

Roundhouse Products (3-1) SERIES

Roundhouse has been manufacturing kits for almost 40 years, and since we are one of the world's leading kit-manufacturers we have had calls for more and more separate parts for today's scratch builders. It is just too costly to sell indi-

vidual parts, and therefore we decided to manufacture a group of kits just for the scratch builder and we call this series our (3 in 1) kits. Pictured below is our complete line of current (3 in 1) kits.

3-1

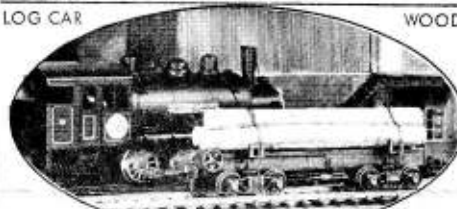
(3-1) CHECK LIST

The (3-1) series of HO kits at a glance. Listed below is a brief outline of all the current (3-1) kits in the line. Please note: Not all (3-1) kits contain 3 individual kits. Kits with (*) indicate "theme kits", kits which can be combined into a larger configuration. (3-1) kits are "basic" kits; kit-bashing is necessary.

1510
less
boiler

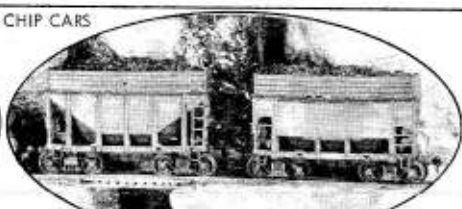
- | | |
|---------------------------------------|-----------------------------------|
| 1500 Log Car Set (3) | * Victoria Sq. Theme Kit |
| 1501 Wood Chip Set (3) | |
| 1502 26' Flat Car Set (3) | * 1511 Station, Caboose & Box |
| 1503 34' MW Car Set (3) | |
| * Shantytown Theme Kit | * 1512 Office & 2 car Set |
| * 1504 Yard Office & 2 Box Cars | * 1513 Victoria St Scene |
| * 1505 Shanty: 1 Pass. Car & 1 Reefer | 1514 Battle Mtn / Street Scene |
| * 1506 Office: 1 Flat & 1 Tank Car | 1515 Rotary Plow-Dummy |
| 1507 MW Fire Train 3-car Set | 1516 Spreader, Crab & Flanger |
| * Battle Mtn Theme Kit | 1517 Dozer, Flanger, Plow |
| | 1518 Battle Mtn "Galloping Goose" |
| * 1509 Office & 3 log cars | |
| * 1510 Battle Mtn (Dummy) Climax | |

LOG CAR



1500
1504

WOOD CHIP CARS



1501



1505

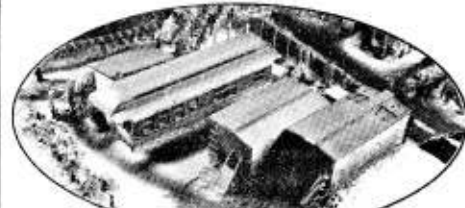


1506

SHANTY TOWN

Section Gang-Shanty Town... The Kit That Contains Three Complete Projects:

- # 1504 - Freight Station & Two 36' Box Car Kits
- # 1505 - Section Gang House, Overton Coach & 36' Reefer Kits
- # 1506 - Telegraph Office, Oil Tank & 26' Flat Car Kits



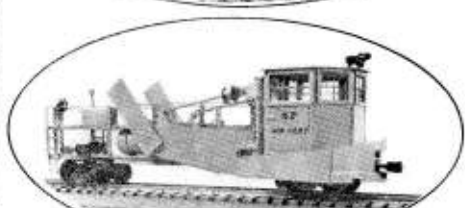
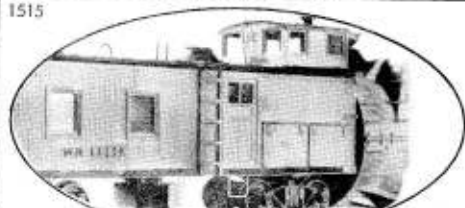
1515



1516

SNOW FIT'ING series New addition 3 kits:

- # 1515 - Rotary Snow Plow and Tender. Kit contains: side door caboose, rotary and molded tender body.
- # 1516 - Jordan Spreader, Snow Crab and enclosed Shorty Flanger. Kit contains basic parts. (For advanced modelers.)
- # 1517 - Snow Dozer, MW Flanger and flat car for a push plow.



1516



1517



Panorama view of "Battle Mountain", Nevada's rich gold and silver "Glory Hole" town. Teminus of the Central Pacific Railroad and the Nevada

Central Railway. Chance of a life-time to acquire a complete town. Ideal desert location adds to your rail empire's overall value. Visit with any

Roundhouse hobby broker today for details or send a large stamped, addressed envelope for full particulars on how you can own "Battle Mountain".

Model Die Casting, Inc.

P.O. Box 1927, Carson City, NV 89702, U.S.A.

See Back

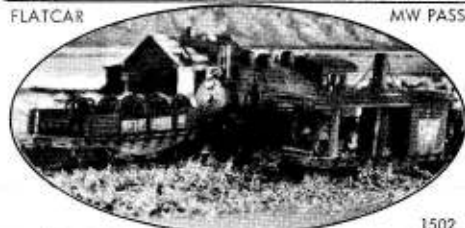
(3-1) SERIES CONT.

Each of the kits below is a model that has been extensively changed in appearance from the kit contents! Please bear in mind that what you see is not what pops out of the kit box; these are not shoke together kits. All (3 in 1) kits have instructions that cover how to make kit contents into

models as pictured, plus most of the needed parts. All (3 in 1) kits are available from your nearest hobby dealer.

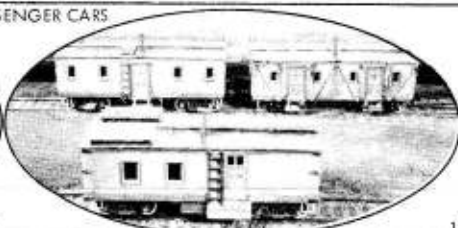
Kits are undecorated, and require kit bashing and the purchase of some components from other manufacturers

FLATCAR



1502

MW PASSENGER CARS



1503

VICTORIA SQUARE

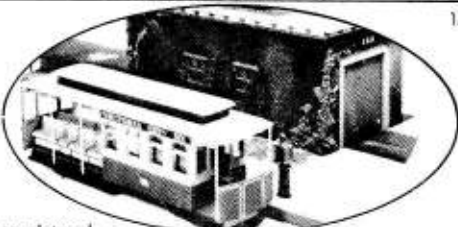
Kit #1511 will contain two car kits: a modern style steel 40' AAR box car and a modern steel sheathed, 2-window caboose. Kit also contains a special building kit Victoria Station "look-alike"

Kit #1512, Victoria Cable Car and Power House. We will utilize our 34' Overton Passenger car and a single-story brick building kit.

Kit #1513, Victoria Brick Car Barn and Shop

This kit can be built utilizing the components to achieve a "typical old time street scene"

Cable Car as pictured is not available!



1512



1511



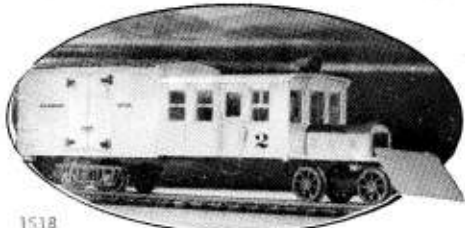
1513

BATTLE MT. new additions parts 4, 5 & 6

#1514- (Part 4) "Battle Mountain" typical street scene. All molded parts in simulated stone. (2) single-story (1) 2-story.
#1518- (Part 5) "Galloping Goose". Kit contains diesel body, 36' box car body, molded underframe and special trucks as illustrated. (For advanced modelers.)



1514

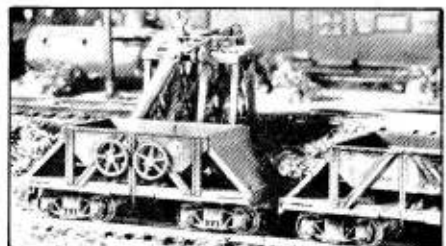


1518



BATTLE MOUNTAIN

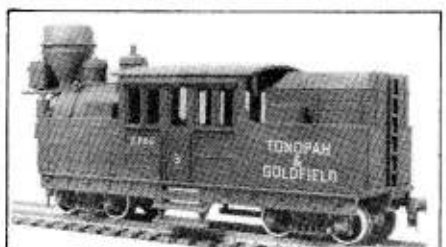
Way out West along the Southern Pacific mainline in Nevada's wasteland exists a small interchange, "Battle Mountain". Years ago, this exchange carried the narrow gauge Nevada Central equipment from the Southern hills and town of Austin. Now, for the first time in HO scale, Roundhouse Products has recreated in miniature a complete facsimile of this 19th century rail empire, complete with locomotives and rolling stock. Battle Mountain is the second in a series of new "Theme Kits"



Below... Kit #1509, Log & Mine timber car series, three complete metal underframes, trucks, less logs & chain.



Left... Kit #1510, Narrow Gauge Climax. Kit contains Climax body, flat car floor & NG trucks.



1510

CHECK LIST AVAILABLE (INC)
For a complete listing



#1509 Battle Mountain log & mine timber cars. Feature three all metal 36' skeleton log car frames, (less logs). Also included assay office.

#1510 Battle Mountain (dummy) Climax Kit. Features complete H-O Scale Old Timer Climax less (cast metal underframe), a flat car body.



WELCOME TO ROUNDHOUSE'S MINIATURE
SHANTY TOWN

ROUNDHOUSE
(3 in 1) SERIES
WAYSIDE
STRUCTURES



"SHANTY TOWN"
Total area needed
to construct (artist's
rendition) of a typical
section gang's quarters
is less than 18" long
by 10" wide.



"SECTION GANG - SHANTY TOWN"
"THE KIT THAT CONTAINS THREE COMPLETE PROJECTS"

- # 1504 - Freight Station & Two 36' Box Car Kits
- # 1505 - Section Gang House, Overton Coach & 36' Reefer Kits
- # 1506 - Telegraph Office, Oil Tank & 26' Flat Car Kits



HISTORY - Roundhouse's "Section Gang - Shanty Town"



When "Steam was King", the railroads all across our great nation needed plenty of hard working men...and they needed places to live. Generally speaking, we can figure that wherever the steam locomotive stopped for water you would find a small telegraph station, coal or oil loading facility and, of course, a "section gang's living quarters".

In analyzing this style of living, one must journey back in years to before the "aluminum mobile home era"...back to the time when just a roof that would keep out the wind and rain made a home for a track layer and his family. Thus, we have an ever abundant class of obsolete railway cars being utilized in one form or another. You can say that the early-day rail-roader was the original "kit basher" in 1" to 1" scale! There was just no end to a "Gandy Dancers" originality. (If one found a truss-sided caboose being used as a garage and family living quarters. All that had been done was to cut one end out; add garage doors and a partition for the living quarters...what a view from that cupola! Also, a great home was made from former palace cars! (Just imagine all that beautiful stained glass and inlay wood paneling!)

With the passing of the years, these little "shanty towns" developed into quite pleasing "miniature" towns; even today, many still exist along our major railroad right-of-ways...and by all means, take some time to study this vanishing breed of dwellings...be sure to take your camera for there is just too much to remember.

In utilizing your Roundhouse (3 in 1) Wayside Structure kits, you should decide on the overall effect you want. To help you I will outline each kit in this (3) part series. (Remember, the kits used are as a guide to get your imagination started.) (See reverse side of this sheet)

Just what is Roundhouse's "Wayside Structure" series all about?...Over the years, modelers have been asking us for something to build with...parts, railroad cars, floors, plus loads of super detailing parts! Well, when you look at our model line of exquisite railroad items, there is just no way to sell one small part or body without it costing the modeler more than it's really worth. Therefore, we have decided to do something totally different in the way of kits; that is, to release a line of "kit bashed" models that would contain combinations of parts never before available as (normal) line kits. Our first (3 in 1) kit was the 26' log car kit. The log car kit is made from our tank car chassis, less the tank body! Original? Well, we thought so, and so have many modelers...roughly ten thousand of you...so, off we went working on more (3 in 1) kits. Now, there's a whole line available.

As you have purchased our latest (3 in 1) kit, you have already become a real (kit bashing) modeler, a person who likes to do something on his own! ...Congratulations...and now Roundhouse is about to take you one step further into kit bashing, with our new series of "Wayside Structures".

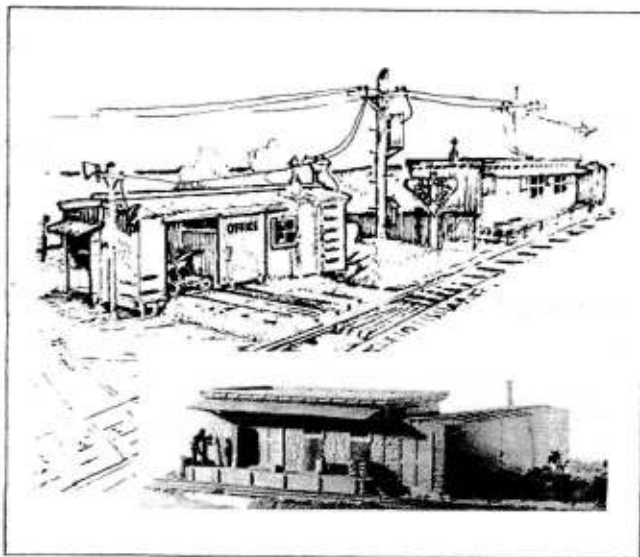
Roundhouse is still going to stick with the (3 in 1) concept of three individual model projects contained in each box. Now, we will add a building kit to the box and only two car kits, instead of 3 car kits (as with our "Maintenance of Way" series, #1503).

With the introduction of the Roundhouse building models, you will find a whole new realm of modeling opening up to you. For instance, you can kit bash the building into several unique structures, along with the car kits, making a real "section gang" shanty town. Or, if you wish, build the building and add the car kits to your pikes' rolling stock roster. Either way you will come out with unusual "kit bashed" equipment.



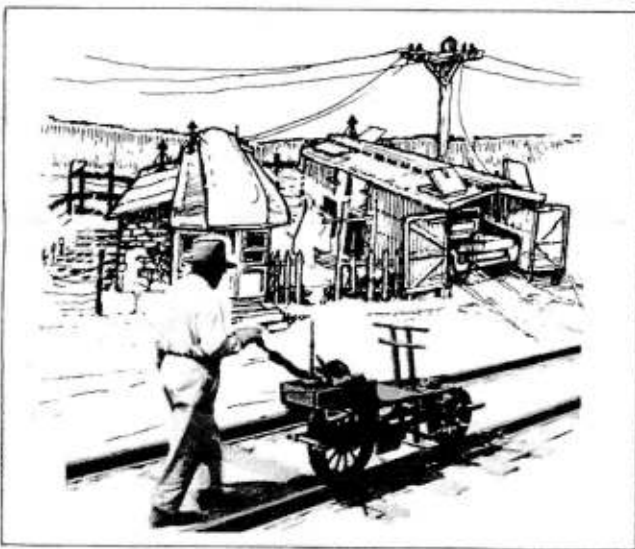
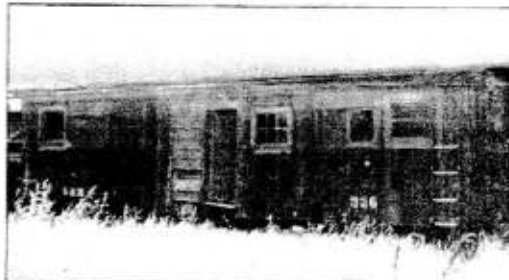
WAYSIDE STRUCTURE SERIES

Comprising three individual kits: #1504, #1505, #1506

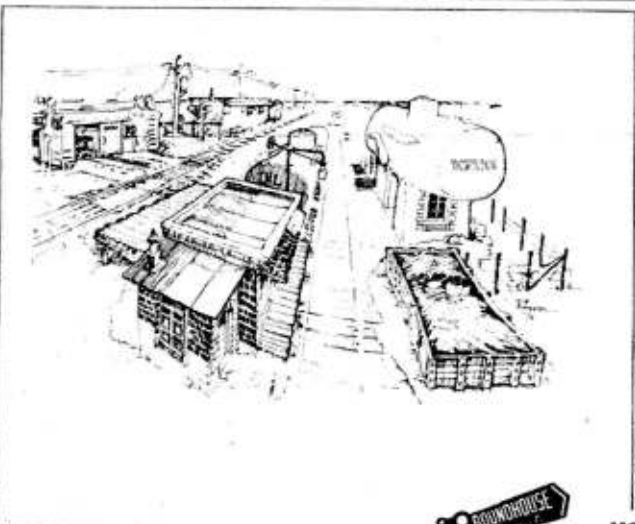


Kit Description:

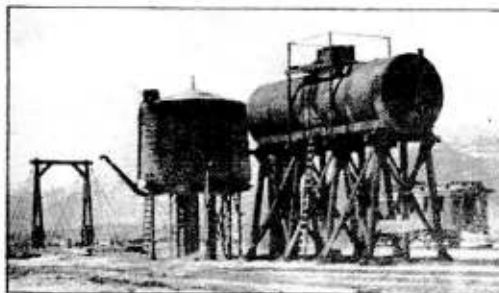
#1504 - Freight Station and Loading Dock (using our flat car gondola sides) supplied with kit. Kit is furnished with two 36' box car kits. You can use one box car body positioned next to the building as a tool shed, by cutting out door and window openings as instructions illustrate. The second body can be positioned next to the "main line" and constructed into a hand car shed and office. You can use our hand car kit No. 2976.



#1505 - Gandy Dancer's Quarters. Kit consists of a single-story, stone building which can be made into individual sheds which are attached to the sides of the car kits. Car kits: one Overton 36' old timer passenger car, and one 36' old timer wood style refrigerator car kit. In the drawing you can see the building idea and also an idea to make the reefer into a garage.



#1506 - Telegraph Office (single-story brick building) kit Bashed into a two-room building. Kit contains one flat car and gondola sides. Use flat car as a wayside loading and unloading ramp for your local heavy equipment needs and use the gondola sides to construct a cooling bin or "clinker dump". Next, you have a tank car which makes up into an "oiling facility". The car can be mounted on the ground with a filling pipe attached to the tank.



MODEL DIE CASTING, INC.

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TYPICAL "WAYSIDE" BOX CAR



Kit # 1504 - Wayside Structure Kit No. 1. (Part 1 of a 3-part series.) See accompanying page for complete information on this exciting new series. Roundhouse (3 in 1) convertible kit: Featuring two complete 36' box car kits, and an Old Timer series single-story brick building kit which can be utilized as a freight station or office.



PART-1-SHANTY TOWN

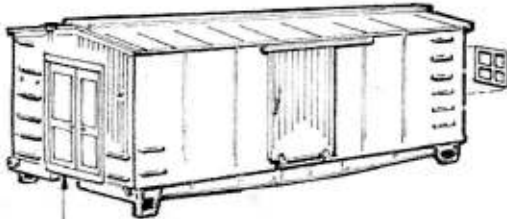
H-O FREIGHT CAR & BUILDING INSTRUCTIONS

We know you will enjoy building this kit. Keep in mind that you have a "kit bashing" kit. That means you can change it to suit your particular layout needs. Use your imagination! First, before starting, try to visualize several ideas of what you can make with the kit before starting actual construction. To give you an idea of how much can be done, we have made an "Idea" list:

- 1) Using the box car kits, use the metal floors and make two flat cars. Just cover the tops with scribed balsa wood or glue wooden tooth-picks across the top. When they dry, trim flush with sides.
- 2) Use the box car bodies for buildings as illustrated in instructions.



Instructions for Box Car Body when Utilizing as a Tool Shed

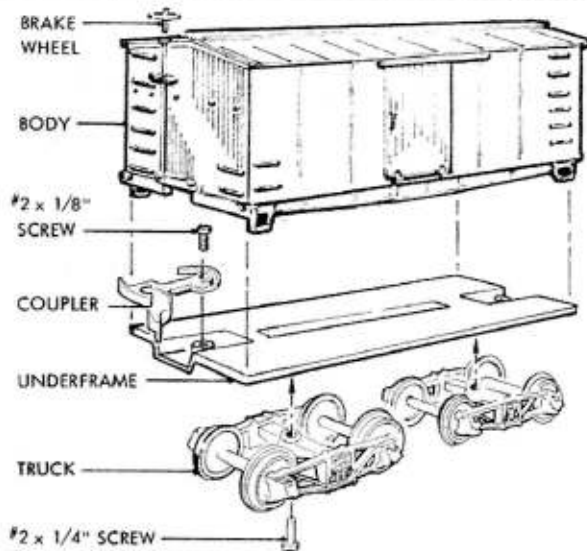


LARGE DOOR (cut off window section).
SMALL WINDOW SMALL DOOR



BACK VIEW

- 3) Building kit construction: Assemble building kit as illustrated with no kit bashing, or for other ideas we have a big 8-1/2 x 11 inch, 24-page "Handy Hints" handbook which illustrates how to "kit bash" our buildings into many unique styles of structures. Only \$2.00



ASSEMBLY INSTRUCTIONS - When constructing your box car or scratch building a flat car utilizing the box car underframe.

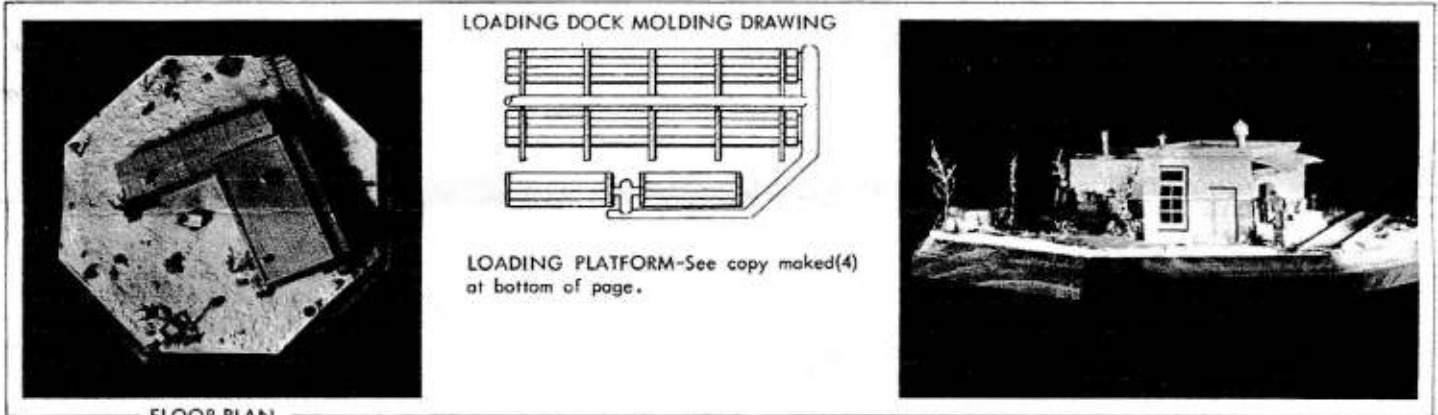
INSTRUCTIONS - 36' Box Car Kit Construction:

- 1) Underframe: Clean flash from casting and paint flat (dark brown or black).
- 2) Coupler Assembly: Insert couplers into coupler pockets, both ends. Position coupler and secure with #2 x 1/8" (small) screws.
- 3) Truck Assembly: Attach arch bar trucks to underframe using the (large) #2 x 1/4" screws. (Do not tighten too tight; trucks should pivot freely.)

OLD TIMER BUILDING CONSTRUCTION

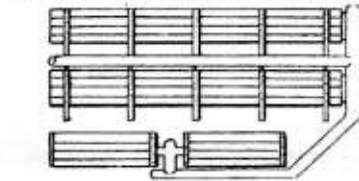
Please read the instructions carefully and study the drawings before starting. NOTE: When attaching plastic moldings, use only styrene plastic glue. Apply the least amount.

Model kit does not include: Large ventilator figure or small details. Box car is un-painted and un-lettered.



FLOOR PLAN

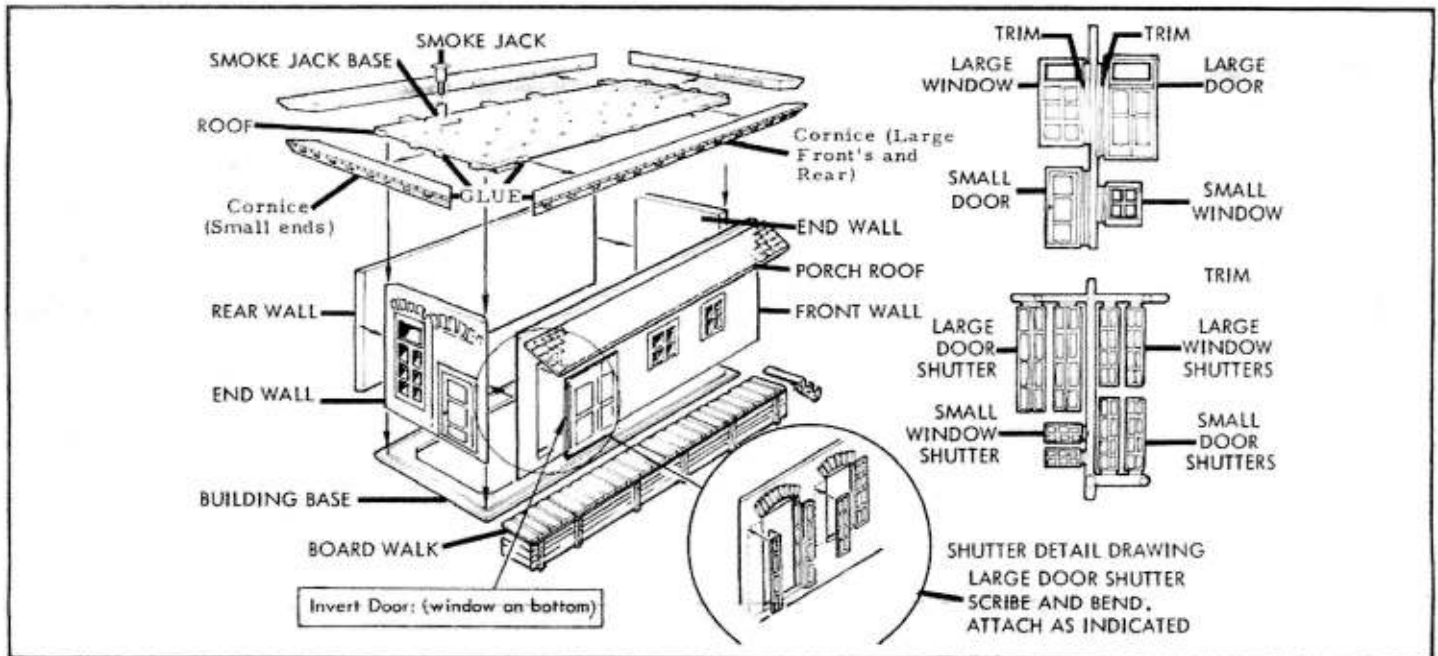
LOADING DOCK MOLDING DRAWING



LOADING PLATFORM-See copy maked(4) at bottom of page.

Construction:

- 1) Walls & Base: Glue walls and ends to base. Be careful not to get glue on outside wall detail. Glue should be applied along the beveled edges, as well as on the bottom of each wall. Place front wall in place and butt both side walls to front. Affix rear wall into place and adjust for trueness. Attach and glue roof (step 2).
- 2) Roof: The roof is molded in two parts. You will find four moldings designated as cornices - two long moldings and two short moldings - and a flat block section. The cornices glue to the pins on the edges of the flat section and then attach to the walls.



- 3) Doors & Windows: Attach doors and windows per instructions, using drawing. Glue doors and windows into openings from the outside. Note: When constructing building with a loading dock, the large door for front building wall is attached with windows to the bottom; they will be covered by loading dock. (If you are not using loading dock, glue door into place with window to the top.)
- 4) Loading Dock (flat car gondola sides): Using detail drawing 1. Use (1) long section for front and cut a small section to join to the long section. The distance should equal the length of the building. Use small sections for ends. Glue dock to building. Next, glue boardwalk on top of dock; cut two steps from molding and place at each end of dock.

Steel shutters (optional parts): These were used in the mid-1800's and up until quite lately for fire protection and security purposes. Attach shutters in the open position (one on each side of a window) or glued to a wall in a closed position.



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1505 (3 in 1) Gandy Dancer's Quarters - Part 2

INSTRUCTIONS: Part 2, of a 3-Part "Wayside Structure" Series

INTRODUCTION:

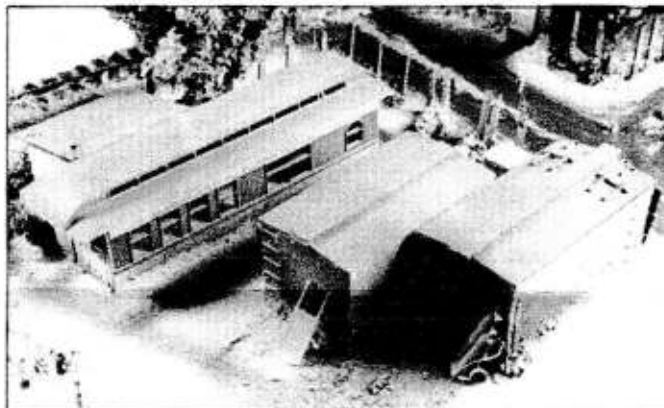
Introducing a concept to fill the needs for a large number of different modelers, Roundhouse has chosen to include two themes in which you can model the contents of the kit: (1) Construct each car kit to add to your rolling stock. To accomplish this, follow basic car kit construction assembly drawings for the 36' Refrigerator and 36' Overton passenger car. Next, Assemble the building kit following drawing marked "Single Story Stone" building.

The second theme for which this kit was designed to be built, is the "Gandy Dancer's Quarters", and can be utilized with our other two kits in the series to accomplish a complete "Old Time" Shanty Town. Basically, you will have five (5) individual models, or more, when you finish your kit, depending on how much imagination you use in following the photos and text.

OUTLINE FOR UTILIZATION OF KIT #1505

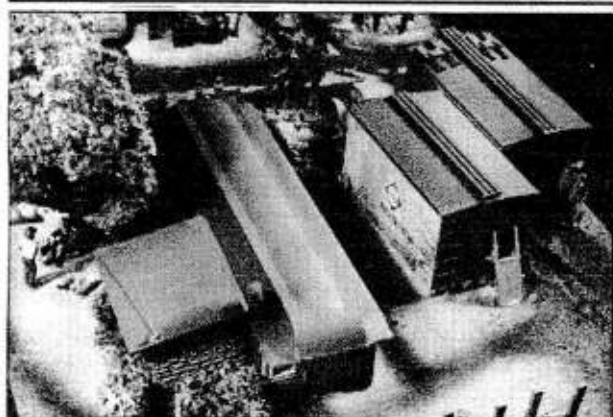
Your kit will produce the following items; each is described within the assembly instructions text.

- 1 - 36' Reefer Kit: (Body) Can be cut into two equal sections and made into small "shanty" type structures (with doors and windows). Also into garages for autos. Metal Underframe: Construct into a Truss Rod, 36' flatcar.
- 2 - 36' Passenger Car: (Floor and Body/Roof) Construct into a Wayside Diner, "Beanery", or a "Palace Sleeping Quarters". Passenger Car underframe makes into an old work car.
- 3 - Building Kit (Single Story Stone): Refer to instruction photos illustrating buildings; presented as "idea starters". We picked stone because we felt that "Gandy Dancers" would find stones around where they



lived and would have made buildings out of them. Therefore, try and imagine what you would like. As an example, an addition off of the passenger car. A small stone tool shed. A diesel generator building built with a couple of diesel smoke stacks. Also, look over your back issues of Model Train magazines for additional ideas.

We have given you an idea of the theme, plus photos of the finished "Gandy Dancer's Quarters"; but, by no means, should you try duplicating us. However, if you should, keep in mind that this is a "fun project" and in constructing each model, don't worry about wrecking anything -- you just can't mess up! ... It looks easy, and by following our project outlines, you will be on your way to an "honest, old time styled shanty town" ... Don't forget to get plenty of Campbell's "town little people". Just right for those Jordan vehicles!



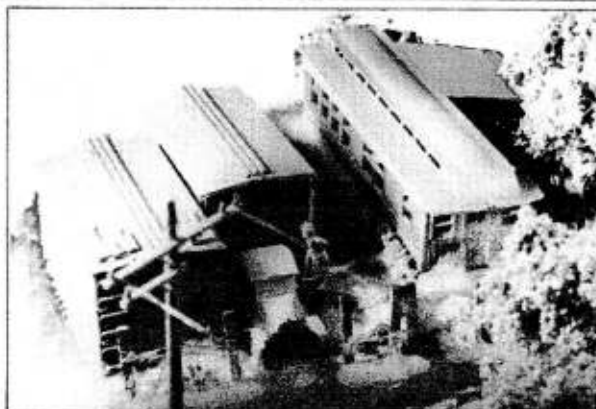
PROJECT OUTLINE - Gandy Dancer's Quarters. (Outline is based on actual photos as shown).

To start this project: First, if you have a layout which has a long stretch that is vacant along the right-of-way, then you have just the place to start your "Shanty Town" living quarters section. Also, there should be a passing siding to locate a water tank - which will be discussed in Part 3, Kit #1506.

Again, look at the photo showing the garage and old Model "T"; notice too, the fences and grass. You should lay out your area as if you, yourself, were N-O scale and were going to live in this place of "railroadiana in miniature" - sort of "stake out" your place, so to speak.

Now that you've got the "lay of the land", take up the chore of building! Cut the Reefer body in two pieces; clean up and attach details; cut out windows, doors, and add smoke stack; etc. Take an enamel flat spray (your choice of color) and paint; outline all trim with a second color. Next, weather each half and Presto! A couple of old buildings to super detail! You can add flower boxes and window awnings and outside plumbing pipes and sinks!

Reefer Underframe: As we mentioned earlier, you can make a really "spiffy" flat car - with some work! We use good old "wooden" tooth-



picks to cover the top. First, file the sides flat and get some "Walther's Goo", good sticky stuff and glue one-by-one the toothpicks all across the top. When dry, trim so that 1/8" overlaps each side. (Push down and cut with a sharp Exacto knife, using shallow light cuts until you cut completely through, then use wood stain! Paint casting and trucks flat Gray or Tuscany ... End Reefer Project.

PASSENGER CAR PROJECT - Again, check over the photos and study details. We used ours for living quarters for a family of track layers. Cover over some of the windows and add some small details to break up the sides. Make a hot-water heater box outside with a stack.

Passenger Car Building Addition: (Small stone room added to side of coach) See construction drawing accompanying this text, and so marked. Follow outline of how to cut plastic building parts which, in turn, make up structure (idea starter only). When walls are dry, attach to passenger car and affix roof, positioning as shown in photos ... End Passenger Car.

Building Project: Using the remaining building components, it is possible to make up a small single room building. What it is used for and how is left up to the modeler's imagination! For a couple of starters: old time gas station (with gas pumps), a small general store, or a garage for auto repairs.

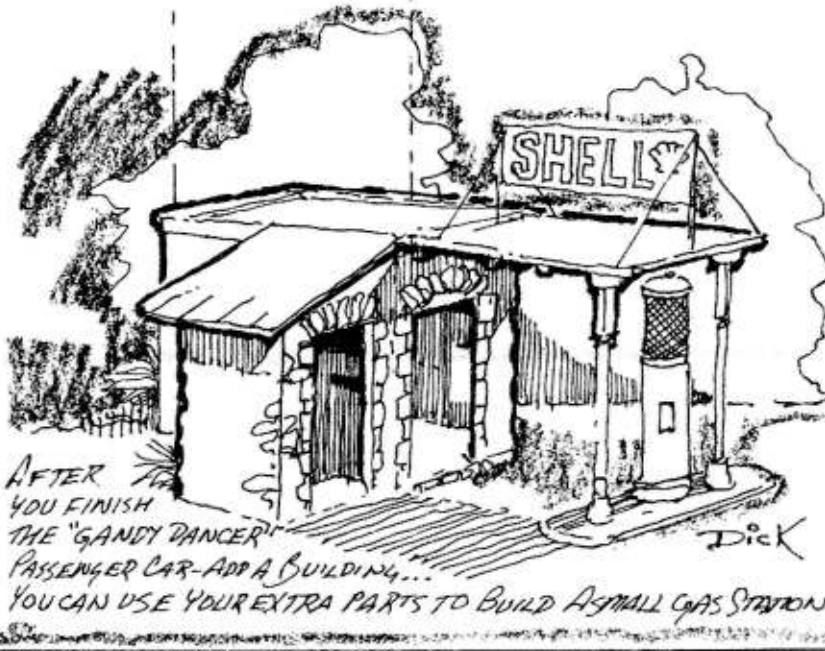
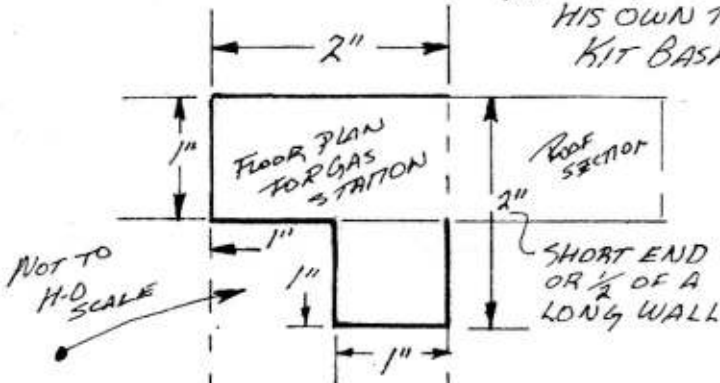
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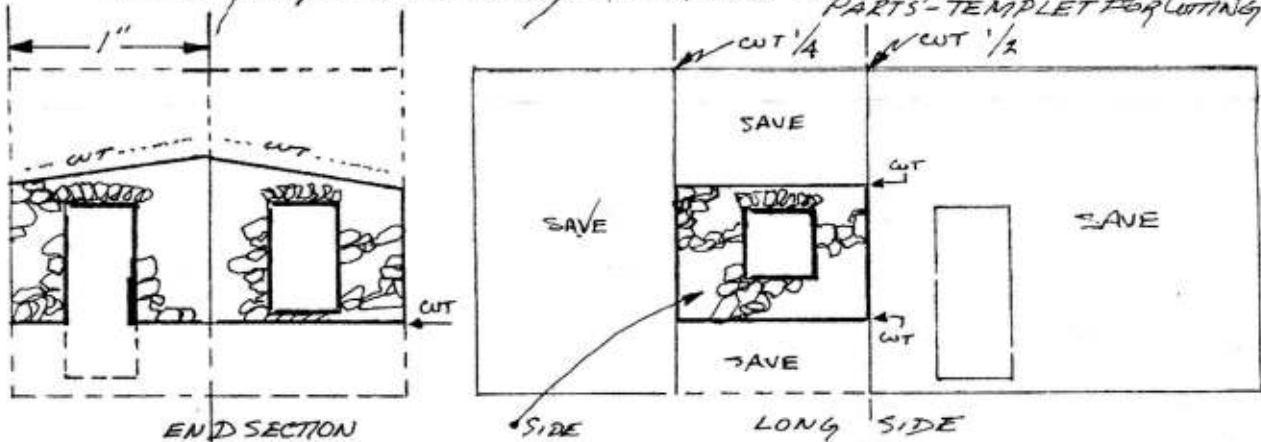
10-76

1505 KIT BASHING BUILDING IDEAS

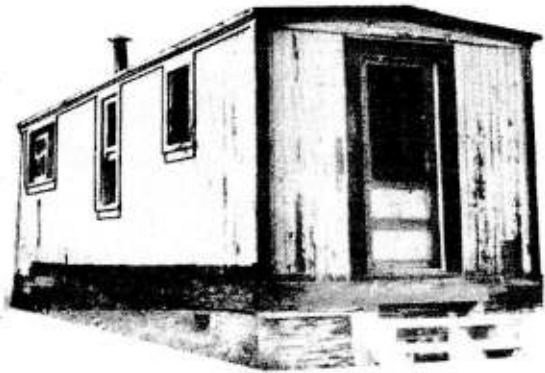
THIS PAGE IS FOR THE MODELER WHO LIKES DOING HIS OWN THING!... IF YOU HAVE NEVER TRIED KIT BASHING-THIS IS AN EASY PLACE TO START!



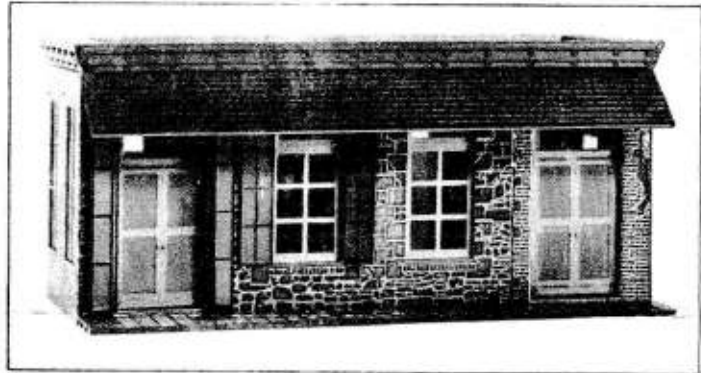
ADD-A-ROOM FOR PASSENGER CAR 000 DRAWING OF BUILDING PARTS-TEMPLET FOR CUTTING.



1505 GANDY DANCERS QUARTERS

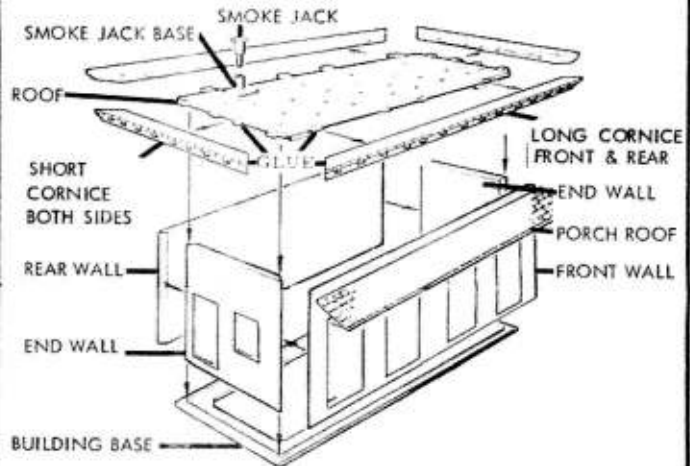


"Gandy Dancers' Quarters". Photo by Glenn Tenberry, Ravenna, California, 1975. On the Southern Pacific main line Mohave to Los Angeles. You may wish to use your 36' old time refrigerator car body to construct this interesting structure. The original building was painted Ocher and trimmed in Chocolate Brown.



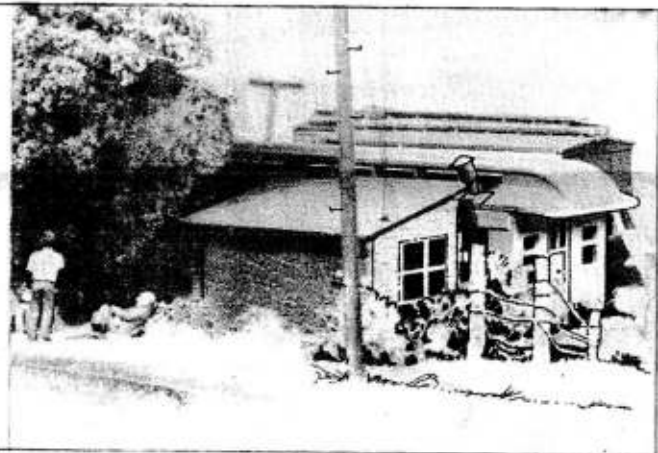
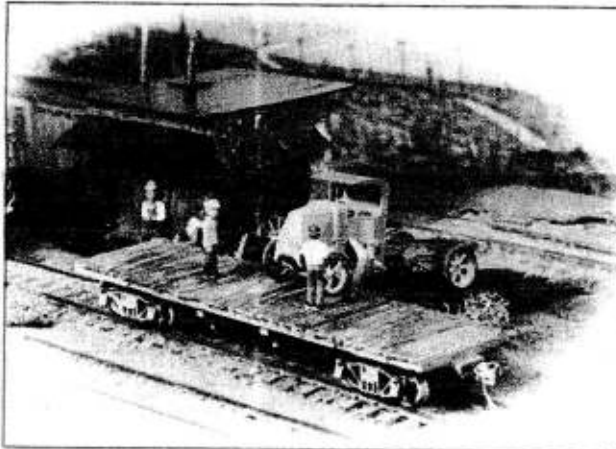
Typical single-story Roundhouse kit construction, depicting finished kit. Note hand painted doors and shutters. Kit 1505 will vary slightly in wall and window detailing. Use this photo as a construction outline reference.

1. Walls & Base: Glue walls and ends to base. Be careful not to get glue on outside wall detail. Glue should be applied along the beveled edges, as well as on the bottom of each wall. Place front wall in place and butt both side walls to front. Affix rear wall into place and adjust for trueness.
2. Roof: The roof is molded in two parts. You will find four moldings designated as cornices—two long moldings and two short moldings—and a flat black section. The cornices glue to the pins on the edges of the flat section and then attach to the walls.
3. Doors & Windows: Detail moldings can be attached either from the front or to the rear of openings. Picture of our (typical building, top right) illustrate doors and windows glued into place from the rear.
4. Steel Shutters: (Optional parts to this kit.) The steel shutters were used on old style stone and brick buildings for fire protection. To simulate a window area on a blank wall section, merely glue onto a wall.
5. Finish: Your building parts are made of molded plastic. If you are going to paint your finished building model, use only enamel paints (spray or brush). Artist oil paints lend themselves well for aging and special effects.



About the Photo Below: Small square building constructed as illustrated in the drawing on page 2. Flat Car: Using the underframe from the refrigerator car kit, floor is covered with flat wooden tooth picks, glued into place and trimmed off. Car painted MW Gray.

Add-on-Building Below: We have shown a close-up picture to give you a better idea of the construction and appearance of a stone building attached along side our "Gandy Dancers' Pullman Palace Car". Refer to page -2- for more details and notes on cutting parts



Kit Bashing Building Techniques: Follow these few simple techniques: To cut wall/roof sections, use a straight edge and cut a deep line. Next, bend away from cut line and snap parts into pieces needed. (If part bends, recut.) Sand edges smooth and when you have two sections that butt at a corner, sand each edge at a 45° angle. Plastic liquid glue: Coat both edges and attach.



91878

1506 (3 in 1) Telegraph Office & Short Line Servicing Facility — Part 3

INSTRUCTIONS: Part 3, of a 3-Part "Wayside Structure" Series

INTRODUCTION:

Introducing a concept to fill the needs for a large number of different modelers, Roundhouse has chosen to include two themes in which you can model the contents of the kit: (1) Construct each car kit to add to your rolling stock. To accomplish this, follow basic car kit construction assembly drawings for the 26' Tank Car and Flat Car Kit. Next: Assemble the building kit following drawing marked "Single Story Brick" Building.

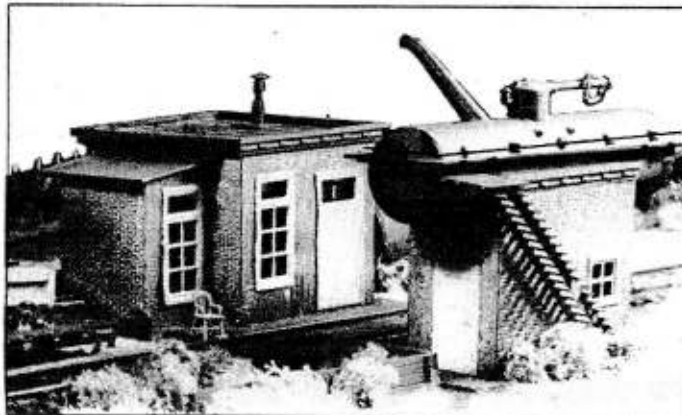
The second theme for which this kit was designed to be built is the Telegraph Office & Servicing Facility, and can be utilized with our other two kits in the series to accomplish a complete "Old Time" Shanty Town. Basically, you will have three individual models, or more, when you finish your kit, depending on how much imagination you use in following the photos and text.

OUTLINE FOR UTILIZATION OF KIT # 1506

Your kit will produce the following items; each is described within the assembly instructions text.

1 - 26' Oil Tank Car Kit: (Tank) Can be for either a water tank on top of a stone water bunker (parts supplied as extra building - blank wall section) or as an oil storage tank. You can also mount the tank car atop the shanty flat car, which makes into an "old style" looking tank car. The tank car frame can be used as a log car by glueing logs to the top, logs made from twigs; wrap chains over load.

2 - 20' Shanty Flat Car Kit: (Using Molded Body) Can be used as a loading dock, either as a drive-on dock or end loading platform. Gondola sides (supplied) are used as a coal retaining bin, constructed per instructions. The metal underframe can be utilized as a "Shanty" flat car, by glueing wooden toothpicks across the top.



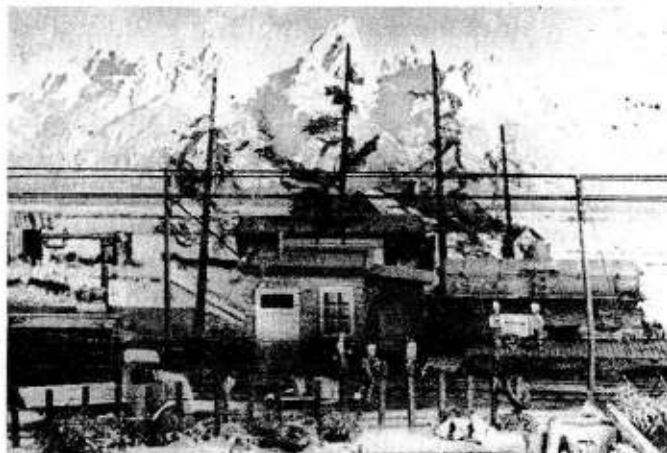
PROJECT OUTLINE - Telegraph Office and Short Line Servicing Facility. (Outline is based on actual photos as shown. Also study drawing at top of page marked "Shanty Town".)

To start this project: This wayside structure scene is constructed utilizing a main line with a passing siding. The two tracks should be 3" apart, from rail to rail (not centers).

Normally, tracks are 1-1/2 inches, center-to-center, so if your tracks are at normal intervals move the telegraph office to the far side of passing siding, which puts it along side the water tank and cooling/oil facilities. (String out in a row.) Either way is perfect because no two "shanty towns" are alike.

Look over the photos above and visualize your own layout having these structures on it. Remember what we discussed in kit #1505 "The Gandy Dancer's Quarters", that you should "become H-O size and walk around the grounds" to get a lay of the land before starting to build this kit.

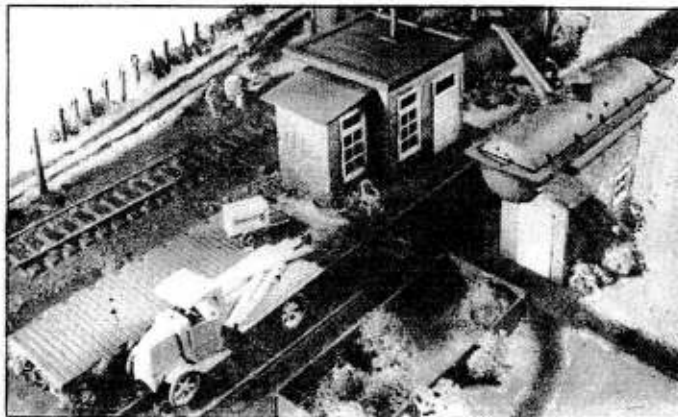
As a note on our model's appearance: Fence posts are Campbell's wood railroad ties, strung with invisible wire. Ground cover is flocking, which



3 - Building Kit (Single Story Brick): Refer to page covering construction of Telegraph Office with utility room. This "wayside" kit bashing structure will fit nicely between two parallel tracks that have 4-1/2 inches from center-to-center. Your kit also contains two blank building parts.

These are used to construct a "rectangular" stone support for the water tank.

We have given you an idea of the theme, plus photos of the finished Telegraph Office & Short Line Servicing Facility. Follow our project outline & you will be on your way to an "honest, old time styled shanty town" ... Don't Forget to get plenty of Campbell's "town little people". Just right for those Jordan vehicles!



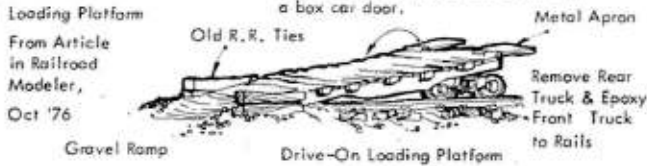
was sprayed onto layout, then air-brushed. All materials are available thru your local hobby center.

Flat Car (Metal Underframe): We mentioned earlier that you could make this into any kind of flat car imaginable: (Old time tank car, or glue toothpicks across it for a nice wood top. See #1505 kit for instructions.)

Tank Car Underframe: We did not have room to show the log car instructions, but our Log Car Kit #1500 has a complete set of instructions. If you would like them, send a self-addressed stamped envelope requesting Log Car Instructions.

Building Project: Page 2 covers the water tank construction, using the stone wall parts. Page 3 covers the Brick Telegraph Office. Also, if you would like to purchase additional building parts and kits, we recommend sending for a copy of our Roundhouse Building & Parts Catalog \$2.00 (be sure to ask for Building Catalog).

FLAT CAR BODY USED TO CONSTRUCT A LOADING PLATFORM OR DOCK



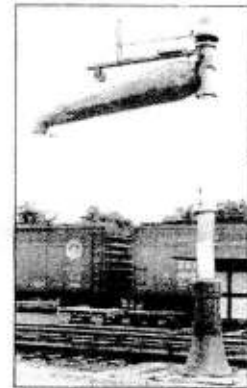
Construct platform to be 3/4" away from siding door; should be even with a box car door.

Oil servicing facility photographed at Jamestown, CA - home of the "Sierra Railroad".

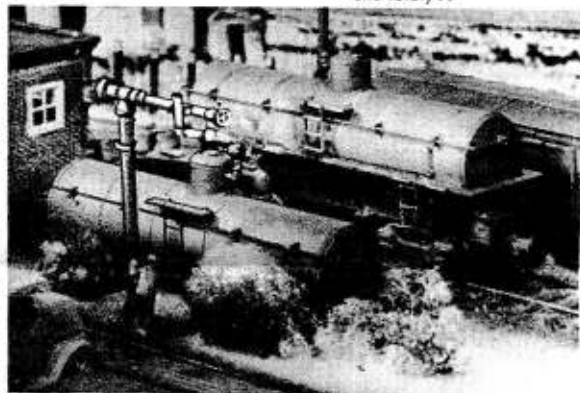
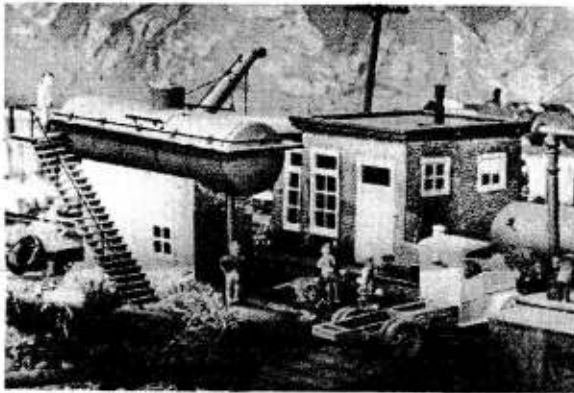


Check with: Bowser Mfg. (was made by Shellies).

"Water Plug" on the B & O. A real must item. Check with your dealer; we only



show it because of clarity of details... & who has seen one lately!!

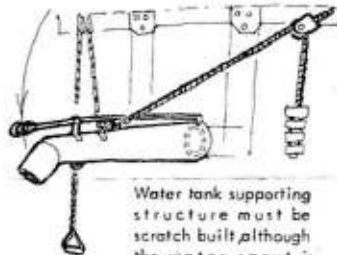
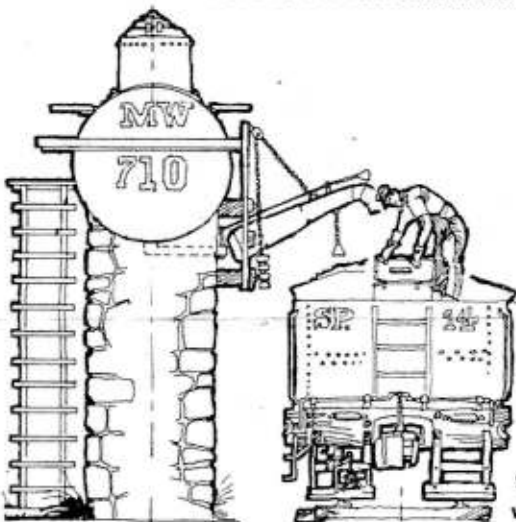


TANK CAR BODY USED AS A WATER TANK

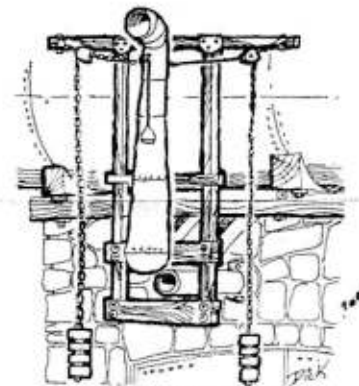
OIL STORAGE AND SERVICE FACILITY

Oil Storage Tank Building Hints: Tank ground supports can be made from scrap wood blocks placed under

each corner. Glue plastic board walk between service track & tank. Oil column mounts to walk end.



Water tank supporting structure must be scratch built although the water spout is available molded in plastic.



SPOUT DETAILING

See Kit Bashing Techniques; page 3

Water tank support structure kit contains: Two stone molded wall sections, one long and one short. (1) Cut long wall into two sections; one section is the rear and the other half is cut for ends. Short wall section with door molding details is used for front. (2) 1/2 wall section cut into two 1/2 inch sections; bevel edges. (3) Short end sections: Cut tank diameter radius into wall sections and sand smooth. (Refer to drawing above showing end view.) Assembly drawing showing end view of water tower is H-O scale. (4) After

cutting radius and both end sections, glue wall section together and let dry. When dried, you should wrap sand paper around tank bottom and sand top of structure until tank body sits securely. (5) Detailing water spout support; Follow drawings. Construct using strip wood or styrene.

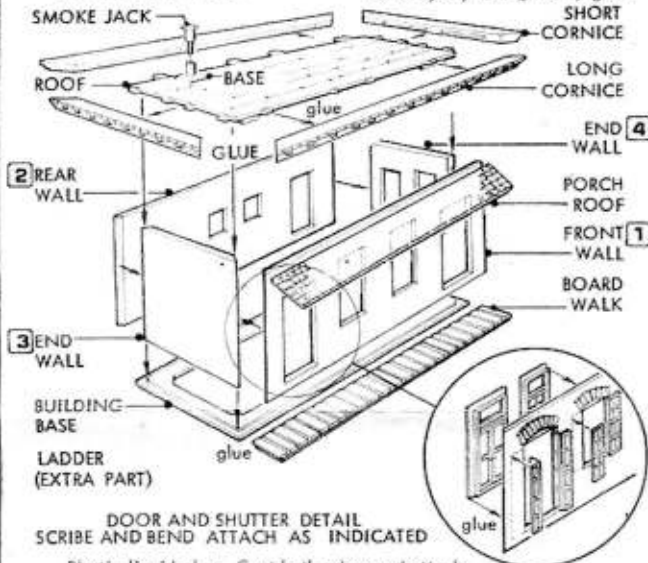
Take your time on this project. Pulleys and chains can be made with dress hooks and thread.

1506 TELEGRAPH OFFICE



BUILDING KIT AS SUPPLIED

Please read instructions carefully and study the drawings before starting use only styrene (plastic) glue.



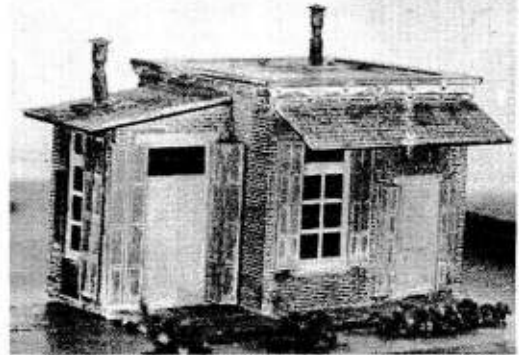
DOOR AND SHUTTER DETAIL SCRIBE AND BEND ATTACH AS INDICATED

Plastic liquid glue: Coat both edges and attach.



1. Walls & Base: Glue walls and ends to base. Be careful not to get glue on outside wall detail. Glue should be applied along the beveled edges, as well as on the bottom of each wall. Place front wall in place and butt both side walls to front. Affix rear wall into place and adjust for trueness.
2. Roof: The roof is molded in two parts. You will find four moldings designated as cornices - two long moldings and two short moldings - and a flat black section. The cornices glue to the pins on the edges of the flat section and then attach to the walls.
3. Doors & Windows: Detail moldings can be attached either from the front or to the rear of openings. Picture of our (typical building, top left) illustrate doors and windows glued into place from the rear.
4. Steel Shutters: (Optional parts to this kit.) The steel shutters were used on old style stone and brick buildings for fire protection. To simulate a window area on a blank wall section, merely glue onto a wall.
5. Finish: Your building parts are made of molded plastic. If you are going to paint your finished building model, use only enamel paints (spray or brush). Artist oil paints lend themselves well for aging and special effects.

3



KIT BASHING VERSION * Follow these few simple techniques: To cut wall/roof sections, use a straight edge and cut a deep line. Next, bend away from cut line and snap parts into pieces needed. (If part bends, recut.) Sand edges smooth and when you have two sections that butt at a corner, sand each edge at a 45°

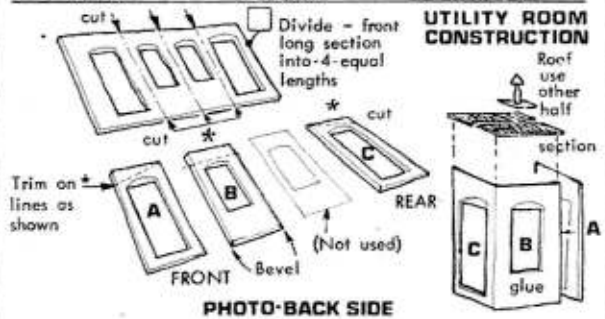
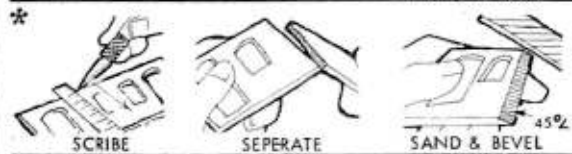
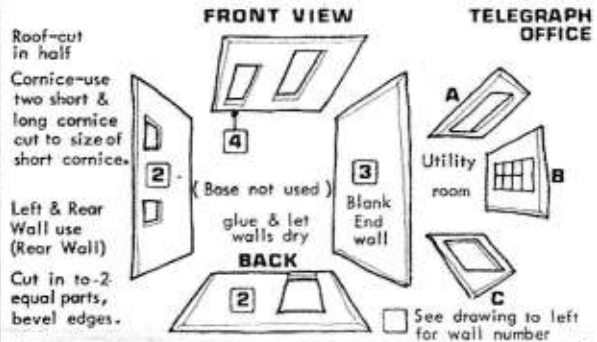


PHOTO-BACK SIDE

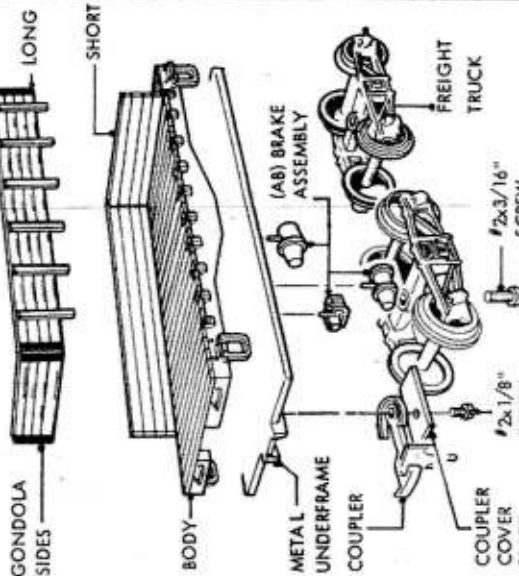


10-76

KIT: 1506 PART 3- SHANTY TOWN STOCK KIT CONSTRUCTION

ASSEMBLY INSTRUCTION

FLAT CAR



FLAT CAR UNDERFRAME ASSEMBLY

- 1) Clean and file small burrs off of the underframe casting.
- 2) Insert coupler into coupler pocket. You can substitute Kadee Magna-Matic (5 & 10) without alterations.
- 3) Attach coupler cover plates using a small #2 x 1/8" screw to attach plates.
- 4) Paint metal underframe (after drying). Insert underframe into finished plastic Flat Car Body.
- 5) Attach trucks using a #2 x 3/16" screw.
- 6) Brake gear (3 plastic moldings that make up the AB Brake System). Study the illustration and glue parts into their proper loading holes.

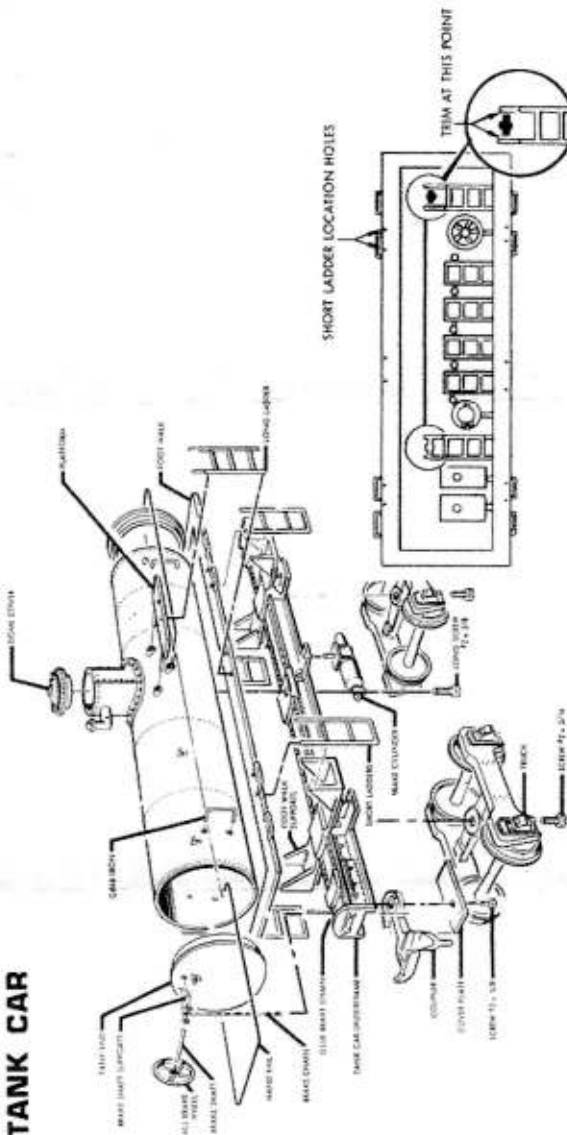
The above instructions cover the basic Flat Car assembly.

GONDOLA DETAIL ASSEMBLY

Your kit comes complete with set of Gondola sides. Each kit is supplied with (2) long sides and (2) short end moldings.

1. The long sides affix to Flat Car Body by inserting protruding bottom stakes into stake pocket holes. Note: Do not force (push) ends to break off. Clean stake pocket holes out. Then insert. (They can be glued into place-optional.)
- This completes the basic Flat Car Kit construction

TANK CAR



GENERAL INSTRUCTIONS:

Please study instructions and illustrations before starting to build car. Use a glue made for styrene plastic, and apply the least amount necessary. Avoid getting glue on painted surfaces as it attracts the paint. Application of glue is easiest by using a toothpick to place the glue exactly where you want it to be. Note assembly sequence:

- A) Tank Car-Body Assembly
- B) Tank Car Underframe Assembly
- C) Tank Car Final Assembly

Extreme care should be used in removing small parts from the Foot Walk. Trim out center portion at top of the two long ladders exactly as shown on Illustration A. When attaching the parts of this kit, use glue sparingly. Very little is required for holding purposes.

A) TANK CAR BODY ASSEMBLY:

1. Locate and glue small platforms onto Tank. See illustration for location.
2. Glue Dome Cover to Dome.
3. Sub-assemble Tank Brake End. Assemble and glue Brake Shaft Supports into tank end. Line up holes in supports with Brake Shaft Wire. NOTE! Do not glue wire shaft. Set aside tank end sub-assembly to dry. (Assemble tank ends to tank body in step 5.)
4. Insert (4) Grab Irons, which are provided in the form of special staples. Prepare by cutting apart and cleaning any small residue that may cling to edges. Split a paper match to provide a cushion between carbody end and grab irons when they are inserted into the holes. Flow glue around prongs from inside of body, check outside to see that they are resting on match and allow glue to dry. Then slip match out from beneath the grab irons and they will be perfectly uniform in distance from body. If you wish, they may be painted black.
5. Assemble Tank Ends to Body-DO NOT GLUE. Carbons, ends are different. Do

MODEL DIE CASTING, INC.

When attaching plastic moldings, use only styrene plastic glue. Apply the least amount possible, and do not get glue on any painted surfaces as it will attack the paint. When gluing detailing parts over a painted surface, remove a small amount of paint where parts touch before applying glue for satisfactory adhesion.

not face in place-they are a press fit. Carefully attach Hand Rails to tank ends, press onto stanchions along body, then insert ends into holes at middle of tank body.

B) TANK CAR UNDERFRAME ASSEMBLY:

1. Clean and file small burrs from Underframe casting.
2. At this stage of assembly, you may wish to paint the tank underframe with flat black paint. After paint has dried continue to step 3.
3. Press Truck Bushings into bottom of underframe.
4. Insert Couplers into coupler pocket. You may wish to substitute kit couplers with Kadee Magna-Matic (5&10) coupler kit which fits without alteration.
5. Attach Cover Plates using small 2 x 1/8 screws.
6. Attach Brake Cylinder. See drawing for location.
7. Attach Trucks using the 2 x 3/16 screws.

C) TANK CAR FINAL ASSEMBLY:

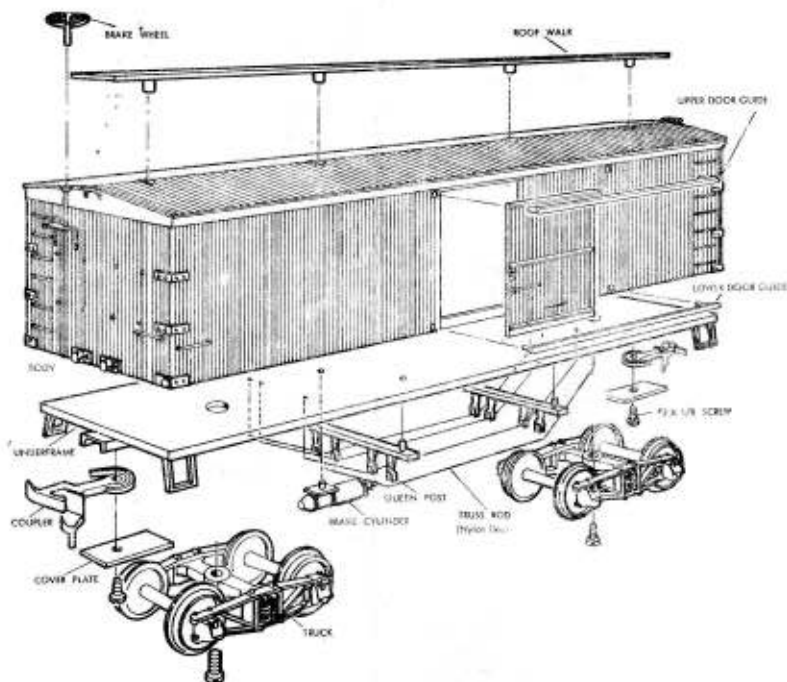
1. Attach the four short ladders to foot walk molding. Lay the molding smooth side down, insert ladders into location holes and glue. Put aside until glue sets up, then proceed to next step when you are sure glue is completely dry.
2. Carefully position Foot Walk onto underframe foot walk supports. Do Not Glue. Place tank body on underframe and fasten with long 2 x 3/8 screw. DO NOT overtighten.
3. Attach the two long ladders as shown. Insert into location holes and glue.
4. Attach small Brake Wheel to brake shaft. (Large brake wheel is an extra.) We suggest, for best results, dip brake shaft end into small amount of glue, then apply shaft to hub of brake wheel. Put aside until glue sets up, then proceed to step 5.
5. Insert Brake Shaft through Top Link of brake Chain white holding chain between brake shaft supports. The lower end of chain glues to side of tank underframe. Sparringly glue brake shaft to brake shaft supports to hold in place.

Kit #1507 Typical Construction

ASSEMBLY INSTRUCTION

Follow instructions for easy kit construction:

Please read the instruction sheet carefully and study the assembly drawing before starting construction. Note there are more parts included than are shown on the drawing. These parts are run in a family die that makes parts for several types of cars at a time. You will find the extra parts useful for modifying and extra-detailing this or other cars.



For best results, work on one side of car until all details are in place and glue has set firmly, then repeat procedure on other side. Identify the upper door guides (they have a smooth top), place a dab of glue on the end of each pin and insert into holes. Next, slip door into slot in upper door guide and leave in place while installing lower door guide in the same way as you did the upper one. While glue is still wet, make any adjustment necessary to allow door to slide freely in track. Allow to dry.

Glue roofwalk into place and glue the small brake wheel into hole at end of roof.

Place coupler into box on underframe and attach lid with a 2 x 1/8 screw. Insert queen posts and brake cylinder into holes in underframe, glue into place and allow to dry. Then, starting from top of underframe, thread the nylon line used for truss rods in place. Cross to other end, go up through outside hole on same side. Cross to next hole and go down through it; then toward other end and go up through corresponding hole. Repeat for other two truss rods, weaving back and forth and pulling line fairly tight on each pass. Tape free end to the floor of car to hold securely. Finally, stretch line over the queen posts.

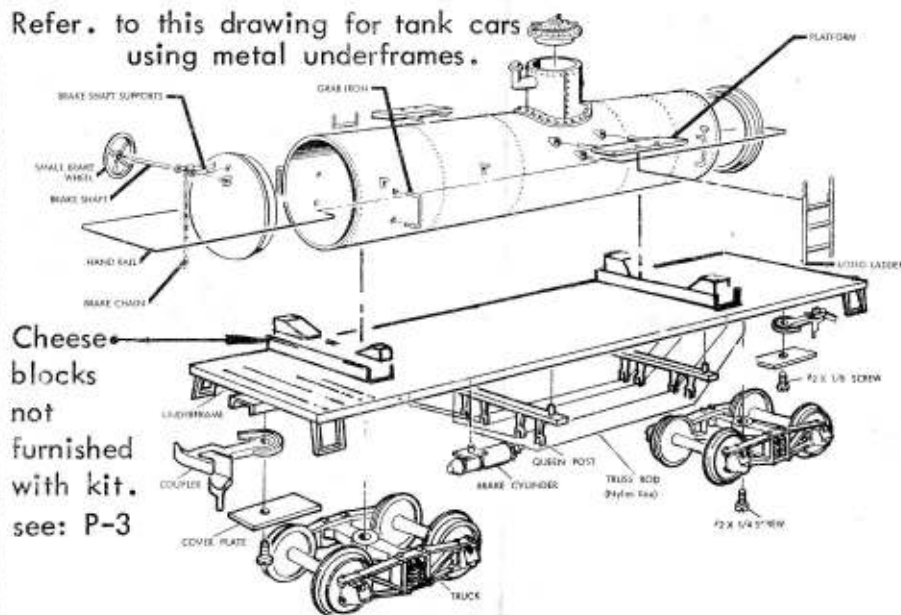
Attach freight trucks to underframe using 2 x 3/16 screws. Trucks must swivel freely for good operation. Press finished car body onto underframe. Your car is now ready to roll.

91884

MODEL DIE CASTING, INC.
P.O. BOX 1927 - CARSON CITY, NV 89702

When attaching plastic moldings, use only styrene plastic glue. Apply the least amount possible, and do not get glue on any painted surfaces as it will attack the paint. When gluing detailing parts over a painted surface, remove a small amount of paint where parts touch before applying glue for satisfactory adhesion.

Refer. to this drawing for tank cars using metal underframes.

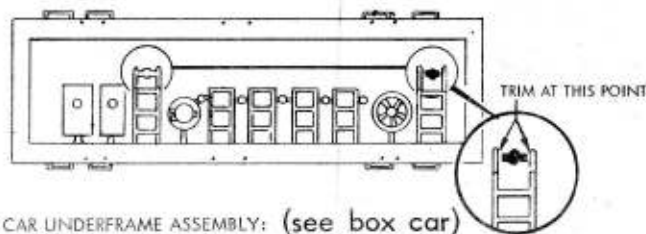


Cheese blocks not furnished with kit. see: P-3

TANK CAR BODY ASSEMBLY:

1. Locate and glue small platforms onto Tank. See illustration for location.
2. Glue Dome Cover to Dome.
3. Sub-assemble Tank Brake End. Assemble and glue Brake Shaft Supports into tank end. Line up holes in supports with Brake Shaft Wire. NOTE! Do not glue wire shaft. Set aside tank end sub-assembly to dry. (Assemble tank ends to tank body in step 5.)
4. Insert (4) Grab Irons, which are provided in the form of special staples. Prepare by cutting apart and cleaning any small residue that may cling to edges. Split a paper match to provide a cushion between carbody and grab irons when they are inserted into the holes. Flow glue around prongs from inside of body, check outside to see that they are resting on match and allow glue to dry. Then slip match out from beneath the grab irons and they will be perfectly uniform in distance from body. If you wish, they may be painted black.
5. Assemble Tank Ends to body-DO NOT GLUE. Caution, ends are different. Do not force in place-they are a press fit. Carefully attach Hand Rails to tank ends, press onto stanchions along body, then insert ends into holes at middle of tank body.

NOTE: Brake Wheel, Shaft and Chain are to be attached in final assembly step.



TANK CAR UNDERFRAME ASSEMBLY: (see box car)

MW FIRE TRAIN

"Old Timer" Maintenance of Way steam era fire fighting train. Circa 1880- 1955.



INTRODUCTION

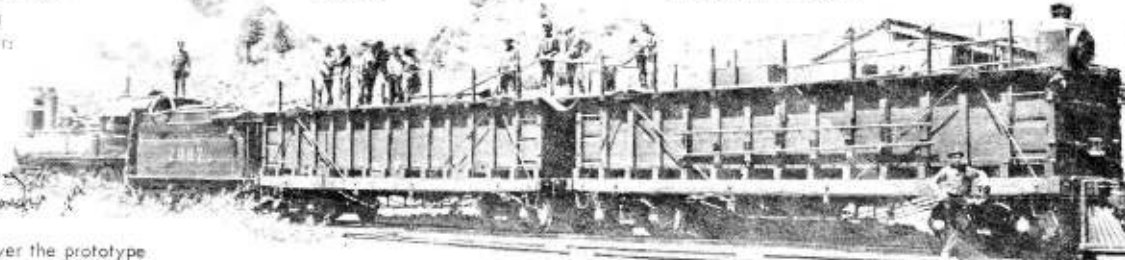
The MW fire fighting kit was designed to produce the three car kits which are illustrated. You need not follow all the necessary detailing that is given in the assembly instructions; you can use your own imagination or work from photos and drawings that you might have.

Kit #1507 contains three (3) car kits which will need explaining so you can figure out what is what in all these pieces:

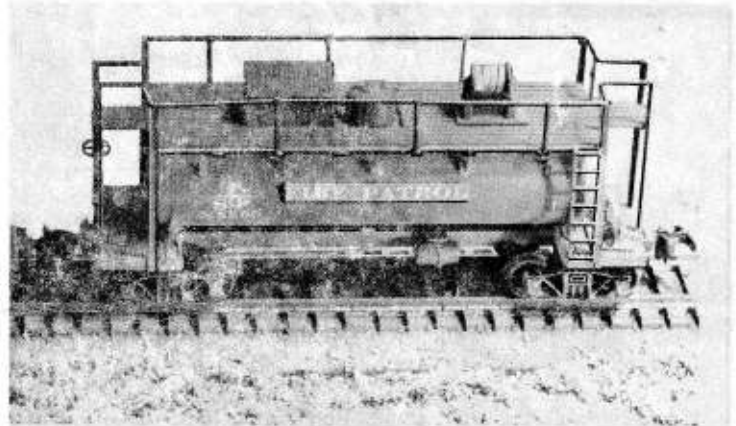
- (1) 36' box car kit complete (see assembly drawing which illustrates kit).
- (2) Two tank car kits, less the normal (channel frames) which are NOT included as part of this kit.
- (3) Two metal underframes: A 36' flat car, which will be utilized to build a Chemical Car, and a 30' covered hopper frame which is utilized to build the Water Car.

Instructions
for the
Advanced Kit
Bashing
Modelers:

From the collection of
Ed Best



Look over the prototype and model photo section. This will give you a pretty good idea of the many things that you can create.



ASSEMBLY INSTRUCTIONS -

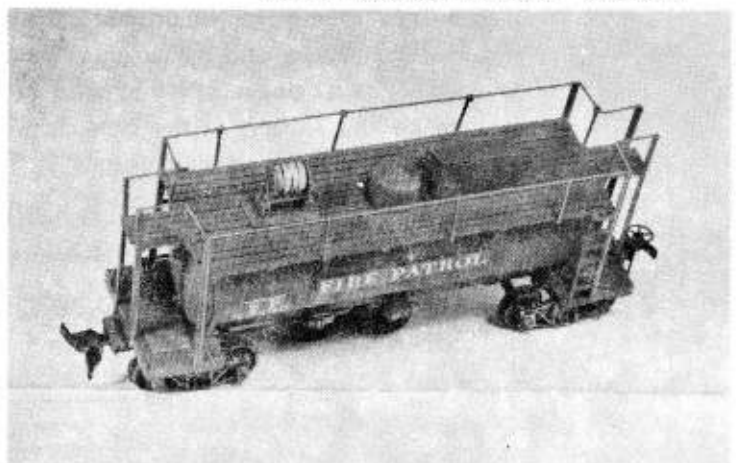
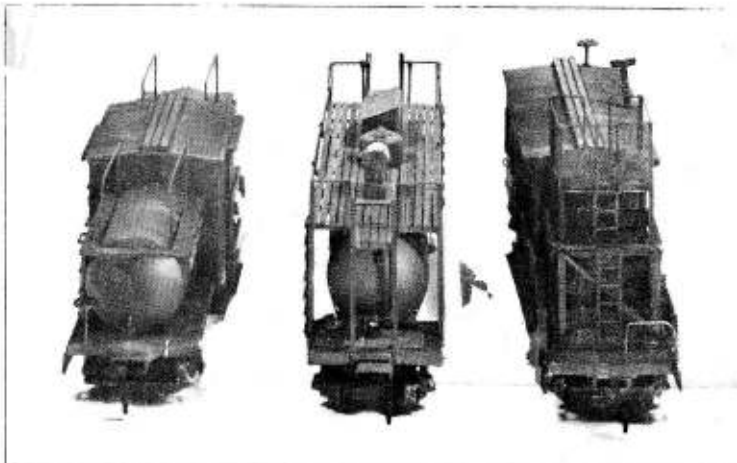
For the modeler who does not desire to build what is outlined as "Advanced Kit Bashing" Instructions:

- (1) Follow instructions covering "Standard 36' Box Car Assembly".
- (2) Use the 2nd (36' box car) underframe, and mount a tank to it as illustrated in the photo.

- (3) Use the (skeleton style underframe) for a log car. Just add trucks and couplers and paint.

Then glue some "twigs" on top to simulate a load of logs.

---But, if you want to kit bash the entire contents of this box--- Read ON!



ASSEMBLY INSTRUCTIONS:

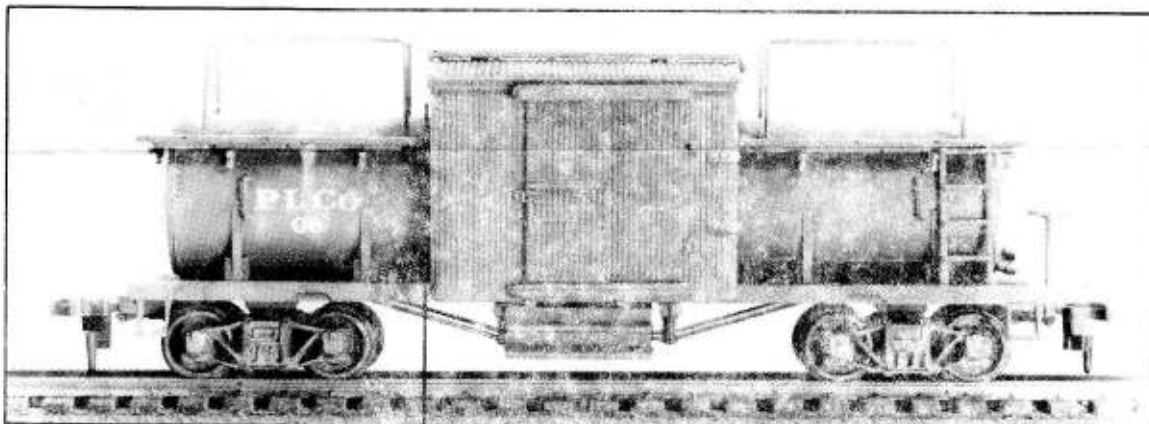
1 - Fire Patrol - Water Car:

This particular model is very close in appearance to Southern Pacific cars used in fire patrol high in the Sierra Nevadas. Construction is accomplished in three stages: Frame, Tank, and Decking.

- 1- Frame Assembly. Cut the center sill arm from both sides of center channel and file channel smooth.
- 2- Upright Supports & Platforms. Upright supports are "Plastruc" Angle 3/64" (available from most hobby shops). Platform is made by cutting a piece of Northeastern scribed stock to fit over frame ends.

- 3- Cheese Blocks. Using 1/16 x 1/8 inch strip wood, cut two sections 3/16 inch long; mark 1/16 on the top and 1/16 on the opposite end (see illustration). Cut diagonally and you have two cheese blocks to brace the tank. (See drawing in building section.)
- 4- Tank Straps. Cut a strip of heavy paper 1/16 inch wide. Cement one end to one of the cheese blocks and wrap around the tank; cement other end to the other cheese block and trim off excess strip.
- 5- Pump & Hose Reel. Cal-scale #WP-287, hose made with thin solder wrapped around reel and painted tan or light gray.
- 6- Platform. Made from scale 2x2 strip wood; braces made with "Plastruc" angle stock 3/64"; stanchions by "Athearn". Tool Box; Atlas shanty, brake equipment, MDC with "Plastruc" angle stock

- 2** – Chemical Car Assembly: Utilizes (1) tank car body and section of 36' box car body.



CUT Model by: Carlos Gasparini, Carson Ltd.

- 1- Tank. Cut tank along the rivet line near dome as illustrated. Enclose cut-off end of tanks with styrene sheet and trim flush with tank edge. Cut platform to fit around tanks. Cut cross member of platform, then trim until platform fits on top of handrail logs. Attach handrails to tank, using groove made by platform and tank as a guide. Use ACC or Epoxy glue for this. Cheese blocks are made in the same way as the tank car.
- 2- Cabin. Cut the box car body 1-11/16 inches from the (A) end (the end without brake wheel). Plug grab iron mounting holes with plastic model putty. Apply to the inside of the structure and force out through the holes. Make end by using styrene sheet or scribed wood. Mount roof walk. Cut doors in half and use part with the latches; cut door guides twice the length of the new doors. Glue these and the door to the cabin. (Door should be about center in the closed position.)
- 3- Chemical Car Underframe Detailing. Refer to: 36' Box Car Instructions and follow procedure and drawing as outlined.
- 4- Steps. Mount steps last by cutting off attached lugs and bonding steps to cabin with ACC or Epoxy glue.

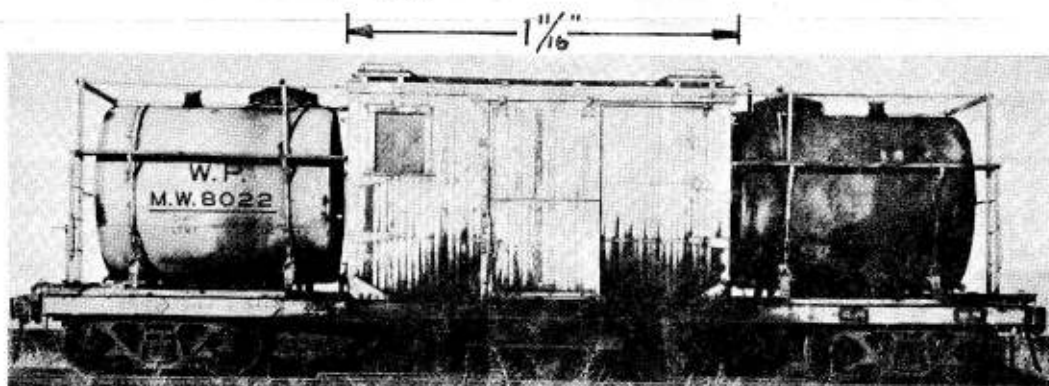
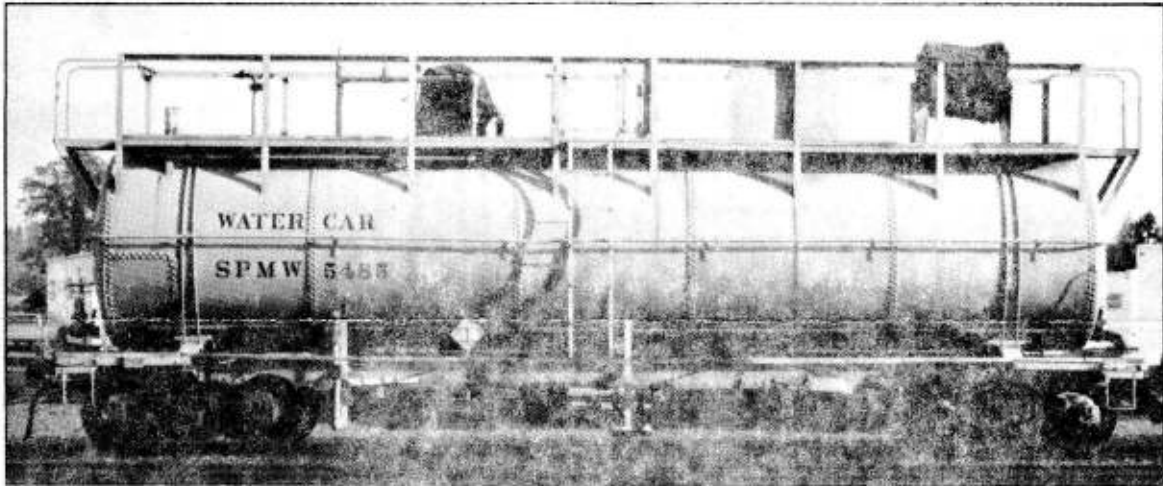


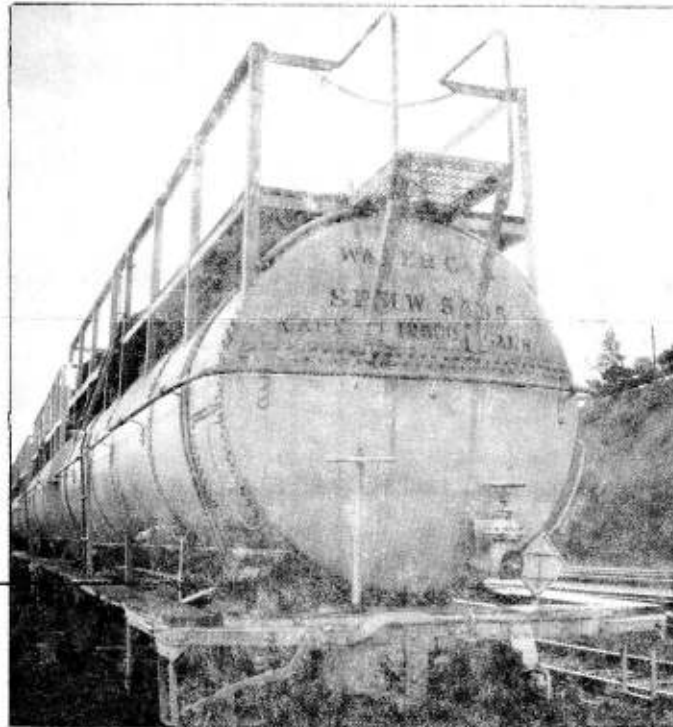
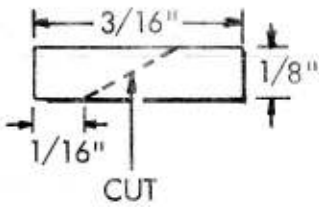
Photo by: Don Sims from: Model Railroader

1507 (3 in 1) MW Fire Fighting Tank Car



LEFT SIDE

Cheese Block
construction
(used on water car
&
chemical car)



END VIEW

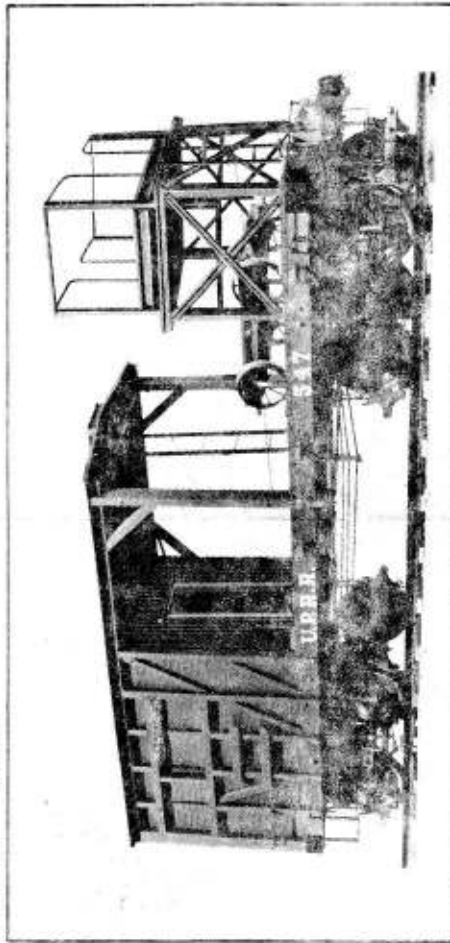


Refer to Page-1-
for model photos
use this page for
reference when
doing detailing.



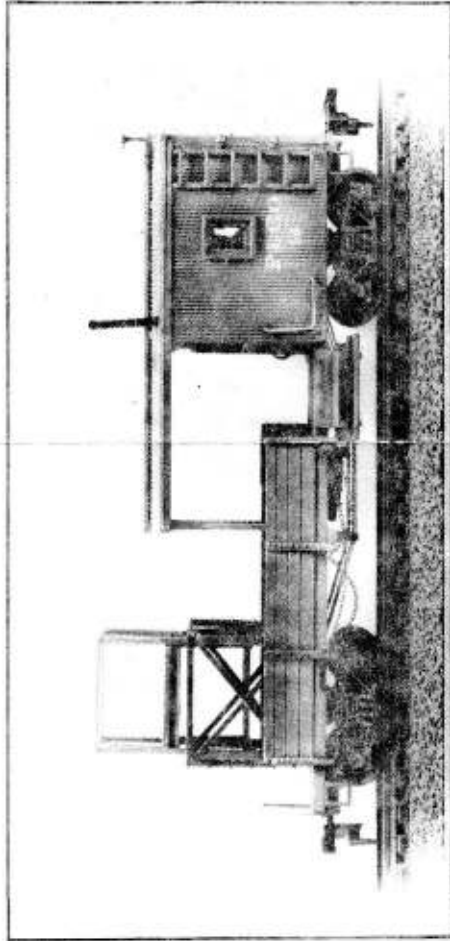
From the collection of Ed Best

RIGHT SIDE



Tower Car Assembly: Utilizes 36' metal underframe (box car). Use box car instructions for detailing underframe.

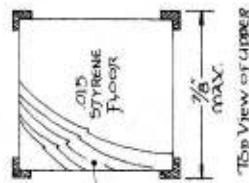
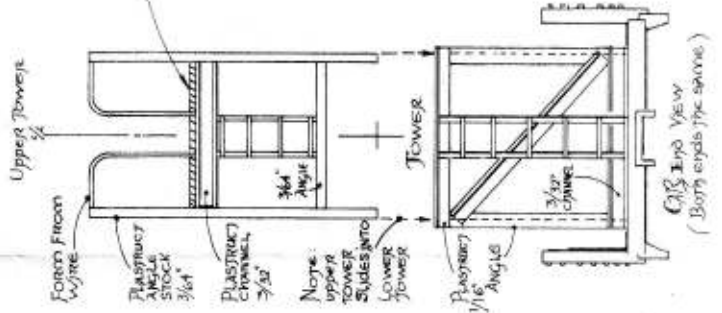
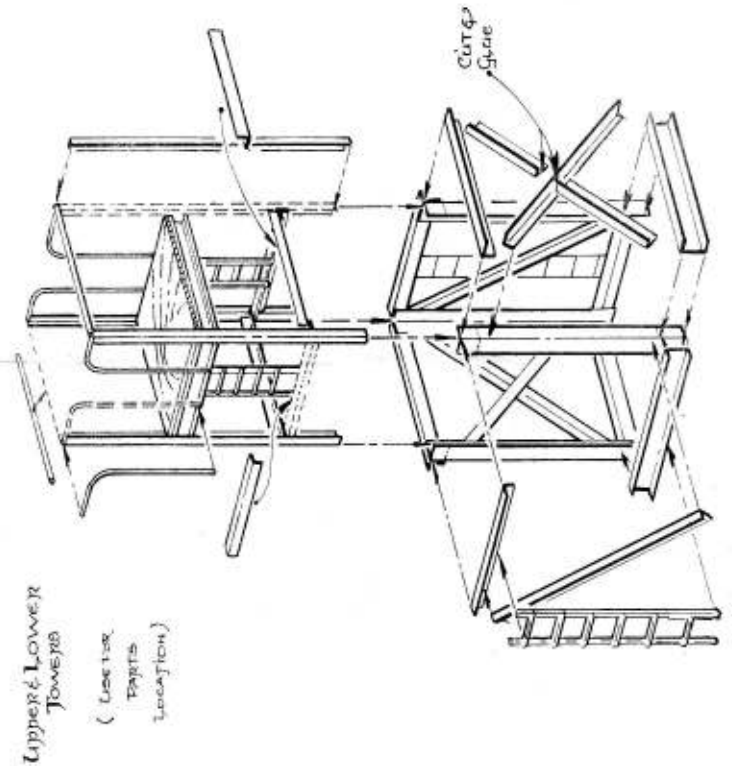
This is a real "fun" project and one that is sure to raise some eyebrows! ...Making a tower car in H-O out of strips of plastic is done once in a lifetime! So, I recommend getting the materials and doing the rest of the construction first. Then, when you have some spare time, construct the tower. By the way, ALL tower cars must work...no fudging...the real ones go up and down and so should yours.



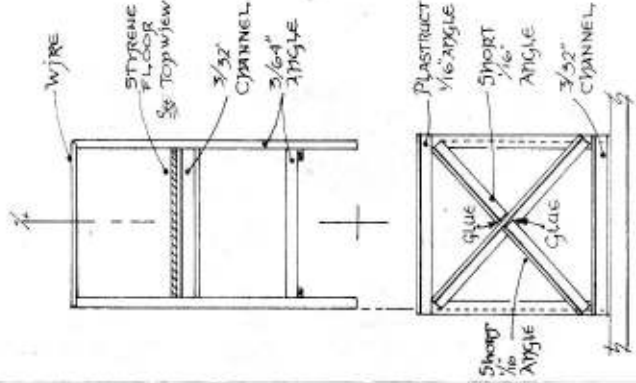
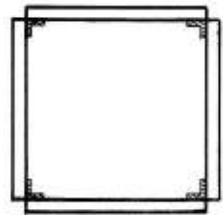
MODEL DIE CASTING, INC. - P.O. BOX 1927 - CARSON CITY, NV 89702

Tower Car Body: Use the remainder of the box car. Notice that the roof is left whole and is cut along the eave lines, back to 1-1/2 inches from the end. Use the trimmed side walls to enclose the inside open end of the cabin. The windows are Walther's part #941-575. The side planking is supplied with kit (Epoxy into place). Underframe: Follow 36' box car instructions for installation of cross rods, trucks and couplers. Tower construction: Materials, "Plastruc" angle 1/16" & 3/64", channel 3/32"

Refer to tower car construction drawing which is in H-O scale. Tape down on a smooth flat surface and cover with wax paper. Now you can do all necessary cutting and gluing.



This Drawing is HO SCALE

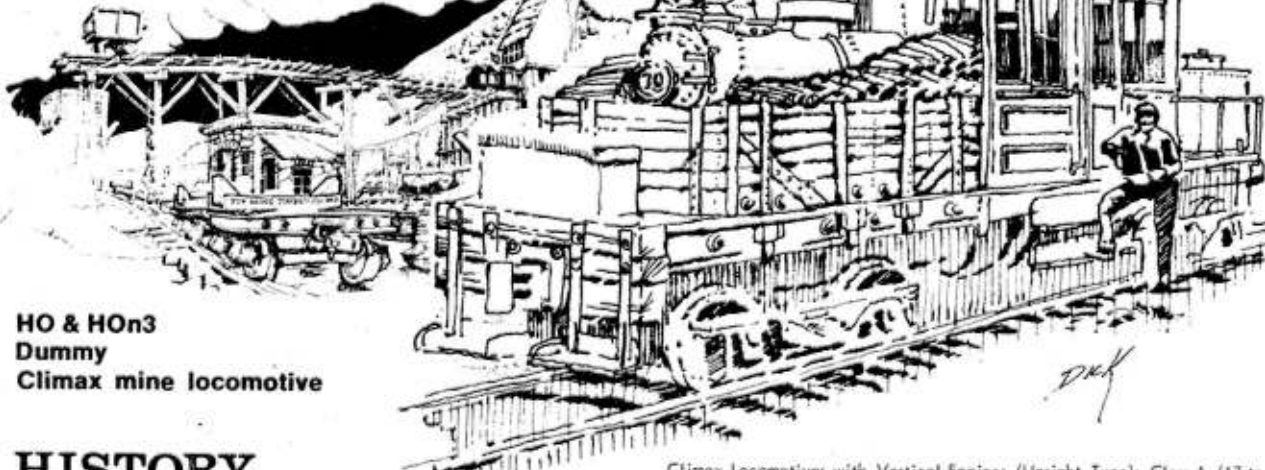


Side View (Both sides the same)

Top View of Lower Tower

Side View (Both sides the same)

BATTLE MOUNTAIN CLIMAX



**HO & HO_n3
Dummy
Climax mine locomotive**

HISTORY

The following brief history and general information was taken from the book **ARTICULATED LOCOMOTIVES** by Lionel Wiener (a Kalmbach publication).

The Climax locomotive was built by the Climax Manufacturing Co., Cory, Pennsylvania (U.S.A.). Its outstanding difference from the Shay locomotive is that the transmission shaft is located on the center axle, transmitting power through to the center of the axle; whereas, the Shay locomotive is powered on the right side of the power truck.

Transmission — A transverse crankshaft is driven by the engine through the intermediary of connecting rods with universal joints. This shaft has a master gear which transmits the power through the longitudinal shaft. This latter further transmits it to each axle gear through the truck pinions.

Gearing — A bevel gear is keyed to each axle, which meshes with a corresponding pinion on the transmission shaft. The gears are located alternately to the right and left of the transmission shaft. Special attention has been given to the springing of the trucks so as to overcome difficulties which may be caused by irregularities in the permanent way. There are springs under the ends of the bolster as well as the usual springing of the axles.

The transmission system is not designed for high speeds. The gear ratio for freight service allows a maximum speed of 12 miles per hour. A ratio of 2:1 is used for locomotives intended for passenger service, which permits a maximum of 20 miles per hour.

Frame — The main frame carries the boiler and the cab, with the fuel bunker and water tank at the rear. It is secured at its ends to the two trucks.

Firebox — This can descend freely between the trucks, but very deep fireboxes are not needed in this type of locomotive.

Valve Gear — Walschaert valve gear is used on locomotives weighing 45 tons or more.

TYPES OF CLIMAX LOCOMOTIVES

There are two types of Climax locomotives, one with vertical and the other with an inclined horizontal boiler.

Climax Locomotives with Vertical Engines (Upright Type); Class A (17 to 20 tons) and Class B (30 to 40 tons) . . . This type is used for the smaller locomotives up to 20 tons. The engine is of the two-cylinder vertical double acting type and drives the transmission shaft through a two-speed gear. The engine is located behind the boiler which is of the wagon-top type. The transmission shaft is provided with universal joints. These locomotives can be used on wooden rails if required.

Inclined Cylinders (Horizontal Type); Class B (30 to 60 tons) and Class C (70 to 100 tons) . . . This type is used for all the larger locomotives, which reach 30 to 60 tons for those with two four-wheeled trucks, and 90 tons for those with three such trucks. It more closely resembles an ordinary locomotive than the previous type.

Boiler — The boiler is of the wagon-top type. The water level is sufficiently high to insure that the fire tubes are not uncovered on any gradient. The steam dome is located at the center of the boiler so that a supply of dry steam is given whether the locomotive is running in forward or reverse gear.

Steam Piping — The five steam pipes leading from the dome to the cylinders have universal joints and pass through the smoke-box saddle. The exhaust pipes have similar joints.

Utilization of Climax Locomotives . . .

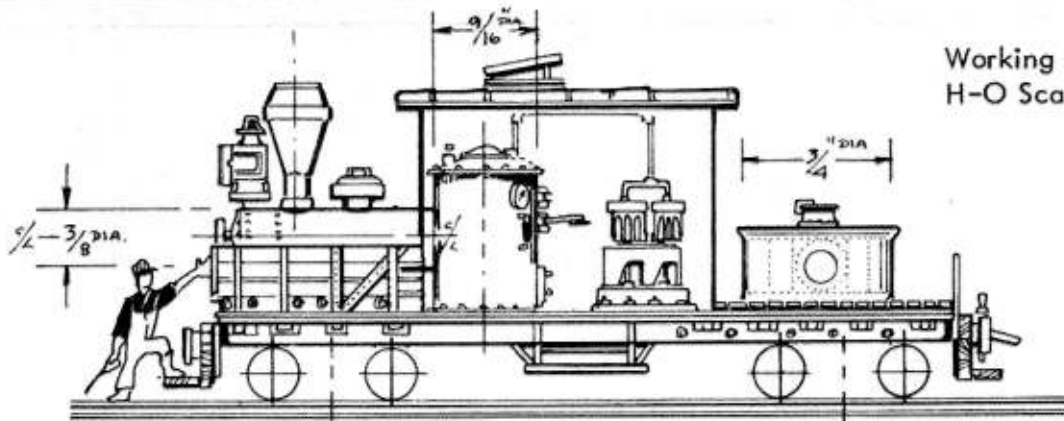
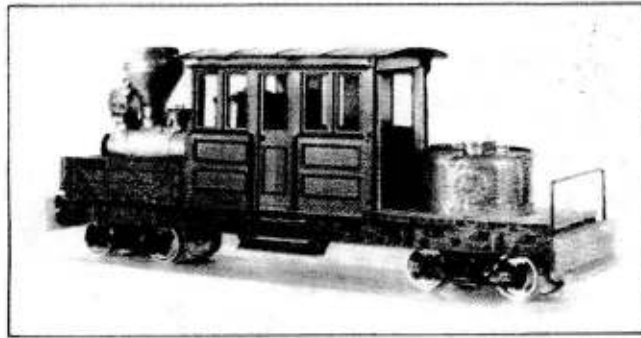
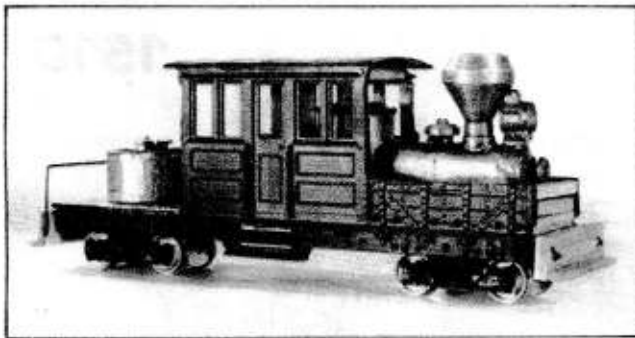
Like the Shay locomotives, the Climax locomotives are much used for logging railways, as also for other services where the gradients are severe, the curves sharp, and the permanent way inferior.

Climax Locomotives With Two Motor Trucks . . .

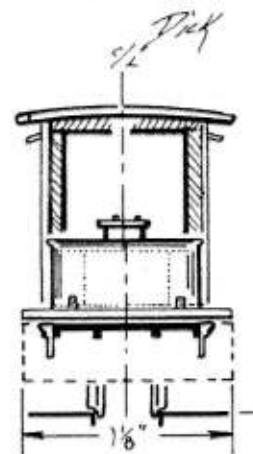
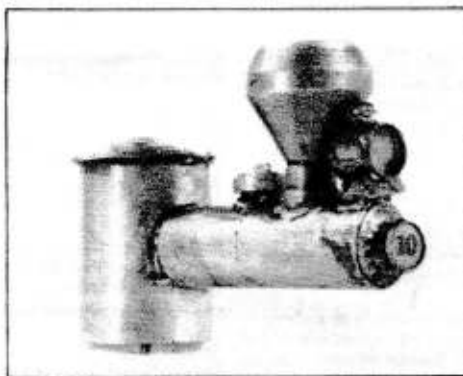
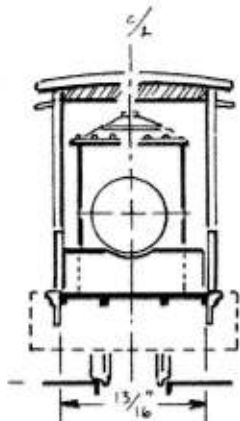
This is the most familiar type, and is built to a series of standard designs ranging from 20 to 60 (short) tons.

Climax Locomotives With Three Motor Trucks (Class C Climax) . . .

This type is built to a series of standard designs of 70, 80, 90, and 100 (short) tons (67 tons 14 cwt. to 89 tons 6 cwt.). The Jerome Railway (Arizona), a mineral line, uses the most powerful climax locomotives yet built, which weigh 90 (short) tons (80 tons 7 cwt.).



Working scale drawing
H-O Scale



PRINCIPAL DIMENSIONS OF CLIMAX LOCOMOTIVES

Type		CLASS A	CLASS B	CLASS C		
No. of Trucks		17-20 TONS 2	30-60 TONS/2-TRUCK	70-100 TONS/2- & 3-TRUCK		
Cylinders, diameter	ins.	7-3/4	9-1/8	12-1/4	12-7/8	12-7/8
Cylinders, stroke	ins.	11	12-1/4	14-1/4	14-1/4	16-1/4
Boiler Pressure	lbs/sq in.	160	160	172	172	172
Wheels, diameter		2' 5-1/4"	2' 4"	2' 7-1/4"	2' 7-1/4"	2' 7-1/4"
Wheelbase, truck		2' 3-1/4"	3' 8-1/4"	4' 0-1/8"	4' 0-1/8"	4' 3-1/4"
Wheelbase, total		19' 0"	20' 4"	26' 0"	26' 7"	26' 11"
Overall Length		29' 8"	26' 11"	32' 4"	33' 6"	34' 6"
Overall Height		10' 10"	11' 3"	12' 3"	12' 0"	13' 6"
Water Capacity	cu ft.	67	81	159	187	201
Coal capacity	tons cwt.	1-0	1-0	1-10	1-19	2-9
Wood Capacity	cu ft.	32	64	95	110	127
Weight, Empty	tons cwt.	17-16	16-17	28-16	34-12	39-12
Weight, In Service	tons cwt.	17-16	17-16	31-12	40-11	44-10

* The data as to loads drawn are those furnished by the builders.

MODEL DIE CASTING, INC., P.O. Box 1927, Carson City, NV 89702, U.S.A.

DUMMY

BATTLE MOUNTAIN

CLIMAX

BASIC KIT
INSTRUCTIONS

HISTORY

The Climax Locomotive was produced by the Climax Manufacturing Co. in Cory, Pennsylvania. Designed in the late 1800s, the Climax was designed as a logging locomotive with a 1:1 gear ratio and attained a maximum speed of 12 mph. Of interest also is the fact that the Climax locomotive was also used for passenger service, utilizing a 2:1 gear ratio, giving it a whopping 20 mph top speed! The early styled Climax design was a virtue of simplicity; one flat car, with a 2-cylinder tug boat steam engine in the center, enclosed by a cab; a boiler at one end with a fuel bunker at the other end! The Climax was powered by a transmission and spline shafts, coupled with universals located below the superstructure and centered between the geared trucks...much like today's automobile.

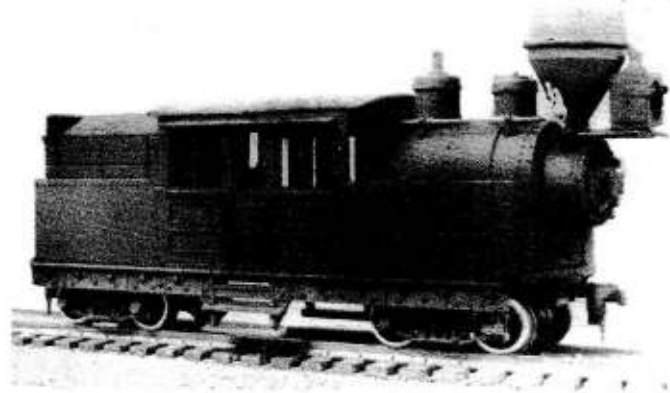
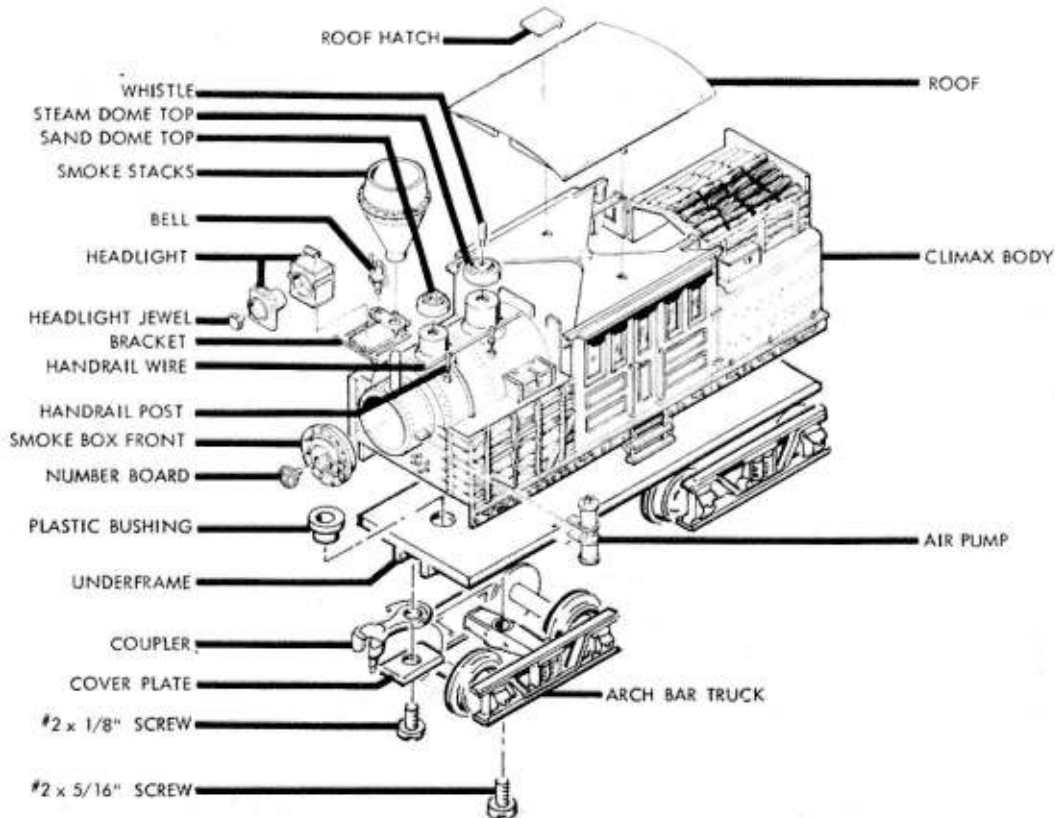


Photo above: Typical kit construction for HO version.

Note: Kit contains two moldings, containing details for Climax. Refer to drawing shown below for proper part and location. Kit is packaged with many extras; these may be attached wherever you wish.



Underframe Assembly:

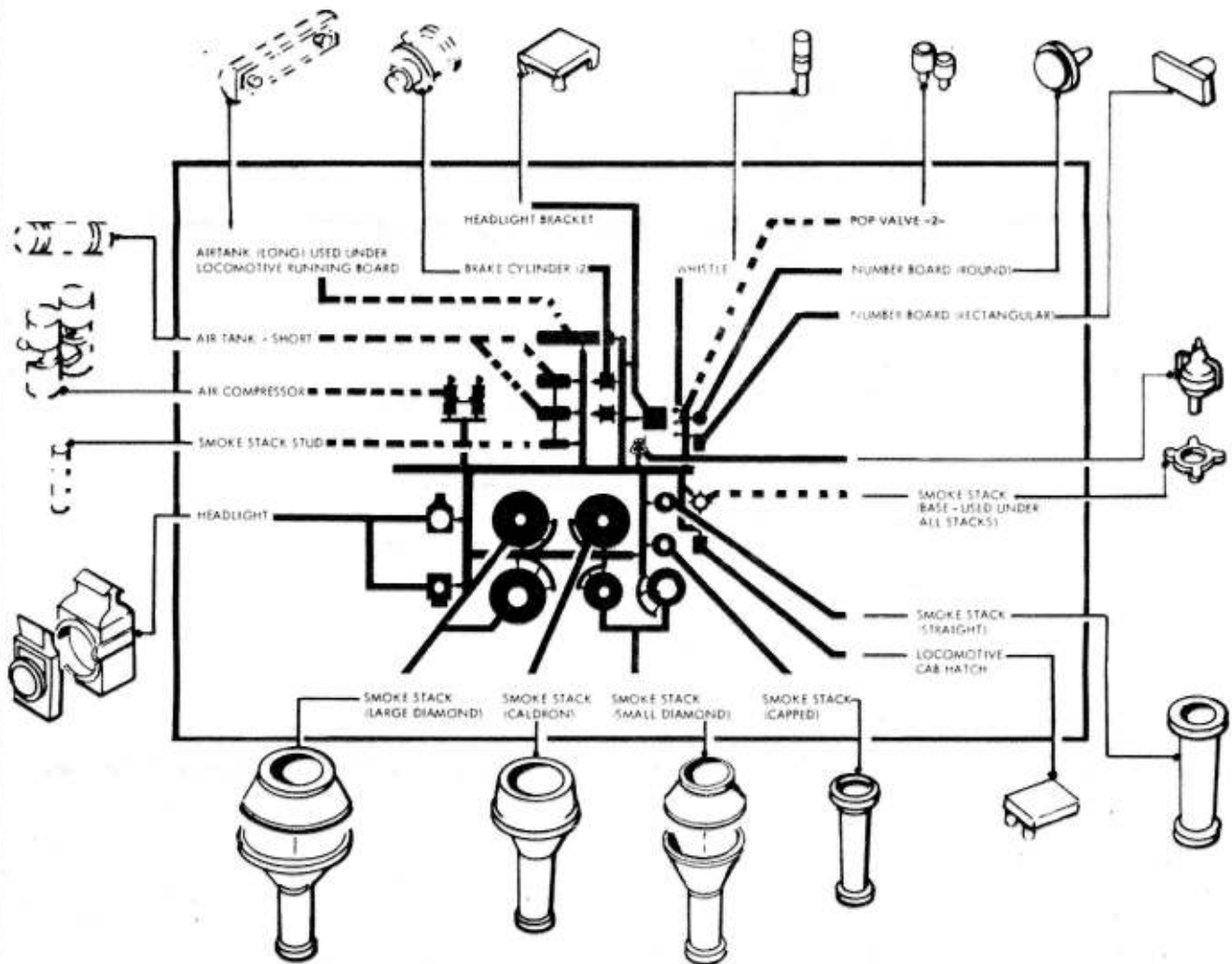
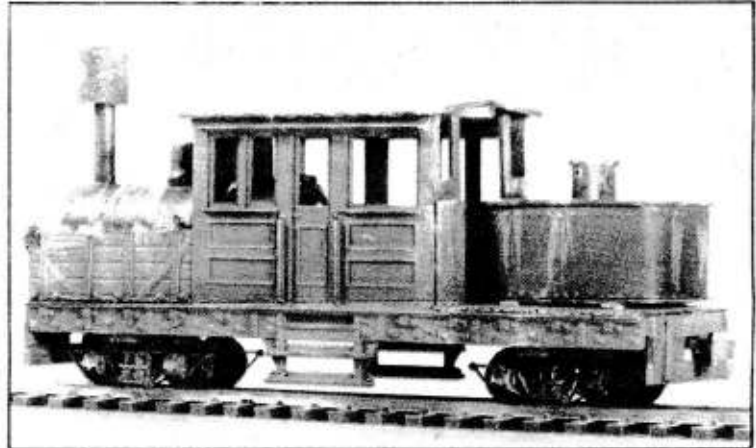
- 1) Insert plastic bushing into truck bolster holes (top of plastic underframe). Place underframe on a wood block and gently tap into place.
- 2) Coupler Installation: Insert coupler into coupler pocket. Attach cover plate and secure assembly using a #2 x 1/8" screw. Put a spot of glue on the rear of cover plates to keep them from turning.
- 3) Attach arch bar trucks to underframe securing using #2 x 5/16" screw, DO NOT tighten too tight; trucks should turn freely.
- 4) Glue finished underframe into bottom of Climax body. Note: If you are going to use your Climax as a dummy with other locomotives, you should add some weight, 1oz to 2 oz (wheel weights, or fishing sinkers).

Body Assembly - Refer to instructions illustrating body detailing.



CLIMAX

LOCOMOTIVE
DETAIL MOLDING



----- Optional parts
(not used in kit)

CLIMAX

Kit does not contain small boiler which is illustrated in the photographs.

NARROW GAUGE DUMMY CLIMAX CONSTRUCTION TECHNIQUES

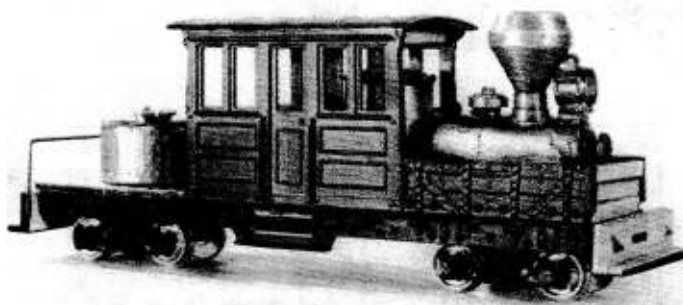
- 1) Detailed in the "kit bashing" drawing you will see a drawing B1 and B2 illustrating the left and right sides of the Climax after cutting. Follow outline given. To cut plastic Climax body use a Jeweler's saw or Dremel cut-off abrasive wheel; sand both sides smooth. Also cut off bottom step. Refer to drawing 2

- 2) Floor Construction, utilizing plastic standard gauge floor. (See drawing 1). If you are going to make a narrow gauge Climax you will need to narrow the floor by removing plastic from both sides. Trim approximately 1/4 inch off from each side and sand smooth.

Next, glue and insert into place the plastic bushings. Lay floor on a firm surface and, using a hammer, lightly tap plastic bushing into place. When glue is dry, file off exposed bushing tops flush with top of underframe.

- 3) Position and glue the left and right sides to the finished underframe. Top of sides should be flush with underframe top. Use masking tape to secure sides. Make sure top of cab is level and straight. After drying go to next step. Usually you should wait 24 hours. See drawing 3
- 4) End Assembly. (Front and Back). Use sheet styrene, .020 to .030 thickness. Refer to drawing 4.

The early class A Climax had open ends for ease of obtaining fuel held in the side bunkers. We have included drawings for the all-weather enclosed cab version should you wish to build it.



- 5) Roof Modification. Since the floor has narrowed, likewise so should the roof be cut down. Before trimming, sand the inside details off and then trim 3/8 inch from one side. Length will not be altered. Attach and glue roof into place or set aside until the Climax boiler and water tank have been attached. Refer to drawing 4

- 6) Boiler Construction. The small Class A Climax (17 to 20 tons) utilized a vertical (steam donkey) boiler, just like those used on early fire engines. The Class B Climax (30 to 40 tons) used a vertical and "T" boiler or a horizontal boiler, much like conventional locomotives.

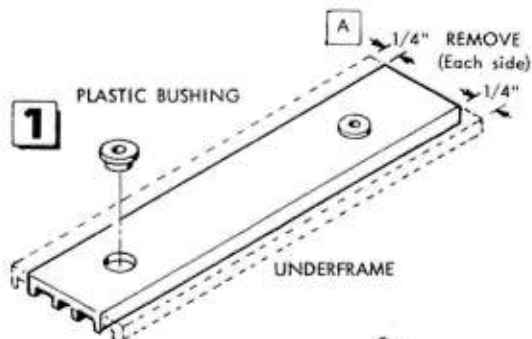
Although at the turn of the century, more modern Wagon Top boilers were put into use and less vertical boilers, and small Class A Climax engines were built. Therefore, you can model just about any style boiler on your locomotive; but we recommend using one or two that will look just right: Scale Structures vertical boiler or Keystone's Horizontal boiler. (See Walther's catalog for availability.)

If you should like to "scratch build" your own boiler out of brass tubing or styrene, by all means do so; it adds a great deal to the fun and eye appeal of the finished model. K&S brass tubing is found in all model shops and comes in all sizes. See separate page for boiler.

Continued on back side.

HO₃ KIT BASHING VERSION
or 'N' gauge for operation on 'N' gauge track

- A CLIMAX UNDERFRAME
Cut as illustrated, and sand sides smooth.

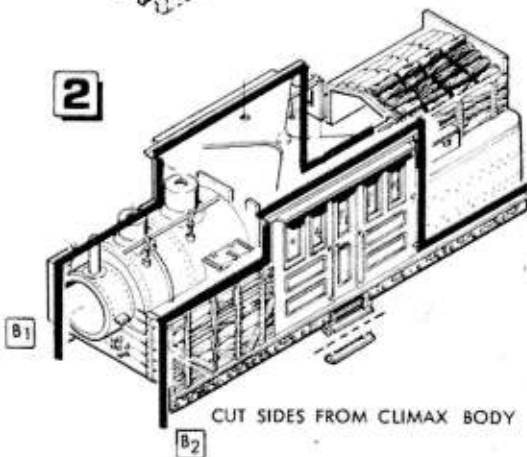


- B Body Construction (Kit Bashing Techniques)

Climax HO Body:

Using jewelers saw, cut along back line. Save center section for parts.

Step - Cut off bottom step.



CONTINUED ON BACK

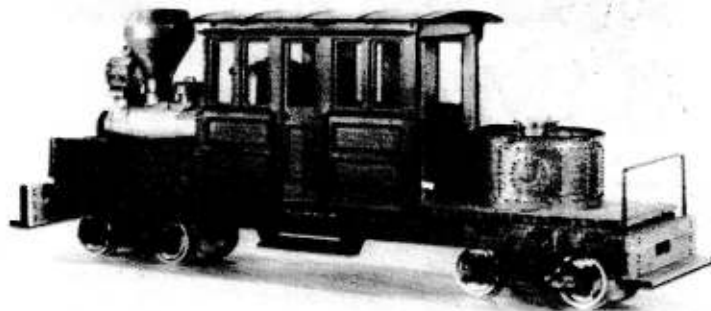
(Narrow Gauge Trucks - Not supplied)

- 7) **Rear Decking and Water Tank Construction.** For the best overall appearance to your model you should (plank) the floor using wood toothpicks or Campbell's HO wood ties. Simply measure the inside cab and front fuel space and glue into these areas the trimmed toothpicks. Next, measure out and cut a batch of 1 inch to 1-1/8 inch toothpicks for the rear water tank deck. (An easy method is to simply glue whole toothpicks into place and when dry, trim off with a Dremel emery cut-off wheel!) When dry, sand lightly and stain using "weather-it" by "A. West Products." (Be sure to mask wood when you do your finished spray painting!) Refer to drawing [3]

While we're at it, and using toothpicks, build up a front section to close in the wood fuel bunker!

The Water Tank can be constructed from a 5/8 x 1/2 inch high piece of wood doweling. Make a masking tape or wine bottle lead wrapper; add details, and glue onto wood dowel section. Cover can be made from a piece of .030 sheet styrene. Add filler cap and strap iron supports. Refer to drawing [4] & study the photographs.

- 8) **End sills and coupler boxes.** Use scrap bin or build up from HO wood railroad ties. Add strap iron and scale Kemtron bold head castings.



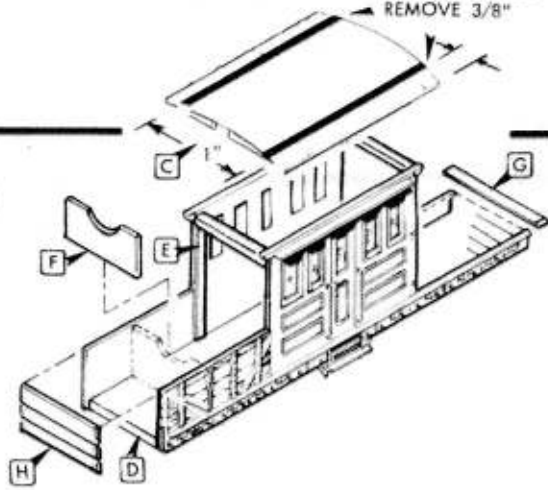
This concludes the basic kit bashing instructions which are used to make a Dummy Old Timer narrow gauge Climax.

Study the drawings and photographs furnished with the instructions to better understand this project. You will notice that we have incorporated many small details, as found on the prototype Climax engines. These "super detailing" parts are not covered in the written text; we felt that you, as a "kit bashing" modeler, could add what you felt was needed or substitute other scale details.

- END -

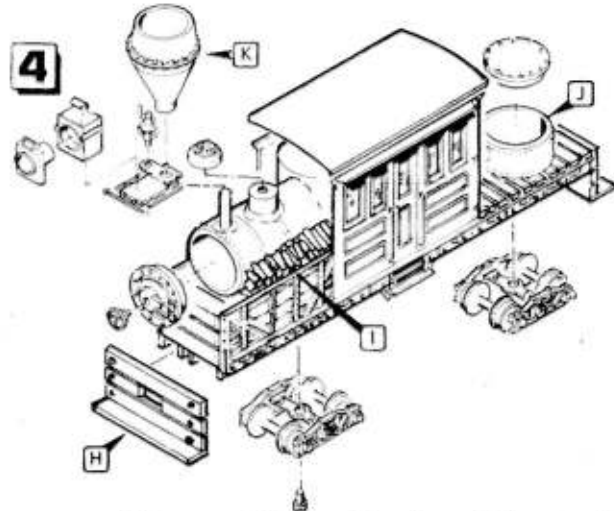
FROM BOTH SIDES
REMOVE 3/8"

3



- [C] Roof - (1" width) Cut off small section from both sides.
- [D] Attach underframe to right and left sides.
- [E] Use wood on styrene .025 stock and construct upright and horizontal supports (see illustration).
- [F] Boiler support - Construct for your own boiler. Note: Narrow gauge boiler is not furnished with kit. Sample boiler is made using 3/8" brass stock and rear section is 9/16" stock soldered together.
- [G] Rear platform decking - Use Campbell Scale HO wood ties (1-1/8").
- [H] Final assembly - Make front and rear end sills and foot board using ties.
- [I] Wood bunker load - Toothpicks.
- [J] Water tank - 3/4" dowel cut small section 3/8" high. Cover using thin brass or lead stock. Do your own riveting before attaching to wood dowel.
- [K] Assemble plastic details per instructions.

4



(Narrow Gauge Trucks - Not supplied)

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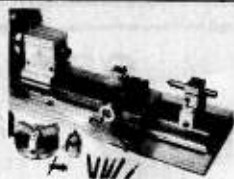
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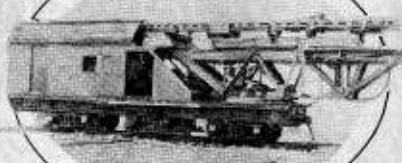
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specific railroad to make an educated guess
at what might have been?

Colors on the older cars were also more
drab, mostly tuscan or boxcar red for house
cars and either tuscan or black for hoppers,
flats and gondolas. Refrigerator cars, after
the ICC banned private owner reefers in the
early 1930 period, often had tuscan red
bodies with sides of red, white, yellow or
orange. There were always the inevitable ex-
ceptions to make the passing scene a bit more
interesting. Even steam locomotives in the
good old days of the 1930's could be found in
maroon, orange, red, blue and other "gaudy"
colors.

One night, I made the interesting discov-
ery that wooden style MDC roofwalks fit
Athearn 40-foot steel AAR cars perfectly,
permitting me to visually age these cars by a
few years. Conversely, I assume that the
Athearn metal roofwalks would also have to
fit the earlier MDC cars, making it possible
to upgrade the older style MDC cars by a
decade or two. A growing number of model-
ers has taken to removing roofwalks from
kit-built cars in conformity with the latest
FRA rulings. Take a look at a passing freight
train from an overpass. Hardly any older
freight cars have roofwalks any more, al-
though brackets for them usually remain. If
you're modeling the current era, roofwalks
are on the endangered species list.

I still like the modern stuff despite the
direction I've taken with the SN. There's a lot
of it stashed in railroad room cabinets, espe-
cially Erie Lackawanna which takes me up
to the Conrail era, and one of these days I'll
probably add a few of the blue CR beasties to
the collection.

A new breed of O gauger

I note that many of the new breed of 1/4"
scale modelers look at you quizzically if not
hostilely when you (jokingly) refer to them as
blacksmiths and sand casters. The new breed
has never even seen a 1935 vintage Scale
Craft Pacific with giant third-rail shoes
sticking out from under the cylinder block
and tender trucks. The new breed knows that
being almost double the size of HO, O gauge
(er, scale, that is) has the potential for pack-
ing in lots more detail. I wonder if the new
breed would change their mind if they could
see an old sand-cast O gauge articulated eas-
ing its way around wide sweeping curves,
third-rail shoes sparking, while hauling 60
to 70 heavy O gauge freight cars. Probably
not.

Winter vignette

I was driving down a local country road
following the old Lehigh & New England
right-of-way after the season's first snow
when an old—and small—turntable pit
loomed into view. Investigation revealed it
had been used to reverse a gas-electric car at
one time. The snow also made a number of
other old railroad culverts and bridges stand
out, the undersections black against the con-
trasting white surface. It was like looking at
a well-ballasted right-of-way in model form,
all finished except for the addition of the ties
and rail.

Hel

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inued items. Many dealers may have some
of these items on their shelves, so if you
want 'em, you'd better get busy.



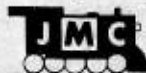
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Notes on an old timetable

editorial/HAROLD H. CARSTENS

The cut-off date

I have never been one to worry overly about specific cut-off dates for my model railroad. I've always modeled in "the present," and if I took a fancy to an old-time pay car, diamond stack 4-4-0, or some obscure piece of railroad equipment that has long since vanished from the railroad scene, I wasn't overly concerned. If Train No. 1 was all-streamlined, Train No. 3 departing 30 minutes later could just as well have two old open-end coaches with power provided by an old wood burner. My collection of scale model railroad equipment includes pieces from about 1830 right through the present. I enjoy them all.

As I started gathering old and new equipment for the Susquehanna Northern, I decided at an early date to have lots of camelbacks and smaller steam power with equipment to match—not really turn-of-the-century, but equipment of the 1930 period up to and including some of the first-generation diesels. I realized that the new road would have a decidedly Eastern flavor but didn't give it too much additional thought—until recently when I placed the latest batch of new cars on the shelves where equipment is stored until the layout is ready to accept the rolling stock. I realized with a start that I was looking at equipment which I hadn't seen on the real railroads in any quantity in many years. Freight cars were predominantly tuscany or black, and few of the cars were emblazoned with the gaudy colors, slogans or heralds that would be common several decades in the future.

Missing from the collection were such big road names as Conrail, Burlington Northern, Illinois Central Gulf, Chessie System, Amtrak or the Family Lines. I was staring at rolling stock from the Reading, NYO&W, Lackawanna, Erie, Lehigh Valley, Pennsylvania, New York Central, Jersey Central, Lehigh & New England, Susquehanna, and Lehigh & Hudson River. Fifty-ton hopper cars made up more than half the fleet, and of these most were lettered Susquehanna Northern or Erie. Double-sheathed wooden boxcars were common, and the lettering on these cars was different than that seen today on passing freight trains.

The road's crack passenger train was also taking shape, heavy on head-end equipment to pay the freight. The SN still needs full dining car service, but there is buffet service in the open-end observation car. Pullman service has also been inaugurated with the arrival of three old heavyweight cars, which

Jim Boyd thought was a real bit of "camp". You won't find the cars on any Pullman car roster: *Camp Grant*, *Camp Berkeley*, and *Camp Crowder*—a nostalgic touch for at least a few of our readers. All the letters were easily assembled in groups from an existing Pullman name decal sheet from Champ, and no doubt the same could be done with a Microscale or Walthers name or alphabet set.

Finding data for freight cars having lettering dating to circa 1940 is not easy, as several other local modelers seeking the same information have also discovered. Clear freight car photos of the period are scarce. Most photographers of the period shot only locomotives or moving trains at a rakish head on view, an angle which took full advantage of the slower films and lenses of the period—and which effectively obscured lettering data from the negative. Back issues of *RAILROAD MODEL CRAFTSMAN* were of help, but rarely did I find the specific cars I was looking for. Decal lettering guides by Walthers and Champion were also of help but didn't show the specific cars to which they were applied. Additional photos were shown in the Carstens *ROLLING STOCK PLAN BOOK* and the *Car Builders Cyclopedias* in either original or reprint form. Also invaluable for such rolling stock research is our new Carstens Railroad Book series which now includes NYO&W, Long Island, Western Maryland, Union Pacific and very shortly Susquehanna. As a magnifying glass wanders over the corners of the photos seeking out elusive bits of car detail and lettering information, an occasional nugget is unearthed. *Official Equipment Registers* for earlier years are very helpful in learning number series of cars and their basic dimensions, but they tell nothing of how the cars were lettered.

I know personally several modelers who have done 50-ton hopper cars for the New York, Ontario & Western. Both modelers lettered the cars "NYO&W" and the circular O&W herald, but both modelers admitted they had never seen the cars lettered in that fashion and knew that in recent years the cars lacked heralds and had either "OW" or "O&W" lettering. The NYO&W did letter an earlier high-sided wooden gondola series with the circular herald, and it is likely that the steel cars were once so lettered—but no one has yet turned up a photo.

The temptation to fudge it is there. If I can't find a photo documenting a certain car, why shouldn't I go with my best guess if nobody is there to tell me I'm wrong? Many modelers even fudge it with modern equipment due to limitations of what's available. So do the manufacturers, because they've learned that modelers will buy any equipment lettered Santa Fe, Southern Pacific or certain other roads, even though they know the railroads didn't own that car or engine. Occasionally, such "errors" cause a purist to scream, even to the extreme of claiming fraud. Scale model railroad equipment also includes things which could have been, perhaps including Conrail steam loco decals.

Ultimately, it has to be up to the individual modeler to decide how much time he or she can afford to devote to critical accuracy. Most modelers try to model freight cars as closely as possible within the limits imposed by availability. On a six-digit boxcar, does it really matter if the car did or didn't have Youngstown doors, Dreadnaught ends, or Dalman trucks. Somewhere one of the cars might have been reshipped with just that combination. Do we know enough about the

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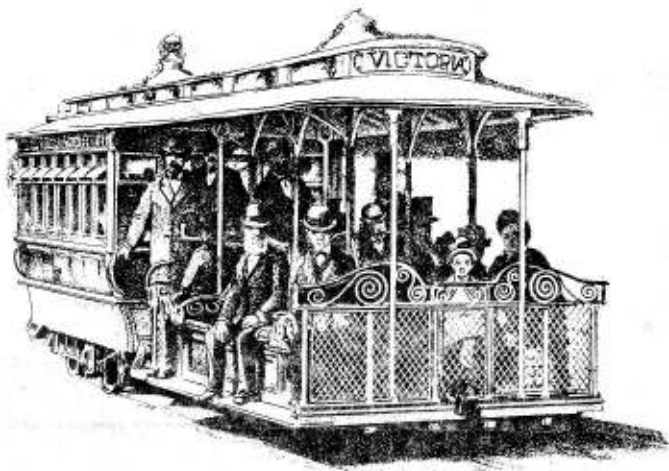
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VICTORIA SQUARE

STREET WIRE ROPE RAIL ROAD. FORMERLY A HORSE ROAD

#1511, #1512, #1513 (3 in 1) Theme Kits,

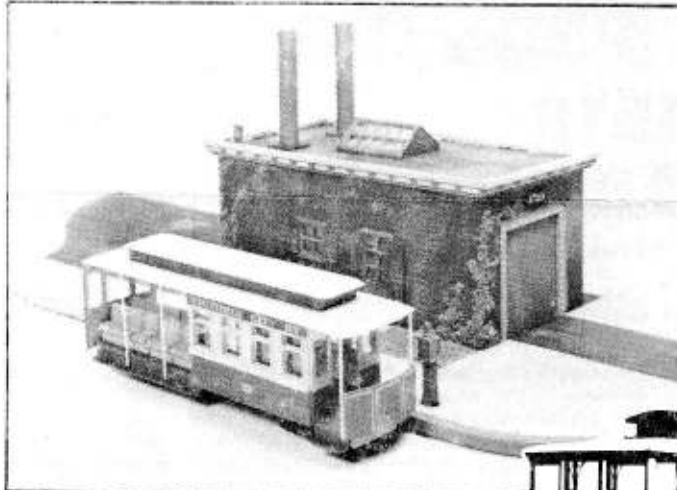
RESTAURANT AND STATION

Kit #1511 will contain two car kits: a modern style steel 40' AAR box car and a modern steel sheathed, 2-window caboose. Model kits are un-decorated. Kit also contains a special building kit. The instructions illustrate the Victoria Station "look-alike" model version of the famous restaurant.



KIT BASHING & SOME PARTS AS ILLUSTRATED NOT ENCLUDED!

STREET RAIL ROAD



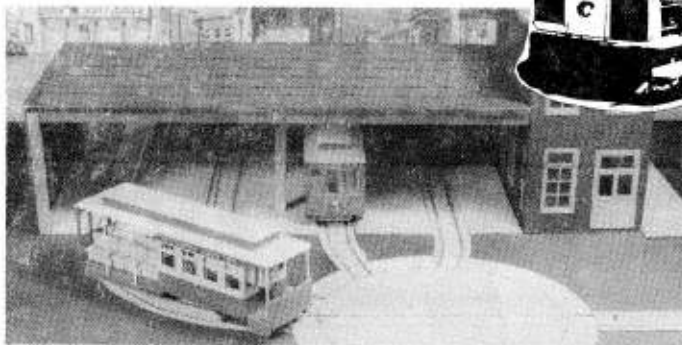
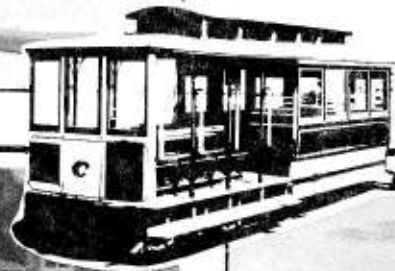
Cable Car as pictured is not available!



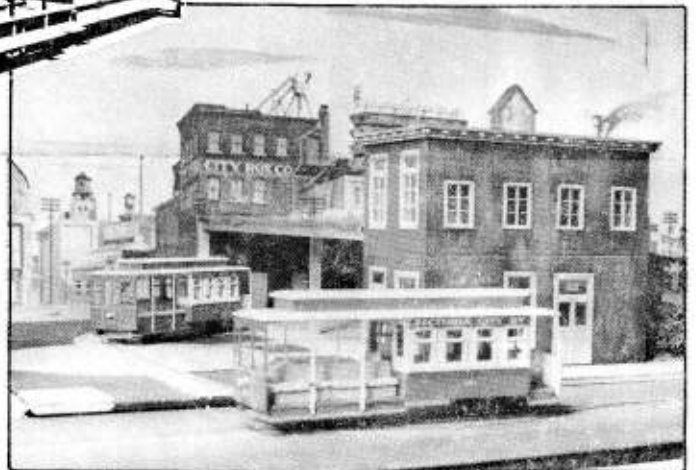
Cable car is constructed from passenger car!

Kit #1512, Victoria Cable Car and Power House. We will utilize our 34' Overton Passenger car and a single-story brick building kit. Instructions will cover the cable railway and illustrate some of the major prototype functions of the "Big Wheel", which moved the cable car empire.

kits require kit bashing and some parts from other manufacturers.



Kit #1513, Victoria Brick Car Barn and Repair Shop, complete with a special sheet of idea starters. This kit can be built utilizing the components to achieve a "typical old time street scene", just like San Francisco during the turn of the century, or the modeler can make a cable car barn. Both ideas are fully covered in the instructions.



CABLE CAR BARN

Model Die Casting, Inc.

P.O. Box 1927, Carson City, NV 89702

1512 VICTORIA SQUARE CABLE CAR & POWER HOUSE PART 2



SYSTEM OF WIRE ROPE



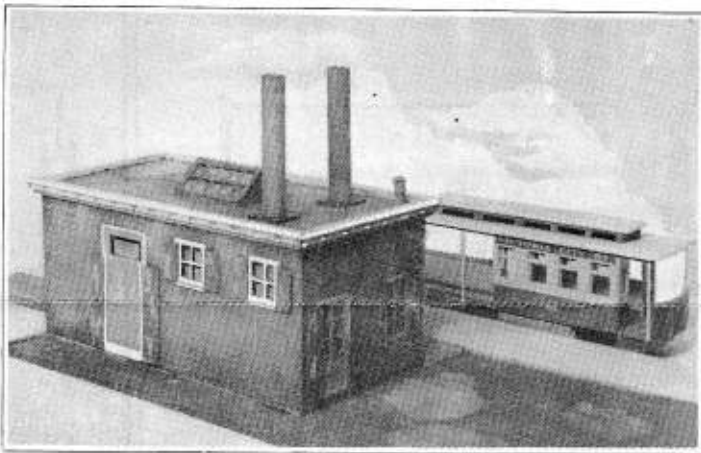
STREETRAIL ROADS.

#1512 INTRODUCTION — Victoria Square — Cable Car & Cable House

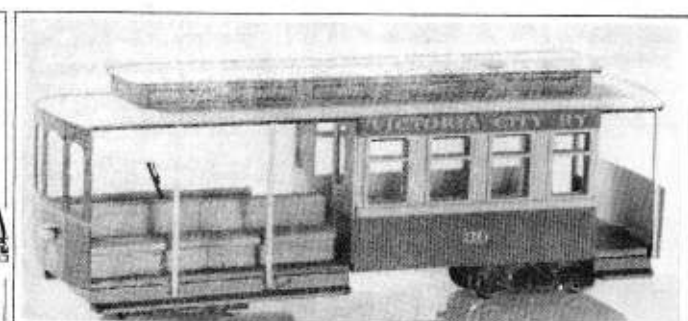
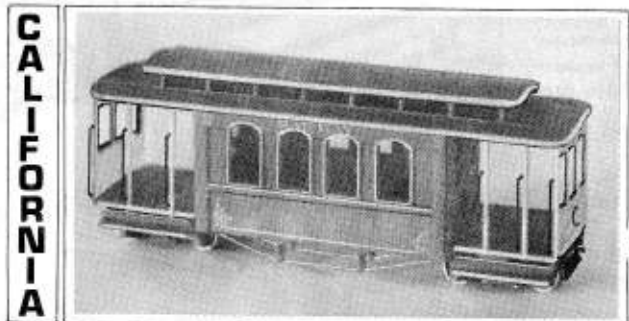
This kit is Part -2- of a series of three kits entitled "Victoria Square", consisting of a single story brick building and two passenger car kits (which can be made into four cable cars). Refer to our "Victoria Square" flyer for more information covering part -1- and part -3- of this series.

Part 2 of "Victoria Square" contains two separate sets of instruction sheets, one for a "typical kit construction" and the second covering the "kit bashing" instruction drawings for making two different styles of San Francisco cable cars and a building to house the cable machines. We hope you will enjoy this (3 in 1) kit as much as we have in putting the whole concept together.

Please bear in mind that this kit was designed for "kit bashing" — a true



learning experience! We have included a large supply of parts but, of course when you start kit-bashing you will need to purchase or make some of the detailing items. With each project you will find reference to parts not included in this kit; i.e., "cable car seats, styrene sheet plastic, and cable car details". Check with your hobby shop for this material.



ASSEMBLY INSTRUCTIONS — Victoria Square — Building Assembly Instructions

See page 2 for assembly drawing —

Please note building walls will vary from drawings and photos due to our supplies. Please read (typical kit construction sheet) first before starting building assembly. You will also find a separate section on "kit bashing" buildings, titled "Idea Starters".

Historically as a background, cable car empires utilized a cable house (housing the big wheels that turned the cables for locomotion) and an underground cable system which transmitted the power to the cars.

A modeler should become aware of these operating characteristics. Basically, MDC will (in a short passage) impart some of the fascinating highlights associated with an operating cable and the plant that generates the "big pull".

The "old timer" 1870s cable house and power plant utilized steam engines for their power source and contained a vertical 14 foot high steel wheel for each line and a set of smaller wheels which held the line cable tension. The cables were made from woven metal strands and the cable was 1-1/2 inches in diameter. For a cable car to utilize the cable, which was moving at (9 mph) within a vault under the street, it needed a "grip", a mechanical hand to snatch up the cable or let go of the cable. Also, brakes to slow and stop the cable car. Simple devices: shoe brakes, rail brakes and an emergency brake; an 18 inch steel wedge which dropped into the slot between the tracks! The modeler needs to envision this system for his model layout. Track mounted flush with the street with a black line drawn down the middle between the rails. A thin

metallic "artist tape" can be used to simulate your cable car track. Another great attraction is the cable car "turntable". Draw a 25' HO scale circle and line in white paint, then cover inside with a simulated wood board top. Make one for each end of your line. The switches are single point traction type.

"Cable House" single story brick building is utilized to house the steam engine and the big wheel for the line's single cable car line.

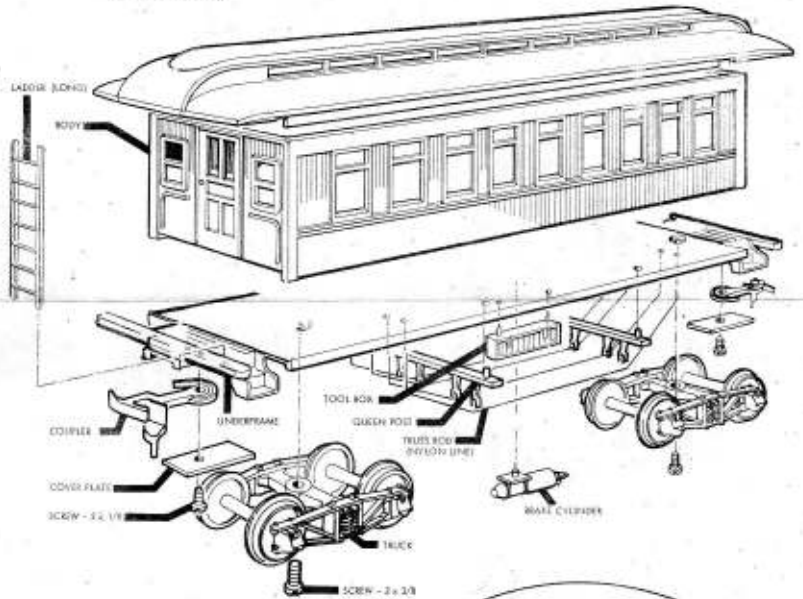
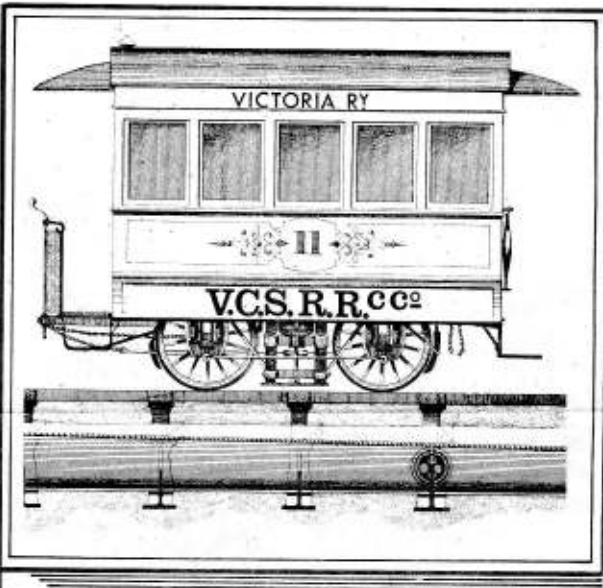
Kit Construction: Lay out the brick walls (two long walls for sides and two short end walls) and separate windows and doors from runner. Kit parts vary; therefore, exact descriptions of parts are not given. Study photos and drawings for ideas. Also, for proper building techniques, read the "typical building construction" sheet.

Super Detailing: Idea Starters ... Roof transoms and smoke stacks (not supplied). You might want to put a stationary boiler along the side of the cable house. Front wall of building: Kit has a blank end wall; you can cut or glue a simulated corrugated large door on this wall. Better yet, have door open and detail interior, showing the "big wheel" and cable layout.

Painting Instructions: Paint building walls with an enamel spray paint; while paint is wet use a soft rag soaked in thinner and wipe paint off the bricks into the cracks. Do one wall at a time. When the walls are finished your building walls will look like actual bricks. You can also paint the brick facing of the cornices and roof moldings.

VICTORIA SQUARE

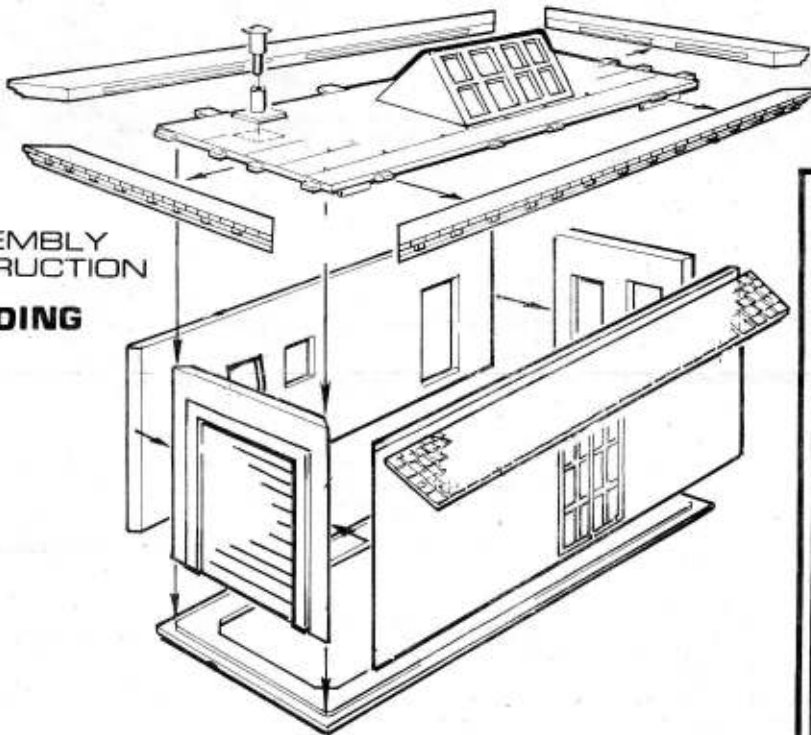
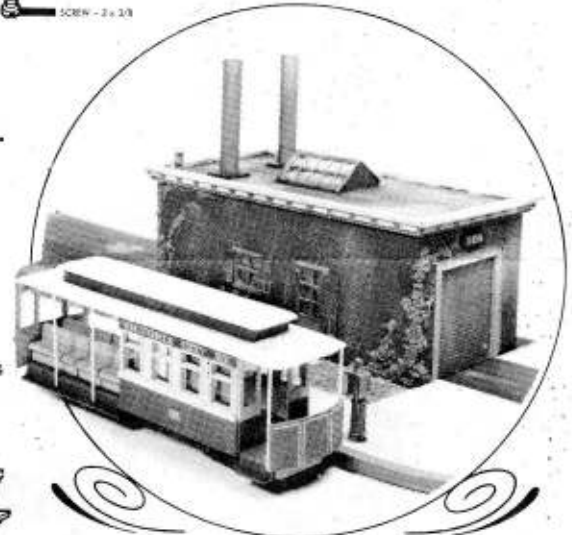
DUMMY.



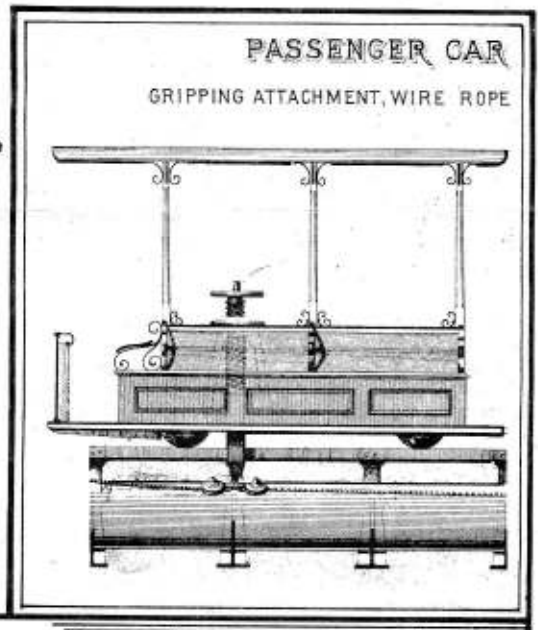
ASSEMBLY INSTRUCTION 34' OVERTON COACH

Place coupler into box on underframe and attach cover plate with $2 \times 1/8$ screw. Put some glue on queen post attaching pegs, insert into location holes and allow to dry. Starting from top of underframe, thread the truss rods (nylon thread) down through one of the outside holes, leaving an inch on the upper side taped down to hold it in place. Cross to other end, go up through outside hole on same side. Cross to next hole, down through it, then toward other end and go up through corresponding hole. Repeat same procedure for other two truss rods. Finish by taping free end to the floor to secure. Note, if line is stretched over the queen posts too tightly, floor will buckle. Tension can be eased by lifting tape. Attach and glue tool boxes and brake cylinder.

Glue platform railings as illustrated in drawing. Glue brake wheel to brake staff wire and insert into small socket at each end of platform. Cut long ladders from plastic runner and glue base of each ladder in location holes on platform only. This allows roof to be removable. You can glue it in place if you prefer, but leaving it loose will provide access to interior for adding detailing if you are so inclined.



ASSEMBLY INSTRUCTION BUILDING KIT



MODEL DIE CASTING INC.

3811-15 W. ROSECRANS, BOX 926 • HAWTHORNE, CA. 90250

California style 1512 CABLE CAR

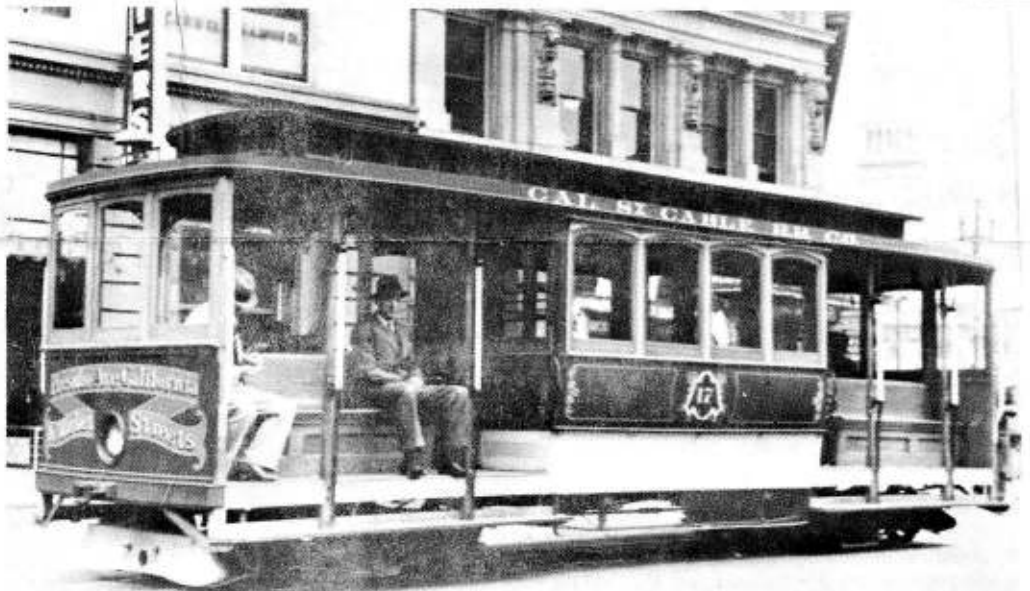
Assembly instructions: Note - Kit bashing needed.

Modeling Notes:

The "California" style car is produced from the contents of the passenger car kit.

Follow the written instructions (page 6) and drawings below.

Note: The California car drawings are not to scale.



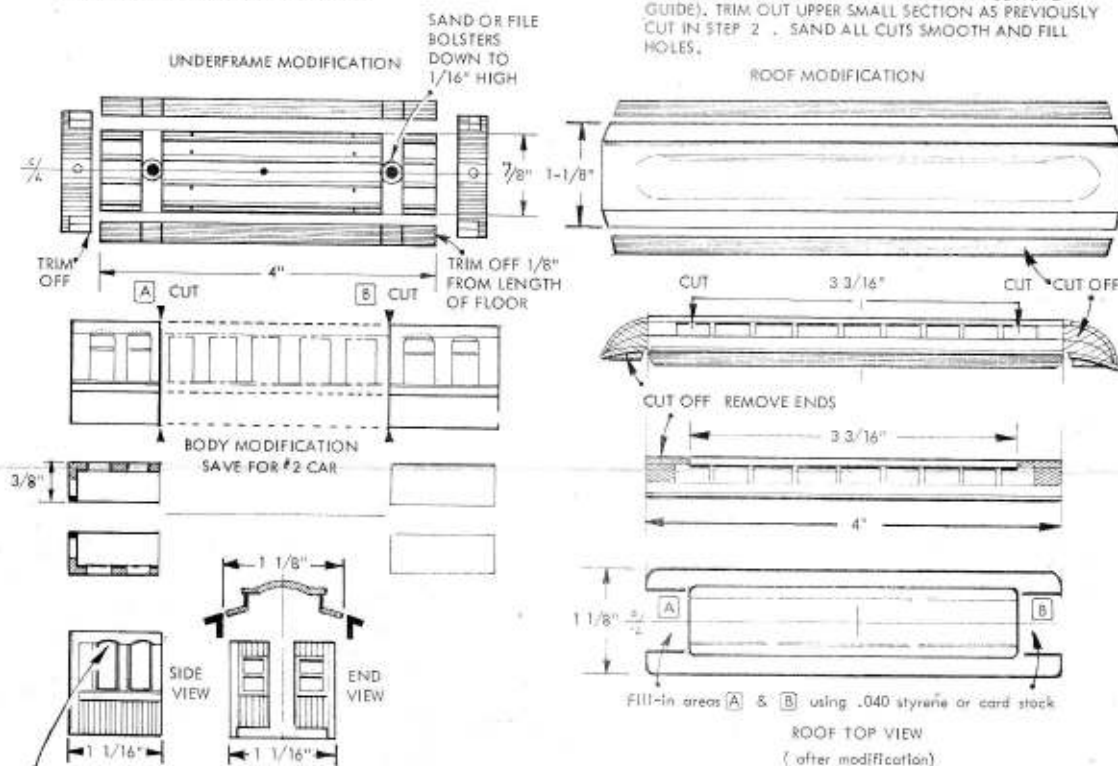
1 CUT COMPLETELY THROUGH BODY AT [A] AND [B] - CUT EXACTLY MIDWAY BETWEEN EACH WINDOW.

2 CUT EACH END SECTION (IN HALF), NEXT FILE OR SAND TO WIDTH OF WINDOW EDGE - FINAL SIZE 3/8" PLUS. REPEAT PROCEDURE TO REMAINING (3) BODY SECTIONS. (NOTE: YOU HAVE A BLIND WINDOW WHICH CAN BE LEFT AS IS OR CUT OPEN AS DESIRED.)

1 REMOVE ROOF LOCATING MOLDING EDGE AND THAT PORTION OF ROOF. USE EDGE AS A CUTTING GUIDE.

2 CUT TO WINDOW ONLY. DO NOT CUT COMPLETELY THROUGH.

3 CUT OFF EACH END AS ILLUSTRATED; FINISHED ROOF IS 4" LONG (USE "CROSS BRACE" INSIDE AS A CUTTING GUIDE). TRIM OUT UPPER SMALL SECTION AS PREVIOUSLY CUT IN STEP 2 - SAND ALL CUTS SMOOTH AND FILL HOLES.



USING A FILE OR DREMEL TOOL (ARCH EACH WINDOW) AND REMOVE SASH

-NOT TO SCALE -

Line drawings are for reference only!



VICTORIA SQUARE

STREET WIRE ROPE RAIL ROAD

CABLE CAR INSTRUCTIONS

San Francisco "Powell" Style Car

circa 1870 early cable car "IDEA STARTER"



OVERTON PASSENGER CAR BODY -

Body Modification: Use a fine blade X-acto saw to cut the ends off the Overton body, making sure it is a square cut. Then cut the sides from the floor and smooth the cut with sandpaper.

The cable car sides are made from the passenger car sides. Starting with the side that has the blanked out window, make a cut on the center between the blanked out window and the first clear window; again make sure it is a square cut. The plans show four windows per side. Make a cut on the center between the 4th and 5th window (counting from the right). Now using the side you just finished cutting as a template, trim the left end of the remaining side.

FLOOR, END PARTITIONS, AND CLERESTORY -

Assembly: Use sheet styrene (not furnished with kit). Cut the floor per HO scale template out of .040 styrene sheet and drill 1/16 inch hole for mounting the trucks as indicated on the drawing. Cut the ends, partitions, clerestory section and wheel guards out of .020 styrene plastic sheet. Score and bend the ends before cutting windows; to make the window cutting easier, drill a #62 hole in the inside of each corner. Using a sharp X-acto #11 blade and a steel ruler, cut a straight line connecting the holes; however, don't try to cut through the material the first time. Instead, score it the first time and then go over it with more pressure. Cut the main roof out of .060 styrene and the clerestory roof out of .040 styrene. Shape the roofs as per plan using a sanding block or file for rough shaping and #600 wet-n-dry sandpaper for finishing.

Cable Car Body and Floor Subassembly: Assemble cable car body and glue the sides to the floor as per plan then glue the partitions to the sides at each end. Glue the clerestory section together and set aside. At this time you may wish to paint your model, especially the interior; refer to painting suggestions for this.

When the paint has dried you may want to add interior detailing. Walthers plastic seats #941 736(U) are just the thing (leave one arm rest off and trim the top head rest off). Cut the wood seats out of Walthers seat #944 371(M); the right 1-5/16 inch long and the left 1-11/16 inch long. File the front corner flush with the floor, then glue the seats as per plan. Glue the front and rear ends to the floor as shown in the plans.

Center the clerestory roof over the clerestory section and glue these together, then center this assembly over the main roof and glue it. Glue the roof to the body.

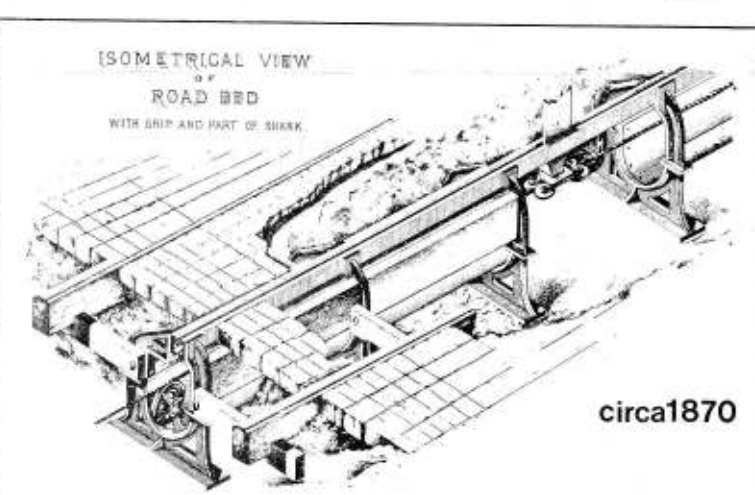
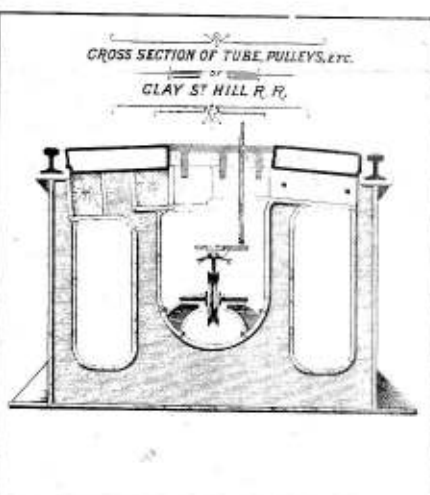
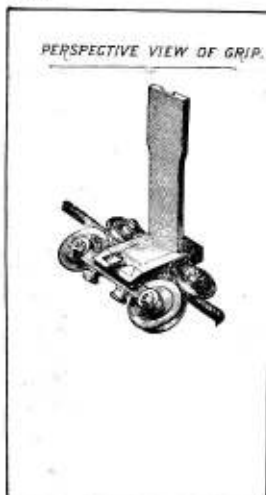
Make the front and rear steps out of Plastruct angle A-4 and glue them to the floor as per plan. Also, glue the wheel guards. Finally, add the grab-posts as per plan. These are made from .020 inch wire. With the attachment of the trucks, your cable car is ready to take on passengers.

Parts List:

Wood seats:
Walthers #944 371(M)
Plastic seats:
Walthers #941 736(U)
Angle:
Plastruct #A-4
Trucks:
Kadee #MT-1017
(MDC HO#3 dummy trucks
furnished with kit)

Painting Suggestions:

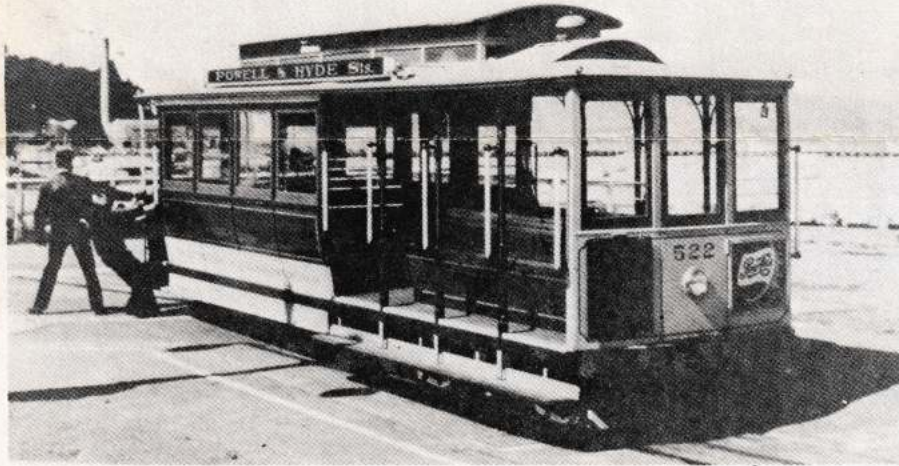
	Scheme 1	Scheme 2
Underbody	Black	Dark Gray
Trucks	Black	Dark Gray
Wheel Guards	Tan	Red
Interior	Cream	Wood Tone
Front/Rear/Side	Light Green	Maroon
Window Band	Tan	Cream



circa1870

Powell style 1512 CABLE CAR

Assembly instructions: kit bashing needed.



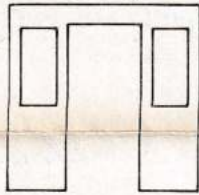
Modeling Notes:

The "Powel Cable Car" is made-up from sheet styrene.

Only the center section of the car kit is utilized.

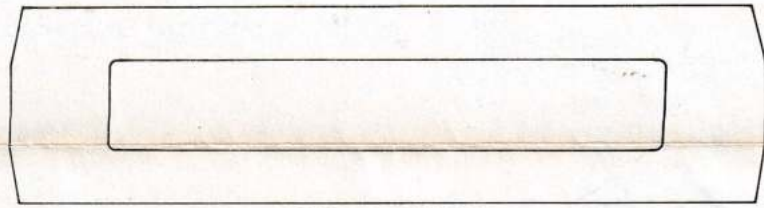
Follow the written instructions (page 4) and line drawings below.

REAR

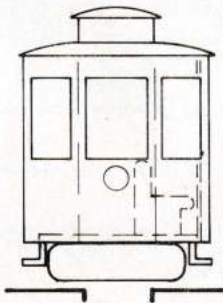


PARTITION

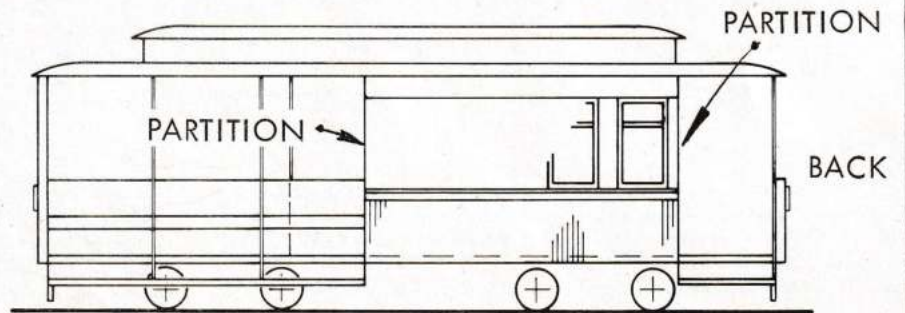
TOP ELEVATION



ROOF TEMPLATE



FRONT
VIEW



SIDE ELEVATION

FLOOR PLAN



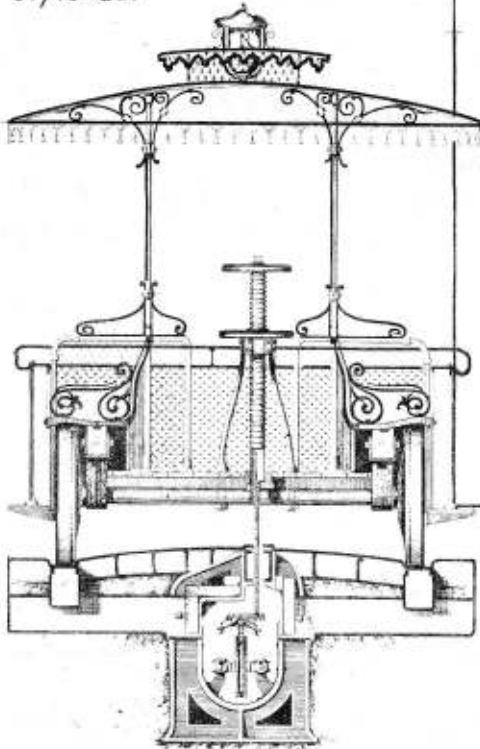
BACK
VIEW



DRAWING IS HO SCALE

CABLE CAR INSTRUCTIONS

San Francisco "California"
Style Car



CABLE CAR INSTRUCTIONS – San Francisco "California" Style Car

For additional information, acquire a copy of "The Cable Cars of San Francisco" by Phil and Mike Palmer, a Howell-North book, 1050 Parker Street, Berkeley, CA 94710. Tell them you're building a Roundhouse Products kit!

CABLE CAR –

Wheels

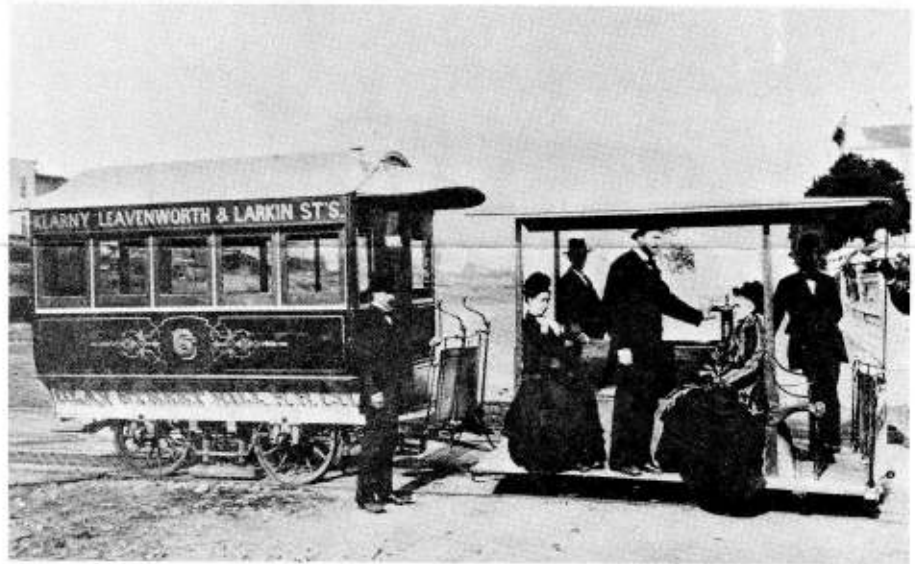
TRUCK ASSEMBLY: (Narrow Gauge). Remove from runner and sand outer edges smooth. Assemble wheels onto axles. Place wheel on a small block of wood and push axle into wheel. Turn over and push down on wheel until it clears wheel; trim off flash around hub. Assemble finished wheel sets into molded side frame and gauge to desired truck. (N gauge) or (HO_N3) truck mount to finished floor using #2 x 1/8 inch screws.

UNDERFRAME MODIFICATION: Cut floor as illustrated in drawing. Finished scale floor is 29 feet long by 6 feet 6 inches wide. Sand end and sides of floor smooth; next sand down bolsters (truck mounting pads) to 1/16 inch high. Also sand down front and rear coupler channels to the same height as horizontal floor bracing. Trim and glue insert plastic bushings into bottom of floor.

TRUSS ROD ASSEMBLY: (Underframe Bottom). Queen posts modification—Cut bottom frame to 15/16 inch long (same width as floor width) and remove pins. Glue into place using thread for truss rods; follow procedure outlined in typical passenger instructions.)

BODY MODIFICATION: Before starting on the cable car body "kit bashing" study the drawings of both cars as illustrated. One drawing shows the "Powell" style cable car and the other represents a "California" style cable car. Notice that you can cut each kit body into two cable cars! So be careful and use a jeweler's (fine) blade for your kit bashing. 1) Cut completely thru body at A and B. Cut exactly midway between each window. 2) Cut each end section (in half). Next file or sand to width of window edge. Final size, 3/8 inch plus. Repeat procedure on remaining (3) body sections. (Note the blind window which can be left as is or cut open, as desired.)

IDEA STARTERS



Circa 1870

Photo - Ray Graves

Modeling note—the old photos & drawings depict early period cars.

SECTION THROUGH
DUMMY & ROAD BED
SHOWING CABLE AND
GRIPPING ATTACHMENT.

ROOF MODIFICATION: Refer to drawings covering roof (California Car).

- 1) Remove roof locating molding edge and that portion of roof. Use edge as a cutting guide.
- 2) Cut to window only — do not cut completely through!
- 3) Cut off each end as illustrated. Finished roof is 4 inches long (use "cross brace" inside as a cutting guide). Trim out upper small section as previously cut in step (2). Sand all cuts smooth. Fill holes at front and rear center using .050 styrene or artist construction board. (Cut to 1 inch long.)

BODY AND FLOOR FINAL ASSEMBLY: Center body section onto floor and mark position. Next, use liquid plastic glue and (butt join) body halves together; align. Glue each finished body half to (pre-marked) floor. Add steps to floor using supplied part (cut kit steps apart; each step is used singularly), located to bolster edge — refer to photo. Your model will now appear in a "rough state". Sand and clean up any rough edges around the roof and floor ends.

BODY END ENCLOSURES: (Use .025 sheet styrene; Not Supplied.) Follow template and adjust to fit your model.

FINALIZING YOUR CABLE CAR: Super detailing your model — Purchase a box of wood or metal car seats used in vestibule section and long wood style benches which are used for the end section.

Final Small Details: Study the prototype photograph; note that you should add upright poles 1/16 inch round stock and grab; use wire. Final floor detailing; add a little "cow catcher", coupler; Cal scale HO_N3 link and pin style; or take something. Headlight 1/8 inch brass K&S tubing filled with liquid glue.

Painting Instructions —

The California Car Paint Scheme:

Roof: Tar paper, Tuscan
 Body: Two-tone burnt sienna and yellow ochre (refer to photo). Dark areas are sienna, and light areas yellow ochre. A modeler's choice of colors: Tuscan and Desert Tan
 Seats: Ochre/trim; cow catcher, cream; kick stem, cream
 Lettering: Gold and Brown shading, gold striping

The Powell Car Paint Scheme:

Roof: Cream
 Body: Emerald Green
 Seats: Ochre/Wood trim; lower section cream



1513 VICTORIA SQUARE CABLE CAR BARN

INTRODUCTION TO VICTORIA SQUARE CABLE CAR BARN

"Welcome Back"! ... To Part 3 of our 3-part series of Roundhouse Products latest (3 in 1) series of fun kits. Just in case you're new to the (3 in 1) series, we want to briefly explain just what kind of kit you have purchased. All (3 in 1) kits are designed to achieve at least two different themes; one is a typical right-out-of-the-box model (this one is titled "A Typical 1890-1940s Old Time Brick Street Scene". The second concept is a cable car or street car barn or, for that matter, any big old shop with an attached office building.

You, the modeler, must make the final decision as to what happens to your kit! We only furnish the bare necessities of parts, along with all the needed instructions.

Please keep in mind, concerning the car barn concept, not all parts as called out for in our instruction sheets are packaged with this particular structure kit. We do not supply the car barn roof or special Plastruct building parts. Please ask your dealer for help on these items. The typical street scene is complete as described in the instructions.

As a finished model the "Car Barn" is a fairly large structure, measuring 10-5/8 x 6-5/16 inches wide. You should check over your model railroad layout for placement. Traditionally, the car barn was situated right in the middle of the town area. The tracks from the car barn gave the effect of a hub to a wheel, fanned out to all the major streets.

Next, you should think about N scale track and powered models. Part 2, MDC kit #1512 covers our cable cars and instructions for modifying the MDC Overton Passenger cars into (non-powered) cable cars. With some forethought, a modeler can construct a working cable car or empire.

OFFICE BUILDING KIT

To assemble the 2-story office building illustrated on the right side of the drawings, study the callouts pertaining to each wall: Front - both sides and back.

- 1) Lay out all walls as illustrated.
- 2) The front and rear short walls are constructed from one of the long walls which contains a large door at each end and two large windows in the center. Cut this wall into (2) equal pieces. Bevel each half section at the cut line. Bevel at a 45 degree angle from the back side. (It must match at the corner with other wall sections to form a 90 degree angle.)
- 3) Long wall facing into car barn interior: Wall has (1) large door and (2) small square windows. Special cutting to large door and wall are needed. Large door: Cut out upper panels in door section for "glass" windows. Next remove plastic; cut down to horizontal row of bricks from below each window. Small square windows: Trim thin plastic strip away from the thick portion of each window. Install and glue windows into upper window section "open". Set windows at an angle to represent open transoms. The lower window sections can be detailed to look like dispatcher's windows. First glue a shelf on the bottom edge and add a "candle stick" telephone! Use your imagination for additional small details. Add a time clock and time card rack to wall!!!

UPPER STORY ASSEMBLY

NOTE: Special attention to wall that must be modified before assembly.

- 1) Rear short blank wall. If you want windows in this wall, use another short wall with (double large windows) as a template and scribe a line indicating window placement. Next drill a large hole in the window area and, using a 3-corner file, open up window areas. Finish squaring up window holes with a 3/8 inch flat file.
- 2) The long window side is assembled using (2) small ends butted together.
- 3) Finalize assembly and walls. Floor: You can add a nice scribed wood floor (see your dealer for this item.) Be sure to stain floor and add desks and figures.
- 4) Roof assembly. Glue cornices to the flat brick roof. Refer to typical street scene for complete instructions. When glue dries, paint and attach to building.

CAR BARN ROOF ASSEMBLY

- 1) Cut roof from .050 sheet styrene or artist board, 4-1/8" wide x 6-1/2" inches long. Cover roof with masking tape to simulate tar paper. Run tape lengthwise in sections 3 inches long. Overlap each section. Spray paint the finished roof flat black.

CABLE CAR BARN ASSEMBLY INSTRUCTIONS

Floor Plan Layout:

- 1) Lay out and cut a floor using .050 styrene or artist board sheet: overall size 11 inches long by 7 inches deep.
- 2) Next cut second floor sections A, B, C and D used for walkways between tracks. Refer to drawing 1 marked FRONT.

GENERAL CONSTRUCTION INFORMATION

Read over both the typical kit construction and street scene instructions to familiarize yourself with the building techniques.

Painting Instructions: (Use ONLY enamel paint or an acrylic water-base paint.) Before doing any construction, paint building walls with an enamel spray paint. While paint is wet, use a soft rag soaked in enamel thinner and wipe paint off the bricks into the cracks. Do one wall at a time. When the walls are finished your building walls will look like actual bricks. You can also paint the brick facing of the cornices and roof moldings.

CABLE CAR BARN BUILDING ASSEMBLY

Make up special wall sections A, B, & C from card stock or .050 sheet styrene (not furnished). Use HO templates furnished on the instruction sheet below (page -1). NOTE: When cutting walls in half, be sure to bevel any wall which must join with another wall to a 45 degree angle!

When attaching doors and windows: You can glue from the outside; giving the appearance of "shashes" or glue from behind. When gluing to the inside of building, again you have an option: (1) Push part into wall and it looks almost flush with wall. (2) Again, from the inside, but this time run part around so flat side attaches to wall (inside). What this procedure will achieve is a scale 9 inch thick wall! It will look fantastic. Just like the old style real buildings.

- 3) Locate and glue office building floor base onto your cable car barn base (right hand corner) see floor plan drawing.

- 4) Construct and detail the lower building walls, doors and windows using any clear plastic. (Not furnished; see your dealer.) Also add "green" shades to the large windows for added effect!

If you desire to super detail the lower office interior, do so before attaching 2nd story building base and walls. The cable car barn roof attaches to upper story wall.

CAR BARN WALL CONSTRUCTION

- 1) Left hand long wall (blank). Add and glue special wall section A (not furnished). Cut from sheet styrene or card stock.
- 2) Rear wall: Refer to drawing marked BACK. Utilizing (1) long blank wall and (1) short wall section, glue steel shutters over window.
- 3) Side walls for rear building using (2) small blank walls with special wall sections B and C (not furnished). Cut from sheet styrene or artist board. Glue rear wall to short walls to dry.
- 4) Upright posts (4) 3/16 x 3/16 inch Plastruct (not furnished) used for roof supports, length: 2-1/4 inch high. Wood dowels can be used for substitutes. Refer to floor plan for locating. Attach walls and upright posts and let dry.
- 5) Spanner beam (Plastruct channel) 1/4 x 3/32 x 8-3/16 inch (not furnished). Glue spanner beam across top leading edge of car barn roof (left top wall to building). Refer to drawing (FRONT). After spanner is dry, glue roof to top of structure.
- 6) Roof edge trim (Plastruct angle) 1/8 x 1/8 (not furnished). Trim top front of roof, left edge and rear edge of roof. NOTE: When butting angle stock, bevel or cut to a 45 degree angle. This completes the large flat car barn roof.

CAR BARN (REAR)

- 7) Sloping roof assembly. Follow previous building techniques as outlined. Roof size: 2-1/8 inches wide by 6-1/4 inches long. When adding the final trim to roof edges, trim only the sides.

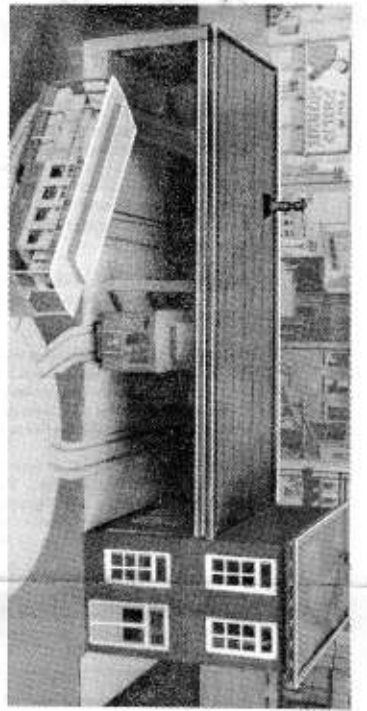
SUPER DETAILING THE CAR BARN INTERIOR

Add all the tool racks and work benches plus ladders and hoes associated with a typical work shop. Really clutter it up. This is a great place for using all those bits and pieces you have been saving in your "goodie box"!

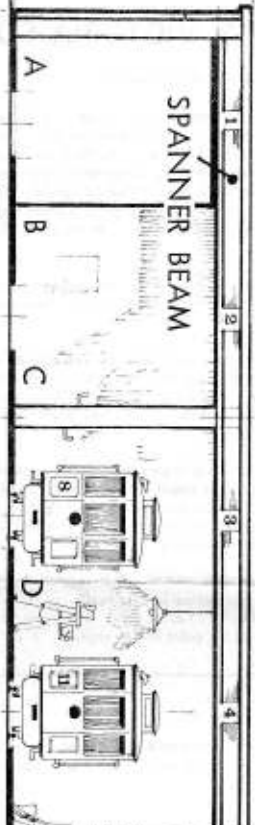
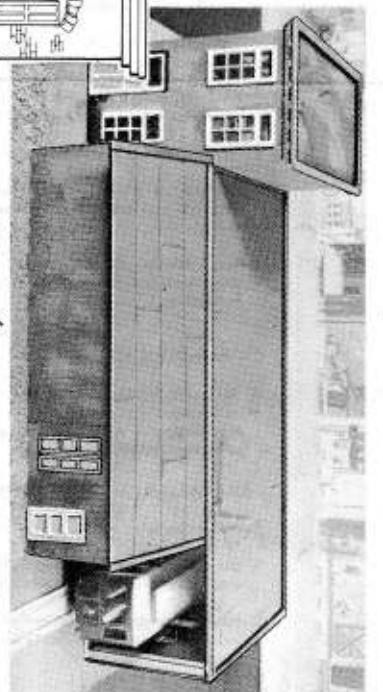
FLOOR PLAN

Measurements are for HO scale. Drawing is exactly 1/2 (HO) size. For a full scale working drawing use an artist divider and double the length of any construction line within the floor plan.

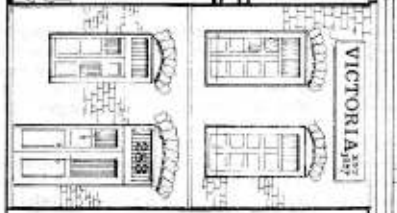
FOR ASSEMBLY DRAWING SEE BACKSIDE OF THIS SHEET



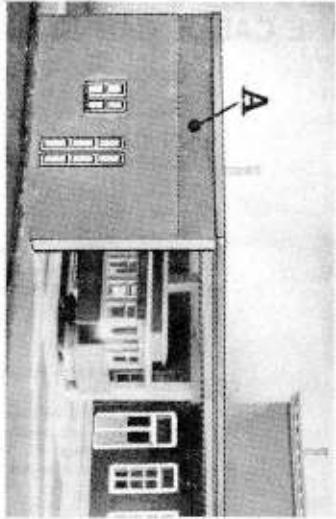
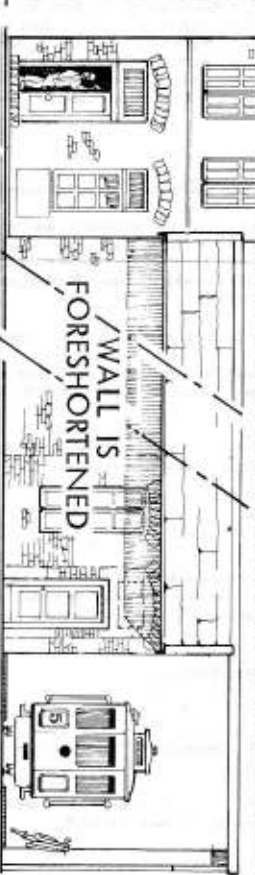
(3 in 1) KIT #1513
CABLE CAR BARN
 Drawings are 1/2 HO SCALE
 See other side for assembly
 instructions.



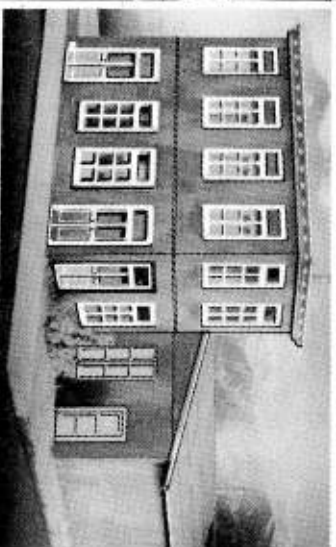
DRAWING 1 CAR BARN FRONT



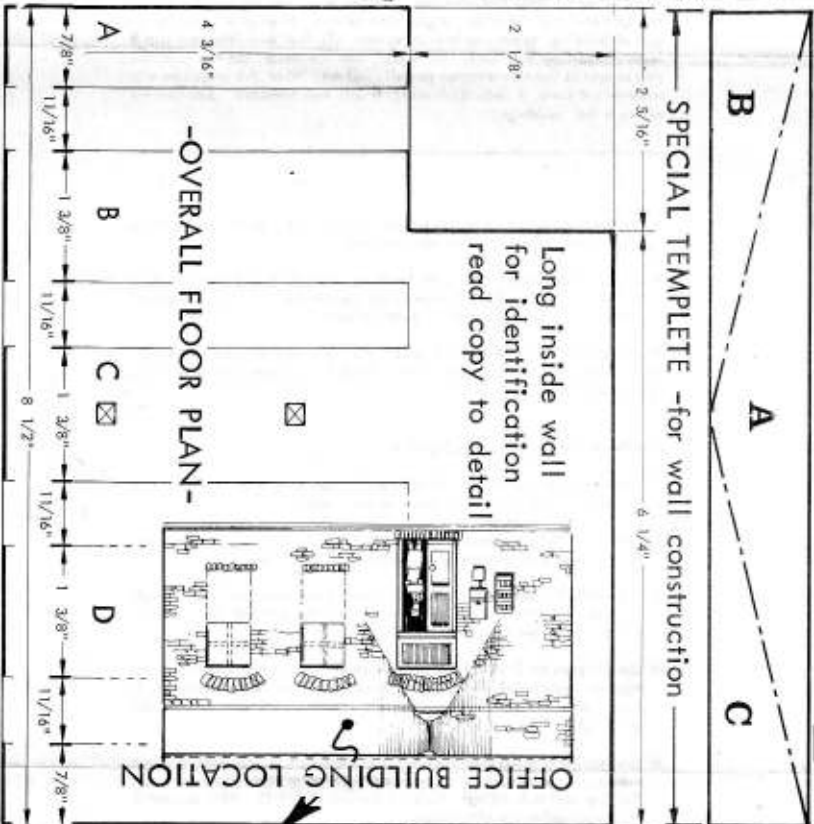
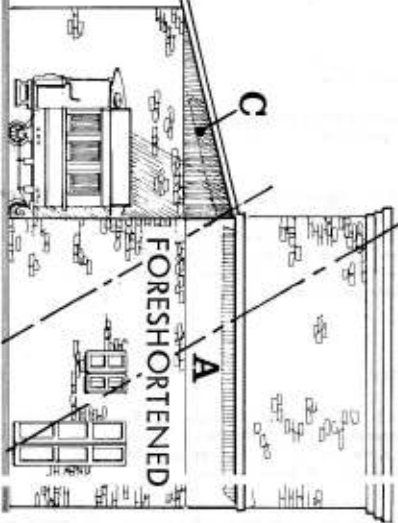
DRAWING 2 CAR BARN BACK



LEFT SIDE



RIGHT SIDE





1513 & 1514 Typical Street Scene

HISTORY

Old timer or modern — this typical street scene will fit right in on your home layout or club. These buildings represent structures designed around the late 1800's and into the 1930's. Before starting your model, you might want to give some thought to the period of time your layout is modeled after. If you are modeling the "Old West", then you will want to use the iron door shutters on the front of the buildings, just like they did back then. The purpose for these shutters was to fight fire; when shut there was no chance for flames to reach the interior of the building. As time passed, the need for fire protection lessened, and all of the buildings had the shutters removed from the fronts and street sides. Note: Many of these buildings retained the shutters in the rear.

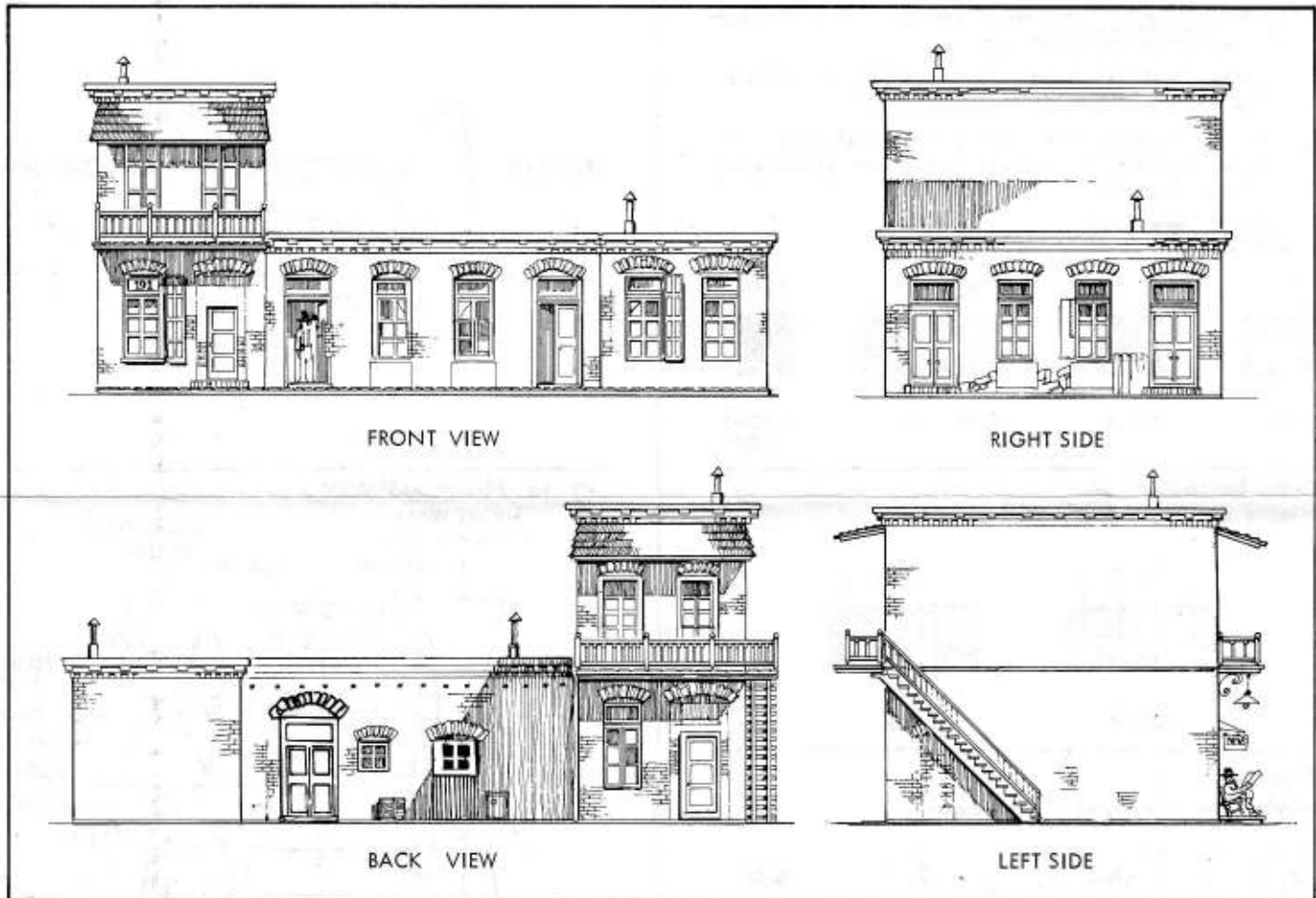
So, once you have decided on which way your buildings will look, follow the instructions starting on page 2.

Kitbashing — (Advanced modeling technique). Kit features module construction; all walls are interchangeable and, by following basic instructions, you can re-arrange this kit to any desired configuration needed. As an example, back or side walls can be used in place of front walls. Also, two short ends placed side by side will equal one long wall. A long wall can be cut in half, equaling an end wall. Note: If you do cut long walls, be sure to bevel cut with a 45° angle to match other mating wall ends.

The large doors (1) can also be cut to facilitate an open appearance. Cut below window transom and then cut the two doors in half. See photo.

Pictured below are the four construction views. When constructing your model, refer to these views.

Please read the instructions through completely in order to familiarize yourself with the basic construction techniques and subassemblies.



ALSO AVAILABLE: BUILDING HANDBOOK #1850 @ \$2.00

Roundhouse has an outstanding and complete 24-page, colorful "Handy Hints Handbook", on how to build scratch built structures, using our building kits and components.

This is a real must for the builder who likes to go his own way with this type of building material. Send \$2.00 for handbook and check list.

NOTE: When attaching plastic moldings and detail parts together, use only styrene plastic glue. It is best to use the tube plastic glue for walls and large parts and use the liquid plastic glue for small detailing parts.

STEP 1 — Base Molding Construction, REFER TO DRAWING 1

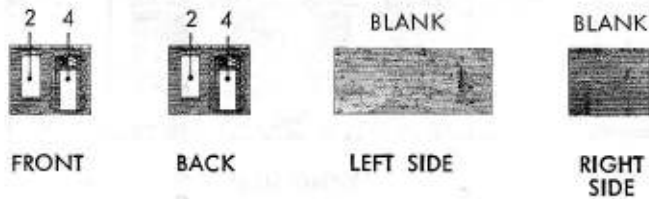
1. Lay out three (3) base moldings per drawing marked 1 and glue along butting sections.

STEP 2 — 1st Floor Assembly

1. Select walls and lay out corresponding to illustration below.
2. Glue windows and doors to walls using illustration. Notes: Each drawing refers to windows and doors by number.
3. Left hand building: See 2 and start at left side and glue each wall to base molding. Walls fit into groove along outside edge and meet exactly at corners.
4. Center building sections: Repeat step 2. (1 & 2) Wall layout and window/door assembly.
5. Right hand building: Repeat step 2. (1 & 2) Wall layout and window/door assembly.
6. For added strength, take a toothpick and apply very small amounts of glue to all corners (top & bottom) and along (butted wall) seams. Set aside to dry.

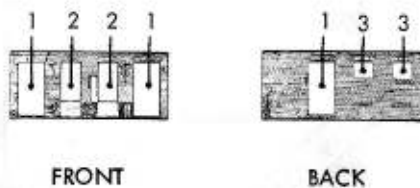
Left Side / Lower Story

Window and Door layout / Wall assembly



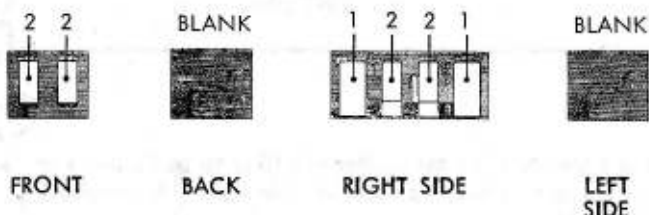
Center building

Window and Door layout / Wall assembly



Right Side

Window and Door layout / Wall assembly



Use testers plastic cement for kit construction. When joining walls use clear tape to hold the wall sections in place.

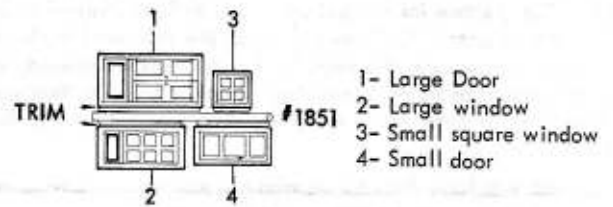
A

DOOR & WINDOW INSTALLATION (Front and Rear)

Doors and windows can be applied from the front or from the rear.

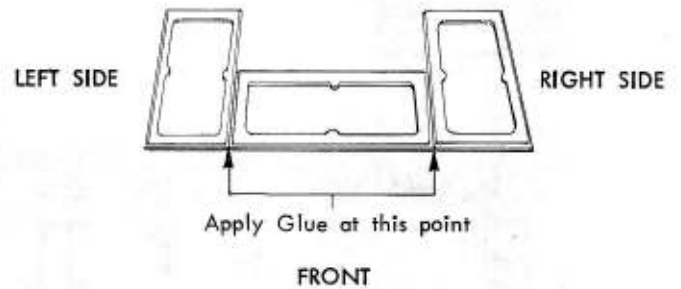


1. When gluing Doors and Window detailing parts into wall moldings: Insert the thick portion into its' corresponding opening.

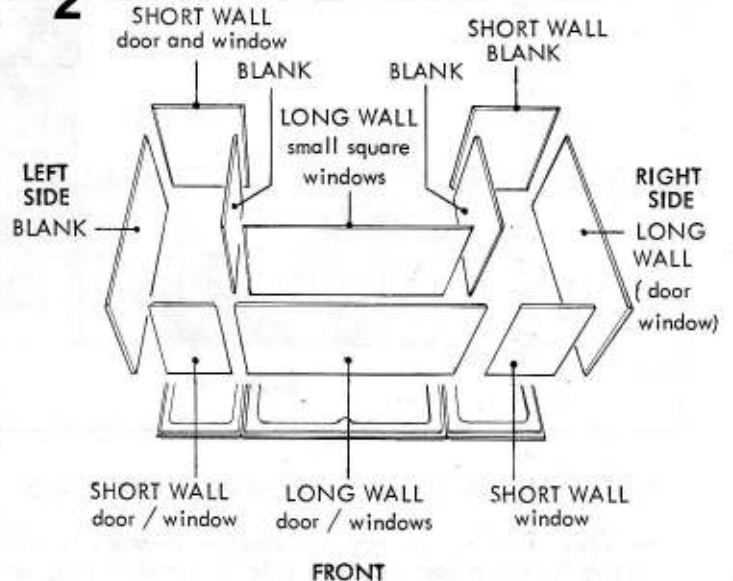


Window and Door detailing Parts

1 BASE MOLDING ASSEMBLY
part #1858



2 1st. FLOOR ASSEMBLY



1513 & 1514 cont.

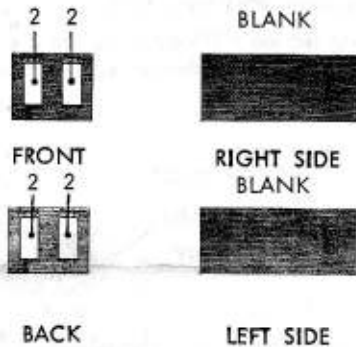
Typical street scene

STEP 3 — 2nd Story and Base Molding / Refer to drawing 3

1. When first floor has dried, glue remaining base molding (flat side down) on top of lower story, left side.
2. Select walls, windows, and doors using drawing below. Use drawing marked 3 and glue walls into appropriate location.

Upper Story

Window and Door layout / Wall Assembly



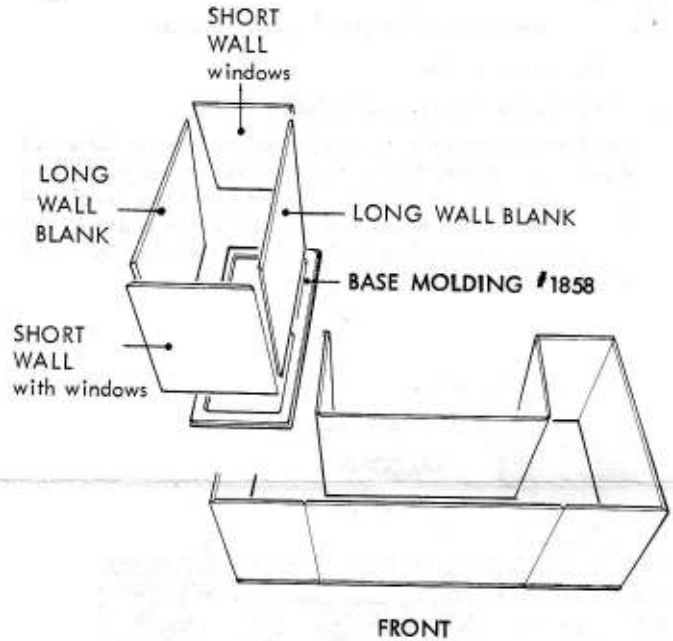
STEP 4 — Roof and Cornice Construction

The roof for the left side (see drawing 4) is made up of five pieces: One flat black section and four cornices (two long sections and two short sections).

1. Glue the short corners to the end of the roof. Apply glue to locating pins at each end.
2. Glue the two long cornices to the sides of the roof. Note: Before attaching, add a small amount of glue to the angled cornice ends. Then attach. Set aside to dry (10 minutes).
3. Slide finished roof onto walls. Note: Walls will go up and into space provided under roof and cornice.
4. Center building roof section. Note: Special attention must be paid to the preparation of roof and cornices for this section:
 - a) Remove pins on both ends of roof sections.
 - b) Short cornices are not used on ends of center roof.
 - c) Long cornice - Trim off straight across ends at the point illustrated. (see drawing 4)
 - d) After trimming off ends, glue to roof and attach to middle building section.
5. Roof assembly for right hand building. Again, special attention is needed to assemble roof and cornice.
 - a) Roof section - Remove pins from lower left half of long side. (See drawing 4).
 - b) Front cornice - Trim corner angle off left end only (see drawing 4), and attach to roof.
 - c) Long cornice, right side - Glue and attach to roof.
 - d) Short cornice, rear end - Glue and attach to roof.
 - e) Cornice, left side - Study drawing 4 and follow special instructions for cutting this cornice. Finished cornice is two and one sixteenth inches long. After cutting, glue along left side and butt to rear middle building cornice. Set aside to dry.
 - f) Turn building upside down and, with a toothpick, apply glue along roof sections that are butting.

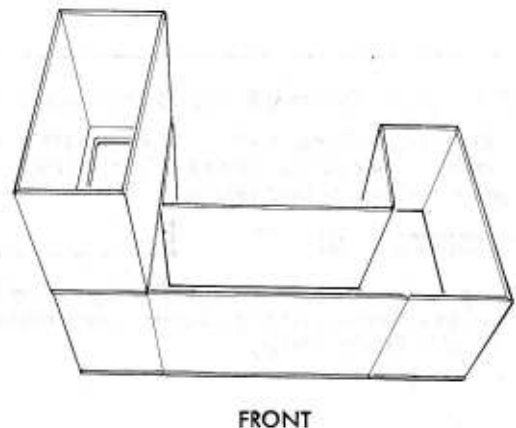
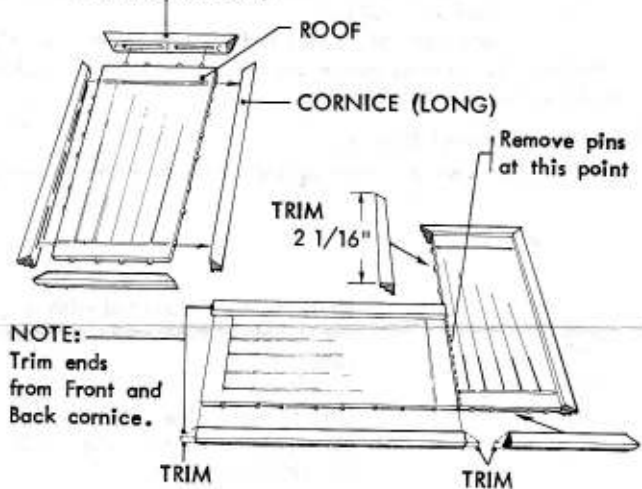
Go to page 4, STEP 5, for detailing street scene buildings.

3 2nd. FLOOR ASSEMBLY



4 ROOF AND CORNICE ASSEMBLY

Note: glue roof moldings onto the tops of each building then glue cornice (long and short) to each roof.



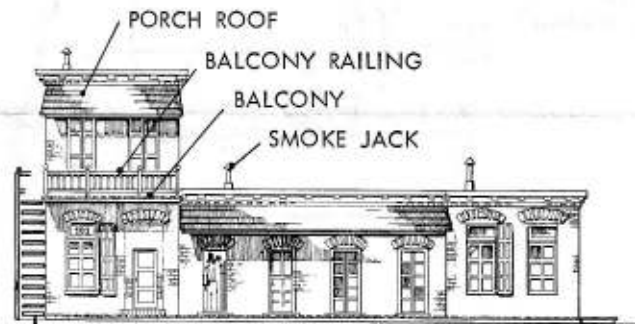
Use clear tape to hold cornices in place while glue is setting.

DETAILING STREET SCENE BUILDINGS

STEP 5 — Assembly of: Porch, Roofs and Balconies.

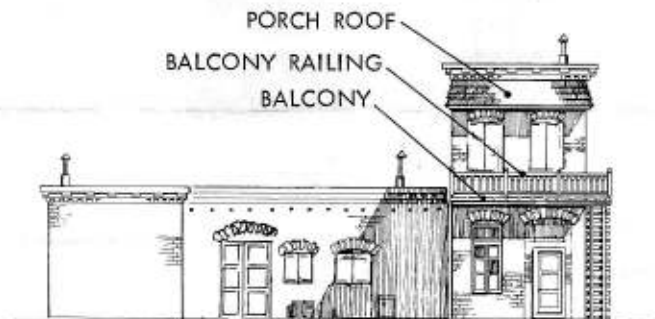
Left side, 2-story building

1. Cut porch roof from runner molding, # 1851
2. Next, cut porch roof exactly into two equal parts. One half glues to upper story front, and remaining half glues to upper story back. Be sure to clean off paint from top edge of wall with scraper (knife blade is ok to use) and glue porch roofs into place. (Note: Use books to support roof sections until glue has hardened.)



FRONT VIEW

3. Cut balcony section from runner molding, # 185.
4. Cut balcony exactly into two sections. Use one section for front balcony. (Note: To make a better glueing surface, trim away one side of boards - the thin portion along the side.) Glue and affix to upper story base front. (Use books to support balcony while drying.)
5. Back balcony - Cut off a second balcony section and trim it to 2-1/2 inches long. Following the procedure in No. 4 above, glue to upper story base, rear.
6. Middle building section - Glue a complete porch roof section across front; position under bottom of cornice.



BACK VIEW

STEP 6 — Steel Shutter Assembly

As outlined earlier, you can use steel shutters on all windows, or just at the rear of buildings.

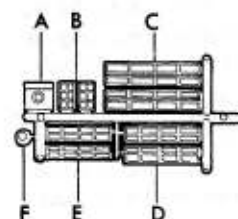
Shutters can be painted different colors (use only enamel paint). Shutters can be cut in half and folded for additional detail. See drawing

Steel Shutter Detail Drawing

Note: Use shutters per drawing and assemble from the outside.

Steel Shutters

Use with:

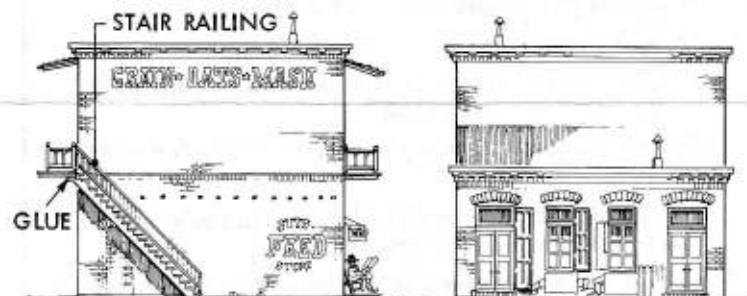


- A Smoke jack base (glue to roof)
- B Small square window
- C Large doors
- D Large windows
- E Extra shutters
- F Smoke jack (glue to top of base)



Shutters can be painted with a non-lacquer type spray or brush paint.

IDEA: Front blue with raised parts painted white. Use a "O" or "OO" brush.



LEFT SIDE

RIGHT SIDE

STEP 7 — Porch (Balcony) Railings & Stair Railings, Part # 1855

1. Left hand building, front - Cut one complete runner from porch and stair railing molding. Trim to length illustrated below and glue to front balcony.



2. Left hand building, rear - Cut off porch railing from molding (one complete runner). Position porch railing as illustrated in (BACK VIEW).

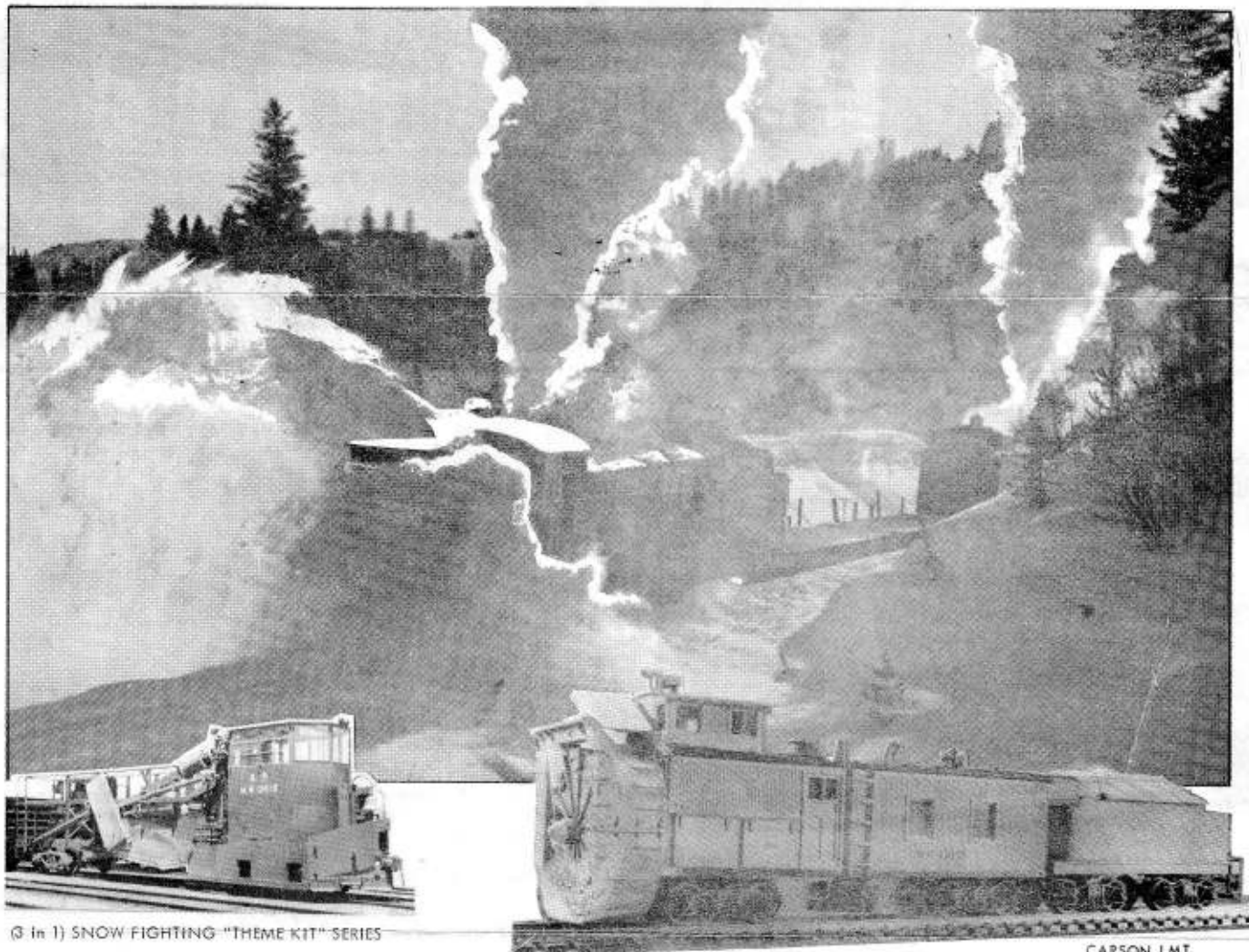
3. Left hand building, side view - Assembly of stairs and stair railings:
 - a) Cut stairs from molding and glue to porch and wall. (Set aside to dry.)
 - b) Cut hand railing (angled section) from molding and glue as illustrated. (LEFT SIDE)
 - c) Cut a small section of railing from hand railing molding and glue onto top of porch end. This section glues at side post of end railing and glues to stair railing.

MW SNOW FIGHTING TRAIN SERIES

4th IN A SERIES OF ROUNDHOUSE PRODUCTS (3 in 1) THEME KITS



NEW additions to the line of (3 in 1) kit series, the "Theme Kit". Theme Kits represent the use of more than one kit, which can be combined with "partner" kits to produce an overall effect. In this case, a complete Maintenance of Way Snow Fighting train. "Theme Kits" can also be used singularly! Other Roundhouse "Theme Kits" now available include: Shanty Town, Battle Mountain, and our new Victoria Square series. See your dealer for all the Roundhouse (3 in 1) series kits today!



(3 in 1) SNOW FIGHTING "THEME KIT" SERIES

CARSON LMT.

INTRODUCING the first inexpensive and most comprehensive series of Snow Fighting Maintenance of Way kits ever produced. Roundhouse Products will have available for the modeler the complete string of equipment: "The Steam Driven Rotary" right out of the old west, circa 1880s. Model kit comes complete with an old time tender. Followed by our second kit, consisting of a

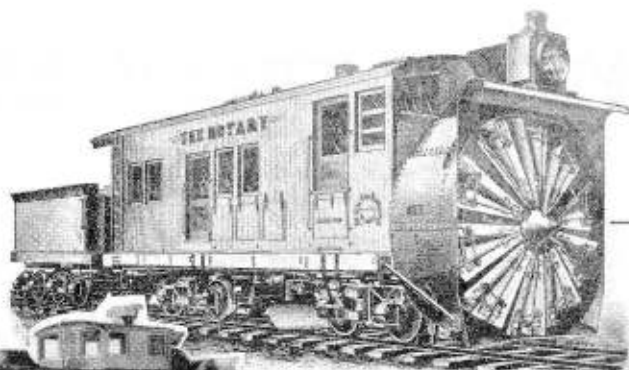
Jordan Spreader, Snow Crab and Special Tool Car. The last kit in our (3 in 1) series of snow fighting equipment consists of a "Snow Dazer", MW Flanger and Work Flotcar. This is truly a once-in-a-lifetime lineup for next year's heavy snows ... start today, collecting the whole 3-part series of maintenance of way snow fighting equipment!



BILL Chappell

(3N1) SERIES

1515 Rotary Snow Plow



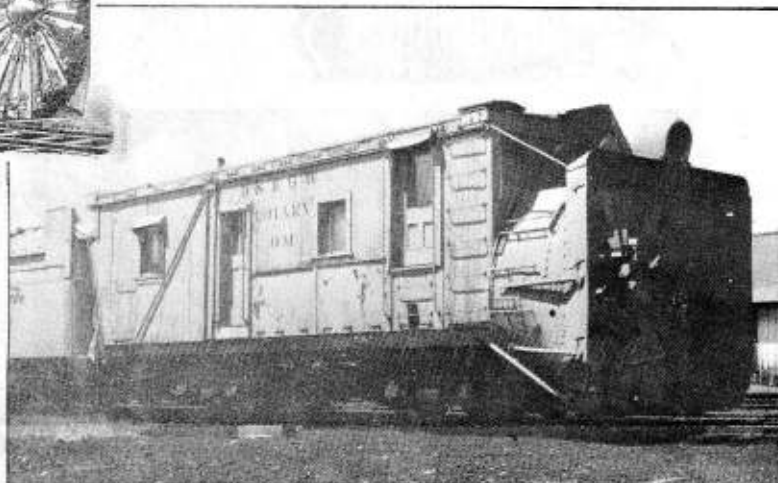
ALL 3=1 KITS ARE
Un painted and
Un lettered

Kit # 1515 Rotary Snow Plow and Tender. (Non operating.) Instructions cover conversion to facilitate Revolving Blade. Kit contains two kits: (1) an "Old Timer" wood style side door caboose, rotary housing blade assembly and trucks; (2) coal style molded tender, trucks and couplers. Instructions contain specially prepared elevation drawings done to HO scale, plus complete instructions.

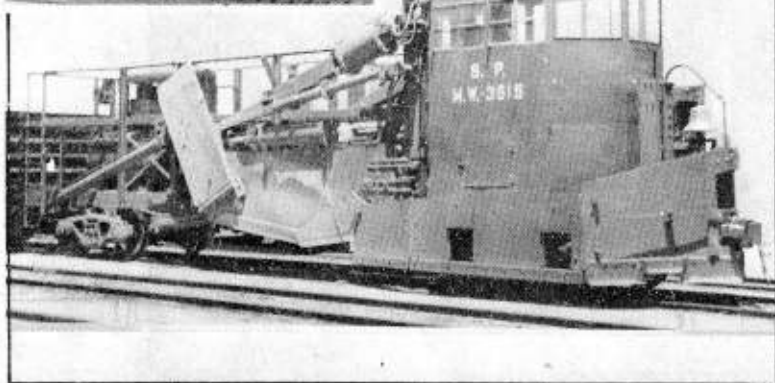
Photo: Bill Chappell

Maintenance of Way Snow Fighting Series, consisting of kits: #1515, #1516 and #1517, (3 in 1) Theme Kits ...

Kit Bashing and some parts as illustrated (NOT included).



CARSON L.M.T.



Gerard Dombroski
CUSTOM MODELING Series

1516

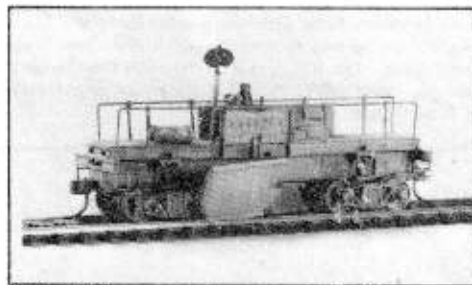
- Jordan Spreader
- Snowcrab
- Tool Car kit

Kit # 1516 Jordan Spreader in the class 'A' version. This kit is a real "kit basher's nightmare" ... But fantastic when finished. Original Jordan photos plus HO scale plans and elevations.

The second model in this kit is, again, a real winner: The "Snow Crab" as written up in RMC magazine. This kit should try your imagination for sure! It is fully working, with scale chain to move the wings into position. Lastly, a nice center cab MW tool car. Basically, kit #1516 contains: (1) side door wood style caboose, (1) 3-bay hopper metal underframe, and (2) 36' metal underframes, plus "scads" of goodies, trucks and couplers.

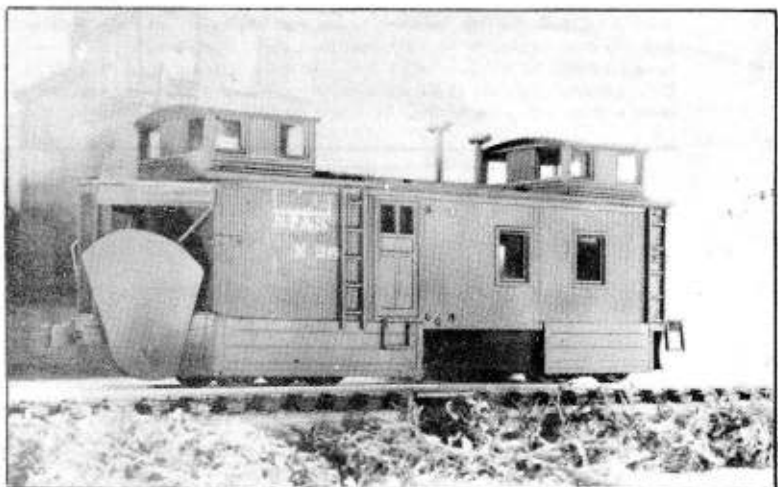
1517

- Snow Dozer
- MW Flanger
- Flat car kit



G.Dombroski

Kit #1517 The Double Ended, Cupola Clad "Snow Dozer". Kit contains a 36' blind end side door wood style caboose. Instructions cover plow assembly utilizing a complete set of HO scale working drawings. Second kit in this series is a fantastic 26' metal channel frame MW flanger. This model depicts the style so familiar to the Denver & Rio Grande Western. Also included in this kit is a 36' flatcar.



CARSON L.M.T.



MODEL DIE CASTING INC.

3811-15 W. ROSECRANS, BOX 926 • HAWTHORNE, CA. 90250



1515 ROTARY SNOW PLOW

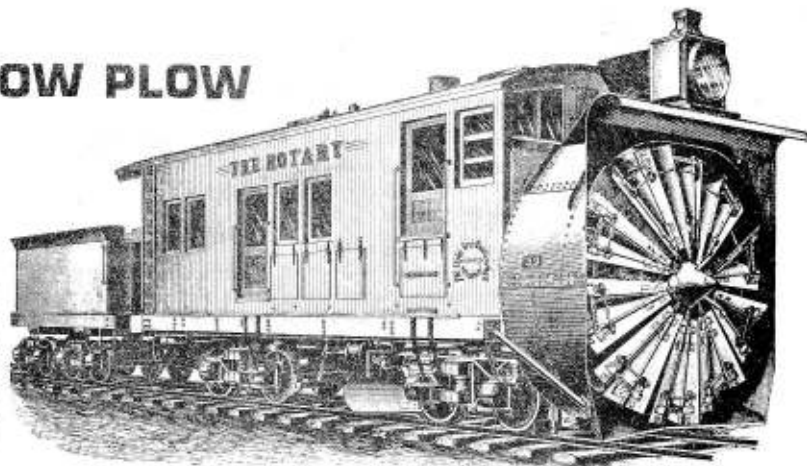
THEME KIT: PART-1

(3 in 1) #1515 ROTARY SNOW PLOW / Snow Fighting Series ... Part 1 of 3 Parts

INTRODUCTION TO THE ROTARY SNOW PLOW "THEME KIT"

Thank you for purchasing the Roundhouse Products (3 in 1) Rotary Snow Plowkit. The rotary kit is the first in a "team" effort by two "plastics" manufacturers. As you may well know all (3 in 1) kits require "kit bashing" (i.e., the art of cutting and fitting, plus the need to purchase additional parts from other manufacturers). Well, this time we visited with the Athern Company and did some (3 in 1) parts purchasing for you. You will find included with your (3 in 1) rotary plow kit a beautifully detailed snow plow housing and rotary blade assembly!

Historically, the "Rotary Snow Plow" was used whenever snow became too deep for the locomotive "push type" plows. The model represents a steam driven 1880s wood style rotary plow. Prototypes of this style still exist and are in use in Colorado on the narrow gauge Denver & Rio Grande railroad.



Please note: Roundhouse Products does not furnish with this kit: Plastruc molding parts, sheet styrene, or small castings. Please see your dealer for these parts.

About the model. Kit contains an "old timer" wood style side door caboose and a coal tender. The tender kit underframe requires modification, and was designed for a caboose. Normally (3 in 1) kits are designed to be constructed as typical kits (caboose and tender) or as outlined by "kit bashing" to make a rotary snow plow. Kit #1500 does not contain any (typical) kit instructions. If you do not want a rotary snow plow, construct caboose and tender by following the outlined instructions, omitting the rotary moldings and snow plow details.

Although we are sure you will build the rotary because of its simplicity of construction and overall "on line" looks! The instructions go into great detail and we did this so you could come up with a finished model that would have all the prototype looks. If by chance you are "all thumbs" or a new modeler, and new to kit bashing, you can certainly take short cuts:

"THUMBS" CONSTRUCTION / Covering Assembly of Rotary Snow Plow

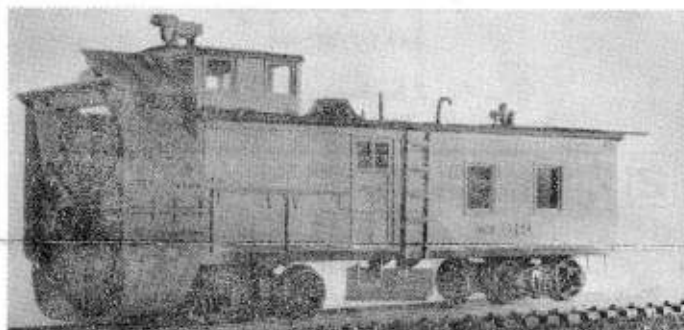
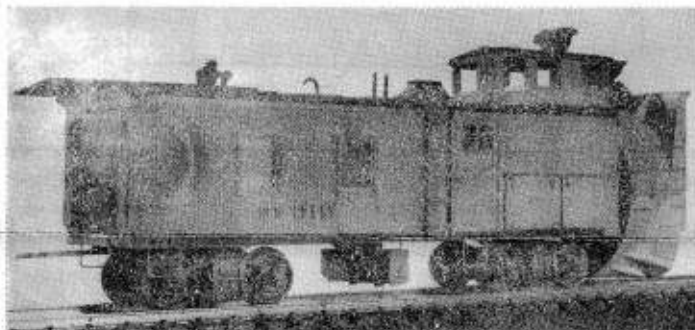
The easiest way to tackle the rotary plow is to construct the caboose

completely. Next, sand off details from end of body nearest side doors. This is so rotary snow plow housing can be glued to body. When glueing housing check height by placing the car on the tracks; position housing at least 1/8 inch above rail heads. This is so your finished model will clear the switch points and your mountain "incline". Before glue dries be sure to test model on a layout and make any adjustments to housing. (Set aside to dry.)

Tender Underframe Modification:

Follow outlined text and drawings. When model is completed and the glue is dry, you can paint the finished plow with any flat gray "Hot Rod" spray enamel. Paint in light coats, going over the model several times. (Do not soak paint onto the model!) Decal finished model with your favorite road name and Presto, you have a simplified rotary plow!

Instructions below are for the more advanced modeler and require the purchase of Plastruc and super detailing parts from a hobby shop.



ADVANCED MODELER ASSEMBLY INSTRUCTIONS / Rotary Snow Plow Body (Refer to Plan Drawing -1- Ref. to detail drawing -5-

- 1) Remove from body end (end closest to sides with side doors) all details that stick out of the front end, either by sanding or filing (refer to Plans). Cut out or sand flush the opposite end as shown in the Plans. Using the rear view in the same plan as a pattern (for cutting out the end) cut the new rear end out of .020 inch plastic sheet and glue into place. Super detail your model by installing a boiler (Keystone #101) or a boiler backhead (Kemtron #6049). Next glue a 1/16 inch wide strip of .010 inch plastic (not supplied) along the bottom of the body (as indicated in the plans) to simulate the metal guard (a nice variation would be to glue Plastruc C-2 channel instead). Finally, the mechanism access doors are cut from .020 inch sheet plastic (refer to plans) and glue them into position. The hinge bar is made with 1/32 inch plastic rod or wire (not furnished) and glued against the body and the top edge of the doors. The hinges are made by using .010 inch by 1/32 inch plastic strip (not furnished). Before cutting to

length, emboss two rivets using a needle as an embossing tool. Attach the side ladders, taking care not to damage the paint job.

- 2) Snow Plow Rotary Housing and Blade Assembly - Instructions for Revolving Blade. Remove all burrs and casting marks off the back of the housing. Scribe a center line 11/32 inch from the bottom edge of the housing. Front end and another on the middle as shown on Fig. 1 & 2 P-2-. Drill a 3/32 inch hole at the point where the center lines meet (this is for the shaft for the rotary blade). Now you are ready to glue the housing to the body. Apply liquid cement to the front end of the body and center the housing on it until the center lines show through the center of the four small circles on the housing.
- 3) Insert a 1-1/2 inch length of 3/32 inch diameter wire into the hole in the back of the blade casting. Then cut a bearing plate - to fit inside the plow body - out of .030 inch plastic sheet and drill a 3/32 inch hole as shown in -1-. This bearing plate is glued 1/2 inch from the end (see -2-). Make a shaft spacer and retainer by cutting Plastruc tubing TB-6 into 1/8 and 5/16 inch sections. Insert the 5/16 inch

Cont. from page -1-

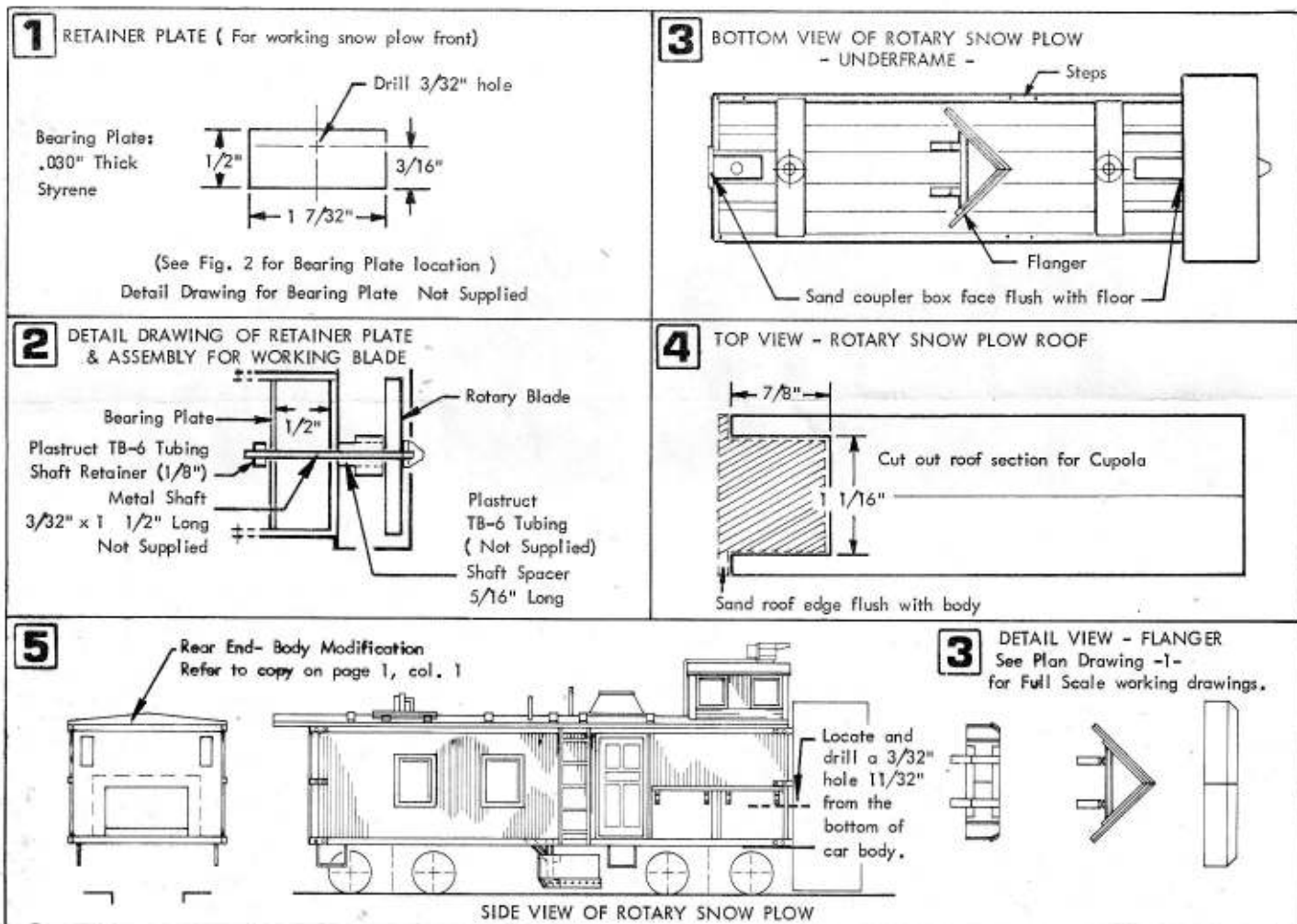
spacer onto the shaft and push it against the rotary blade. Pass the shaft through the front end of the body and the bearing plate; now insert the shaft retainer on the end of the shaft (see -2-) leaving some play so the blade can turn freely.

Construct Rotary Housing Deflector from .020 styrene (1/2 inch wide by 3/4 inch long) and glue to either side of top opening (refer to Plans, top view). For non-operating plow, simply glue housing to body front 3/8 inch below bottom of floor and, when dry, glue the blades into housing.

- 4) Plow Underframe. Cut away coupler box flush with frame. Assemble the underframe to the body, and attach trucks. Make sure that the front coupler pocket is flush with the front end. Fig. -3-
- 5) Underframe Detailing/Flanger. Refer to Plans (rotary, side view) and detail drawing of flanger which is below main illustration. Construct flanger by first cutting the left and right flanger blades and their back reinforcements out of .020 inch plastic sheet (for your convenience, a true shape template of the blades is provided on Plans; these reinforcements are 9/16 inch long). The chip plate at the bottom of the blades is made by embossing rivets on the back of a 1/16 by .010 inch plastic strip and glueing it to the blades as shown in the plans. At this point you have noted the three views of the flanger on plans: side view (illustrated under the snow plow), bottom view (auxiliary) and end view (auxiliary view). These are important as they will help you build this delicate part of the model! Note how the blades are beveled where they join (bottom view). This can be done by sanding or filing the inside edges of the blades at a 45° angle. Cut the cross support arms out of Plastruct H-2 "H" columns (not furnished), using the bottom view as a cutting guide (remember the beveled ends). Now glue the two blade halves and the support arms together (refer to the plans for proper alignment). Refer to Fig.3

Next the Flanger Bracket Arms are cut from Plastruct H-2 beam stock. Cut two main arms and two angle arms and glue them as shown in the Plan Drawing -1- (side view). Finally, glue the brackets to the flanger-support arm subassembly (make sure there is a strong bond by lightly sanding the surfaces to be glued). Be sure that the bracket arms are glued in the position shown in the plans (end view) or they need to clear underframe members. Refer below to Fig. 3

- 6) Final assembly of finished Flanger to Rotary Snow Plow Underframe. Flanger assembly is cemented (with ACC type glue) to the center of the underframe; straddling the center sill beams. Refer to plans for proper location.
- 7) Make small steps from handrail wire (refer to plans, side view).
- 8) Snow Plow Roof. Trim roof flush with the front end of the body (refer to plans). Then an opening for the cupola must be cut (refer to plan diagram, top view). You will note that the width of the cupola opening (1-1/16 inch) is actually smaller than the cupola itself; this is done so there will be no unsightly gaps on the final model. Cover finished roof with "facial tissue" and, using lacquer thinner, glue into place. Refer below to Fig. 4
- 9) Roof Reinforcement Strips (refer to plan drawing, top view). These are cut from .010 by 1/16 inch strip plastic (not furnished). Cut the roof shield (used to protect firemen from the weather) out of .020 inch plastic sheet and glue it into place. Attach the stack of your choice along with the whistle, safety valves, and vent pipe (not furnished). Use Kemtron or Cal Scale castings.
- 10) Finalizing Body/Roof and Interior Detailing of Rotary Body. Glue the cupola to the finished roof. Glue the headlight (not furnished) on top of the cupola and make the electrical conduit leading to it with 1/64 inch or #20 gauge wire. You may want to super detail your model by adding a boiler and cylinders to the interior; therefore, you may not want to cement the roof to the body. Refer below to Side View. ■



ROTARY SNOW PLOW TENDER INSTRUCTIONS

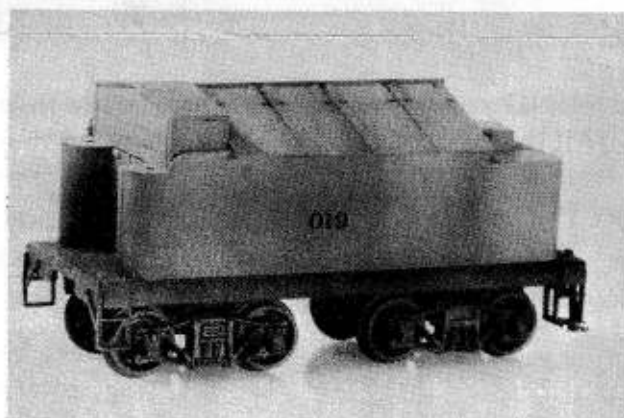
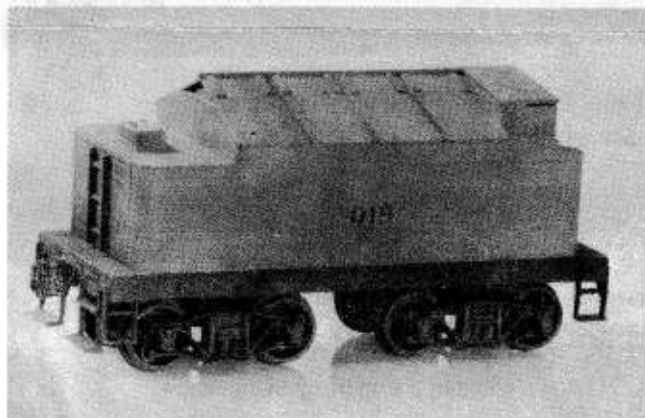
The Rotary Snow Plow used any style of coal tender, ranging in length up to 25 feet. Roundhouse has supplied our Old Timer series tender in the Rotary Snow Plow kit. The modeler can use the kit as supplied, or super detail the model kit as outlined below in the text. Roundhouse does not furnish Plastruc or styrene to make the tender coal bunker. Please ask your dealer for these materials.

TENDER BODY - Typical Kit Construction "Thumbs" (Without Kit Bashing). Add (2) brake wheels to top of bunker (2 small holes) and fill coal load. Made from scrap of wood, shaped to fill 'void' and glue coal to wood pile. A nice alternate load would be a wood load using toothpicks. Add trucks, rear coupler and drawbar. Underframe: Read step 2 below.

Copy below is for Advanced Kit Bashing Modeling, super detailing.

- 3) Attach the trucks to the tender frame with the screws provided. Test fit the frame to the tender shell to make sure everything goes together well. If there are any obstructions, now is the time to rectify them; also, if you feel that the weight of the tender is too light glue ballast weight now: washers, nuts, lead, etc. Then glue underframe to the tender body shell. With a coupler screw attach the drawbar to the front coupler pocket and your favorite coupler to the rear pocket.
- 4) Now, with a coupler screw, attach the drawbar from the tender to the plow's coupler pocket and check for alignment and clearance.

Next, glue the vestibule sides and before glueing the bunker door, scribe the door detail and add the hinges (1/32 by .010 inch plastic strip). To finish, add the hinge bar atop the bunker cover (1/32 inch diameter wire or plastic rod) and glue the hinges (1/32 by .010 inch plastic strip with embossed rivets) to the bunker doors as shown on plan drawing -2-.



- 1) Tender Coal Bunker. Look at Plan Drawing -2-. This shows the tender and all the templates needed to build up the enclosed bunker (typical of many coal fired rotary snow plows). Begin by making your choice of what material to use in making the bunker cover; scribed wood, plastic sheet, or pre-scribed plastic sheet (like evergreen scale models HO scale D&RGW car siding). Then cut out all the parts, cutting two of the bunker covers, coal bunker bulkhead, and vestibule side.

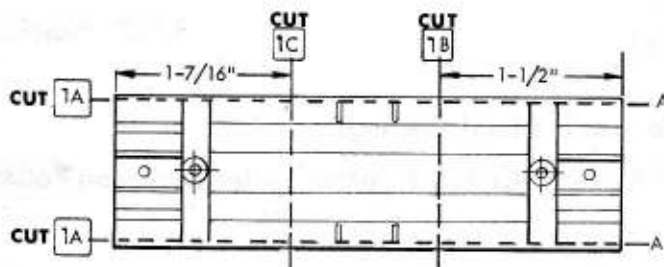
Start assembly by glueing a coal bunker bulkhead to the tender's coal bunker rear. To locate the front bulkhead take one of the bunker covers and place it over the tender bunker on the right side flush with the bulkhead previously attached. Make a mark on the front where the cover ends and repeat for the left side. With these two marks you have an accurate guide for glueing the front bulkhead. Glue the second bunker bulkhead right behind the front bulkhead. Now that both coal bunker bulkheads have been applied, you can glue the bunker covers.

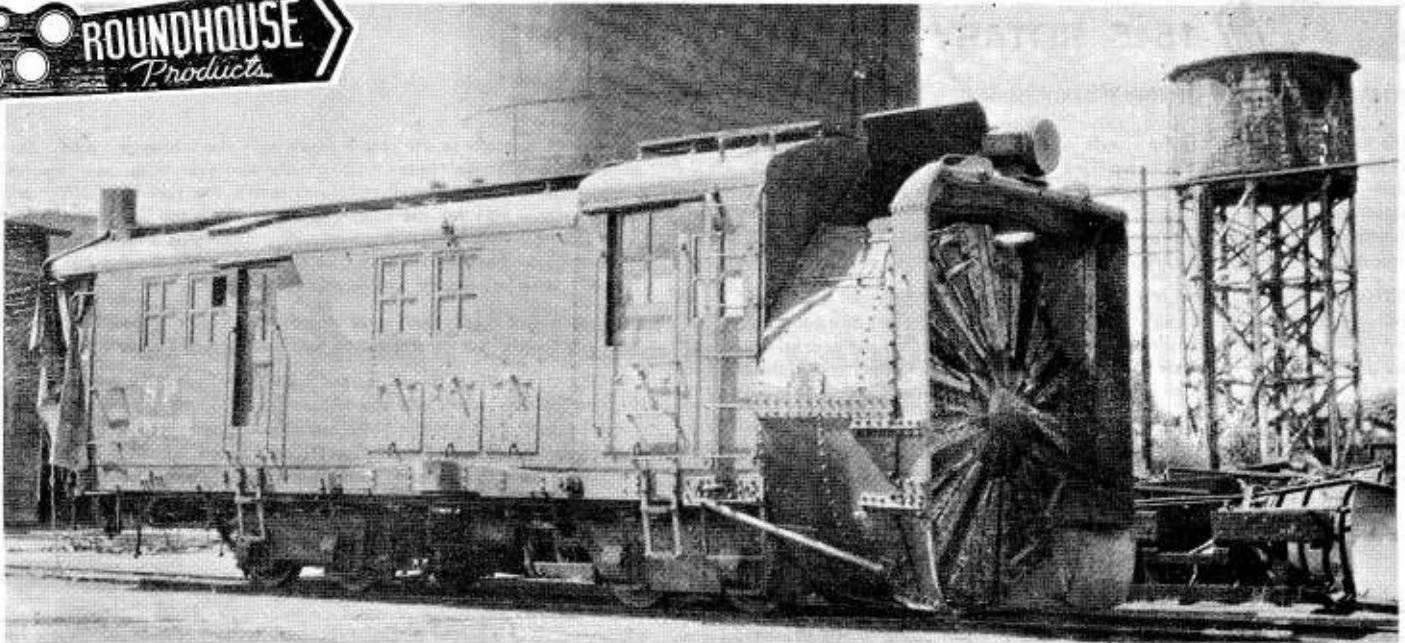
- 2) Tender Underframe. Glue and insert plastic bushings into the top of the underframe. When dry, file the exposed tops off flush with floor. Floor Modification: Using an X-acto saw, trim off 3/32 inch from each side of one of the floors. You can use the inside edge of the side ribs as a cutting guide (see drawing [1A]). After trimming the sides, make a cross cut 1-1/2 inches from one of the ends (see drawing [1B]). (Use a miter box to make a square cut.) Now, make another cross cut, this time 1-7/16 inches from the other end (see drawing [1C]). Fit both underframe pieces under the tender shell to make sure they fit properly. However, if they do not fit, use a sanding block or file to take out the unwanted material.

Finally cement the two underframe pieces together and when dry, drill 1/16 inch holes for the kingpin screws at the center of each truck bolster.

TENDER UNDERFRAME

A





**PAINTING /
DETAILING
YOUR FINISHED
ROTARY SNOW
PLOW
AND TENDER**

At this point you are ready to paint your model. There are many color schemes that can be applied to rotary snow plows. This model was painted following the late D&RGW scheme:

BLACK: Underbody, trucks, flangersupport, plow roof, cupola roof, side belt line detail, boiler backhead, lettering

REEFER GRAY: Tender, bunker cover, snow plow body, rotary housing, rotary blade, flanger blades, cupola, side ladders, headlight

BRASS: Whistle, safety valves **SILVER:** Electric conduit

To save yourself a lot of time and trouble group the assemblies that will be painted the same color together. Paint the ladders, headlight and flanger blades before attaching them to the plow. This will save you from masking. Let everything dry thoroughly before continuing with the assembly.

**WINDOW
GLAZING**

Using clear styrene sheet or acetate glue a piece larger than the window to be glazed. Care should be taken not to let the glue show through the window opening.

**PARTS LIST OF
MATERIALS
(NOT Included
in Kit)**

Plastruct (Plastic forms):	Sheet Styrene (Opaque White):
C-2 Channel, 3/32 x 3/32"	.010, .020, .030
TB-6 Tubing	1/32" Plastic Rod
H-2 "H" Column	

Kemtron (or) Cal Scale Metal Castings

Keystone Metal Boiler #101 (or) Kemtron Boiler Backhead #6049

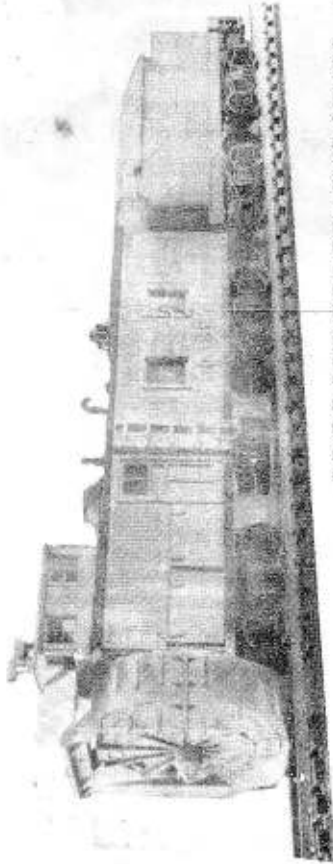
ACC Glue

#20 Gauge Wire (used for electrical conduits)

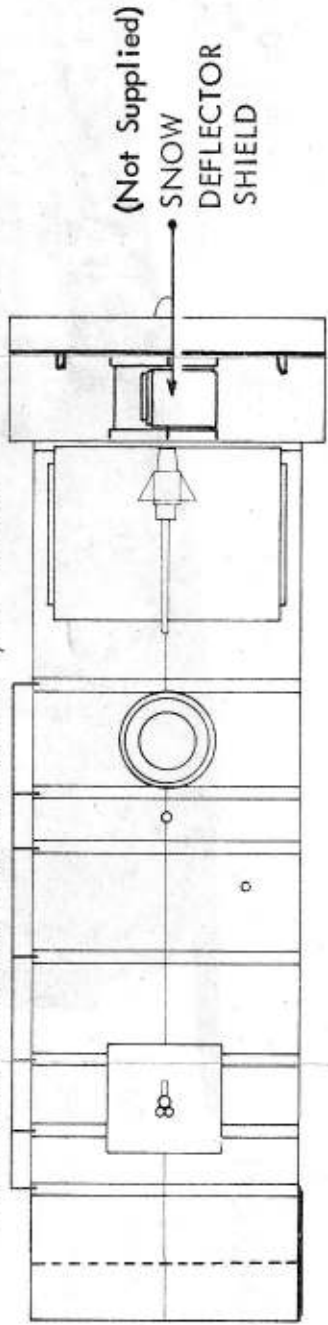


PLAN VIEW DRAWING - 1 -

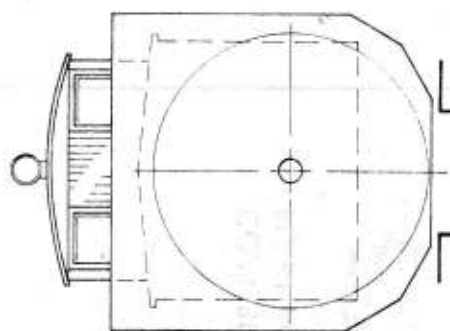
H0 scale



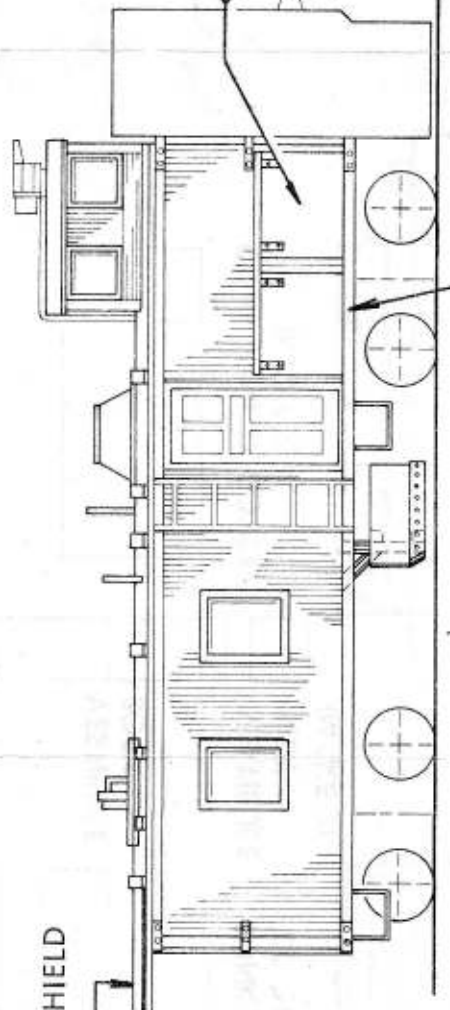
ROOF REINFORCEMENT STRIPS .010 X 1/16" THICK



(Not Supplied)
SNOW
DEFLECTOR
SHIELD

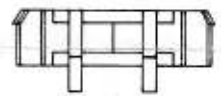
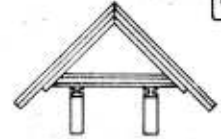


ACCESS
DOORS
.020" THICK
SHEET
STYRENE



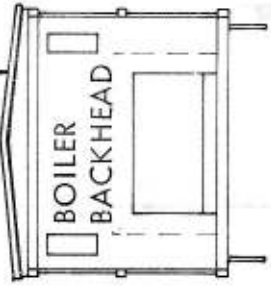
1/16 X .010" PLASTIC STRIP OR PLASTRUCT C-2
CHANNEL (NOT SUPPLIED)

BLADE
TEMPLATE



5

REAR ROOF SHIELD



BOILER
BACKHEAD

FLANGER AUXILIARY VIEWS

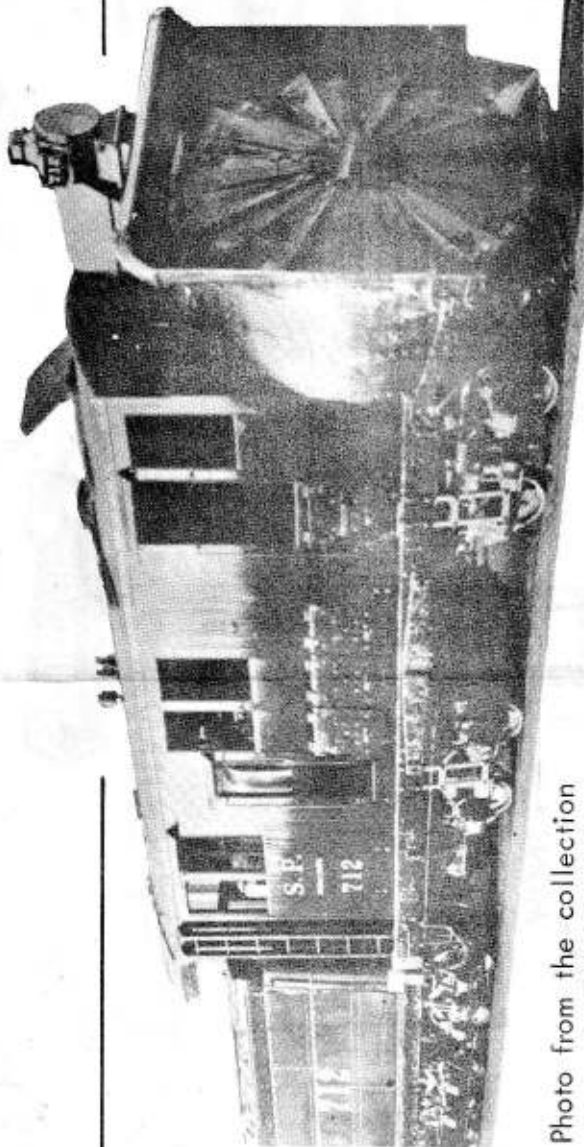


Photo from the collection
of Apache Press
Mr. Phil Da Costa

PLAN DRAWING-2-- HO Scale

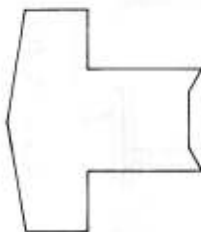
For additional information
Covering the complete
inside boiler detailing
and exterior detailing.

Railroad Model Craftsman
July 1977

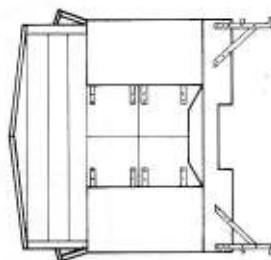
FRONT BULKHEAD



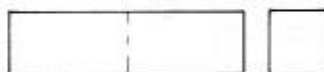
VESTIBULE
ROOF



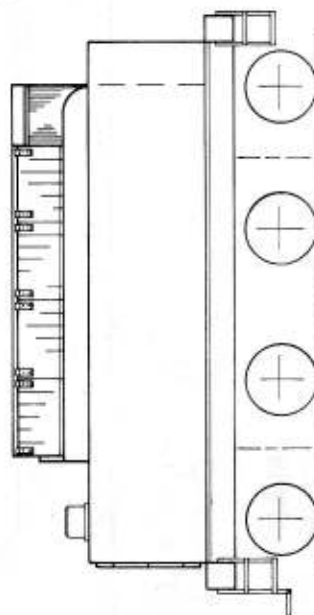
BUNKER
DOOR



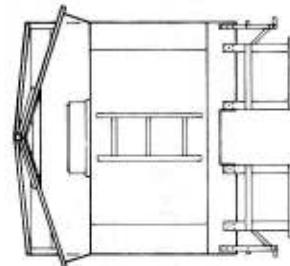
VESTIBULE
SIDE
(MAKE 2)



COAL BUNKER COVER
(MAKE 2)



COAL BUNKER
BULKHEAD (MAKE 2)



HO
scale

BATTLE MOUNTAIN

ROUNDHOUSE
Products

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BATTLE MOUNTAIN

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June '78

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ROUNDHOUSE 1518 \$6.50

...The Battle Mountain "GALLOPING GOOSE"!!
just in time for those long hot summer days...kit is
non-powered HO scale with instructions cover
ing conversion of the Roundhouse Diesel
into a powered "Galloping Goose"!!
kit contains kit-bashing parts :(1) box
car, (1) diesel body and details, & 4 wheel lead truck.



Photo- "Galloping Goose" Diesel conversion, Diesel truck not supplied with kit #1518

All three in one kits are for FUN and KIT BASHING! and any similarity
between the real and unreal of the styles given is purely by chance ...
Based on fact, built on fiction...We know you will love them all! (3 in 1)

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Rare scan of an advertisement from Model Die Casting that was not released in the shown format.

SNOW DOZER FLANGER & WEDGE PLOW

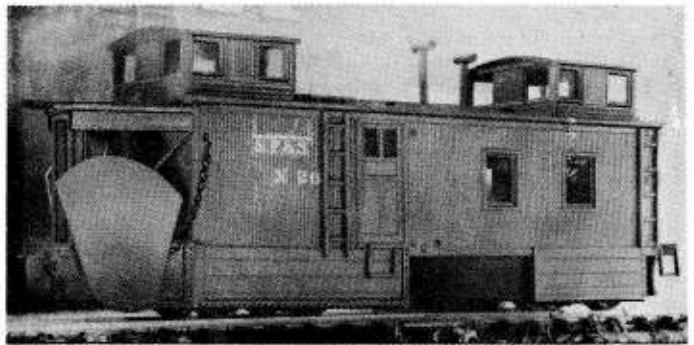
INTRODUCTION:

The prototype for this project is Spokane, Portland, and Seattle's X-26, a double ender Snow Dozer with flanger. The movable large blades on the front are used to remove snow drifts of up to 4 feet over the rail, while the small flanger blade underneath the bottom center sill of the floor removed packed snow from between the rails.

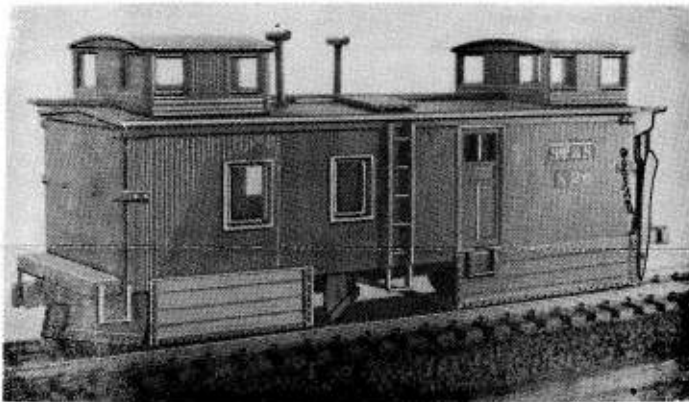
Before beginning this project, read the instructions carefully; study the plans and figures and familiarize yourself with the materials and parts.

(Snow Dozer) Body Modifications: Detail Drawings **[A]** & **[B]**

- 1) File or sand away the bottom bolts, brake base, and bottom corner strap from the rear end (end furthest from door) and the corner straps on the bottom of the sides. ↓



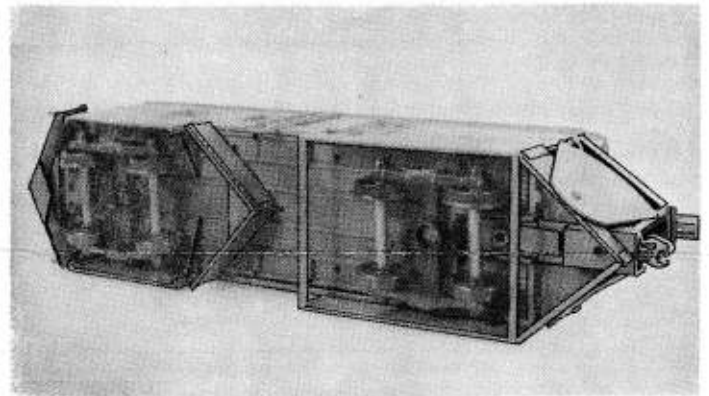
- 2) Front Coupler Support: Cut out of .030" plastic sheet (Fig. 2) and its Reinforcing Plate out of .020" plastic sheet (Fig. 3). Coupler box Kadee #5-10s.
- 3) Front Coupler Bottom: Glue (Kadee) Coupler Pocket to the front end of the coupler support, drop in the coupler, and close the coupler pocket (on some coupler pockets - Kadee #5-10 for example - side mounting tabs must be trimmed off). ↓



- 2) Rear Coupler Sill - opposite dozer end: Cut a piece of 1/16 x 3/16 inch wood to fit across the rear end; glue it in place using ACC. (See detail drawing **[A]**)
- 3) Underframe and trucks secure to the body.
- 4) Fill in ladder holes (side of body) using plastic putty; apply from inside the body.
- 5) Lift Ring Holes: Drill a #76 hole on the upper front sides of the body (see plans) which will be used for lift rings (not furnished). (Detail Associates #LR 1101 or Kemtron's #658.)
- 6) Side Skirts (4): 2 short and 2 long. Cut out of .030" plastic styrene sheet (see plans), scribe these using a straight edge and the back of a modeling knife.
- 7) Glue the skirts to the body, overlapping the bottom of the sides (see plans).
- 8) Reinforcing Strips: Emboss rivets on 1/16" x .010" plastic styrene strip, using a dull needle mounted in a pin vise. (See Plans)
- 9) Rear Coupler Pockets: Attach Kadee coupler pocket and couplers to the center of the rear sill making sure that it is flush with the end of the sill. Detail Drawing **[A]**

FRONT PLOW AND PLOW SUPPORT: Detail Drawing **[C]**

- 1) Plow Front Skirts: Use .030" styrene plastic sheet (Fig. 4 Detail **[C]**) of the body instructions), and drill a #76 hole as shown in Fig. . . Glue skirts to the body side skirts (see plans) and add edge reinforcement strips (Step 8, Body). ←



- 4) Reinforcement Plate: Glue to the underframe's coupler pocket in front of the coupler boss. Drawing **[B]**
- 5) Coupler Support: Glue (with coupler in place) under the reinforcement plate and butted against the underframe's coupler pocket. Detail **[B]**
- 6) Check coupler height with the coupler gauge for coupler.
- 7) Lower Platform Construction (Fig. 5): Cut out of .020" plastic sheet; scribe it per Fig. 5, and glue to the top edges of the front skirts and butt against the car's front end Detail **[C]** plans).
- 8) Plow Support (Upright Members): Cut two 15/16" lengths of Plastruct C-4 channel to make plow supports. (Fig. 6A/ Detail **[C]**)
- 9) Plow (Cross Braces): Cut two 5/16" lengths of Plastruct A-1 angle to make the cross braces for the uprights. Glue the braces to the uprights as shown in Detail C making sure that everything is square.
- 10) Plow Support (Cross Members): Cut two 13/16" lengths of C-4 channel to make the cross members of the plow support; be sure to (bevel) the ends as shown, Fig. **[7]**
- 11) Glue the cross members between the top of the uprights and the upper corners of the front end Drawing **[C]** and plans).
- 12) Upper Platform (Fig. B): Cut out of .020" plastic sheet, scribe it, and glue it to the top of the cross members, Drawing **[C]**
- 13) Lower Deck Truss Rods: Cut .030" or .040" plastic rod or metal wire to fit diagonally between the bottom of the uprights and the upper corners of the front end (see plans, side and front views) & Drawing **[C]**

- 14) Plow Blades: Cut out of .020" plastic sheet using the auxiliary view on the plans as a cutting pattern. Drill a #76 hole where the drawing shows; and then shape the blades by wrapping them around a round pencil or dowel. The blades will be attached to the skirts after painting.

REAR BLADE ASSEMBLY: Detail Drawing [D]

- 1) Rear Blades (Fig. 9A) and (optional Blade Reinforcer (Fig. 9B): Cut out of .020" plastic sheet. Before attaching, scribe a line on the rear of the blade part as shown in Fig. 9A. Use for a guide when attaching blade spacer.
- 2) Rear Blade Spacer (Fig. 9C): Cut out of .030" plastic sheet.
- 3) Shape the blades by wrapping them (lengthwise) around a pencil or dowel; also bevel the front edges of each blade. Glue the two blades together and the rear blade spacer as shown in Detail [D]
- 4) (Optional) Bend the blade reinforcer to form a "V" and glue it to blades below the coupler opening (see plans), Rear View & Detail [D]
- 5) Glue the rear blade assembly to the bottom of the rear end sill over the coupler pocket as shown in plans. Rear View & Detail [D]
- 6) Make the edge guard strip as you did for the side skirts (Step 8, Body) and glue it to the blades.

FLANGER BLADE ASSEMBLY: Detail Drawing [E]

- 1) Flanger Blades (center of car): Cut out of .020" plastic sheet using Fig. 11A as a cutting pattern.
- 2) Scribe a line on the rear of the flanger blade as shown by the dashed lines in Fig. 11A.
- 3) Cut the flanger blade spacer out of .030 plastic sheet using Fig. 11B as a cutting guide.
- 4) Assemble the flanger blades as you did for the rear blades.

- 5) Glue the edge guard strip to the flanger blades as you did for the rear blade.
- 6) Glue the flanger blade assembly to the underframe per plans & Detail [E]

ROOF ASSEMBLY: Refer to Plan Drawing

- 1) Roof Modification-Cupola Installation: Scribe openings for the front and rear cupolas according to the plans. Then cut the opening in the roof for the cupola using a jewelers saw. Refer to plan drawings for measurements. Top View
- 2) Roof Walk: Cut the roof walk to lengths shown in the top view of the plans and glue them to the center of the roof. Also glue the roof mats where shown and glue the cupolas in place. Add roof details as desired.

DOZER PAINTING INSTRUCTIONS:

The color scheme for this model is: Box Car Red/Overall and White lettering (or) your own schemes. It is best to paint your model in its sub-assemblies: roof, body, plow blades, ladders and steps. Be sure to do a neat job since the best assembled model can be ruined by its finish. After the paint dries, the decals are applied in the usual manner.

DOZER FINAL DETAILING AND ASSEMBLY:

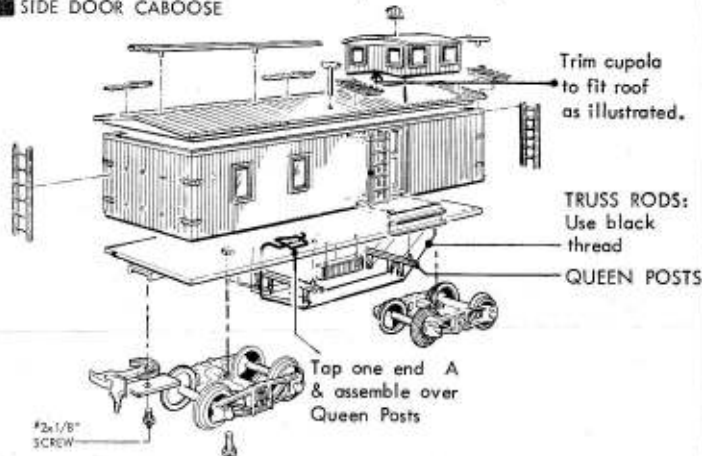
- 1) Glue roof to body.
- 2) Glue the ladders in place (use ACC; and refer to plans).
- 3) Attach snow plow blades to front skirts by inserting a pin through the pivot hole of the blade and the hole on the front skirt; carefully apply a drop of cement to the pin from inside the front skirt. After the cement dries, cut the pins using a rail nipper leaving only 1/8" inside the front skirts.
- 4) Cut two 3/4" lengths of chain (not supplied) or use black thread to make the plow blades' safety chains and attach these between the eyelets on the front corners of the body and the plow blades (carefully use a tiny drop of ACC for this). **END OF PROJECT -**

EASY for modelers that have not done "Kit-Bashing".

1517 Typical kit construction

Kits are not complete- you will need to purchase some parts.

■ SIDE DOOR CABOOSE



26" Metal Channel Frame Flanger

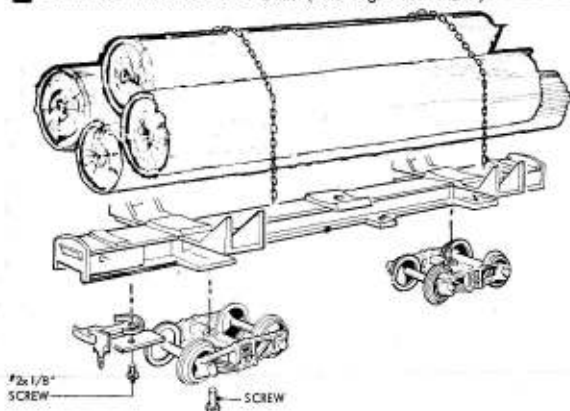
If you feel this project is too extensive as outlined for kit-bashing, we recommend an alternate project. Assemble kit contents into a log car as illustrated in typical instructions.

26" Wedge Snow Plow (Flat Car Kit) and separate Plastic Floor

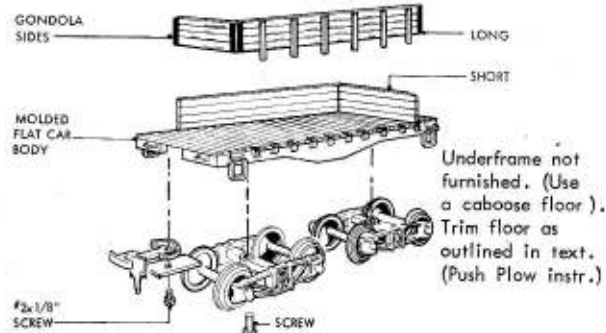
Assemble trucks to flat car and add Kadee 5-10 coupler boxes and couplers. Construct a second flat car from underframe. For operation, add 1 to 2 ounces of weight to each car.

logs: use any straight piece of bush or dowel 1/4" to 3/8" dia.

■ CHANNEL FRAME LOG CAR (less logs and chain)

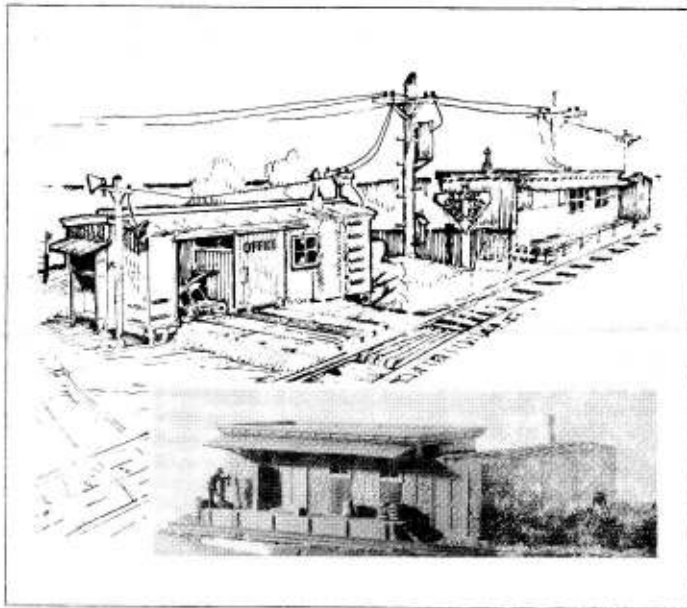


■ 26" FLAT CAR / GON SIDES



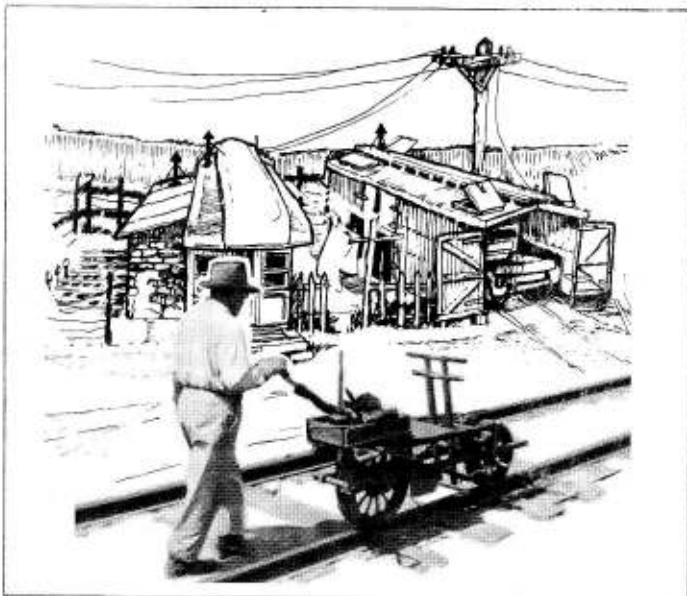
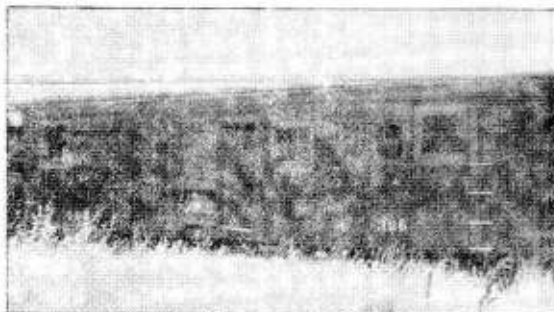
WAYSIDE STRUCTURE SERIES

Comprising three individual kits: #1504, #1505, #1506

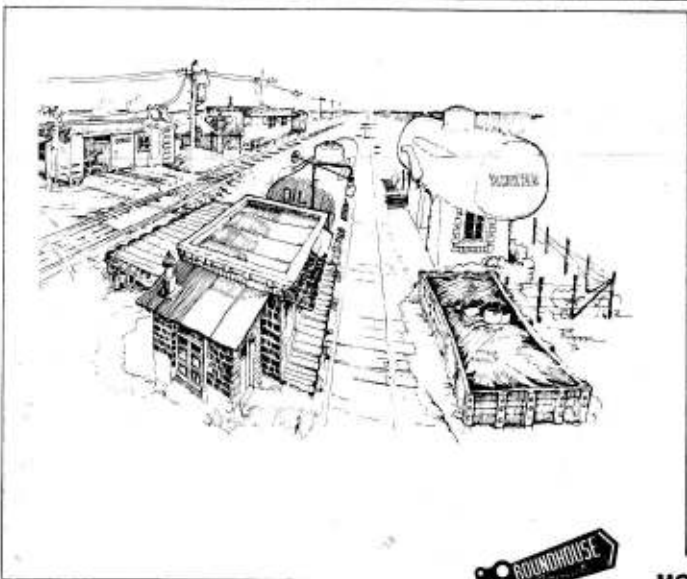


Kit Description:

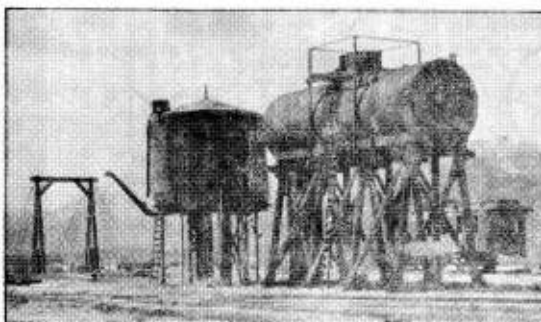
#1504 - Freight Station and Loading Dock (using our flat car gondola sides) supplied with kit. Kit is furnished with two 36' box car kits. You can use one box car body positioned next to the building as a tool shed, by cutting out door and window openings as instructions illustrate. The second body can be positioned next to the "main line" and constructed into a hand car shed and office. You can use our hand car kit No. 2976



#1505 - Gandy Dancer's Quarters. Kit consists of a single-story, stone building which can be made into individual sheds which are attached to the sides of the car kits. Car kits: one Overton 36' old timer passenger car, and one 36' old timer wood style refrigerator car kit. In the drawing you can see the building idea and also an idea to make the reefer into a garage.



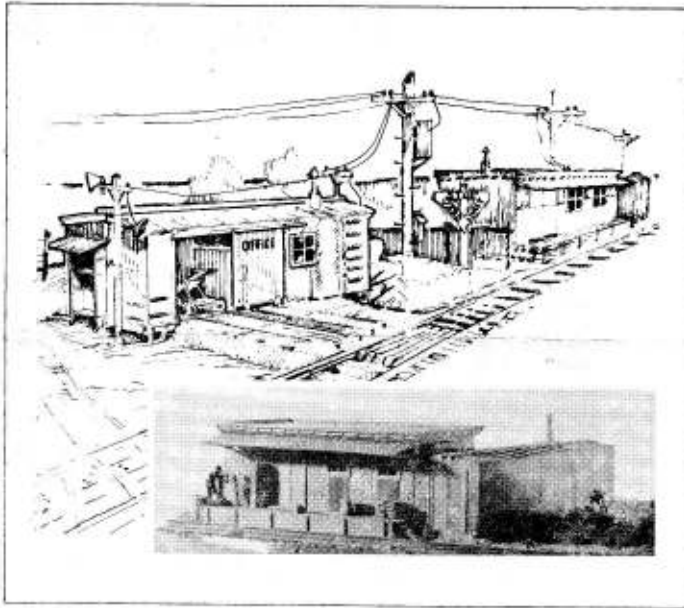
#1506 - Telegraph Office (single-story brick building) kit bashed into a two-room building. Kit contains one flat car and gondola sides. Use flat car as a wayside loading and unloading ramp for your local heavy equipment needs and use the gondola sides to construct a cooling bin or "clinker dump". Next, you have a tank car which makes up into an "oiling facility". The car can be mounted on the ground with a filling pipe attached to the tank.



MODEL DIE CASTING, INC.
P.O. BOX 1927 - CARSON CITY, NV 89702

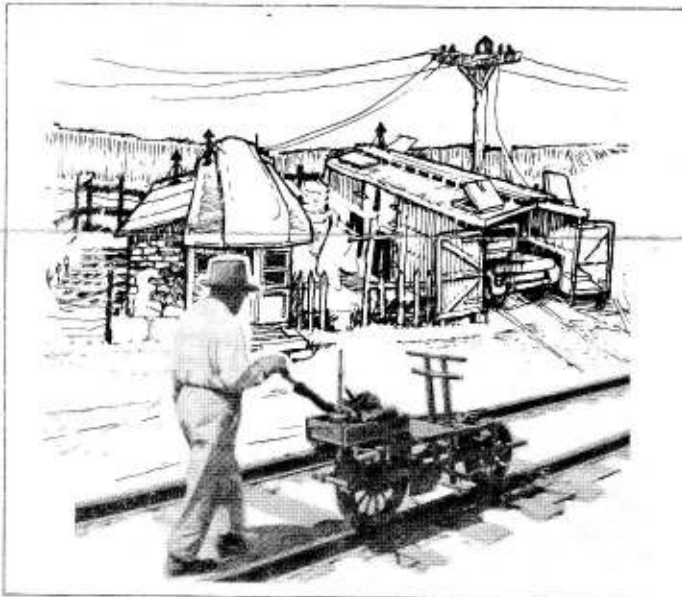
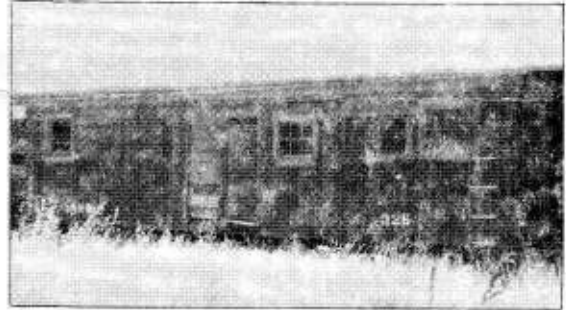
WAYSIDE STRUCTURE SERIES

Comprising three individual kits: #1504, #1505, #1506

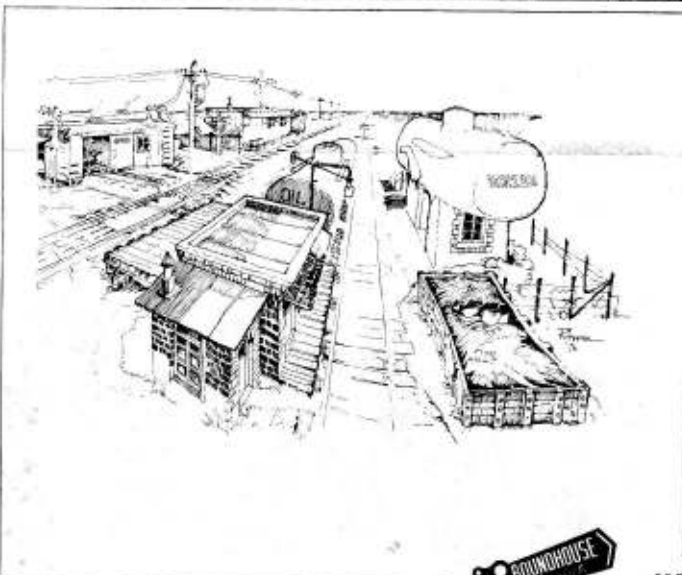


Kit Description:

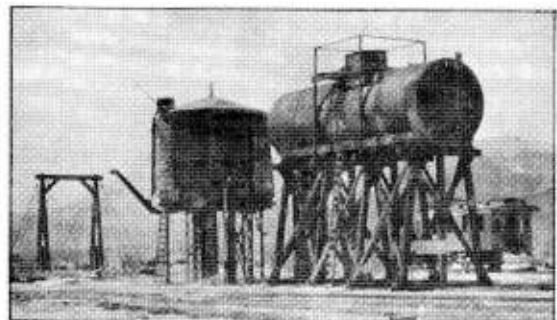
#1504 - Freight Station and Loading Dock (using our flat car gondola sides) supplied with kit. Kit is furnished with two 36' box car kits. You can use one box car body positioned next to the building as a tool shed, by cutting out door and window openings as instructions illustrate. The second body can be positioned next to the "main line" and constructed into a hand car shed and office. You can use our hand car kit No. 2976



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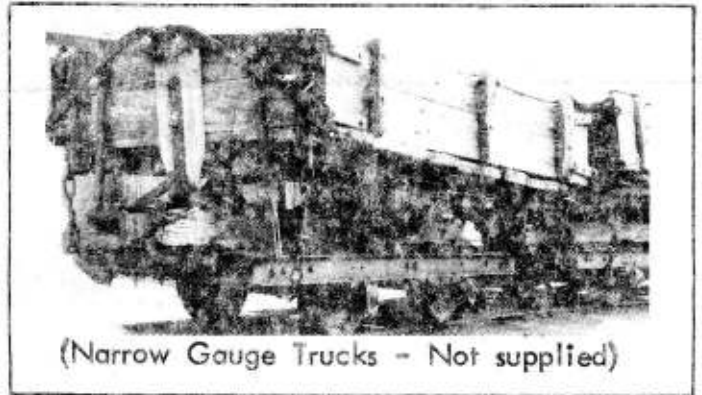
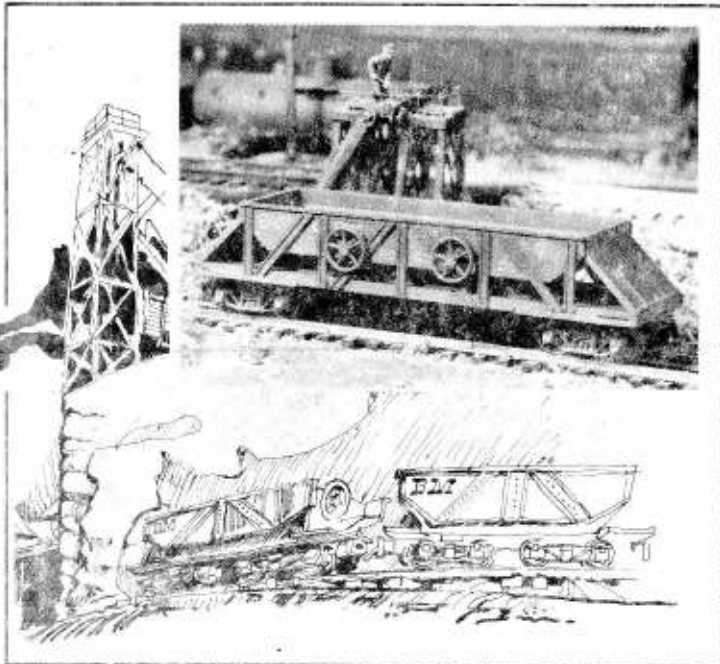


#1506 - Telegraph Office (single-story brick building) kit bashed into a two-room building. Kit contains one flat car and gondola sides. Use flat car as a wayside loading and unloading ramp for your local heavy equipment needs and use the gondola sides to construct a cooling bin or "clinker dump". Next, you have a tank car which makes up into an "oiling facility". The car can be mounted on the ground with a filling pipe attached to the tank.

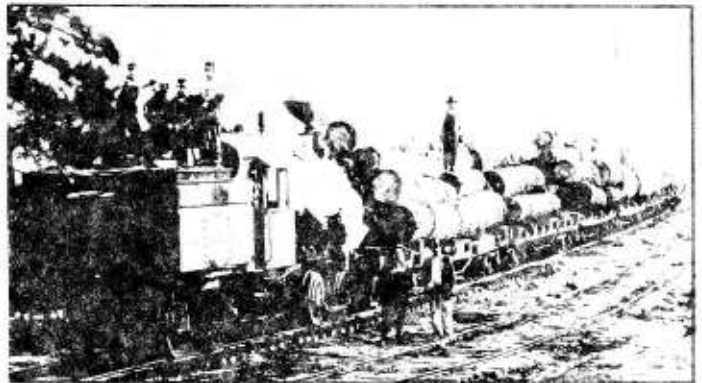
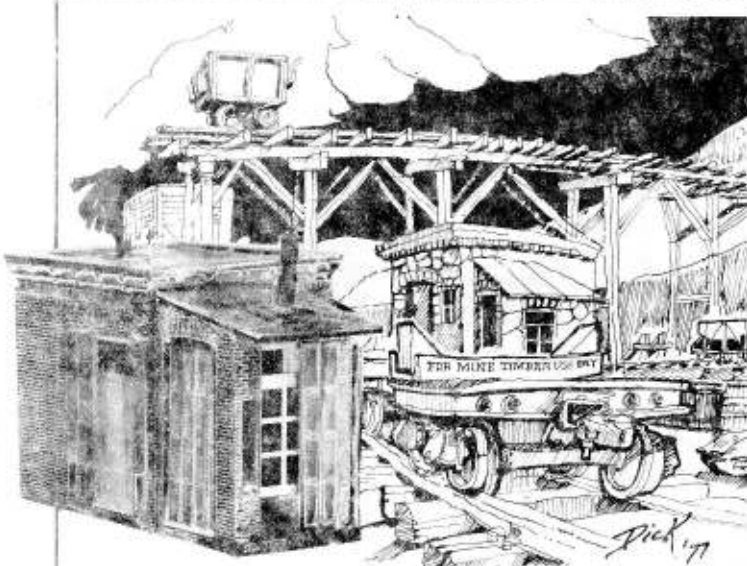


MODEL DIE CASTING, INC.

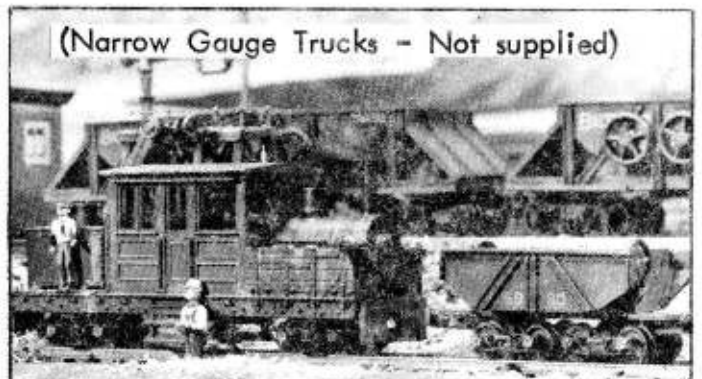
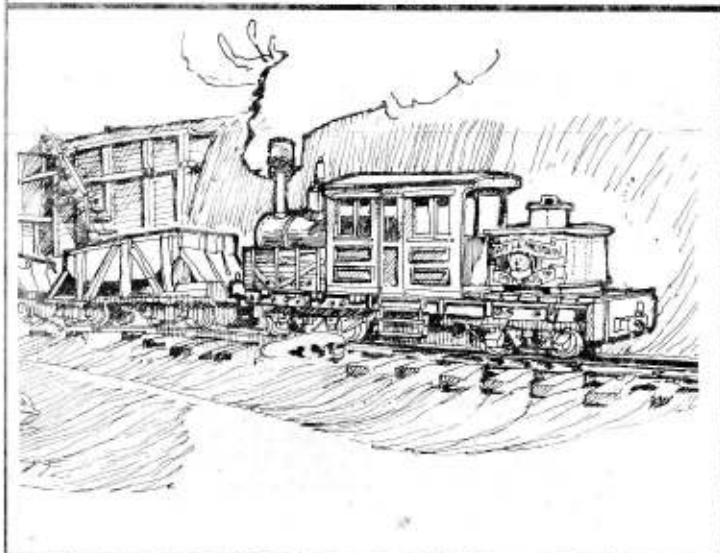
P.O. BOX 1927 - CARSON CITY, NV 89702



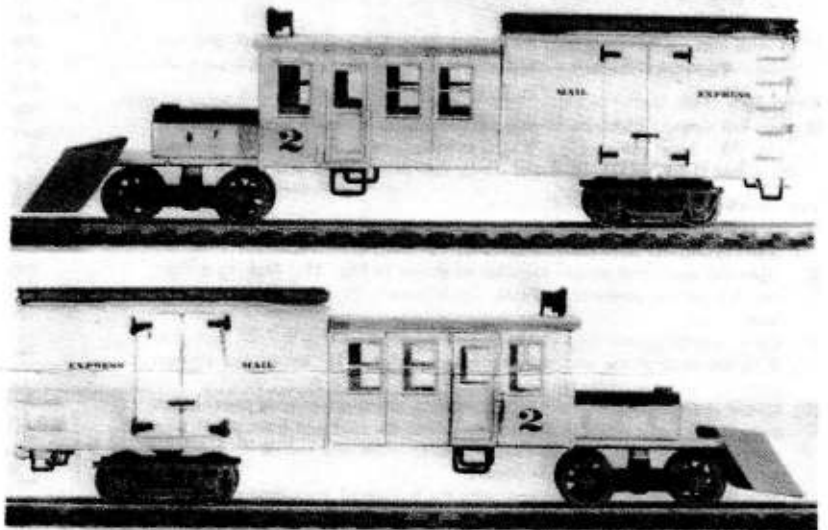
#1509 - Log and Mining Timber Car Set (Metal). Also included with kit: (1) Single-Story molded stone Assay office. Instructions illustrate, with pictures, many old time cars and ideas. Kit is illustrated to the left, showing an end view of the log car along with the building kit. Kit is undecorated and less logs.



#1510 - Narrow Gauge dummy Climax locomotive kit (illustrated to the right). Model kit instructions cover how to convert the Roundhouse HO Climax into a "petite" narrow gauge engine for HO_{N3} or to run on (N) scale track. Modeler will have to do kit bashing and purchase the small boiler (or scratch build one). This is an outstanding engine when finished.



BATTLE MOUNTAIN GALLOPING GOOSE


INTRODUCTION

HO scale modelers who desire a truly unique piece of railroad equipment will enjoy this project.

Basically, the term "Galloping Goose" is derived from the mountains of Colorado, and the Denver & Rio Grande Railroads' "petite" narrow gauge, home-made rail passenger cars of the 1930's. HO modelers have long wanted something similar in appearance to these fascinating cars from the Golden Age of railroading but, unfortunately, there never was a standard gauge copy! Grant you, there were some fascinating contraptions of "home brew" used for standard gauge, but never a true "look-alike" for the Colorado "Galloping Goose".

This is the reason Roundhouse Products has once again enlisted the custom model shops of "Carson Limited", and Master Modeler Mr. Gasparini to re-create the "Goose" for our (3-1) line. Carlos, by the way, also created the now famous Rotary Snow Plow & Tender kit combination for our (3-1) modelers for \$6.50! It was his talents that were needed to once again put together an equally unique (3-1) kit. We know you will enjoy "kit bashing" together the "Galloping Goose"!

Please read over the instructions completely and familiarize yourself with the kit contents before starting construction of this kit. (Be aware that this is not a "Shake-together" kit and that you will need to purchase some additional materials for construction of the kit.

"GALLOPING GOOSE" - ASSEMBLY INSTRUCTIONS
FLOOR:

- 1) The floor is a Harriman Baggage car underframe; cut off the two reinforcement members at each side of the floor by scoring repeatedly with a hobby knife as shown in Fig. 1.
- 2) Cut the floor to shape using the plans (bottom view) as a cutting guide.
- 3) Drill a 1/16" hole for the leading truck mounting screw as shown in the plans and Fig. 3.

PILOT AND REAR TRUCKS:

- 1) Assemble the pilot truck by first pressing the flanged metal rims to the plastic spoked wheel centers. (Note that in profile the centers have a slight taper. The smaller end of this taper aids in positioning and pressing home the rims.) A piece of metal or a vice could be used to press the rims if it is large enough to cover all of the rim so there is equal and uniform pressure (see Fig. 4).
- 2) Press the assembled wheels onto the axles. (A vice will work very well here but be sure that the jaws are not too sloppy in alignment or they may "bind" the wheel set.) See Fig. 5.
- 3) Following Fig. 6, place the wheel sets on the truck frame. Place the retainer plate over it, pass the truck mounting screw through the retainer plate and truck frame, and tighten assembly by threading a plastic bushing. (Be sure to center the mounting screw on the slot of the truck frame). See Fig. 6.
- 4) Attach the pilot truck to the floor as shown in Fig. 7.
- 5) Attach the rear truck with the #2 x 3/8" screw supplied.

SUPERSTRUCTURE:
Mail Compartment (Using 36' Box Car Body) -

- 1) Make the mail compartment by cutting the box car body 2-1/2 inches from the "A" end (end opposite brake), making sure that it is a square cut (see Fig. 8).
- 2) Remove all door detail from the mail compartment (use sand paper) and trim off the side sills as shown in Fig. 8.

Front END FASCIA

- 3) Make the front end trim by cutting a strip of .020" plastic sheet 1/4" by 1-1/2" and gluing it to the top of the mail compartment front end. The strip's bottom edge should match the trim's bottom edge (Fig. 9). When the glue dries, shape the strip to match the contour of the roof and sides (see Fig. 9).

Front End - Using Remainder of Floor (or) -

- 4) Cut a piece of .020" plastic styrene sheet 1-5/32" x 1-3/16" to make the front end (scribe this end to match the rear end by using the back edge of a hobby knife and a steel ruler for a guide). Set the floor inside the compartment close to the front end as shown in Fig. 10. (This will push the sides apart so the end wall will set properly when gluing). Now, glue the front end into place (see Fig. 9).

Front End Final Assembly - Before Glueing Mail Compartment to Underframe -

- 5) Trim the bottom of the front end (see Fig. 9) until the bottom edge of the compartment sides are 3/64" below the bottom of the floor. When you have achieved this, glue the compartment to the floor.
- 6) Make the mail compartment doors by cutting .020" plastic sheet 1" x 3/4", then scribe a line on the center of the door. Glue the doors to the compartment as shown in Fig. 11.
- 7) The door hinges and latch can be purchased at your local hobby shop or constructed with bits of plastic strip 1/8" long. These are glued to the door as shown in the plans.

PASSENGER BODY: (Using Box Car Diesel Body)
Body Modification -

- 1) Diesel body shell; trim off the bottom sill from sides.

Diesel Body (Side View; Use Fig. 12 for Reference) -

- 2) Measure from the diesel front end (back 5/8"). On the diesel sides make pencil marks at the top and bottom of panels. Using a steel ruler and hobby knife, scribe a vertical line connecting these pencil marks. Continue scoring the groove, but don't cut through yet.
- 3) Using the knife and ruler, scribe a horizontal line along the roof edge (where the roof meets the car side). Begin at the panel (1) and continue to the opposite end. Continue scoring the groove until the knife cuts through; repeat procedure on opposite side.
- 4) From the front end of the roof measure back 2-1/2" (Fig. 12) and cut the

roof cross-ways at this mark. Make sure that it is a square cut; then sand smooth.

- 5) Finish cutting the sides from the front panels (I-R and I-L), roof, and rear end. You should be left with (I-right and I-left) side walls & front end.

Diesel Body (Side Walls) -

- 6) Lay out sides, which you have cut away from diesel body, as shown in Fig. 13. Next, using Fig. 13 as a cutting guide, cut the doors (panels II-R and II-L), panels III-R and III-L, and panels IV-R and IV-L.

Door Panels (II-R & II-L) Modifications -

- 7) To make the windows in upper portion of door, simply cut out the solid upper portion in door panel (Fig. 14).
- 8) Glue the doors and panels together as shown in Fig. 15. Making a right and left wall subassembly. Note: Door panels (II-R & II-L) face to the front.
- 9) Cut a reinforcement strip of .020" plastic sheet 1/4" x 1-7/8" and glue it to the back of the wall subassemblies, about 1/16" below the window openings (see Fig. 15).
- 10) Square the top edge of the walls if needed, using a flat sand paper block and glue finished walls to the proper side of the roof and front panels (the reinforcement strip will also allow you to align and secure the walls. Be sure to glue it to the front panels.
- 11) Trim the bottom of the front end until the bottom of the edges of the side panels are flush with the bottom edges of the floor.

Front Center Window Modification -

- 12) Enlarge the center front window by using the plans as a cutting guide.

ENGINE COVER:

Using Remaining Diesel Roof Top -

- 1) From the diesel roof, cut 7/8" off the remaining end. (Note: Use section as shown in Fig. 16).

Diesel Roof Section Modification -

- 2) Measure 1/4" in from curved edge of roof (both sides) and cut as illustrated in Fig. 17. (Center section not used - the curved portion is utilized for engine cover.
- 3) Square all cuts and glue the two roof sections together (Fig. 18) to make the top of the engine cover.
- 4) Cut two engine side covers out of .020" styrene plastic sheet 5/16" x 7/8" (see plans) and glue them to the engine cover (see Fig. 18). Square front & rear ends of engine cover using sand paper block.

Engine Front Cover (Radiator) -

- 5) Cut a piece of .020" plastic sheet 1/2" x 1/2", and glue it to one of the ends (Fig. 18). After the glue dries trim off any excess so the sheet conforms to the shape of the engine cover (see plans). This now becomes the radiator front.
- 6) To further detail the engine radiator front add a piece of wire mesh to the front to simulate the radiator grill.

PAINTING:

You should have three major subassemblies (Mail Compartment attached to the floor, Passenger Section, and Engine Cover). These can be painted in your railroad's colors or as follows:

Black:	Bottom of floor, trucks, engine cover top, mail compartment roof, hinges, headlight
White:	Top of floor, mail compartment, passenger section, engine cover
Red:	Cow Catcher

Be sure to let the paint dry thoroughly before final assembly.

FINAL ASSEMBLY AND DETAILS:

Window Glazing -

- 1) Glaze the passenger section windows with acetate or clear styrene. Cut a strip of material 9/16" wide, then cut two 1-3/4" sections for the sides and one 1-3/16" section for the front.
- 2) Glue the glazing material behind the window openings. The reinforcement strips will aid in aligning the glazing material. Be sure that there are no glue smears showing through the windows.

Interior Detailing -

- 3) (OPTIONAL). If you desire to install interior detail to your model, do so now.

Final Assembly -

- 4) Glue the passenger section to the floor. The bottom edges of the sides should be flush with the bottom edges of the floor.
- 5) Glue the engine cover to the floor, centered between the front windows as shown in the plans.
- 6) Make the cow catcher from .020" sheet styrene plastic using Fig. 19 as a cutting guide for right & left blades and Fig. 20 for the blade spacer. (Be sure to scribe the guide lines on the rear of the blades.) Scribe line is used to locate blade spacer for gluing.
- 7) Glue the blades together and the blade spacer to the blades as shown in Fig. 21.
- 8) Paint the cow catcher (refer to "Painting"). Let dry and then glue it to the floor per plans.
- 9) Glue the headlight on top of the roof (see plans).
- 10) Apply lettering and your model is ready to pick up the folks waiting at the junction!

instructions for Power conversion

HO Galloping Goose Power Conversion Using a Roundhouse Products Diesel Chassis (Not Supplied)

Instructions for easy power conversion to Galloping Goose, using Roundhouse Products "Old Timer" diesel power chassis:

The Roundhouse "Galloping Goose" can be assembled to operate with only the rear power truck, from a Roundhouse diesel chassis! If you have never tackled a "doodle bug" this is a good place to give it a try. Superstructure Assembly - you will use the kit contents as outlined. A separate instruction drawing is furnished outlining the "Powered Conversion".

INSTRUCTIONS FOR POWER ASSEMBLY -

- 1) Underframe: Refer to Power Conversion drawing illustration. Drill holes (A, B, C & D) as outlined. Do Not Remove underframe side members.
- 2) Front lead truck assembly: Refer to drawing (front lead truck). Secure to underframe using long screws and (2) plastic bushings. (Lower bushings) remove flange so that assembly rests level on the front lead truck & rear diesel power truck. Note, be careful that lead truck wheels do not rub on underside of underframe. (Refer to chassis drawing.)
- 3) Secure final assembly at (B) using #2 x 3/16" screws (not furnished) and reassemble screws through underframe and gear housing at (C & D). (Refer to chassis drawing.)
- 4) Test chassis on your work track. Note: Front truck is fully insulated, and is not used for electrical pick-up. If you encounter any pick-up problems adjust diesel power truck (pick-up shoes). Refer to instructions packaged with diesel chassis for power truck removal and reassembly.

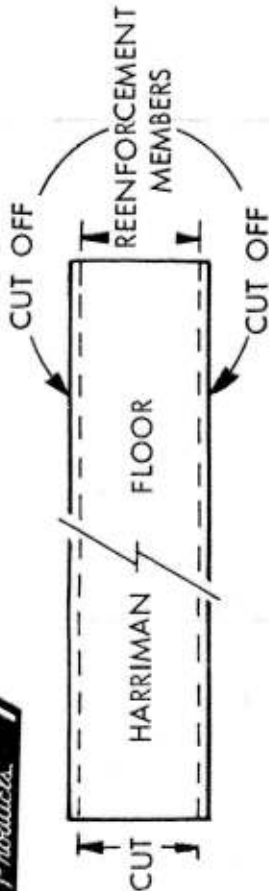
BODY ASSEMBLY (Front motor housing, cab & box car) -

- 1) Attach and glue front motor housing to top side of chassis as illustrated but **DO NOT** glue to cab front.
- 2) Cab & Box Car Body. Construct as outlined (or) take the easy way out and cut diesel body & box car as shown in (powered) illustrations. Glue cab to box car section but **DO NOT** glue to underframe.

FINAL DETAILING -

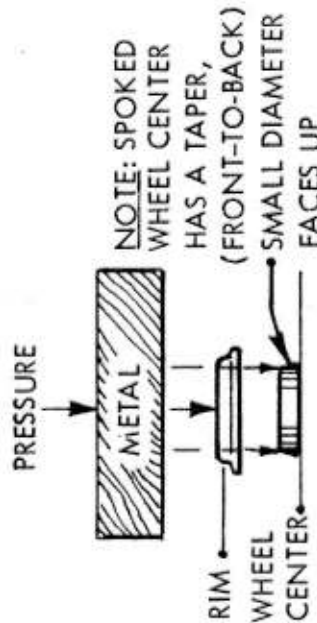
Study the photographs of the several variations we have made. You can use our ideas and make up your own, using your "scrap box" of Kemtron & Cal Scale super detailing parts! You can also add a "fake" gear box & drive shaft assembly to the underside of the underframe. Remember, the vehicle you are working on was originally a gasoline truck, so it should look like any old time truck (modern version would have an air cleaner and diesel stack, plus a luggage rack on top of the passenger compartment).

One last tip! Before doing anything you might want to explore 1/72nd scale military vehicle lines for unusual parts and accessories. Good luck & send us your photos!

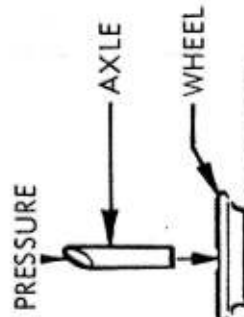


1 FIG. 1, UNDERFRAME NOT TO SCALE

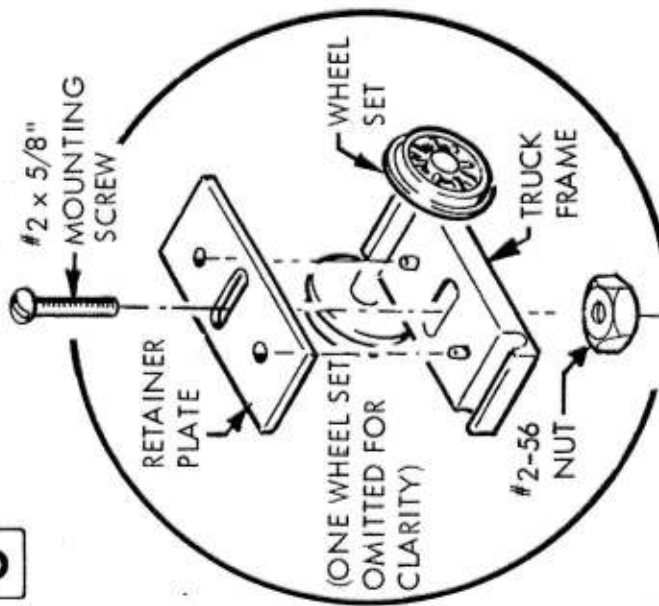
4 FIG. 4 FRONT TRUCK WHEEL ASSEMBLY



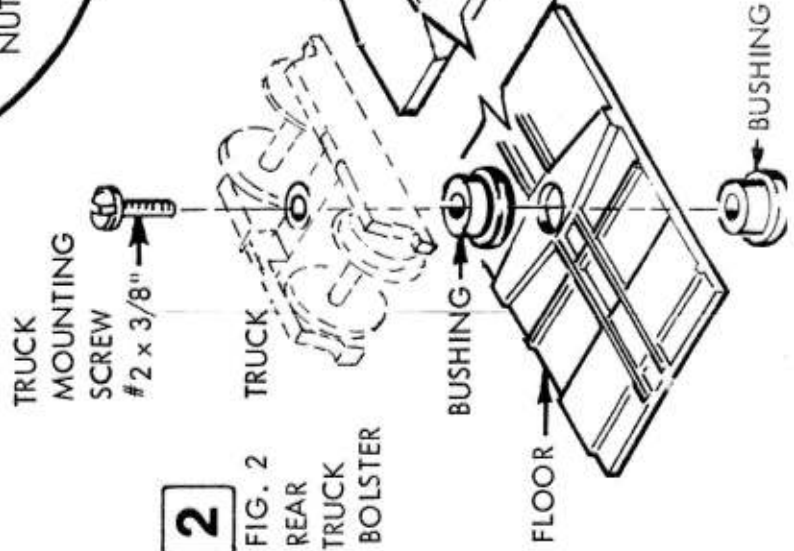
5 FIG. 5 FRONT TRUCK WHEEL AND AXLE ASSEMBLY



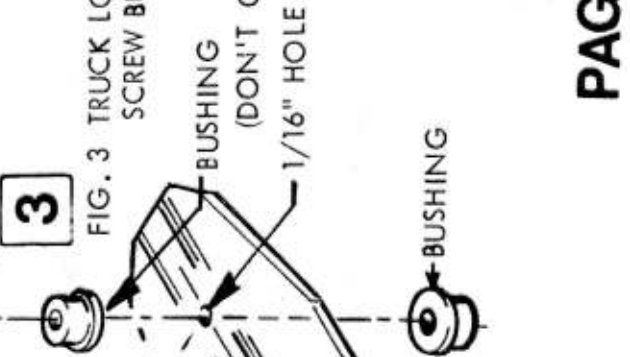
6 FIG. 6 FRONT TRUCK SUBASSEMBLY



2 FIG. 2 REAR TRUCK BOLSTER



3 FIG. 3 TRUCK LOCKING SCREW BUSHING



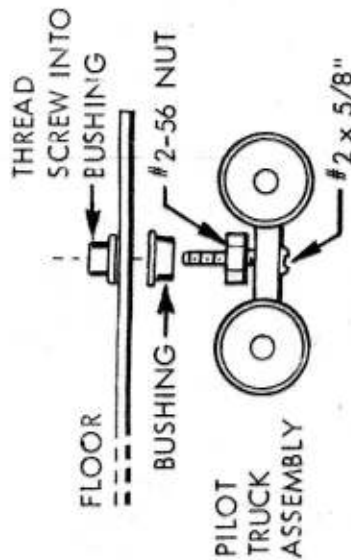
All of the kits these instructions are from are no longer in production and there are no public plans to re-release them. These instruction sets are reproduced here for reference purposes only. Portions indicating scale dimensions are not to scale, due to scanning processes. Linking to these files is prohibited without prior permission. PDF by Geny D.

Kit 1518



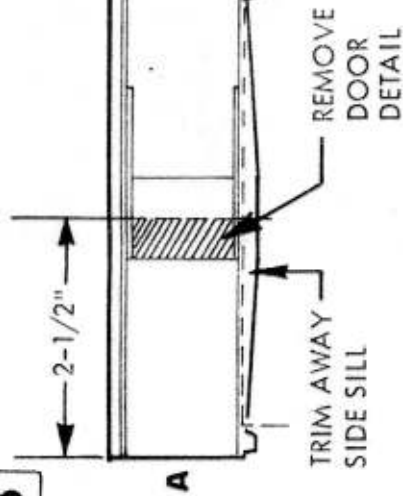
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FIG. 7 FRONT TRUCK FINAL ASSEMBLY



8

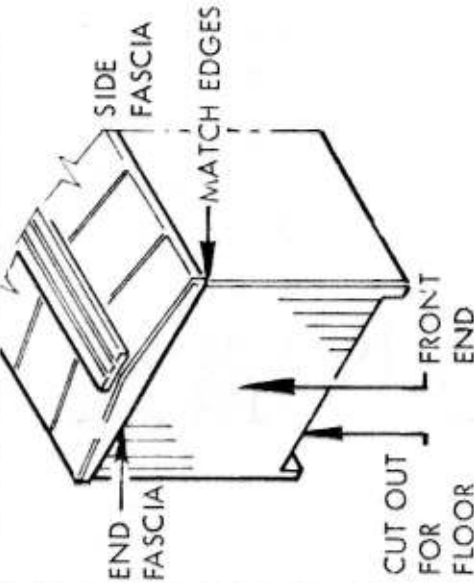
FIG. 8



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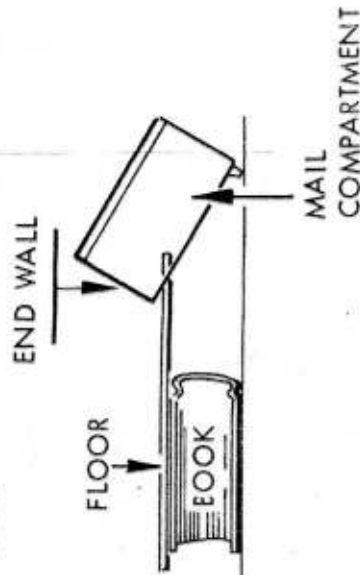
FIG. 9 END FASCIA & END WALL CONSTRUCTION

Construct from: Sheet styrene (not furnished)
1/4" x 1 1/2" x .020" Thick material



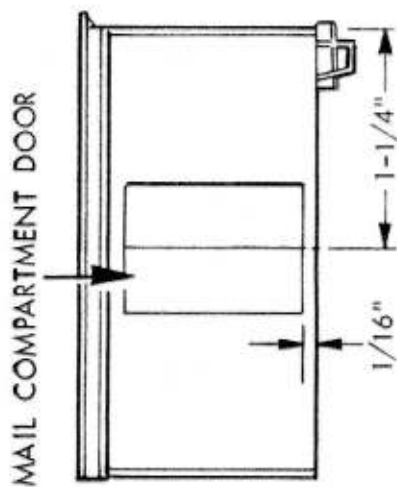
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FIG. 10 FRONT END WALL INSTALLATION FLOOR



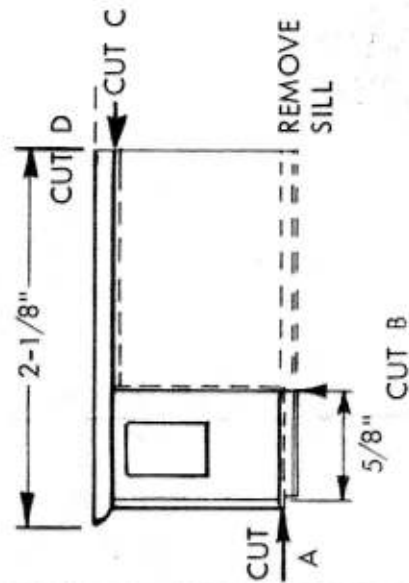
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FIG. 11 NON-WORKING DOOR CONSTRUCTION

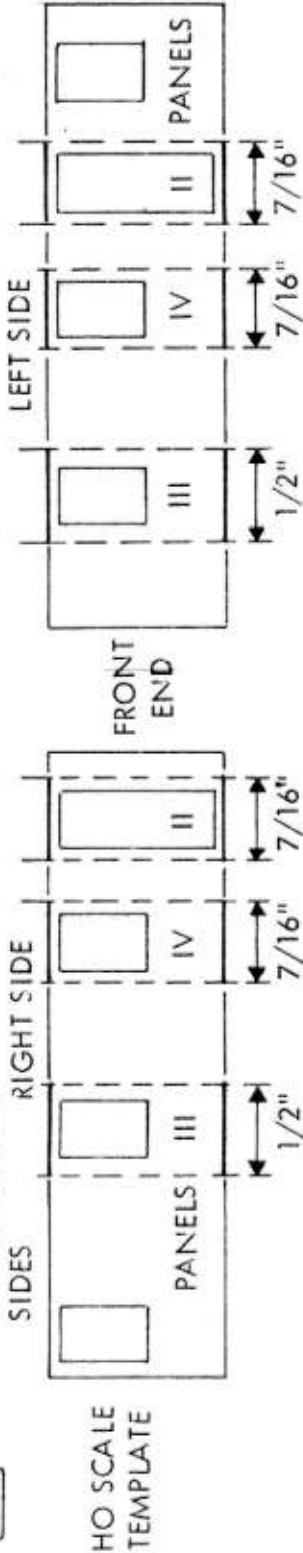


12

FIG. 12 PASSENGER BODY CONSTRUCTION (USING BOX CAB DIESEL)



13 FIG. 13 FULL SCALE BOX CAB DIESEL SIDES



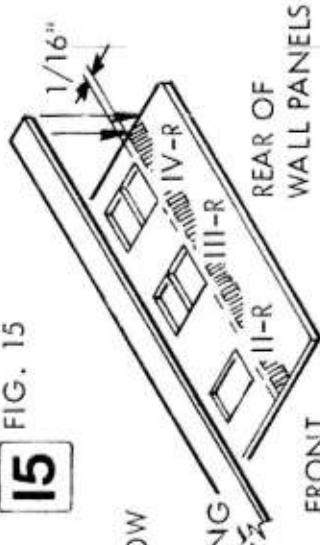
13, # 14 & # 15 (ILLUSTRATIONS SHOW RIGHT & LEFT DIESEL SIDES WHICH HAVE BEEN TRIMMED FROM DIESEL BODY)

14 FIG. 14



NOT TO SCALE

15 FIG. 15



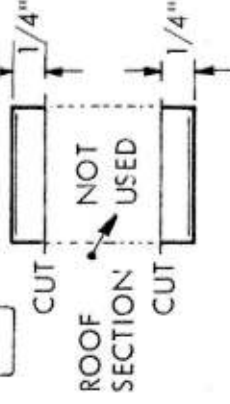
NOT TO SCALE

16 FIG. 16 TOP VIEW-DIESEL BODY ROOF



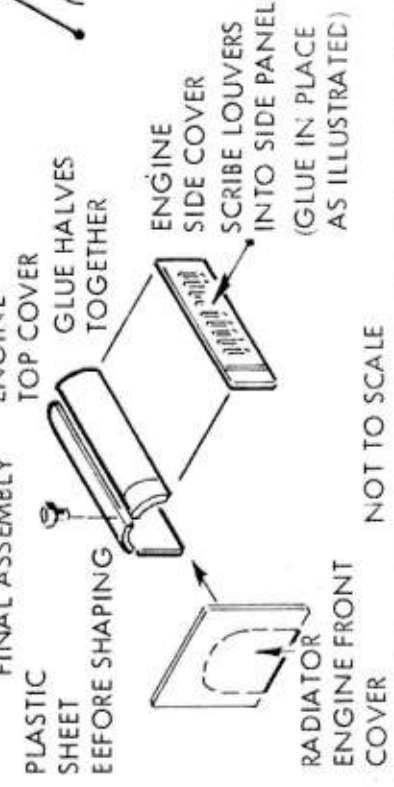
DO NOT USE FOR ENGINE COVER

17 FIG. 17 ENGINE COVER ASSEMBLY



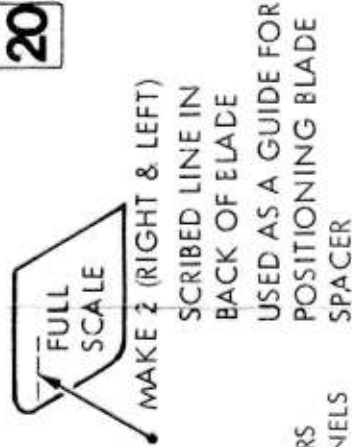
NOT TO SCALE-REF. ONLY

18 FIG. 18 ENGINE COVER CONSTRUCTION FINAL ASSEMBLY



NOT TO SCALE

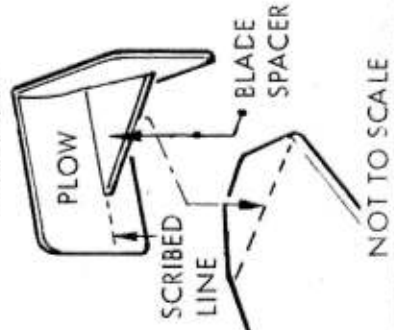
19 FIG. 19 SNOW PLOW BLADE



20 FIG. 20 SNOW PLOW BLADE SPACER



21 FIG. 21 SNOW PLOW FINAL ASSEMBLY

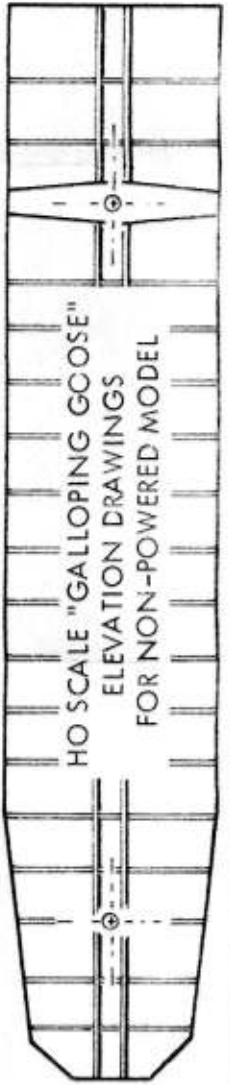


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Page 6 is blank on the two kits sampled.

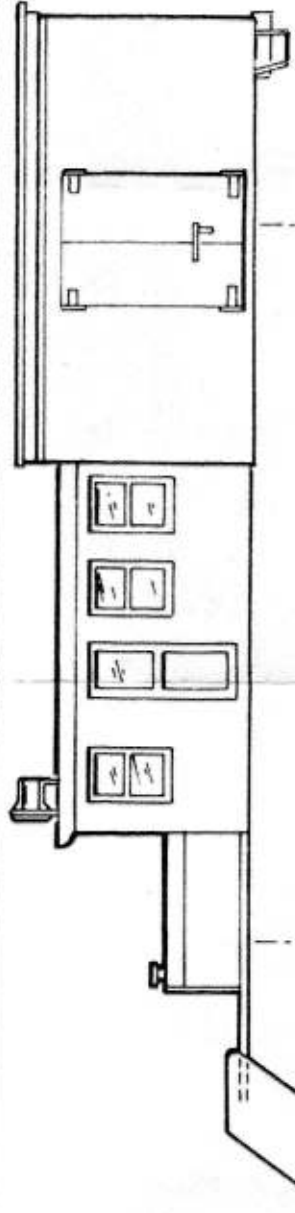


1518

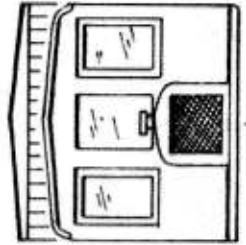


SIDE VIEW

FLOOR TEMPLATE
(USE FOR PATTERN)

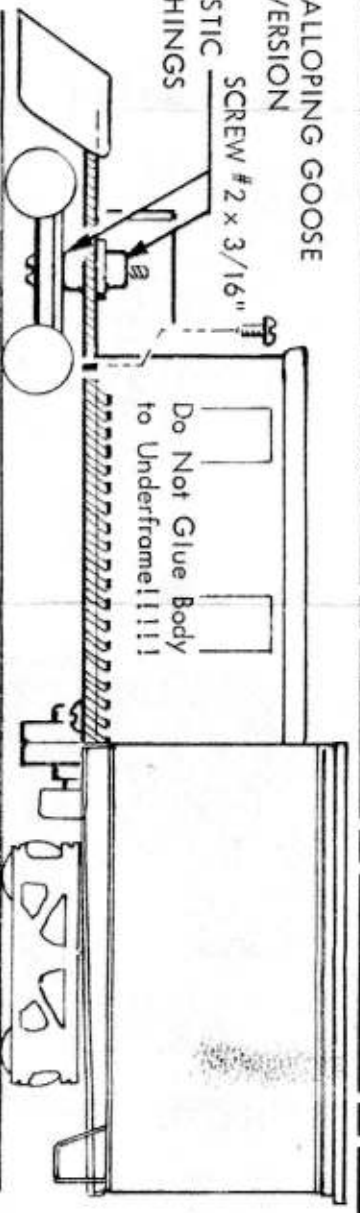


FRONT VIEW



HO SCALE "GALLOPING GOOSE"
ELEVATION DRAWINGS
FOR NON-POWERED MODEL

HO POWERED GALLOPING GOOSE
CONVERSION



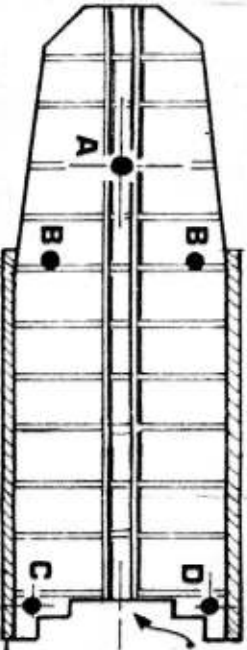
SCREW #2 x 3/16"
PLASTIC BUSHINGS

Do Not Glue Body
to Underframe!!!!

NOTE: POWER CHASSIS
NOT FURNISHED.
MAY BE ORDERED
(REFER TO COPY)

Drill 1/16" holes at:

- A, B, C, & D



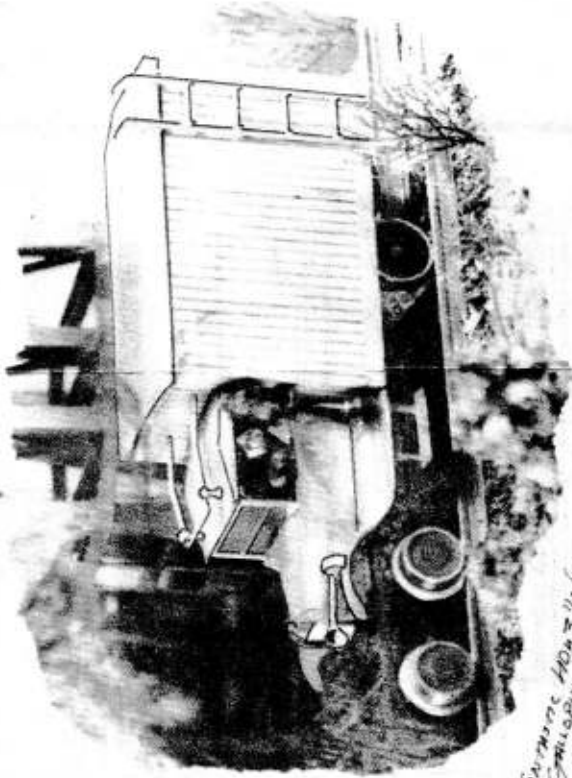
CUT OUT
UNDERFRAME AS ILLUSTRATED
TO CLEAR DIESEL GEAR HOUSING

DO NOT REMOVE REINFORCEMENT
SIDE MEMBERS

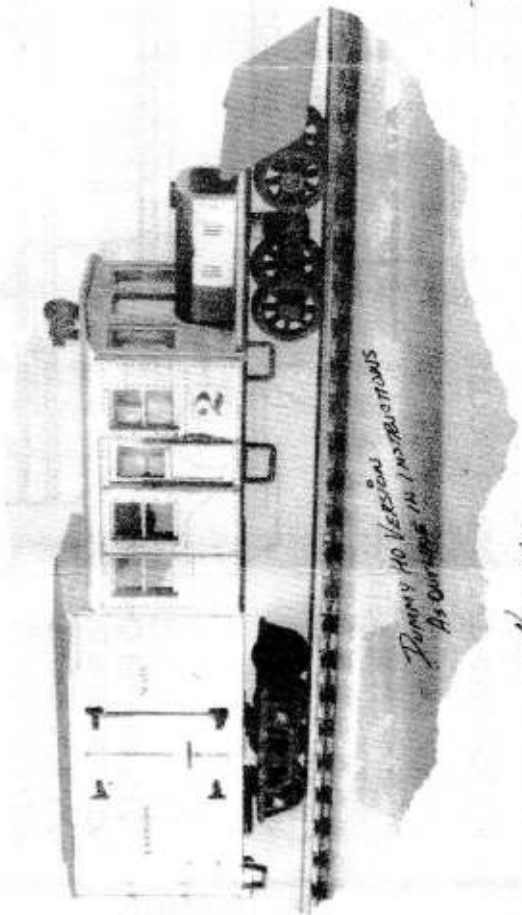
HOscale-Powered kit conversion

All of the kits these instructions are from are no longer in production and there are no public plans to re-release them. These instruction sets are reproduced here for reference purposes only. Portions indicating scale dimensions are not to scale, due to scanning processes. Linking to these files is prohibited without prior permission. PDF by Gerry D.

SCRAP BOOK OF IDEA STARTERS

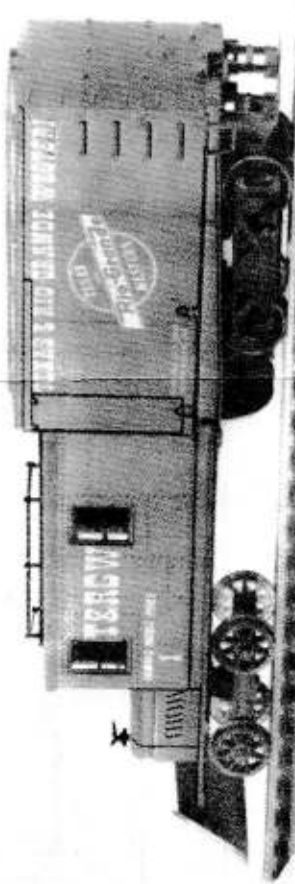
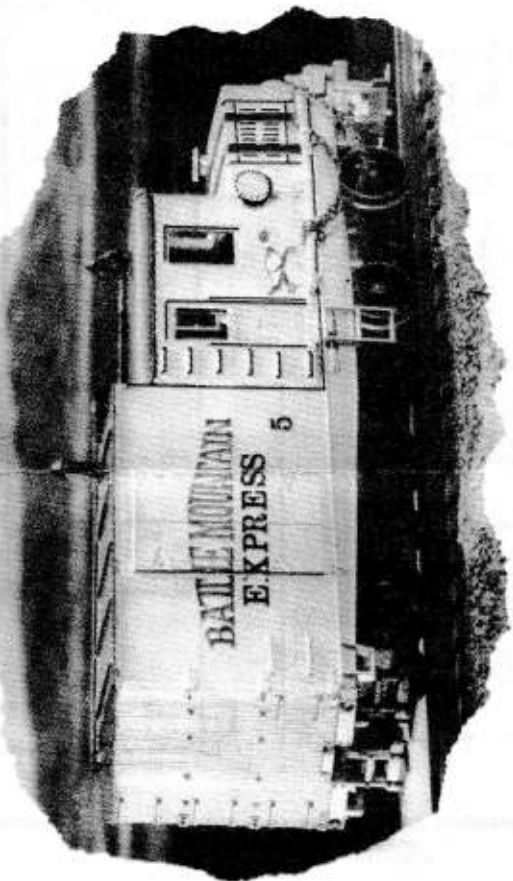


*FOR THE HO 3 1/2" AMERICAN GAUGE
SPRINGING GROUSE
BY PETER SNEEL*



*DUMMYS HO VERSION
AS OUTLINE IN INSTRUCTIONS*

*THE "MASTER MACHINER" DIESEL
HO-POWERED USING
HO-CHASSIS KIT*



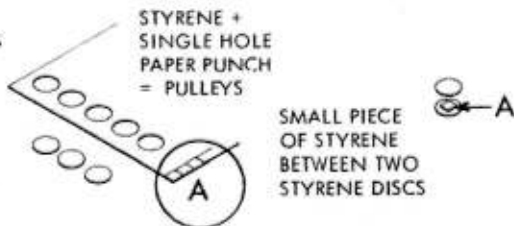
*FINAL POWERED VERSION
USING KIT 1518 INSTRUCTIONS!*

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"ALL-THUMBS" - Boom Arm Assembly (the quick & easy way) will turn, raise and lower!... detailing
 refer to text and drawings pages : 1 thru 10

- 1) Study the boom supplied carefully. This boom will be cut into two major sections at this time (Sec-A and Sec-C).
- 2) Lay the boom flat; measure up the boom approximately 3-1/16 inches. First cut will be parallel to the molded cross section coded X. (Refer to illustrations.)
- 3) Second cut will remove top braces on Sec-C (save).
- 4) Third cut will take place on Sec-C, approximately 1-3/8 inches from the front of boom (5/16 inch in from the molded cross section coded Y). Sec-C now becomes two sections. [Sec-C (smaller) and Sec-B.]
- 5) Lay Sec-C aside for now. Fourth cut will remove the pulley from the bottom of Sec-B.
- 6) Fifth cut will remove approximately 1/4 inch of material from the front of boom (Sec-B).
- 7) Glue Sec-A to Sec-B.
- 8) Sixth cut; trim one (1) of the angled ends from the top brace (now called Sec-D), and glue to the top of Sec-B approximately 1/8 inch in from the front.
- 9) The original pulley (now called Sec-E) will be glued to the boom approximately 5/8 inch up from the rounded bottom. (On top of the first inside cross brace.)
- 10) Sec-F will be scratch built using styrene and glued to the top of Sec-A, approximately 2-1/4 inches up from bottom of boom.
- 11) Two pulleys will need to be scratch built; a simple formula for this task is the use of a one-hole paper punch and styrene.

SIMPLE PULLEYS



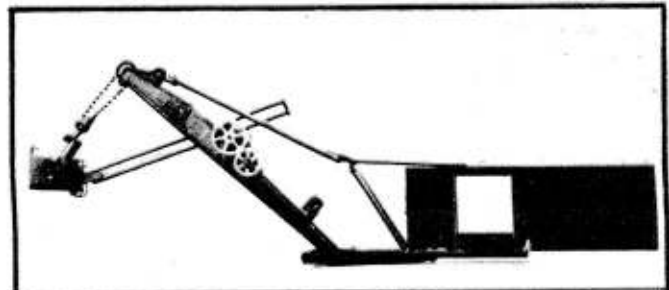
- 12) Glue pulleys to Sec-F and Sec-B.

Base 1

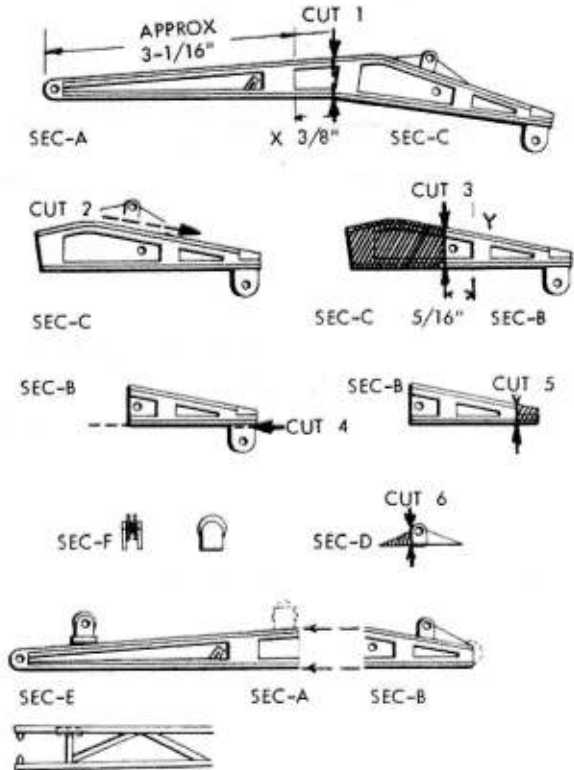
Glue two "Sec" together.

- 1) Study the base. First cut will take place approximately 5/16 inch from the front of base. See illustrations. Save the piece that is removed (shaded).
- 2) Second and third cuts will remove the humps from the bottom.
- 3) Fourth cut should be done carefully with a hobby saw. See illustrations. Remove shaded area roughly then file to a nice rounded affect following original rim.
- 4) Go to Sec-A (area removed with first cut). Fifth cut will remove bottom area (shaded).
- 5) Both ends of remaining Sec-A will need to be notched out (area X and Y).
- 6) Drill a hole at spot marked Z on Sec. A.
- 7) Go to the base and drill a hole at spot marked Z.
- 8) Using a screw, insert Sec-A into the base and secure. Do not tighten completely; by allowing play the boom, when mounted, will swing left to right.

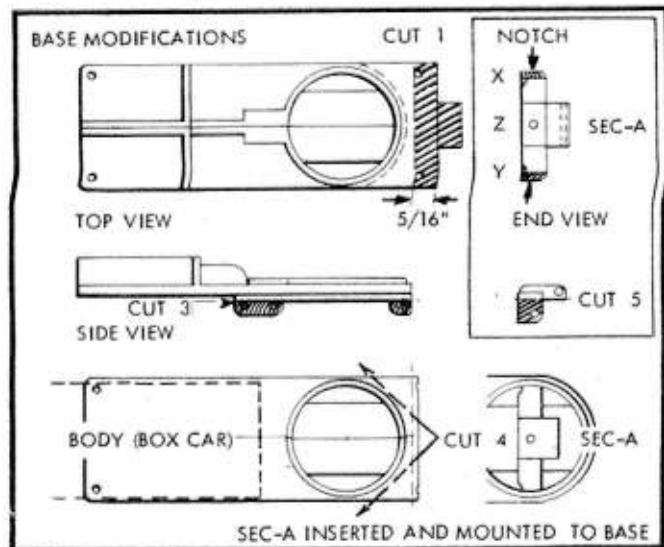
To build a powered ditcher see Railroad Model Craftsman (Rolling Stock Plan Book, p. 61) \$2.00.



- MODIFICATION - NOT TO SCALE



Boom assembly final construction See P.1-P. 10





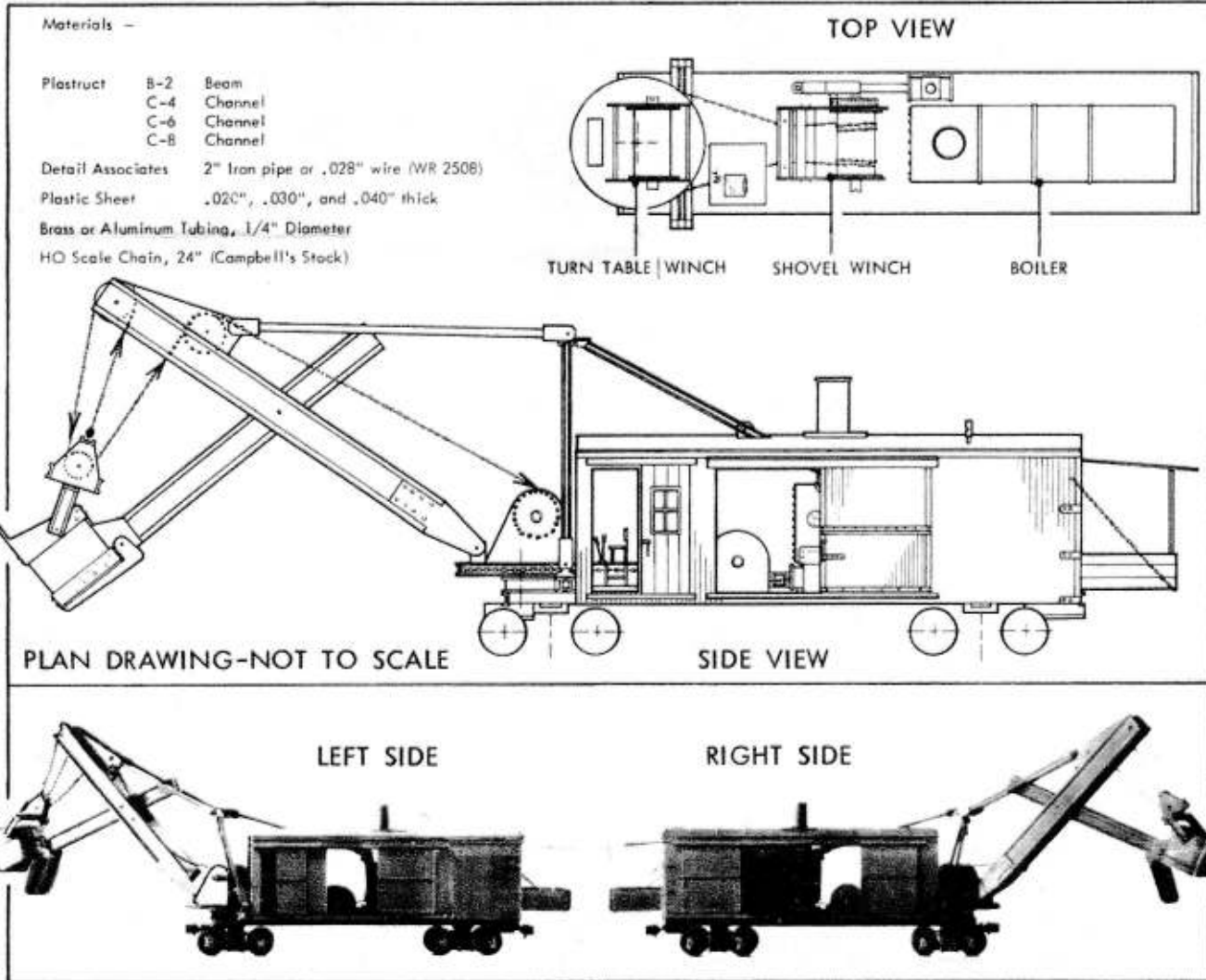
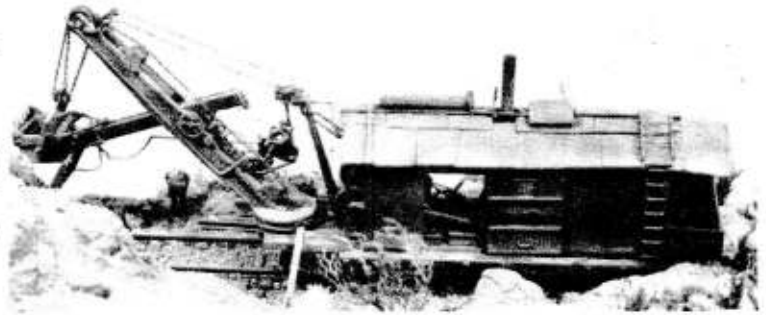
(3-1) 1519 MARION STEAM SHOVEL

BATTLE MOUNTAIN MINING COMPANY STEAM SHOVEL #13

This kit is unique in that it closely resembles scratch building. Therefore, it is assumed that the modeler has had experience with modeling tools. The model can be altered to suit individual needs of the modeler, so feel free to substitute materials.

Read all instructions and take your time; you will be rewarded with a very interesting model.

Designed by: Carlos Gasparini, Carson Limited



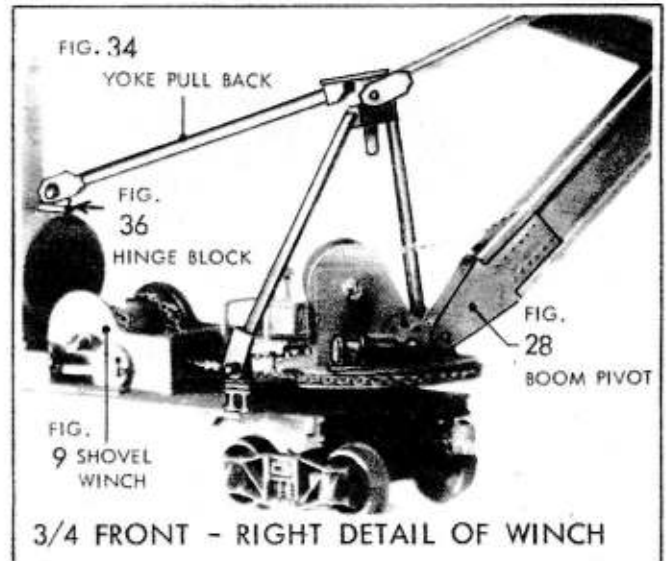
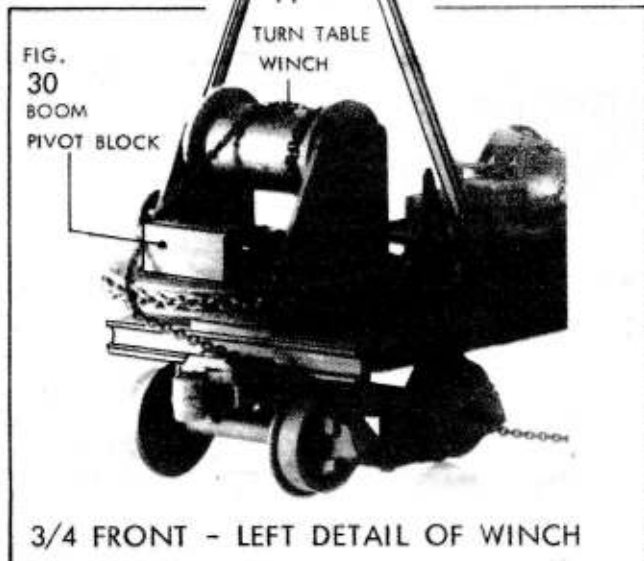
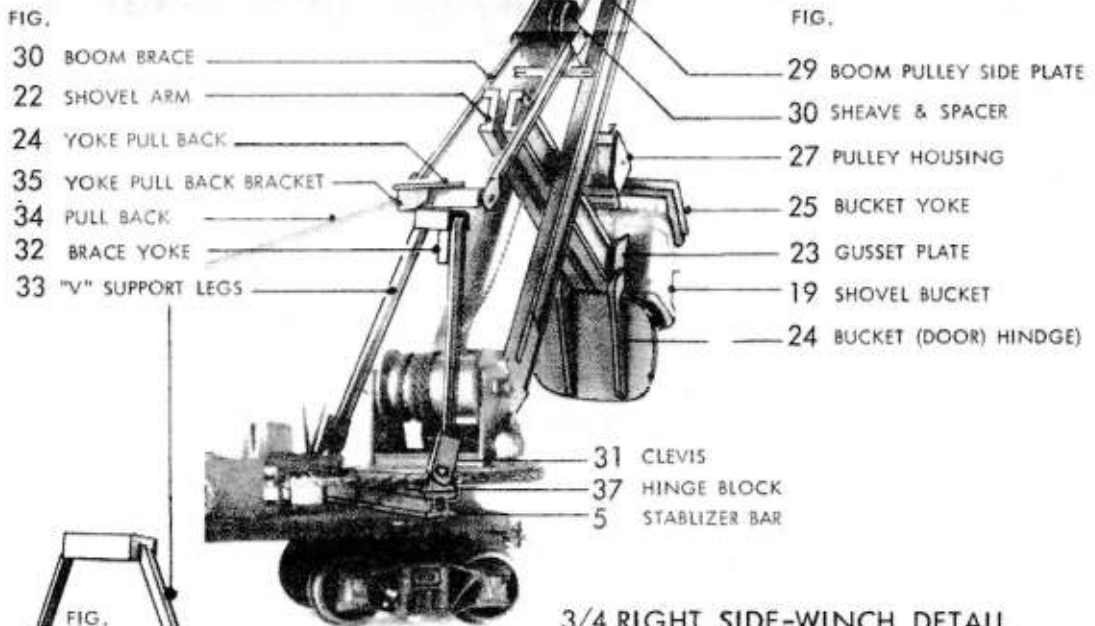
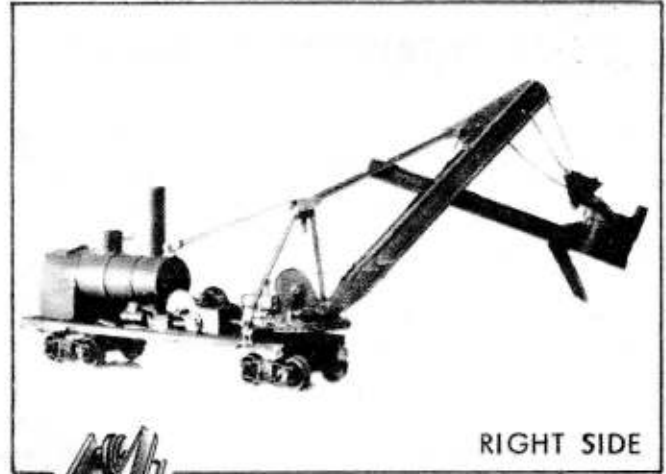
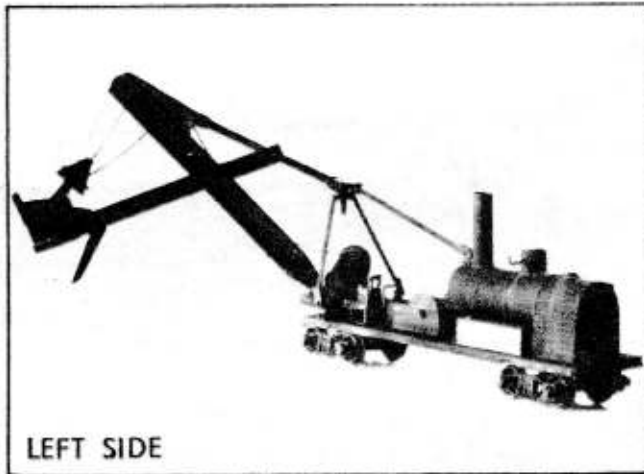
UNDERFRAME - ASSEMBLY Ref. P.3 for assembly drawings

- 1) Trim off all flash from the metal floor and file the sides and ends smooth.
- 2) Cut 3/8 inch from one of the floor ends (this will become the front end). See Fig. 1.
- 3) Drill a 3/32" or #42 hole 3/32 inch from the front end as shown in Fig. 1.
- 4) Cut two pieces of Plastruct C-4 channel 1-5/32 inches long to make the end sills. See Fig. 2.
- 5) To make room for the coupler pocket cut out a section of the end sills as shown in Fig. 2.
- 6) Glue the end sills to the ends of the floor (see Fig. 3). Use ACC adhesive.
- 7) Cut two pieces Plastruct C-4 channel, 1-3/8 inches long and two pieces of Plastruct B-2 Beam, 1-3/8 inches long.
- 8) Glue the channels and beams together to form the stabilizing bar (use plastic weld or ABS adhesive). See Fig. 4.
- 9) Drill a #67 hole on each end of the stabilizing bar as shown in Fig. 4.
- 10) Draw a line across the floor 9/16 inch from the front end. This line serves as a guide to line up the stabilizing bar. Match the rear edge of the stabilizing bar with the line drawn and glue the bar with ACC adhesive. See Fig. 5.
- 11) Cut two pieces of Plastruct C-4 channel, 1-3/32 inches long and bevel the front ends as shown in Fig. 5.

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1

MARION STEAM SHOVEL-DETAIL PHOTOS



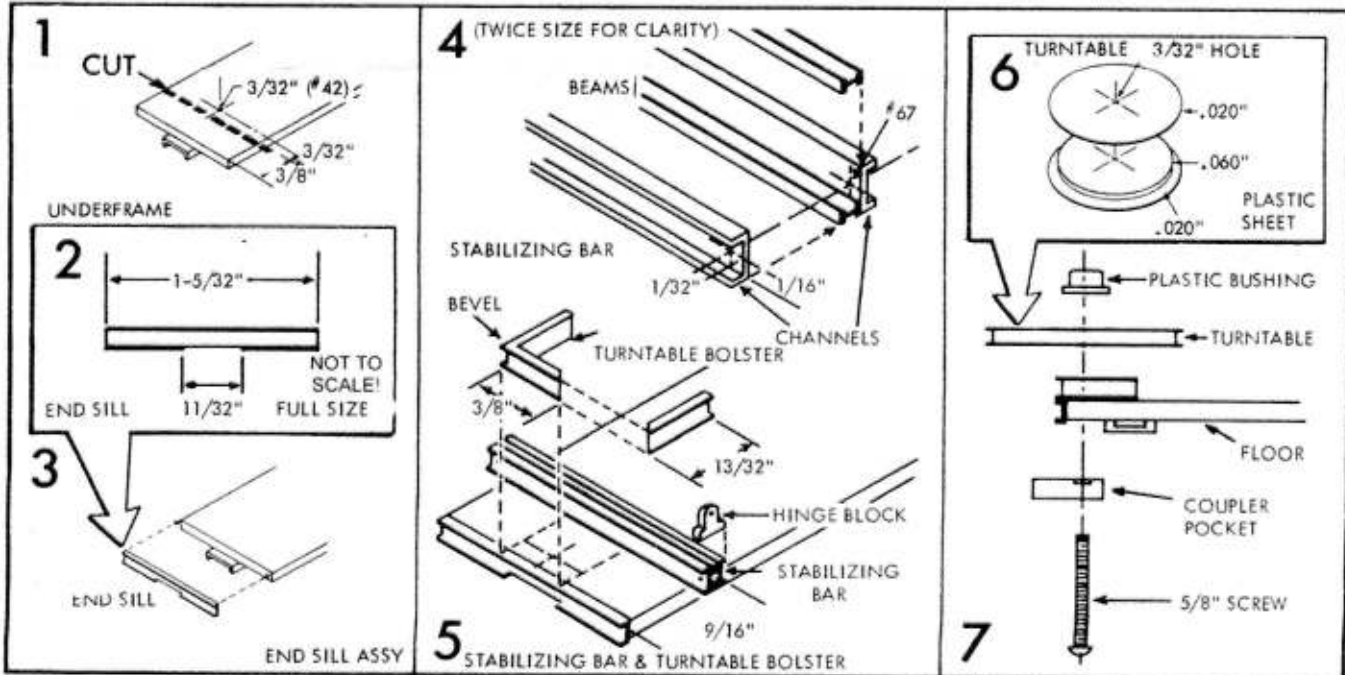
STEAM SHOVEL UNDERFRAME- ASSEMBLY CONT.

(Ref. P.2 - Detail Photos)

- 12) Cut a piece of Plastruct C-4 channel 3/8 inch long and bevel both ends. See Fig. 5.
- 13) Glue the above pieces together (using plastic weld) and forming the turntable bolster. See Fig. 5.
- 14) Glue the turntable bolster to the floor immediately in front of the stabilizing bar (be sure to center it and use ACC adhesive). (See Fig. 5)
- 15) Cut two 1-1/16 inches diameter disks out of .020" plastic sheet. If you have an adjustable hole cutter this will be easier; however, if you don't a drafting screw adjustable compass can be used instead. Replace the pencil lead with another sharp center point, adjust compass for the radius required (9/16" in this case), and draw the circle until the disk is cut free. This procedure can be used for the boom pulleys also.
- 16) Cut the center 1 inch diameter disk out of 0.060" plastic sheet (see step 6)
- 17) Drill a pilot hole #70 (.028") on the center of each disk.
- 18) Using a length of Details Associates 2" pipe (.028" actual) or equivalent as a standard, insert the disks in the order shown in Fig. 6. When the

disks are lined up apply glue to the inside faces of the disks and press together. (Be sure that the glue does not ooze into the flangeway between the two outer disks.)

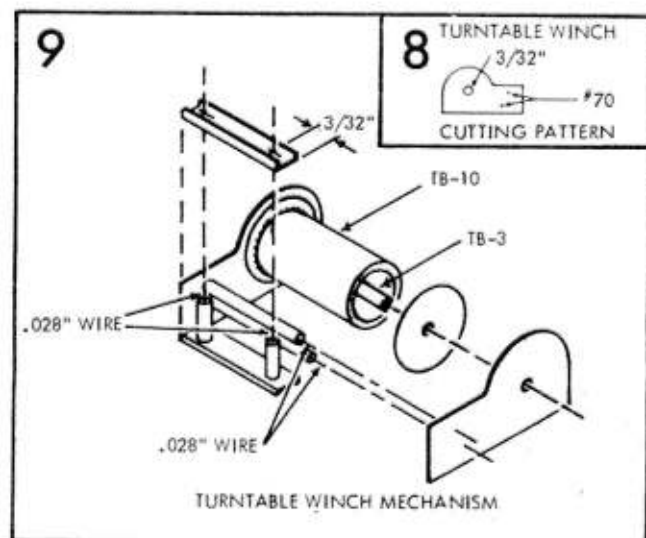
- 19) When the turntable is dry, drill a 3/32 inch hole through the center of it.
- 20) Cut a Kadee coupler pocket 3/8 inch from the front; leave the screw ears on the top plate but remove them from the box cover. (This way, they do not prevent truck swivel.)
- 21) Attach top plate to the floor, making sure that it aligns with the mounting hole (use ACC adhesive).
- 22) Put your favorite coupler in the pocket but be aware that some modifications might be needed since there is not much room. We have used a dummy coupler since this end is not used for switching!
- 23) Cover the coupler pocket with the box cover. Insert the 5/8" screw through the hole in the coupler pocket, floor, and turntable, then thread it through the plastic bushing and tighten until the turntable is secure but moveable.



TURNTABLE WINCH MECHANISM

OPTIONAL: Instructions for working model and super detailing

- 24) Cut four disks 5/16 inch in diameter out of .020" plastic sheet. Before cutting, lightly scribe a 5/8" diameter circle on each disk (use the technique described in step 16 for cutting the disks).
- 25) Drill a 3/32 inch hole on the center of each disk.
- 26) Cut two pieces of Plastruct TB-3 tubing 13/16 inch long and two pieces of Plastruct TB-10 tubing 1/2 inch long. Be sure that the ends are true and square.
- 27) Insert one of the disks onto one of the TB-3 tubing. Let the tubing stick out 1/8 inch opposite the side of the disk that has the scribed circle. Glue the tubing to the disk.
- 28) Insert one of the TB-10 tubing over the TB-3 tubing and glue it to the disk using the scribed circle on the disk to center the larger tubing. (See Fig. 9.)
- 29) To complete the cable drum insert another disk with the scribed side facing the TB-10 tubing. When this is aligned, glue the disk to the tubing. (See Fig. 9.) Repeat steps 27 through 29 for the second cable drum.
- 30) Cut two turntable winch side plates out of .030" plastic sheet. Use Fig. 8 as a cutting pattern.



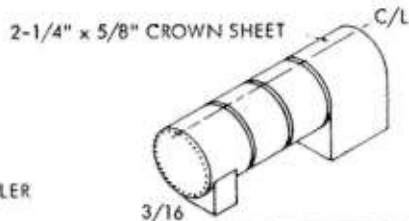
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3

CONT.

- 31) Drill the 3/32" hole and two #70 holes on each of the winch side plates.
- 32) Cut two pieces of Plastruct C-4 channel 9/16 inch long.
- 33) Drill a #70 hole 3/32 inch from each end of the channels. See Fig. 9.
- 34) Cut two pieces of Plastruct TB-3 tubing 3/16 inch long and two pieces 9/16 inch long.
- 35) Cut two pieces of .028" diameter wire 9/32" long and glue them to one of the channels as shown in Fig. 9. (Be sure that these are square and true; use ACC adhesive).
- 36) Glue the above pieces to the right winch side per Fig. 9.
- 37) Cut two pieces of .028" wire 5/8 inch long and glue them to the right winch side (Fig. 9) being sure that they are square and true. Use ACC adhesive.
- 38) Insert the 3/16 inch tubing pieces on the wires of the channel; also insert the 9/16 inch long tubing on the wires of the side plate and the cable drum in the hole on the side plate (see Fig. 9).
- 39) Glue the left winch side to the bottom channel piece being sure that all wires pass through the holes in this piece as well as the axle for the cable drum (see Fig. 9).
- 40) Glue the top channel piece to both winch sides (the wires for the front rollers must pass through the holes in this top piece).
- 41) Attach the turntable winch to the floor per plans (top view) with ACC adhesive.

10 BOILER ASSEMBLY INSTRUCTIONS



- 42) The boiler is built by cutting a 2-1/8 inch length of 5/8 inch tubing or dowel (we used Plastruct TB-20). See Fig. 10.
- 43) The crown sheet is a 2-1/4 x 5/8 inch piece of .020" plastic sheet.

BOILER DETAIL PHOTO



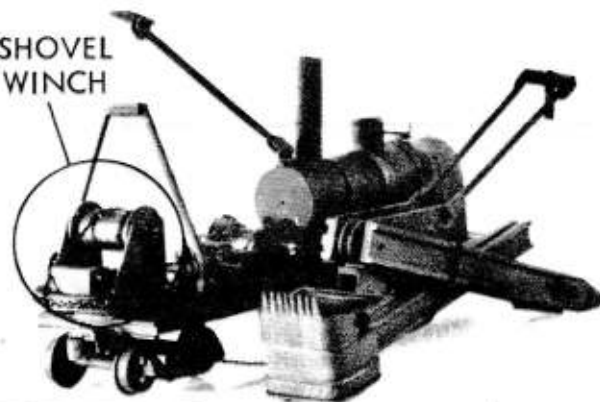
- 44) Draw a centerline on the boiler and at the center of the crown sheet. Glue the center of the crown sheet onto the centerline on the boiler (see Fig. 10). When dry, continue gluing the crown sheet to the side of the boiler up to the middle of it.
- 45) Cut two pieces of .030" plastic sheet 5/8 x 3/16 inch and glue these between the crown sheet sides below the boiler.
- 46) Cut a piece of .020" plastic sheet 43/64 x 7/8" and cut out a 5/8 inch circle with its center 5/16 inch from the end. This will give you the front piece for the fire box. Glue this piece in place as shown in Fig. 10.
- 47) The back of the boiler is made by gluing the boiler crown sheet end onto a piece of .020" plastic sheet large enough to cover entire area. When dry, carefully cut the excess plastic sheet with a hobby knife and dress the cut with fine sandpaper or a file.
- 48) The smoke box front is a 5/8" disk with embossed rivets near the edge (see Fig. 10) and glued to the boiler.
- 49) The boiler straps are 1/16 inch strip .010" plastic glued to the boiler as shown in Fig. 10.
- 50) The front support is a block of wood or Plastruct RT-12 rectangular tubing formed to support the front of the boiler 3/16 inch above the floor (see Fig. 10).
- 51) The stack is a 15/16 inch length of 1/4" tubing with its bottom shaped to match the curve of the boiler (any tubing will work but brass was used to obtain the wall thickness of the prototype). See plans.

SHOVEL WINCH MECHANISM

- 52) The shovel winch is built in the same way as the turntable winch. Cut two winch sides out of .030" plastic sheet using Fig. 11 as a cutting guide, and drill a 3/32" hole in each winch side.
- 53) Cut two pieces of Plastruct C-4 channel, 19/32 inch long.
- 54) Glue one side of the channels to the inside of the right winch side on the rear position. See plans.
- 55) Insert the cable drum to the right winch side and glue the second channel piece to the front position as shown in the plans.
- 56) Attach the left winch side passing the cable drum axle through the hole and gluing the channels to this piece.
- 57) Glue the shovel winch to the turntable as the plans show it.
- 58) Make the boom pivot block from two pieces of Plastruct C-6 channel 3/8" long. Glue front to front to form a box.
- 59) Cut a 1/2 inch length of .028" diameter wire and glue it inside the box formed by the channels. Be sure that it is centered and at the bottom of the opening. 1/16" of the wire should be exposed on each end of the pivot block.
- 60) Turn the pivot block upright so that the wire is at the top and glue to the turntable per plans (top view).

Extra detailing is left up to the modeler. Items such as steam cylinders for the winches, operator's platform, piping, coal in the coal bunker, boiler details, etc., are standard and some are shown in the plans and pictures.

SHOVEL WINCH



11



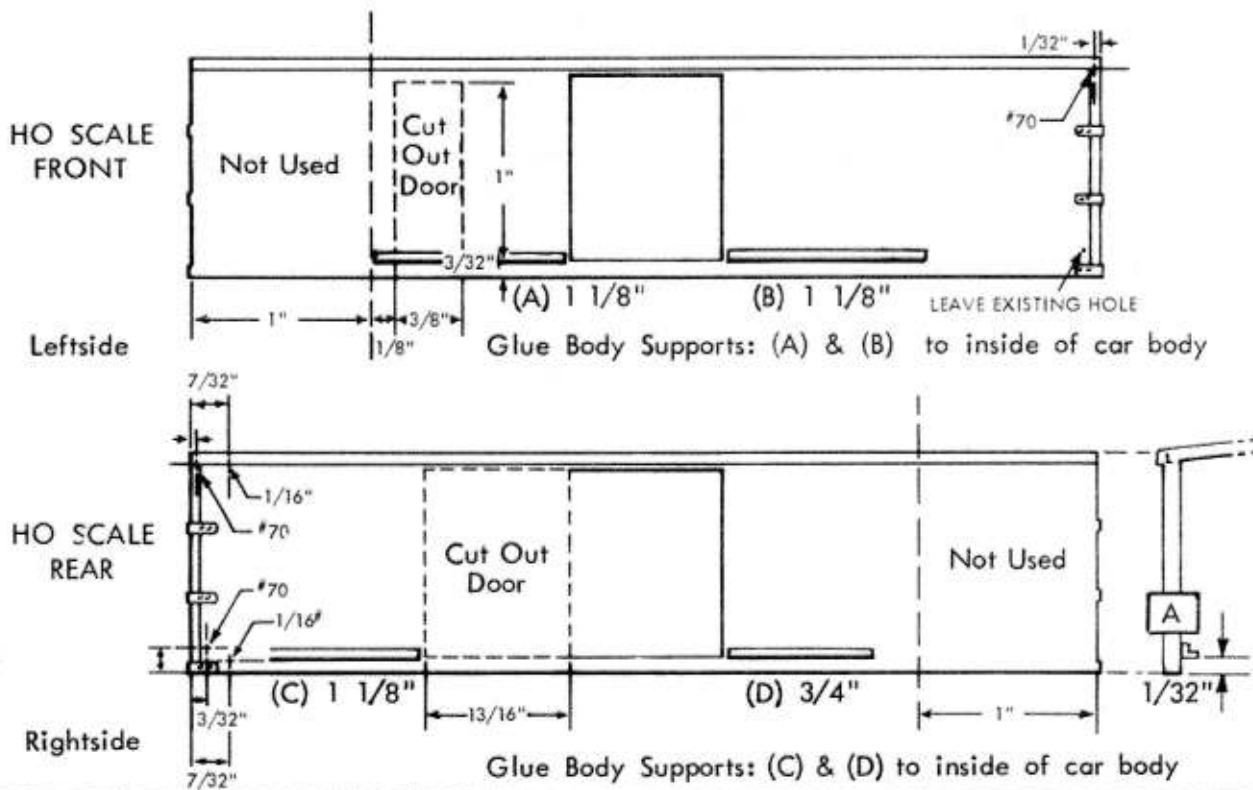
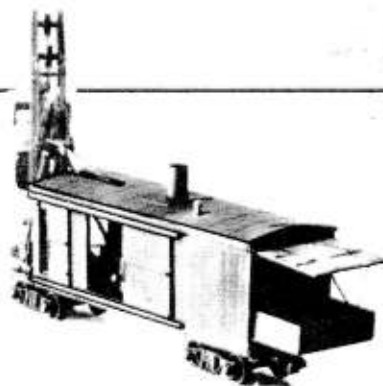
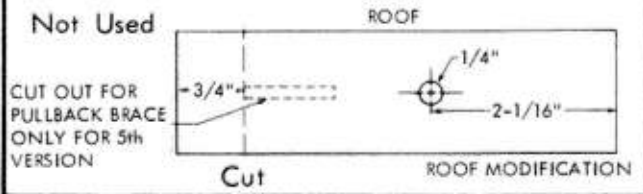
SHOVEL WINCH
SIDE: TEMPLATE

NOT TO
SCALE!

HO TEMPLET
CUTTING PATTERN

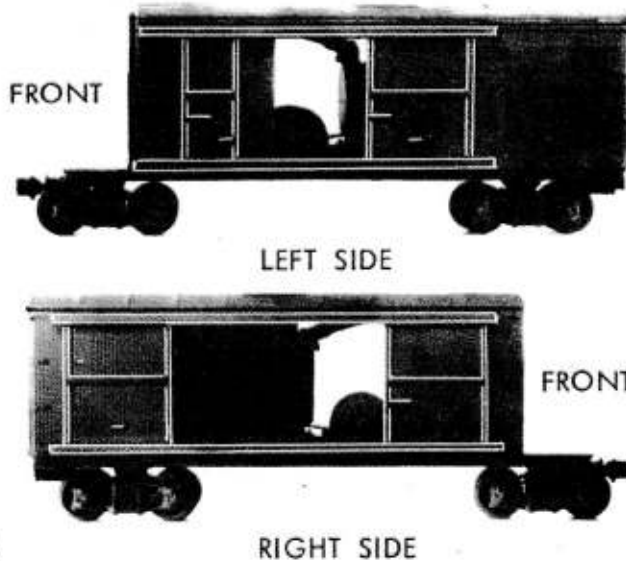
12

13 TOP VIEW-ROOF MODIFICATION



STEAM SHOVEL BODY - MODIFICATION

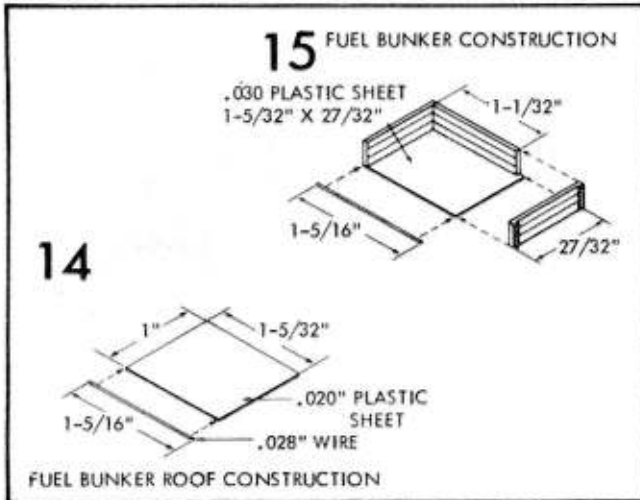
- 1) Cut 1 inch from the front end of each side. See Fig. 12.
- 2) Cut the operator's door opening on the left side as per Fig. 12- 13.
- 3) Enlarge the door opening on the right side per Fig. 13.
- 4) Drill #70 holes, two at the rear end of the right side and one at the rear end of the left side.
- 5) Drill two 1/16" holes on the right side as shown.
- 6) Plug the holes for the grab irons on the sides with plastic putty (but leave the bottom right hole on the left side open). Also fill the holes in the roof.
- 7) When the putty dries sand both inner and outer surfaces smooth.
- 8) Cut four pieces of Plastruct A-1 angle, three 1-1/8" long and one 3/4" long. (A,B,C & D)
- 9) Glue the angles to the sides as shown in Fig. A.
- 10) Drill a 1/4" hole centered width-wise as indicated in Fig. 13.



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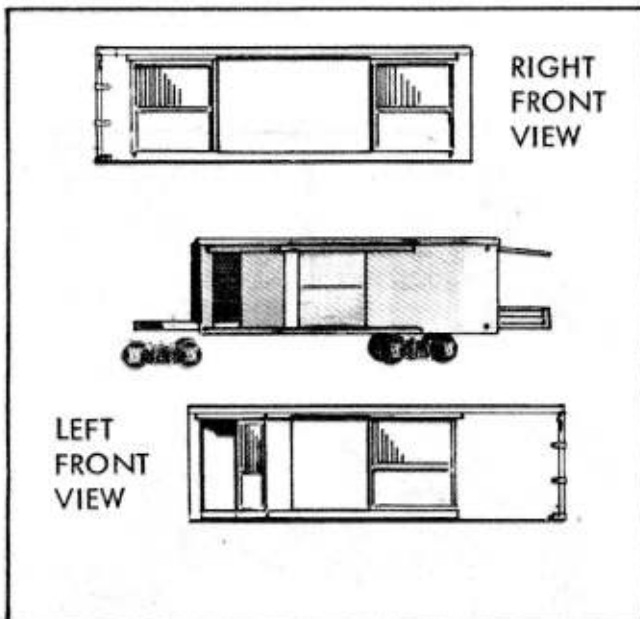
5

FUEL BUNKER - ASSEMBLY

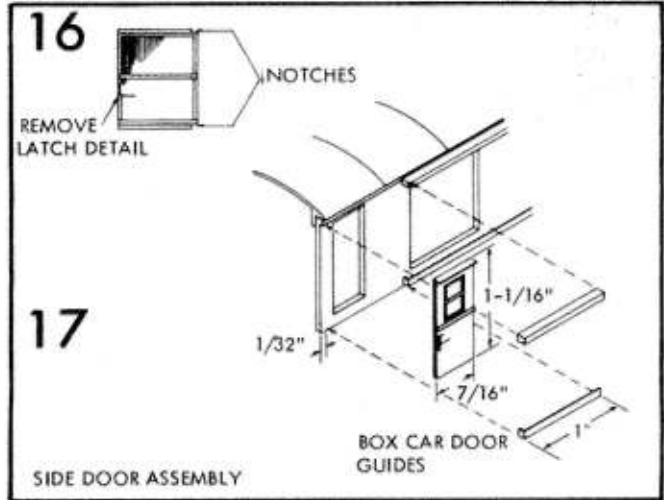


- 11) Cut the bunker roof out of .020" plastic sheet as shown in Fig. 14)
- 12) Cut a piece of .028" wire 1-5/16 inches long and glue it to the bunker roof, leaving 1/16 inch on each side (use ACC adhesive).
- 13) Cut two pieces of gondola siding 27/32 inch long (this is the length between two braces). See Fig. 15)
- 14) Cut one of the gondola siding ends 1-1/32 inches long see Fig.
- 15) Cut off the bottom board of each piece of siding see Fig.
- 16) Cut the floor of the bunker out of .030" plastic sheet 1-5/32 x 27/32"
- 17) Glue the side pieces of siding to the bunker floor; note that the braces must not extend beyond the floor edge or it will foul when it is folded
- 18) Glue the end siding to complete the bunker. Trim if necessary to fit properly.
- 19) Cut another piece of .028" wire and glue it to bunker floor as shown in Figure 18, leaving 1/16 inch on each side (use ACC adhesive).

DOOR GUIDE LAYOUT



BODY - DOOR GUIDE - ASSEMBLY



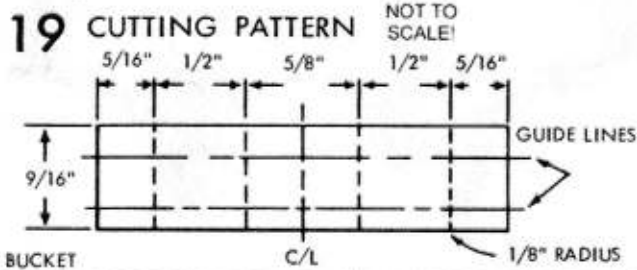
- 20) Remove latch detail of one of the doors and cut two notches about 1/16 inch square at the top and bottom of the left side (see Fig. 16).
- 21) Cut the mounting lugs on the upper door guides in half, one on the left side and one on the right. (This will allow use of the center hole for both upper door guides.)
- 22) Repeat step 21 for the two bottom door guides.
NOTE: Door guide mounting pins may have to be trimmed so they will not interfere with the floor.
- 23) Glue the bottom door guides to the body.
- 24) Put the doors on the bottom guide; the door with the latch detail to the right, the door without detail to the left.
- 25) Glue the upper door guides being careful not to glue the doors also.
- 26) Carefully pry the sides apart and insert the bunker roof in its hinge holes near the top of the rear end (see plans).
- 27) Insert the bunker between its mounting holes near the bottom of the rear end (see plans).
- 28) Put the door on the left side as you would on a regular box car.
- 29) Cut the operator's door from a box car door (see Fig. 17). You may wish to add a window or leave it blank.
- 30) Cut the remaining door guides 1 inch long (see Fig. 17)
- 31) Glue the bottom door guide (let it dry), insert the door, and glue the upper door guide. Be sure not to glue the door!
- 32) Set body over floor and check to see if the stack lines up properly with the hole in the roof. If not, enlarge the hole as necessary. (If error is too great, fashion a flash sheet large enough to cover it out of .020" plastic and drill a hole in the center for the stack. Slip it over the stack and glue the flash sheet to the roof.) Refer to plans.
- 33) Cut two pieces of chain about 1-1/4 inches long. Glue one end to the end of the bunker and the other to the side as shown in the plans (use ACC adhesive). Chain (Not Supplied) use thread.
- 34) Cut two pieces of 2 x 2" scale lumber (or anything similar in the scrap box) to make the bunker roof supports, about 15/16" long. You may want to glue them to the end of the bunker or leave them free standing so the bunker may be folded up. See plans.
NOTE: You may want to add extra detail to the body such as grab irons, whistle, steam exhaust pipes, and such other details your company may desire.

END SECTION

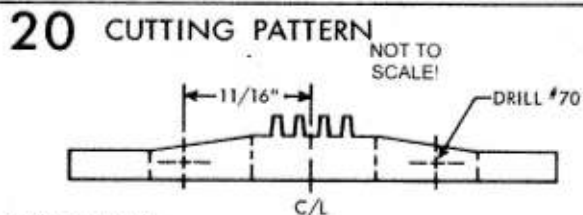
1519 SHOVEL BUCKET - ASSEMBLY

BUCKET AND BOOM -

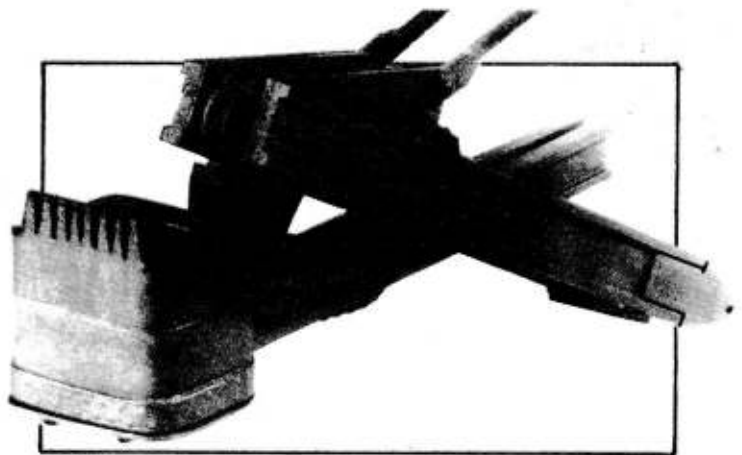
- 1) Cut a strip of .020" plastic sheet 9/16 inch wide and 2-1/4 inches long. See Fig. 21.



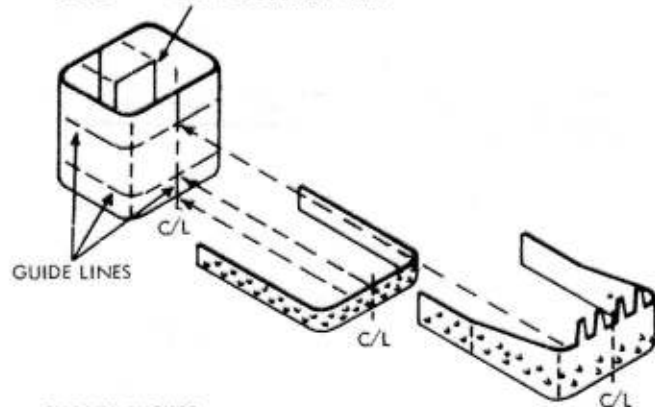
- 2) Draw (with pencil) on the above elastic strip the center line, guide lines and the four fold lines. See Fig 19). These will help line up the bucket straps.
- 3) Bend the bucket into shape by partly wrapping the plastic strip around a 1/8 inch dowel or rod along each of the fold lines (see Fig. 21).
- 4) Cut a piece of .020" plastic sheet 1/4 x 9/16 inch and glue it under the joint of the bucket sheet as shown in Fig. 21. This will act as reinforcement to the bond.



- 5) Cut the bucket teeth strap out of .020" plastic sheet using Fig. 20 as a cutting pattern. Draw the center line and all fold lines.
- 6) Drill two #70 holes in the bucket teeth strap as shown in Fig. 20 (be sure to drill accurately 11/16 inch both sides of the centerline).
- 7) Cut a strip of .020" plastic sheet 1/8 inch wide and about 2-1/2 inches long. This will be the rear bucket strap (draw its center line).
- 8) Emboss rivets to the rear bucket strap and the teeth straps as shown in the plans and Fig. 21)



21 REINFORCEMENT STRIP

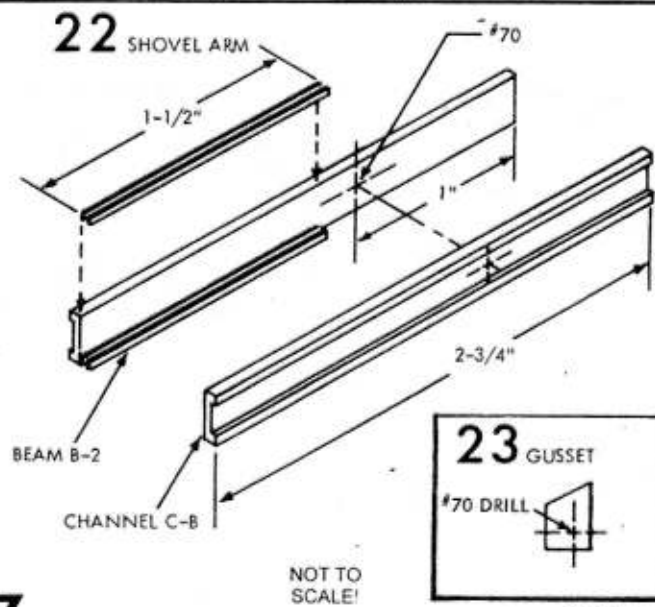


SHOVEL BUCKET

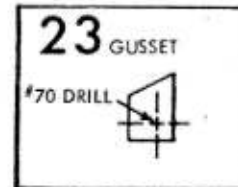
- 9) Glue the teeth strap to the bucket; line up both centerlines, the rear edge of the strap and the front guide line. Glue the center of the teeth strap to the bucket and let dry. Continue glueing the strap to the bucket, making sure everything is lined up. Clamps may be needed to hold the pieces together as you work. If you find that the teeth strap overlaps at its joint trim it until a centered butt joint is achieved. If it is too short, simply cut a strip and fill the gap.
- 10) Drill two #70 holes through the bucket at the location of the holes in the teeth strap.

SHOVEL ARM - ASSEMBLY

- 11) Cut two pieces of Plastruct C-8, 2-3/4 inches long.
- 12) Cut two pieces of Plastruct B-2, 1-1/2 inches long.
- 13) Drill a #70 hole through each of the C-8 pieces (see Fig. 22). Be sure these are square and true.)
- 14) Glue the beams to the channels to form the shovel arm. See Fig. 22
- 15) Cut two gusset plates out of .020" plastic sheet. Use Fig. 23 as a cutting pattern, and drill a #70 hole in each.
- 16) Glue the shovel arm to the bucket; be sure that it is flush with the rear of the bucket (see plans).
- 17) Glue the gusset plates to the shovel arm and bucket (see plans).
- 18) Drill two #70 holes through the shovel arm at the location of the holes in the gusset plates (be sure they line up). Refer to plans.
- 19) Glue the rear bucket strap to the bucket following the same procedure used for the teeth strap. The rear strap must end at the gusset plates. Be sure the rear edge of the strap is flush with the rear edge of the bucket.



NOT TO SCALE!

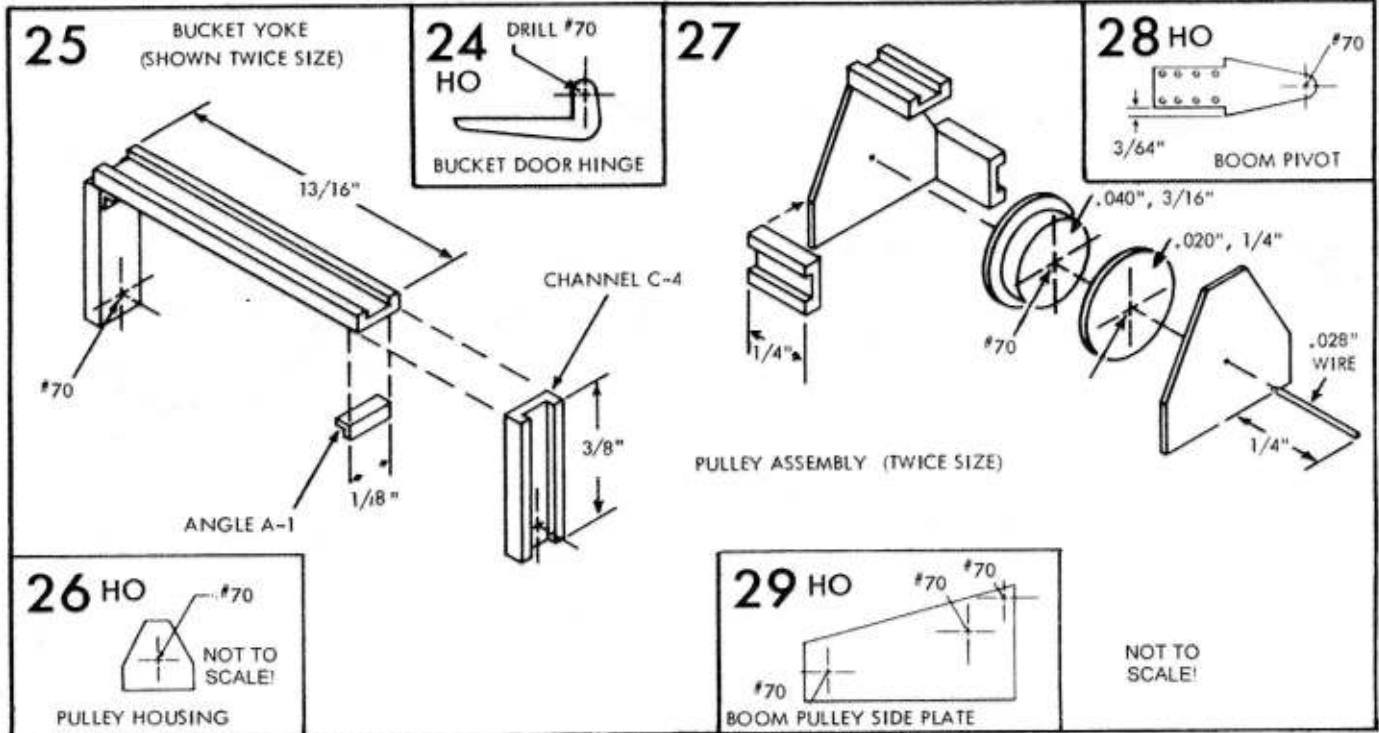
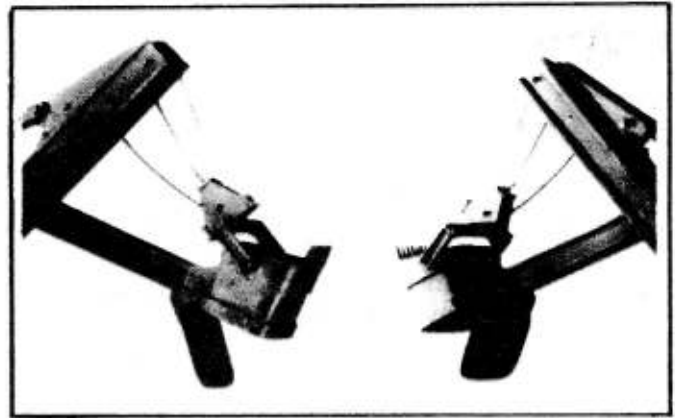


CONT.

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- 20) Cut the bucket door out of .020" plastic sheet by following this procedure: Lay the bucket with the rear part down on a piece of .020" plastic. With a sharp pencil draw the outline of the bucket on the plastic sheet. Now cut the bucket door from the plastic sheet and dress the cut with sandpaper or a file.
- 21) Cut two bucket door hinges out of .030" plastic sheet. Use Fig. 24 as a cutting guide and drill a #70 hole on each hinge as shown.
- 22) Cut a piece of .028" wire 13/32 inch long; round the ends with a file.
- 23) Pass the piece of wire through the right bucket door hinge, the shovel arm, and the left hinge. Test to see if hinges can move freely.
- 24) Test fit the bucket door to see if the hinges will hold door closed without any angle. If so, glue the hinges to the door (be sure that these are square and parallel to the shovel arm). If not, file the top inside edge of the hinges until they do.
- 25) Glue the hinges to the wire. Be careful not to glue the wire to the shovel arm or the door will not hinge (use ACC adhesive).

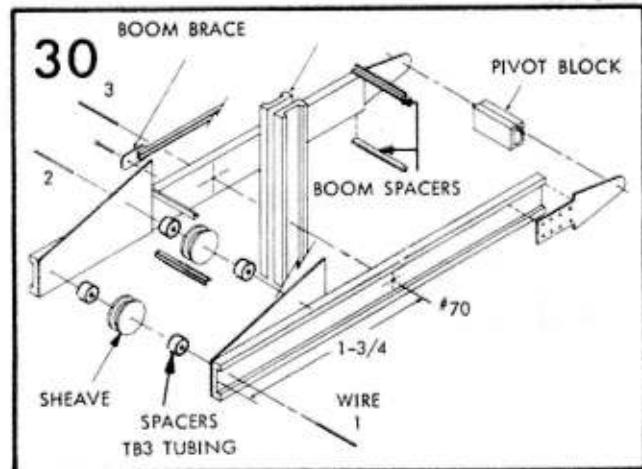


- 26) Make the bucket yoke with plastruct C-4 channel. Cut two pieces 3/8 inch long and one piece 13/16 inch long. To reinforce the joint, use 1/8 inch lengths of A-1 angle (see Fig. 25). Drill #70 holes on the side pieces as shown.
- 27) Attach the bucket yoke with two straight pins passed through the inside of the bucket holes and through the holes in the yoke side pieces. Glue the pins to the yoke (be careful not to glue the yoke to the bucket) using ACC adhesive; cut off the excess on the pins with a nail clipper or similar tool.
- 28) You will have to make a yoke pulley unless you can procure one. Make the sheave as you did the turntable. Make two disks 1/4 inch diameter out of .020" plastic sheet and the center disk 3/16 inch diameter out of .040" plastic. Drill a #70 hole in each of the disks. See Fig. 27.
- 29) Cut the pulley housing out of .020" plastic sheet using Fig. 27 as a cutting guide.
- 30) Assemble the pulley by gluing the 1/4" pieces of C-4 channel to the pulley housing.
- 31) Cut a piece of .022" wire 1/4 inch long and pass it through the pulley housing and the sheave (see Fig. 27). Glue it to the pulley housing with ACC (be careful not to glue the sheave).

- 32) Glue the pulley to the center of the bucket yoke (see plans).
- 33) Cut two pieces of Plastruct C-10 channel 3-1/4 inches long. Drill a #70 hole on each piece as shown in Fig. 30, BOOM Page 9.
- 34) Cut two boom pivots using Fig. 28 as a cutting pattern. Drill a #70 hole in each pivot plate (Fig. 28). Be careful with the front part of the pivot plate as it will go between the side webs of the boom channels. Emboss rivets as in Fig. 28, but make sure there is a right and left pivot plate.
- 35) Glue the pivot plates to the C-10 channel making sure you have a right and left boom side (see plans). Drill through the holes in the front of the side plates.
- 36) Cut two boom pulley side plates using Fig. 29 as a cutting pattern. Drill the three #70 holes in each plate, being sure that they line up.
- 37) Glue the pulley side plates to the front of the boom channels from the inside (see Fig. 30).
- 38) Make two sheaves with the inside disk .040" thick and 1/4" in diameter and the two outside disks .020" and 3/8 inch in diameter (refer to turntable fabrication).

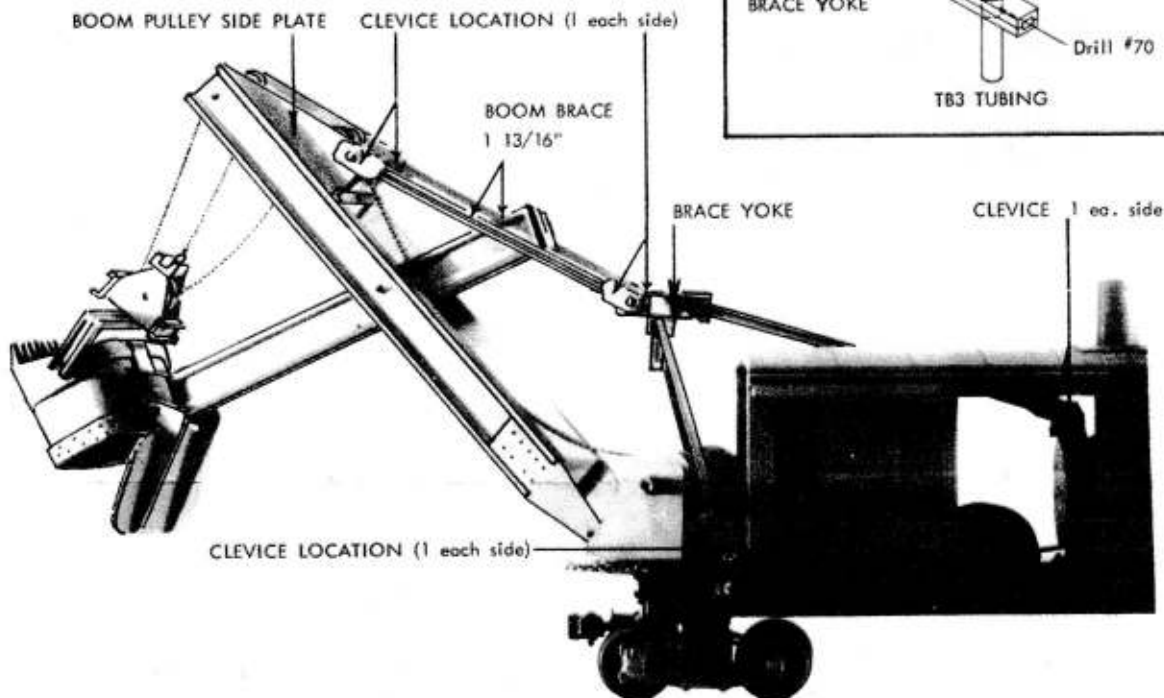
1519 BOOM FINAL ASSEMBLY - Refer to Page -1- and -2- for drawings and photos.

- 39) Cut four pieces of Plastruct A-1 angle 1/2 inch long.
- 40) Glue the A-1 angles to the boom as shown in Fig. 30.
- 41) Cut six pieces of Plastruct TB-3 tubing about 1/16 inch long.
- 42) Cut three pieces of .028" wire 7/16 inch long.
- 43) Take one of the pieces of wire and pass it through the front hole in the boom, one of the TB-3 spacers, one of the sheaves, another TB-3 spacer, and the other side of the boom (see Fig. 30). Needle nose tweezers will help hold the parts.
- 44) Repeat step 43 for the second sheave and the shovel arm.
- 45) Pass the chain (or thread if you want to simulate steel cable) through the pulleys (we used Campbell's chain). Glue one end to top of the bucket pulley using ACC adhesive (be very careful) up over the front sheave and down to the bucket pulley and under its sheave. (This is the tricky part.) Then up over the second sheave. You will need about 12 inches of chain or thread for the rigging of the boom and bucket (see plans).
- 46) Slip the ends of the pivot plates over the wire ends of the pivot block.
- 47) Glue the other end of the chain or thread to the shovel winch (see plans).



BOOM SUPPORT ASSEMBLY

Refer to P.1 & P.2



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(8) Needed

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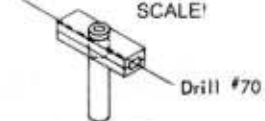


Pencil Mark

32

BRACE YOKE

NOT TO SCALE!



Drill #70
TB3 TUBING

BOOM SUPPORT -

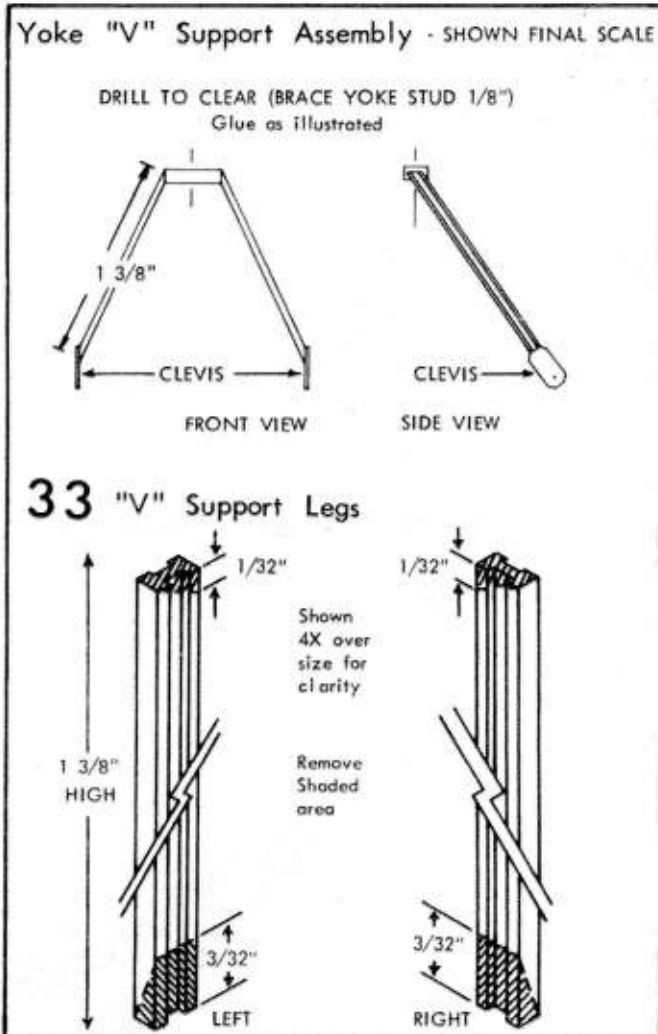
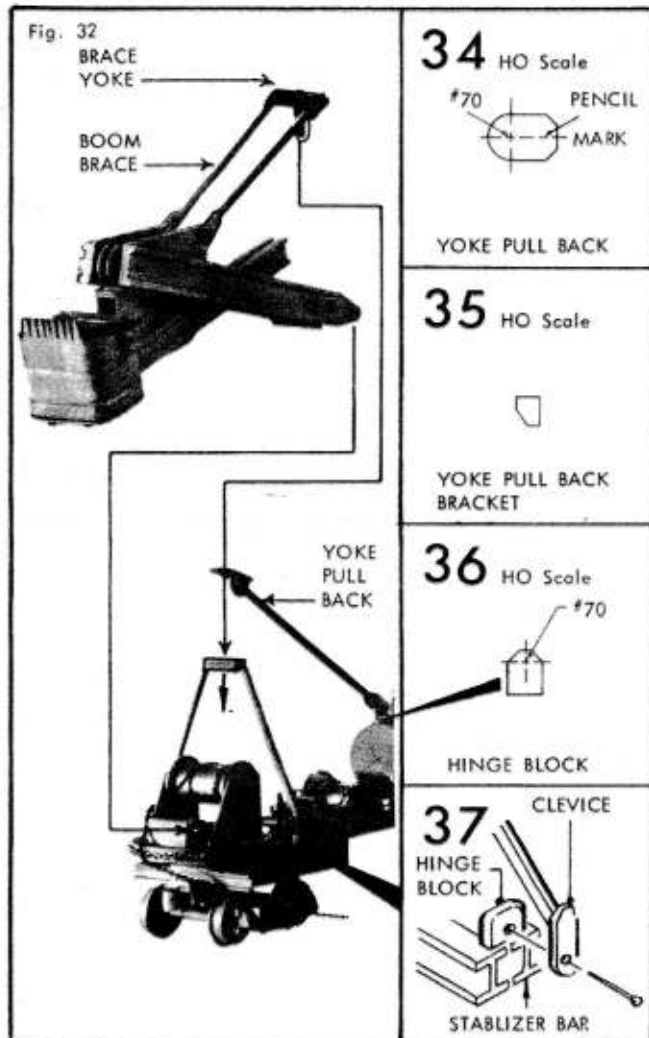
- 1) Make eight clevises out of .020" styrene, using Fig. 27 as a cutting pattern. Drill a #70 hole on each and mark the back with pencil as shown.
- 2) Cut two pieces of B-2 beam 13/16 inch long to make the boom braces.
- 3) Glue a clevis at each end of the boom braces (see Fig. 30). The mark on the back of the clevis indicates where the brace should be glued.
- 4) Attach the braces to the boom by passing a pin through the clevis and then through the top hole of the boom pulley side plate; snip off the remainder

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- 5) Cut two pieces of C-4 channel 7/16 inch long and glue them together face to face. This will form the brace yoke (see Fig. 32)
- 6) Drill a 3/32 inch hole at the center of the brace yoke.
- 7) Cut a piece of TB-3 tubing 1/2 inch long; insert it through the hole in the brace yoke and glue it in place.
- 8) Drill a #70 hole through the TB-3 tubing inside the brace yoke (see Fig. 32).

of the pin from the back side of the side plate and then glue the pin to the side plate with ACC adhesive. Be careful - the brace must be able to move. Do not glue it to the side plate.



REFER back to P.9 for parts location

- 9) Attach the boom braces to the brace yoke by passing a pin through the right clevis, through the yoke, and through the left clevis. Cut the excess off the pin and glue this end of the pin to the left clevis (using ACC adhesive and being careful not to glue the clevis to the yoke).
- 10) Cut two pieces of Plastruct 8-2 beam 1-3/8 inches long. Bevel the bottom ends and cut the top ends as shown in Fig. 33.
- 11) Cut two pieces of C-4 channel 5/16 inch and glue them together face to face (see step 5). Drill a 3/32 inch hole at the center (see step 6). This is the top piece of the "vee" yoke support.
- 12) Glue a clevis to the bottom of each of the vee support legs (see photo).
- 13) Glue the vee support legs to the top piece. The legs should fit inside the opening on the ends of the top piece.
- 14) Glue the hinge blocks to the ends of the stabilizing bar (see Fig 37).
- 15) Attach the vee support to the stabilizing bar by passing pins through the clevises and then the hinge block. Cut the excess length of pin and glue to the hinge block (use ACC adhesive). See photo.
- 16) Cut the yoke pull back plate from .020" plastic sheet using Fig. 34 as a cutting pattern. Drill a 3/32 inch hole as shown.

YOKE PULL BACK BAR

- 17) Cut a piece of 8-2 beam 2-1/16 inches long and glue a clevis to each side of the rear end.
- 18) Cut hinge for the pull back brace out of .020" plastic sheet using Fig. 36 as a cutting pattern. Drill a #70 hole as shown.
- 19) Glue the hinge at the top center of the boiler just ahead of the stack (to add strength you may want to add a couple of A-1 angles to the base of the hinge; see photo).
- 20) Attach the pull back brace to the hinge by passing a pin through the clevis, the hinge, and the other clevis. Cut the excess pin and glue to the clevis (use ACC but be careful not to glue the clevis to the hinge).
- 21) With the turntable removed, pass a length of TB-3 tubing through the pull back plate, the hole of the top piece of the vee support, and through the hole for the turntable in the floor. This set-up should assure alignment so the pull back brace can be glued to the pull back plate (use ACC adhesive, but don't glue the pull back plate to the top piece of the support!). Reinforce the joint with two brackets cut from .020" plastic sheet (see Fig. 35). Glue to the sides of the brace (see plans).
- 22) Install the turntable back in its position and attach it with the screw.
- 23) Slip the tubing of the boom yoke through the pull back plate and the vee support top piece.

END



Kit #1521 Mom's Diner

Diner and Detail Assembly Tips

* SEE PLATFORM CONSTRUCTION ON REVERSE *

NOTE: Parts may be cut and trimmed using a razor-type knife and a straight edge. A hobby saw may also be used.

GLUEING

Any quality Cyanoacrylic ("Super Glue") or Styrene cement may be used. Do one joint at a time, and allow for the glue to set before continuing.

CREATIVE ASSEMBLY

The following procedures are only suggestions, and may be adapted to create a model appropriate to your own layout or modeling era.

1) Carefully remove all parts attached to the sprues, making sure NOT to cut or damage the pin-like extensions on some parts. Also, limit the amount of cutting on the sprues themselves, as these can become valuable extra parts in your construction!

2) Decide where you would like to place the DINER BODY on the PLATFORM. Before gluing the body in place, you may wish to raise the body slightly, as though it were on a foundation. The flat-sided SPRUE pieces from the railings are perfect for this, and can be measured, cut and pieced together to form a foundation. Glue these pieces to the bottom edges of the DINER BODY. When the glue has set, you may glue the body and foundation in place on the PLATFORM.

3) Posts to hold up the edge of the SHINGLE ROOF can be made using the rounded SPRUE pieces from the roof and walkway. To measure the height of the posts, place the DINER ROOF on top of the DINER BODY (DO NOT GLUE) and place the SHINGLE ROOF along the edge of the DINER ROOF where it is to be attached to determine the slope angle that you want the SHINGLE ROOF to be set at. Remove from the edge, place a very thin bead of glue along the edge of the SHINGLE ROOF, and place this edge at the point of attachment on the DINER ROOF, making sure it is at a correct angle. If using Cyanoacrylic, you may hold the SHINGLE ROOF, or prop it up to hold it in place. When the glue has set, measure the height between the outer edge of the SHINGLE ROOF and the PLATFORM. Cut four pieces of the rounded SPRUE to this length, and glue to the underside of the outer edge of the SHINGLE ROOF. This will provide the supports for the SHINGLE ROOF on the PLATFORM. The interior of the DINER BODY may be furnished with tables, chairs, lighting, etc., if you desire (parts not included.)

4) Stairs can be cut to lead up to the edge of the platform. Place them in your chosen location, and attach them - taking care not to use an excess amount of glue.

5) Measure the lengths of PLATFORM RAILING for the locations you wish to install it. Their are pin-like extensions at the bottom of the railings, and these can be inserted and glued into small holes made with a pin vise drill or tip of a hobby knife. STAIR RAILING can be placed along the sides of the stairs.

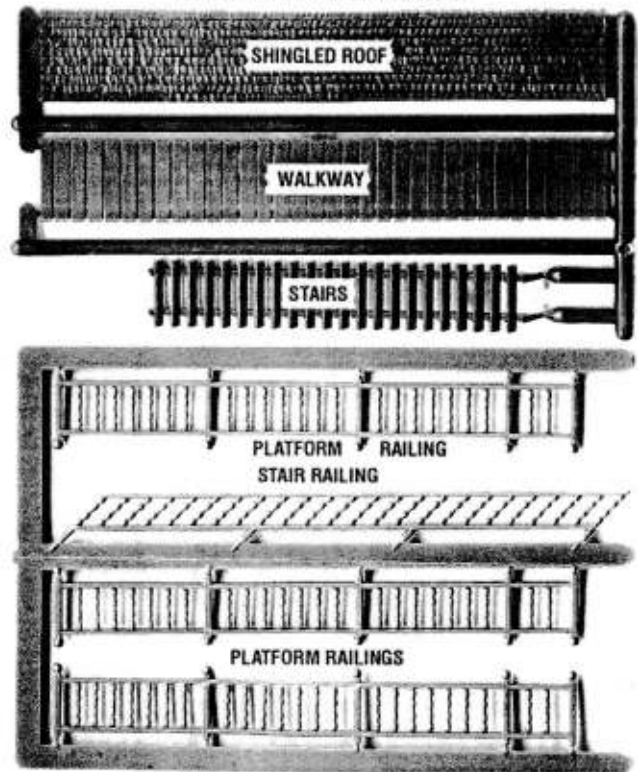
6) Cut and place walkway sections in the areas desired.

7) Signs can be made several ways. A sign on a post can be done using the shorter and thicker rounded SPRUE from the roof and walkway (see illustration "A".) Trim off any rough edges, leaving one of the short side sprues to serve as a support for the sign. Remove some of the material at the base of the post, to serve as an anchoring pin. Use part of the flat plastic sheet removed during platform construction for the actual sign. Lettering done with a computer printer can be glued with rubber cement to the plastic sheet. Also, you can paint the plastic sheet, and apply decal lettering. Glue the finished sign to the post support. Make a small hole in the PLATFORM at the location you wish to place the sign, and glue in place.

Another type of sign can be made to place on top of the DINER ROOF (see illustration "B".) This can be done with a small piece of card stock, or poster board. Other sources of card material could be the inserts placed in new shirts, or even old playing cards. Cut the card stock to the desired shape to lay along the top of the DINER ROOF. Create a color printout with the desired lettering on a computer printer, and glue to the card stock with rubber cement. Trim the edges as required. Glue the sign to the top of the DINER ROOF.

We hope you have enjoyed assembling this kit as much as we have enjoyed creating it for you.

NOTE: Illustrations are not to scale.



Front View Of Completed Model



Rear View Of Completed Model

PLATFORM ASSEMBLY

NOTE: Platform part may be cut using a razor-type knife and a straight edge. Sheet plastic may also be carefully cut with scissors or with a paper cutter, but the results may not be as good.

CUTTING PIECES

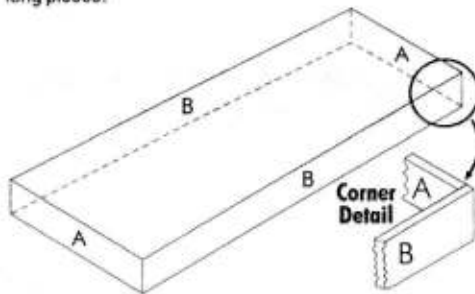
1) Using the template provided as a reference, measure and cut two $1/2$ " wide strips from the end of the supplied plastic sheet. Measure and cut $1\ 1/16$ " long pieces from each strip. The resulting strips will be $1/2$ " wide by $2\ 3/16$ " long (A). You should have small remaining pieces of plastic sheet, marked "Discard" in the drawing. These can be used in the construction of a sign, as described on the other side of this instruction sheet.

2) Measure and cut two $1/2$ " wide strips from the long side of the plastic sheet. This will produce two pieces $1/2$ " x $5\ 1/2$ " (B).

3) You should have a remaining sheet $2\ 1/4$ " by $5\ 1/2$ " (C). This will become the top of the platform.

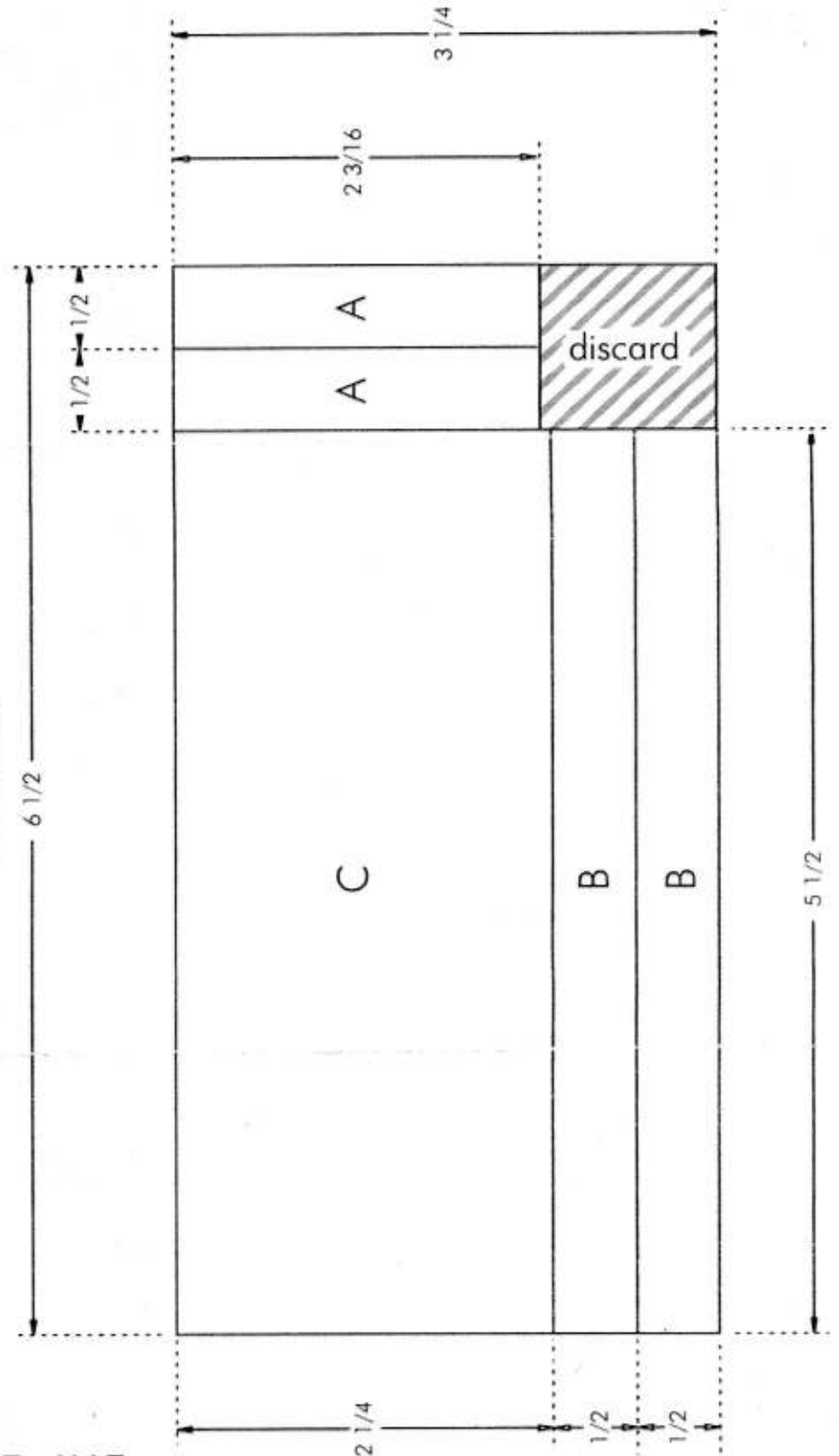
GLUEING

1) The two shorter pieces (A) are to be glued *between* the ends of the two long pieces (B). Any quality Cyanoacrylic ("Super Glue") or Styrene cement may be used. Do one joint at a time. Take care to make your corners square. Allow each corner to set before going on to the next corner. When finished, you should have a rectangular frame, with the two short pieces of plastic nicely nestled *between* opposite ends of the long pieces.



2) Place the rectangular frame on a flat surface, and distribute a thin amount of glue along the upper edges. Place the large plastic sheet (C) squarely on top of the frame, and apply gentle pressure to seat it.

TIP: The entire platform is best painted after all cutting and gluing of the platform is finished.



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Roundhouse Products

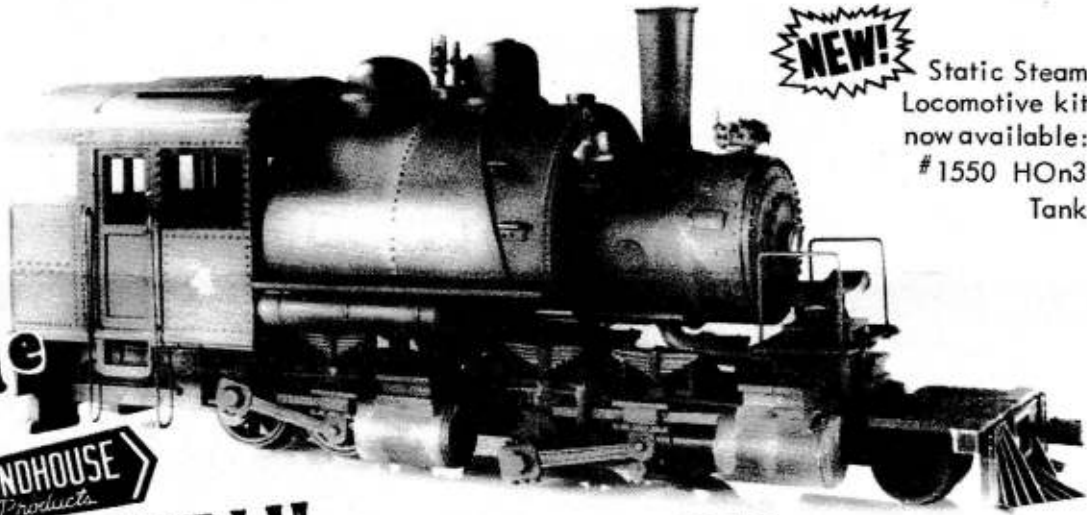
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STATIC STEAM LOCOMOTIVES

NEW!

Static Steam
Locomotive kit
now available:
1550 HO_n3
Tank



NEW!

Roundhouse has the most outlandish 3-1 kit ever — Imagine a complete "Locobashing Kit" articulated for just a mere \$15.50 — But, 'does it run?' you ask. No, of course not; but for this ridiculously low price we can't give you everything. But, you must see it to believe it. Old No. 4, the "Battle Mountain" 2-4-4-OT, is a locobasher's dream come true: everything is in the box. No extras to buy.

The Battle Mountain 2-4-4-OT "Baby Articulated" — at a glance: Kit features one molded Saddle Tanker body & a super-detailed molding of all stacks, airtanks, bell & whistle. All metal (non-powered) "outside frame" chassis, complete with two (2) sets of steam cylinders counter weights and main rods! Drivers are unassembled & consist of all brass rims, steel axles and Celcon molded centers & all screws.

ATTENTION "3-1 Modelers"!! Only ROUNDHOUSE supplies the original (3-1) Series! we are the innovators of the (3-1) multi-kit. So accept NO substitutes: ask your dealer by name. If it's NOT a Roundhouse 3-1 "Craft Kit" then you're just not getting your moneys worth.

!! Buy thrifty - Buy Roundhouse !!

There are many modelers that like to build "non-kit" items (or) "kit bash"; therefore, we decided to start up a line of locomotive projects with the same kind of thinking that went into our "Old Timerkit bashing" (3-1) car kit line.

The Static Steam Locomotive kit represents, first of all, a prototypical locomotive style. Next we furnish the majority of the parts to construct this particular locomotive kit (but) unlike our regular line of powered locomotives the (3-1) are not designed for operation although we feel that, due to the kit contents being made up of our powered kit components, many modelers will have no problem in powering these "static locos". The instructions cover only the "static" construction with no mention of powering kit. Also included in the kit instructions is a special instruction sheet for advanced modelers outlining the construction of a baby narrow gauge: 2-4-4-OT Articulated locomotive, utilizing the 1550 kit contents.

Locomotive Kit (less motor & gears; non-operational) undecorated,

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Model die Casting Inc.
P.O. Box 1927, Carson City, NV 89702, U.S.A.

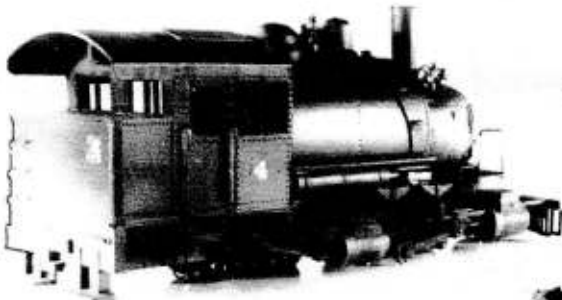


kit 1550: static steam

You can build this 0-8-0t

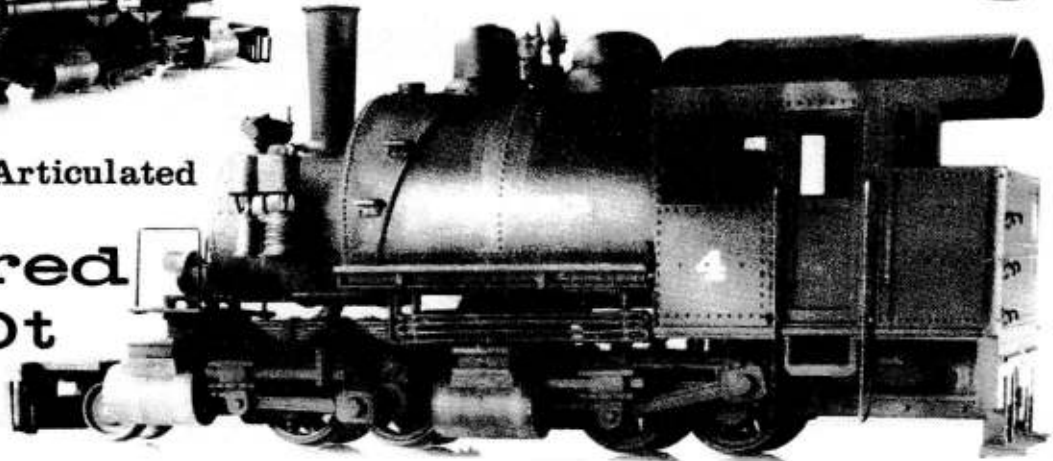


Kit: 1550 Narrow Gauge
0-8-0T "Old No. 9"
Saddle Tank Locomotive



...(3-1) kitbashing

or, this petite Articulated
non-
powered
2-4-4-0t



1st in a series HO_{n3} Saddle Tank 0-8-0T. Just right for the modeler who needs an exquisite outside frame narrow gauge locomotive for his mine or quarry spur; or just sitting next to the roundhouse as an out-of-service derelict! Kit features a one-piece boiler and cab molding and all-metal chassis/frame.

Drivers unassembled and do not require quartering. Instructions cover "kit bashing" and detailing kit contents. Some additional construction components must be purchased, Kit #1550 (non-powered/undecorated) available less motor and gears.

Introduction to the series

Every train layout needs one or two steam locomotives ... but not every train layout needs them powered!

Static steam series is the answer ... no matter what era your pike is modeled around, Roundhouse will soon have the right "static steam locomotive" kit for your needs: "mining, quarries, logging, branch lines, or just a park engine!

How many times have you wanted to build an abandoned mining camp, complete with a couple of rusting 0-4-0 narrow gauge "Porters"; how about a petite narrow gauge 2-4-4-2 tank articulated under repair in your logging camp? ... Sounds great! ... you bet, and now's the time to get started with your first (3-1) "Static Steam Series" locomotive kit. Roundhouse Products' first kit in this new series is a narrow gauge 0-8-0T tank engine. A "dead ringer" for those long-ago mining and plantation engines of the late 1800s.

You may well ask, "What constitutes a "Static Steam Locomotive" model when it comes to QUALITY?" ... Roundhouse realizes that your hard-earned money can't be thrown away on just anything - right? So, to answer your questions concerning our new series of "static steam locos" we have prepared this flyer. We hope it will answer all of your questions.

The (3-1) new Roundhouse Products "Static Steam Series" was designed first of all to make available to all of our modeling friends our vast array of steam locomotive parts; i.e., precision metal castings, molded plastic boilers, cabs and tenders. Just like our original (3-1) kit bashing car kit series, we have done this at a great savings to our model railroad customers. How? Basically, by selecting & packaging a complete "idea" in a single package for you. "Quality" is inherent in all Roundhouse locomotive parts because each part was designed for one of our "powered" locomotive kits. Since each part is perfect in every respect you do not have to pay for "junk"; no soft metal

fragile parts that will fall apart or break even if you should elect to power your model! ... Just think of all the possibilities your kit price will produce when combined with your own imagination and "parts scrapbox" of motors and gears.

Note: Our (3-1) "Static Steam Series" was NOT designed to operate, but we are sure there are those "thrifty" modelers who will enjoy trying to accomplish it. Is it possible? ... Again, only with Roundhouse quality parts is this a fact. For instance, our locomotive chassis as supplied with each kit: we start right at the heart of the model with a precision cast Zamac frame ... not plastic, not a soft metal casting, but a hard, durable long-lasting casting with all holes predrilled. Furnished with kit is a complete (unassembled) set of fantastic molded drivers with all "brass" rims plus steel axles; everything you need less, of course, the gears (obtainable from your model hobby dealer)! Quality all around also means a complete boiler & cab superstructure molded with fantastic details! And that's exactly what you get! The final quality in each kit is the instructions which convey the "theme" of the kit contents into a finished "Static Steam Locomotive" Kit.

You may wonder what the word "kit bashing" actually means, if you are new to this facet of HO modeling. Let us explain briefly for you: Kit bashing is taking several parts that were originally designed to fulfill a specific purpose and, through cutting and glueing and adding additional parts, transforming these parts into a completely new and different object. It does take work to accomplish; definitely not a shake-together project. But, if it's originality and loads of fun you're after, then you should pick up a Roundhouse Static Steam Locomotive kit from your favorite hobby shop and get into this fun filled series!

1550 HON3 0-8-0 TANK LOCO



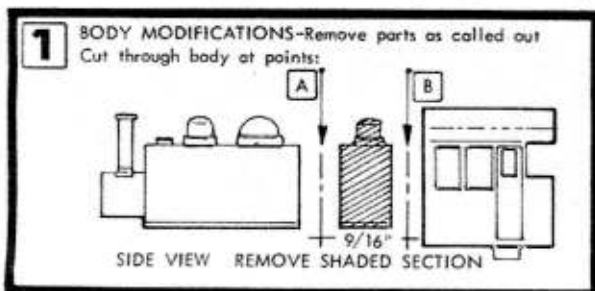
Roundhouse Products has been producing powered locomotive kits for 40 years and is introducing the Static Steam Loco idea as a means to fulfill the non-operating modelers needs for an inexpensive locomotive kit; why not...the modeler has ships, model cars and buildings, but nothing in non-powered "static" locomotive kits.

Your kit is not a "shake together" kit like inexpensive plastic model kits; we have included: steel, brass and expensive all-metal die cast zamac castings, plus a high quality molded locomotive superstructure!

Instructions cover the basic "kit bashing" ideas necessary to achieve an "old timer" 0-8-0T Plantation, or logging locomotive of the late 1800s. Included with kit is a complete assortment of superdetailing parts to make your locomotive into an old or modern looking model. Before getting started with your new



locomotive we recommend studying the kit contents and familiarizing yourself with each part and spending some time doing your own "Idea Starters". These "Idea Starters" should start with some picture looking in your library of short line and narrow gauge railroad books. Try to get an idea of what "Saddle Tankers" looked like; watch for details like cabs (wood & metal), headlights, stacks and compressor locations. Also, make notes covering wood pilot beams, chains, supports and general small nut and bolt layout. These items can be purchased out of your Kemtron catalog or at the hobby shop.



TOOLS FOR "KIT BASHING" YOUR 0-8-0T

Outlined below is what we feel you should have on hand before "kit bashing" the kit contents:

- o Jeweler's Saw - (fine blade) for cutting the boiler frame modifications
- o Small metal files - assorted, flat, square, and round
- o Glues - ACC or Epoxy type and styrene glue
- o Sheet plastic - .025, etc., selection of thickness (see your hobby shop; ask for Squadron or Evergreen opaque white sheet styrene)
- o X-acto knife with (No. 11) blades and small cutting triangle
- o Sandpaper

Equipment needed for project: X-acto fine blade saw. (For cab modification optional) you will need .020 sheet styrene.)

REMOVE

(OPTIONAL) MODIFICATION

ROOF (SEE TEXT)

SMOKE STACK

GENERATOR

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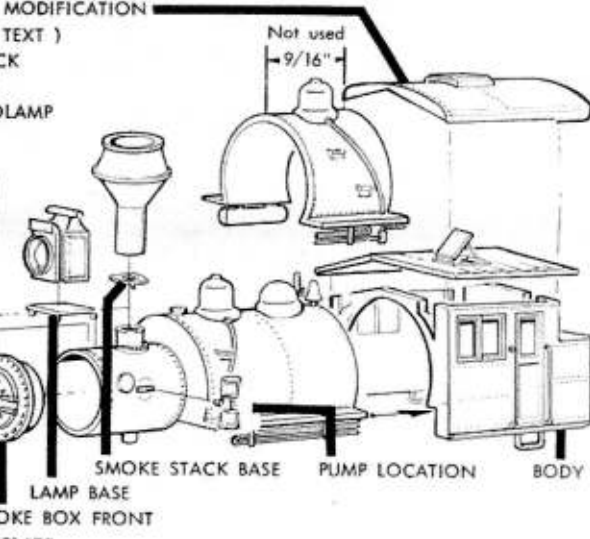
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SUPERSTRUCTURE (Kit-Bashing Instructions)

Your kit comprises a frame and superstructure that were not intended to be compatible; therefore the copy below outlines the simple modifications needed in order to attach the locomotive superstructure to the locomotive chassis.

- 1) Locomotive Superstructure Modification: You will need to make two saw cuts completely through the boiler. Figure 1 at locations A & B; the cut A is at the edge of the cab, cut through boiler. Then scribe a line 9/16" from cut edge to point B and cut through boiler along line. (Discard this section - it is not used.)
- 2) Cab and Boiler. Cut lines should now be sanded smooth using a wood block and keeping parts perpendicular.
- 3) Locomotive Cab Modifications (Optional). Study photos and drawings of cab and decide if you want to have old style wood cab with sloping roof or to leave the cab as is (a modern metal version). If you elect to bypass

cab modifications start (chassis construction) while your locomotive boiler is "setting up". (Then come back to step 4.) Instructions for cab "kit-bashing" copy covers conversion of existing molded metal style cab into an "Old Timer" wood cab, using .020 sheet styrene plastic.

- 4) Finalizing Locomotive Superstructure. Details for your locomotive can vary depending on the period you are modeling. Study photos included with instructions. One point to remember, is when you are using the big diamond stack you should not use the generator (located in front of the original smoke stack). Also, remove the electric headlight from the boiler front molding.

Your kit contains a large selection of molded super detailing parts which are shown in their respective placement within the instructions. Attach parts using styrene glue.

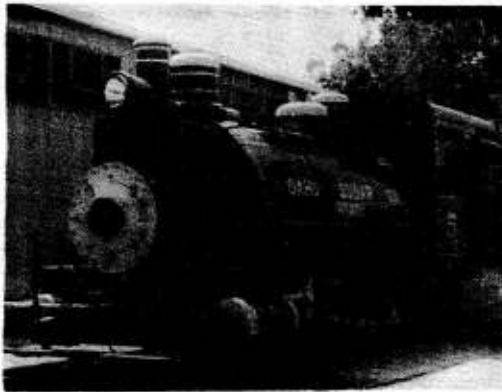
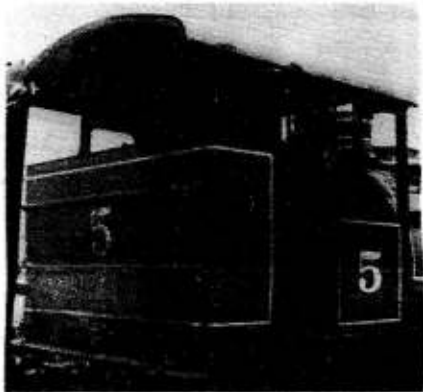
cont. P2

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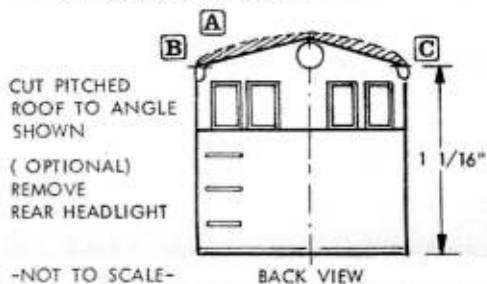
1

1550

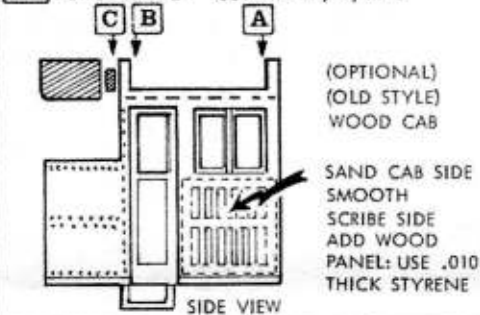
Study Figures 2 and 3, detail drawing covering cab modifications.



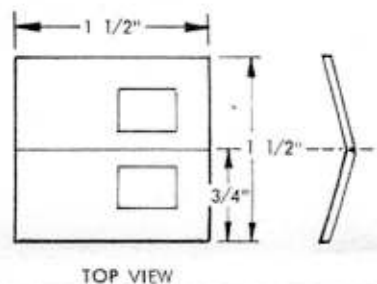
2 ROOF MODIFICATION (SEE TEXT) (OPTIONAL) CUT AWAY SHADED AREA



3 CAB MODIFICATION REMOVE REAR ROOF OVER HANG CUT AT: A, B, & C



4 CAB ROOF STYRENE

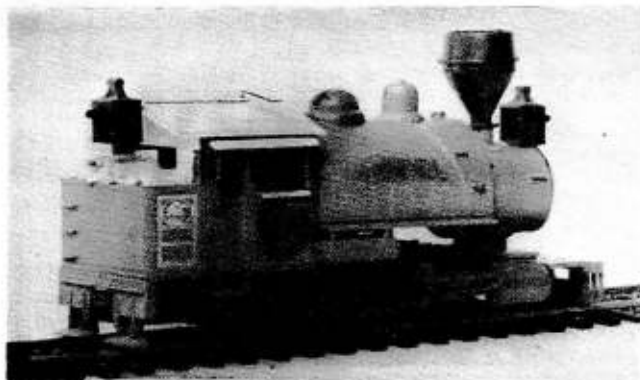
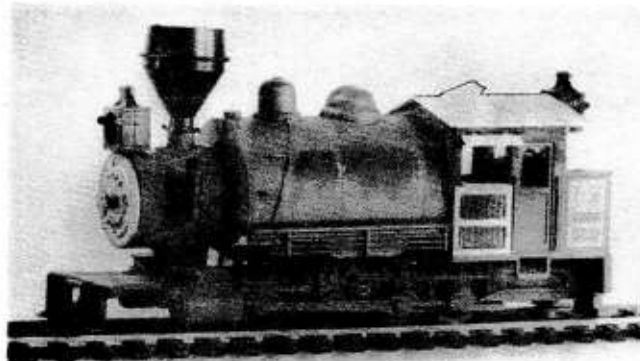


- 1) Roof: Cut section **A** rear roof overhang away from main portion of cab. Refer to Fig. 2
- 2) Scribe a 15° angle line across each side of the rear of cab at **B** and **C** and, using your saw, cut straight through to front. Ref. to Fig. 2
- 3) Fig. 4 Roof Construction: Using sheet styrene (.020) mark off a piece 1-1/4" long x 1-1/2" wide. Next, lay out the 1-1/4" piece and make a parallel line at the half-way point and scribe plastic and bend. (Do not cut through.)
- 4) Glue new roof to superstructure roof angles. Set aside to dry.
- 5) Modifications to Cab (right & left) sides. Sand rivet details from above and below cab windows. Fig. 3
- 6) Scribe vertical lines from window bottom to bottom of cab.
- 7) Lay out and cut 2 cab panels to fit under window area. Material: notebook paper stock or .010 sheet styrene. Use liquid styrene solvent and attach to cab sides.
- 8) Roof (for paper) use artist masking tape or (Kleenex) tissue and overlap edges; glue into place using liquid solvent and when dry trim excess roofing paper from cab roof. Refer to Photos
- 9) Add awning above windows using sheet styrene and roof air vents.
- 10) Fuel Bunker Load. Cut from scrap wood ties or wooden toothpicks.

Finalize your detailing using photos and your own ideas. Painting, again, is left up to the modeler, due to the nature of this project. Remember: Use only spray Enamel paint on plastic! Check your paint for "crazing" on a scrap of sheet styrene.

When attaching new smoke stacks, cut off old stack leaving a 1/8" stud to locate smoke stack base molding and new smoke stack onto.

Cont. 3



1550 CHASSIS

CHASSIS INSTRUCTIONS

- 1) **Frame Assembly:** Clean and take off all burrs from the underframe, using a small flat file, clean out the inside of the coupler pocket and around the pilot beam steps. (Frame top): Remove metal between spring at A-1.
- 2) **Driver Assembly:** Kit contains a complete set of unassembled drivers which are composed of steel axles, plastic wheel centers.
- 3) Assemble the brass rims onto the plastic spoked wheel centers using a small block of thin wood and hammer.
- 4) **Position drivers** onto the steel axles approximately $3/8$ " back-to-back and $1/4$ " from axle ends. **Assembly Tip:** Using a block of wood for an assembly jig, drill a small $1/16$ " wide hole x $1/4$ " deep. Press axle end into wheel center. Next, using your hammer, lightly tap axle through wheel until it bottoms out into hole in your wood block. Do both sides, then check the back-to-back distance. Check progress by inserting assembled driver into frame and put the cover plate in place. Adjust finished driver sets by hand to fit.
- 5) **Counterweight Assembly:** First lay out the driving wheel assemblies in their proper order.

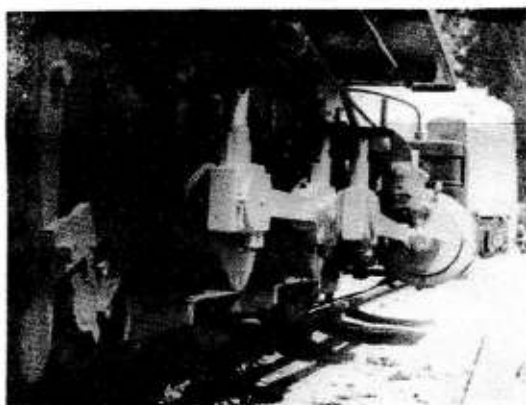
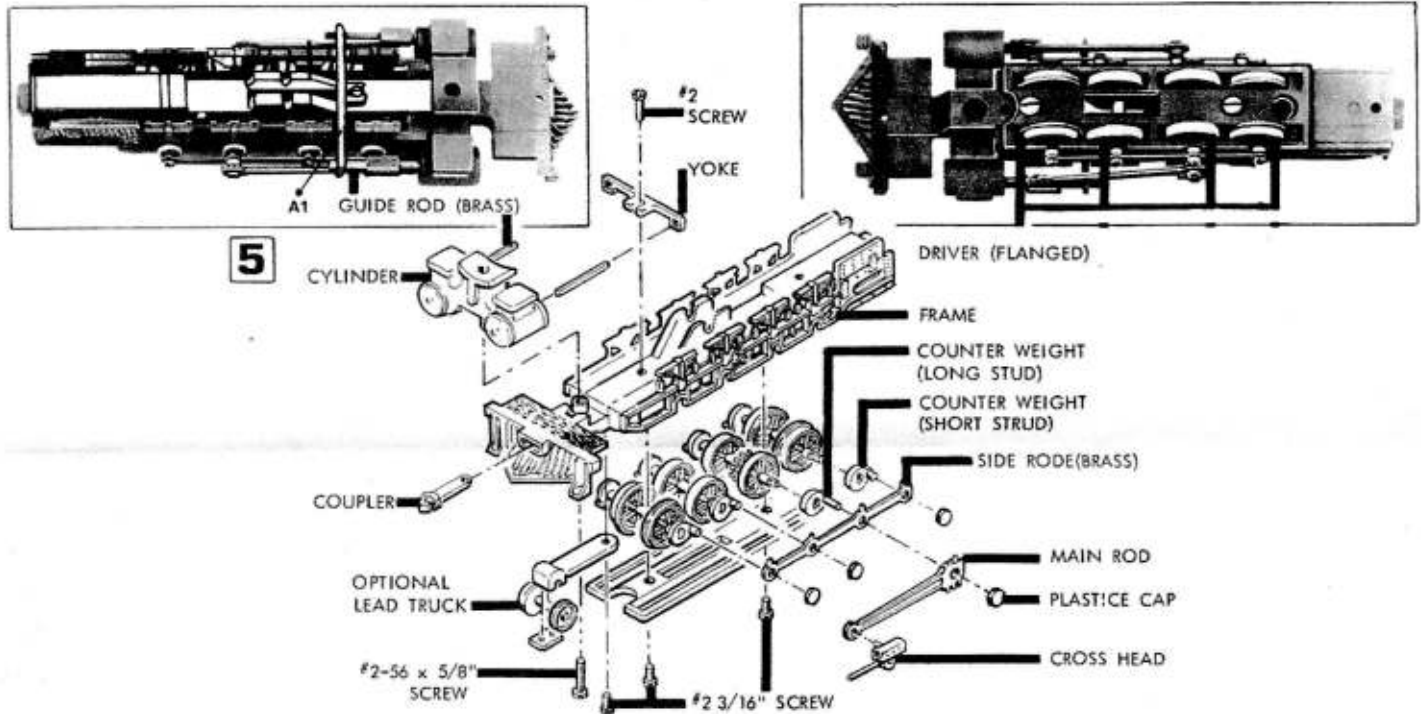


PHOTO illustrates positioning of counter weight, side rod and main rod.

- 6) **Counterweight:** Two styles supplied (metal & plastic); your choice! Study the counterweights and note there are (2) styles of "holes"; also (2) styles of "studs" (long and short). Separate counterweights into groups of four each, being careful not to mix the hole styles. Either group of counterweights can be assembled to the right or left side of the driver axle ends (just don't mix them up)! Holes are used to quarter the drivers. Counterweights are a press fit.
- 7) **Counterweight Assembly:** Assemble (short studded counterweight) to 1st, 2nd, and 4th drivers; assemble (long studded counterweight) to the 3rd driver; long stud holds the main rod.
- 8) **Driver Installation:** Hold underframe upside down and place drive wheels
- 9) **Bearing Plate Assembly:** Attach plate to underframe, using two $\#2 \times 3/16$ inch self-tapping screws.

CONT. P. 4

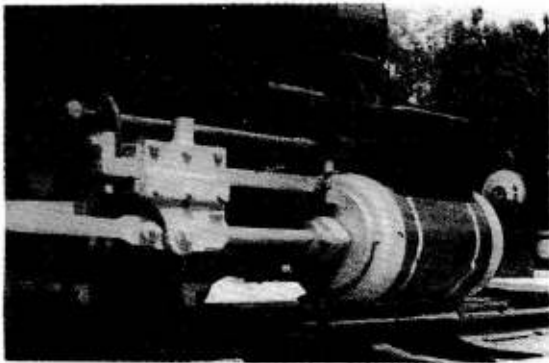
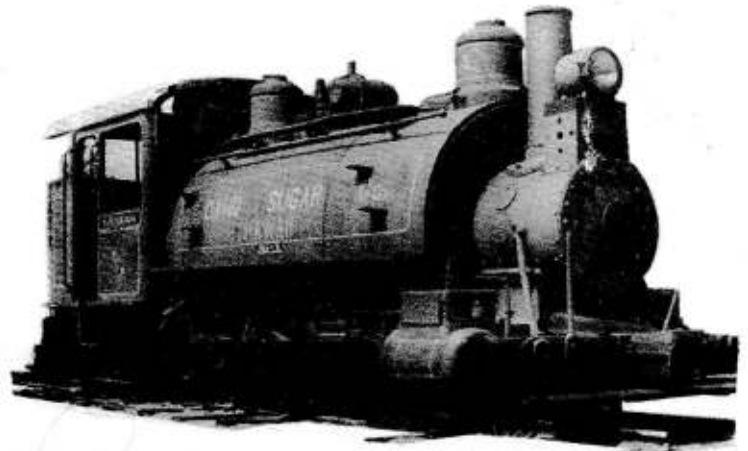
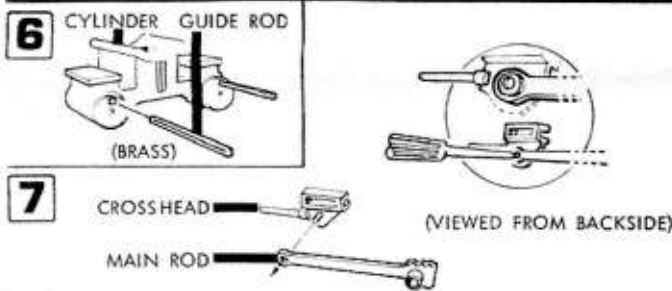


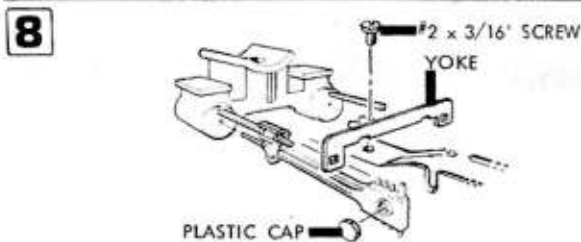
PHOTO illustrates positioning of cross head, guide rod, & yoke (also reverse linkage).



- 10) Side Rod Assembly (Brass Stampings): Before assembling side rods, deburr the front and back sides and also the holes using a small (flat) file. Attach side rod to first, second, and rear driver using plastic retainer cap. Main rod is attached later. Ref. to Page 3 Fig.5
- 11) Cylinder Assembly: Insert guide rods into top hole of the cylinder block. Place cylinder front on a soft surface (use a magazine and, with a small hammer, lightly tap guide rod into designated hole. (Note: Do not force but be firm.) Attach cylinder assembly to underframe. Fig. 6

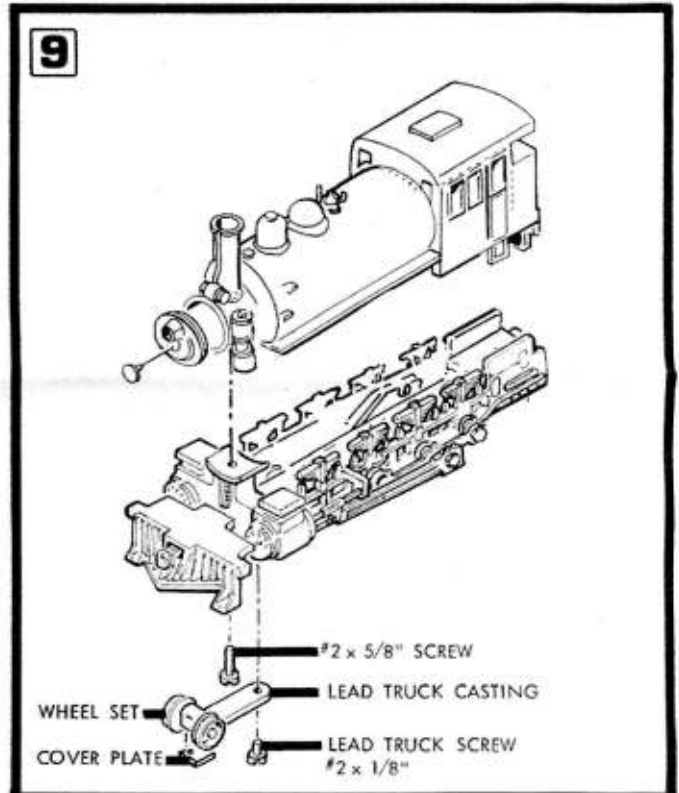


- 12) Crosshead Assembly: Left side and right side to main rods. Study detail drawing. Slide crosshead pin (back side) through hole in the end of the main rod. Next, slightly upset exposed pin as illustrated. Use a small "punch" to accomplish this operation. Fig. 7



DRIVERS NOT SHOWN FOR CLARITY

- 13) Position finished crosshead assembly on end of brass guide rods. The hole at the end of the main rod attaches over the long stud of the driver and is secured in place using a plastic retainer cap. Fig. 8
- 14) Yoke Assembly: Position yoke on frame, pushing brass guide rod ends into holes on end of yoke arms, secure yoke to frame with a #2 x 3/16" screw.

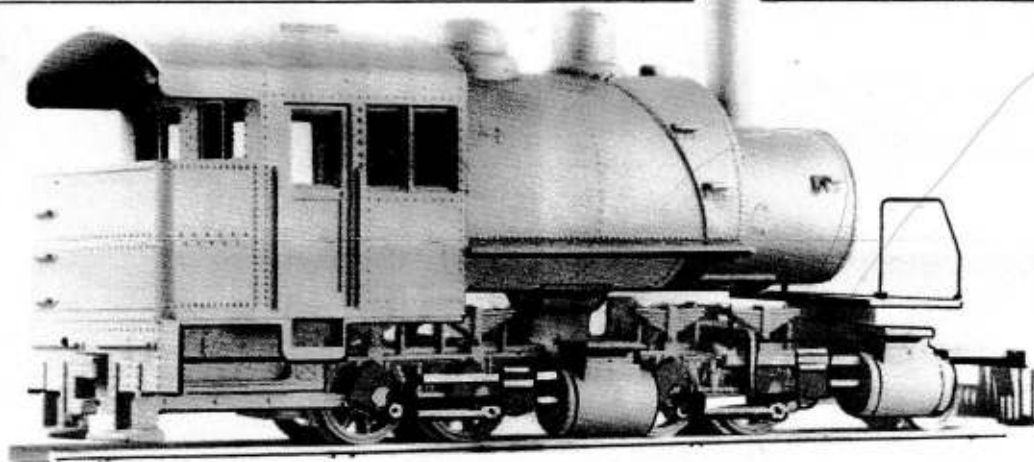


- 15) Frame & Superstructure Assembly: Slide finished rear of chassis into rear pocket of superstructure and secure front of chassis to bottom of boiler front using a long #2 x 5/8" screw.
- 16) Lead Truck Assembly (Optional) for a 2-8-0 model. Assemble lead truck wheels to lead truck casting. Attach lead truck cover plate to casting. Attach finished lead truck to underframe, securing using a #2 x 3/16 inch self-tapping screw.

STATIC STEAM NARROW GAUGE-"IDIA STARTERS"

- o Building a Diorama displaying locomotive using a pine board wall plaque; Great idea for a bookends.
- o Out of service engine repair, loco next to roundhouse.
- o The scrap metal dealers back lot, with Campbell's little people cutting the engine up!
- o Baby articulated, re-designing kit into a 2-4-4-2 loco.

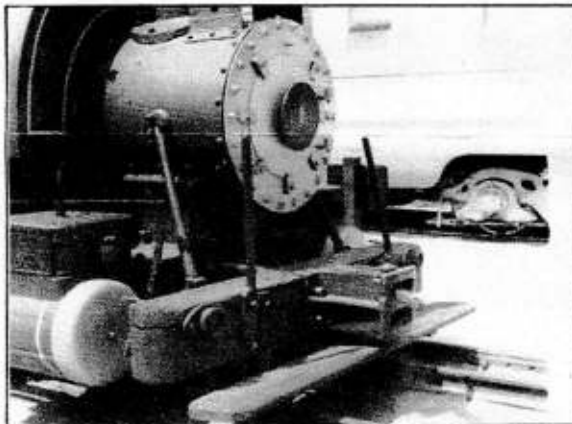
Detailing the ⁿg outside frame 0-8-0 & 2-4-4-0T's



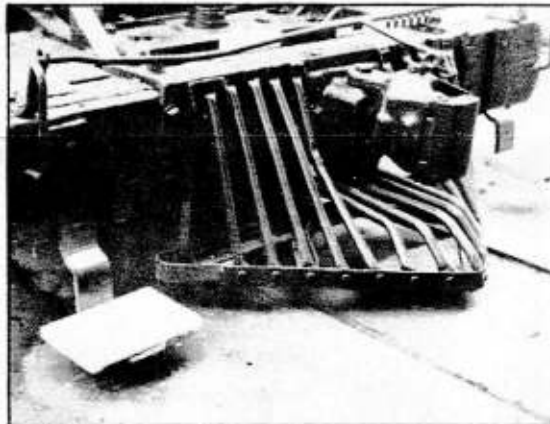
Narrow Gauge 2-4-4-0T!!

MDC staff got so excited over our kit #1550 we took a crack at it & came up with this baby articulated (a free lance model design).

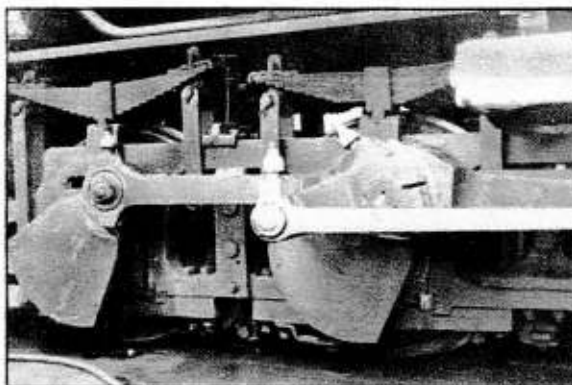
Builders photos for super detailing:



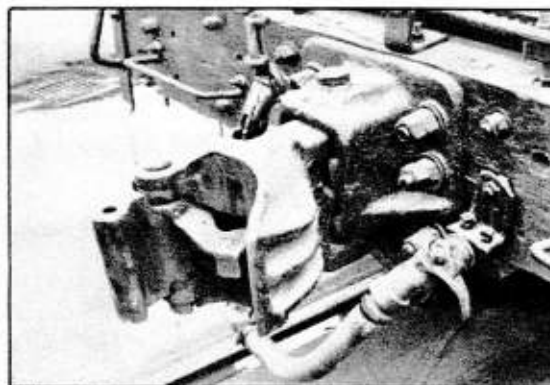
Kit # 1550 Narrow Gauge 0-8-0 Tank Locomotive



Above: Front pilot detail shot illustrating coupler and coupler lift pin bar



Above: Outside frame detail shot illustrating placement of large metal counterweights as supplied with kit # 1550



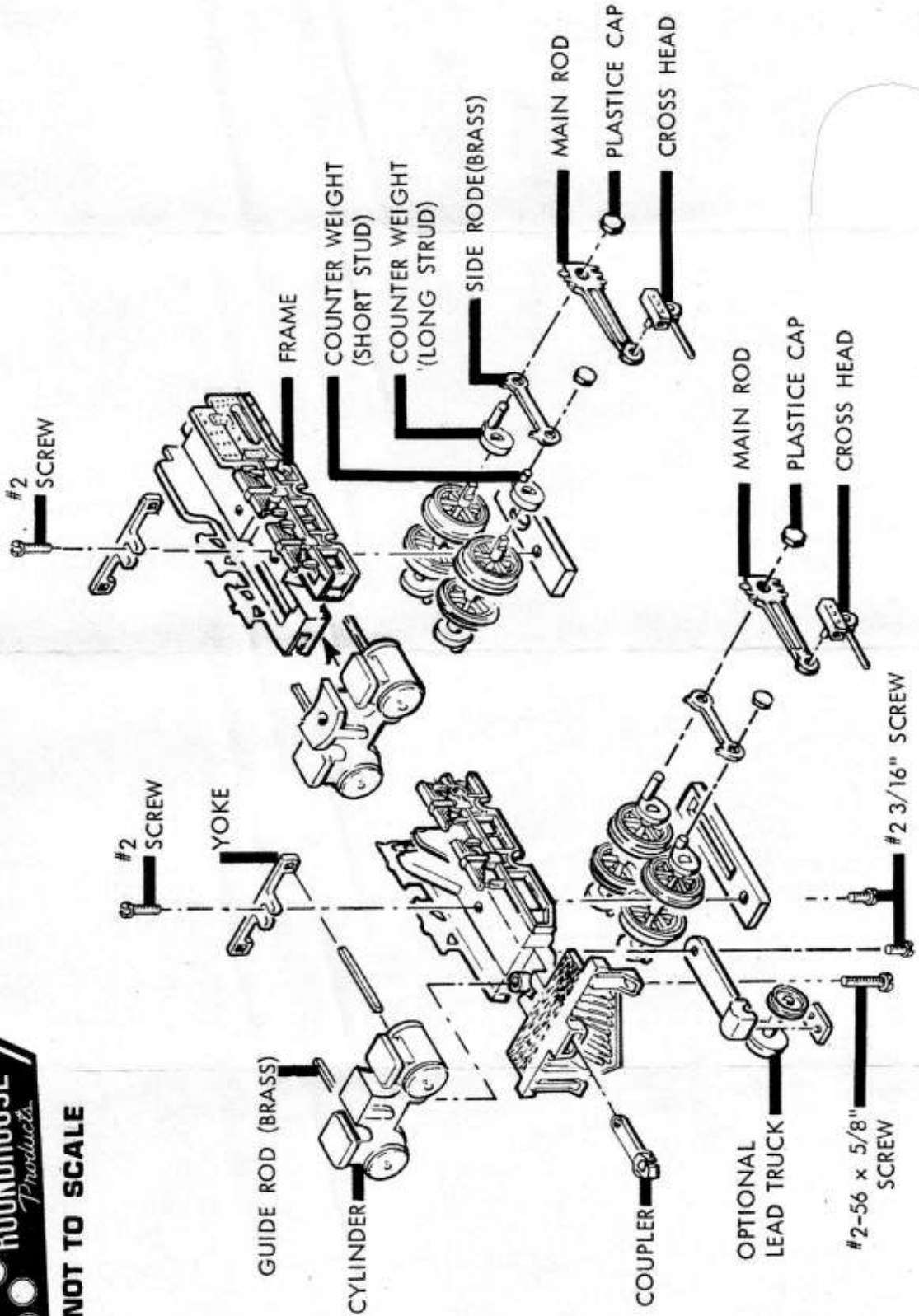
Above: Real coupler beam and coupler detail photo.

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HOn3 2-4-4-OT Baby Articulated Plans



NOT TO SCALE

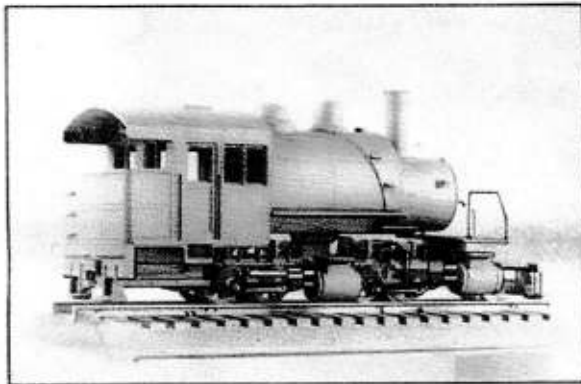
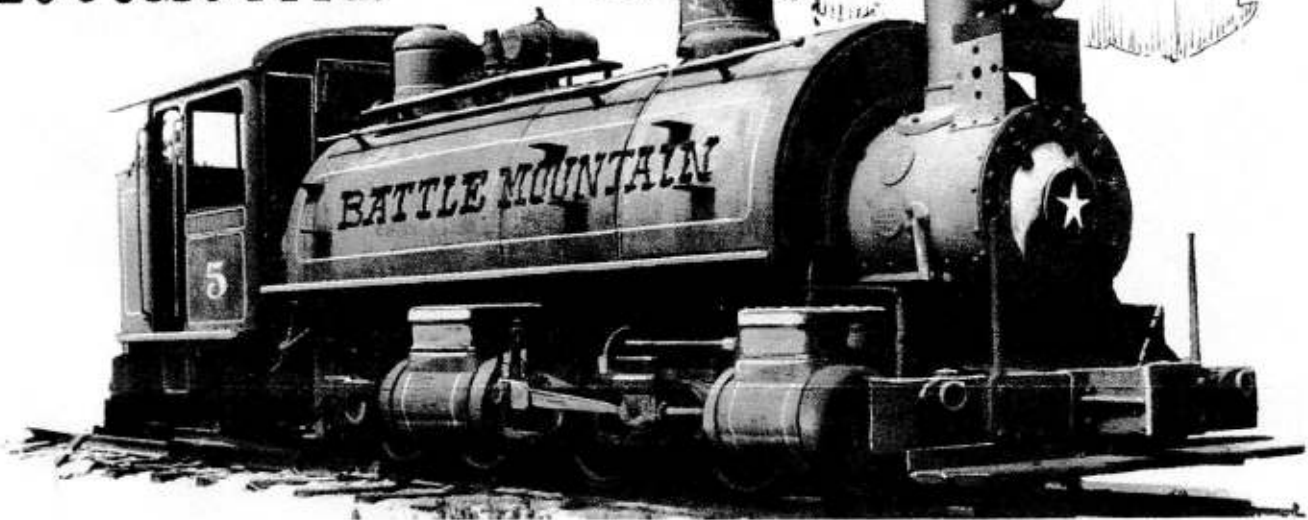
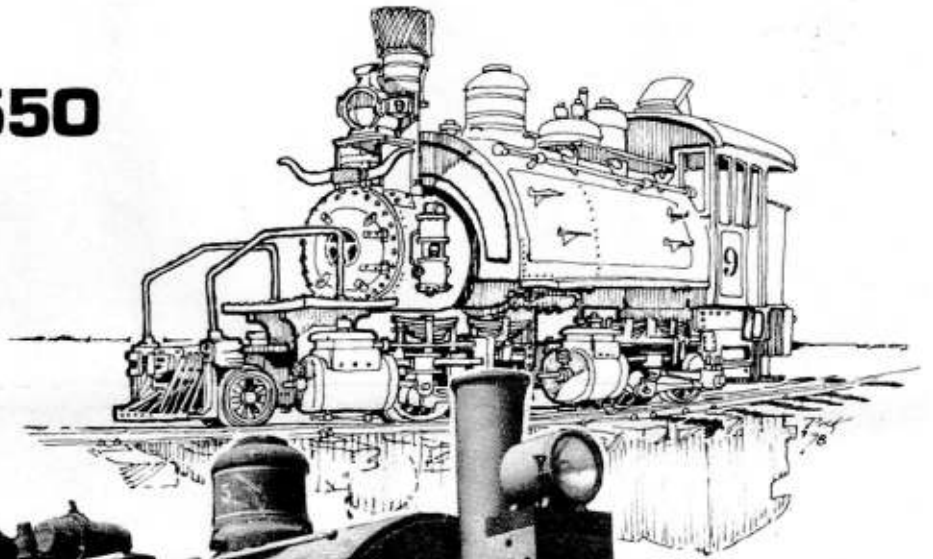


All of the kits these instructions are from are no longer in production and there are no public plans to re-release them. These instruction sets are reproduced here for reference purposes only. Portions indicating scale dimensions are not to scale, due to scanning processes. Linking to these files is prohibited without prior permission. PDF by Gerry D.

ROUNDHOUSE
Products

1550

2-4-4-OT STATIC STEAM LOCOMOTIVE



HO_{n3}
NON-POWERED
KIT CONVERSION 2-4-4-OT

The Saddle Tank 2-4-4-OT model represents a typical logging loco of the early 1900s with the exception that it is a "free lance" design.

The instructions on this page cover the construction of the tank loco model as pictured. (Our pictures should be used as "Idea Starters".) Before beginning the superstructure & final detailing, consider changing the smoke stack to an older cap stack or use a smoke arrester on top of the stack. Add the big kerosene head lamp or purchase a Kemtron "Arch Lamp" (headlight) plus add the air tanks under the footboards. Remember, with "Logging Locos", almost anything goes.

We would recommend looking over any of the fine books on logging locos for a true picture of just what these locos originally looked like (see the Book Section in the Model Railroad Magazines).

ASSEMBLY INSTRUCTIONS

1) Superstructure: Refer to copy in the basic 0-8-OT kit construction. Cut the section out of the boiler as outlined in the copy. Cab modification is optional. The metal cab depicts a modern version. If you elect to model the wood style cab, take your time and do a neat job; again refer to prototype photos for "super detailing". Roundhouse Products also has a narrow gauge coal (wood) style tender which would work well with this locomotive: MDC Kit No. 405 (HO_{n3}) Tender Kit/ includes narrow gauge trucks & couplers; \$7.50). Available through your local hobby dealer. (When ordering direct, add \$1.00 for postage & handling.)

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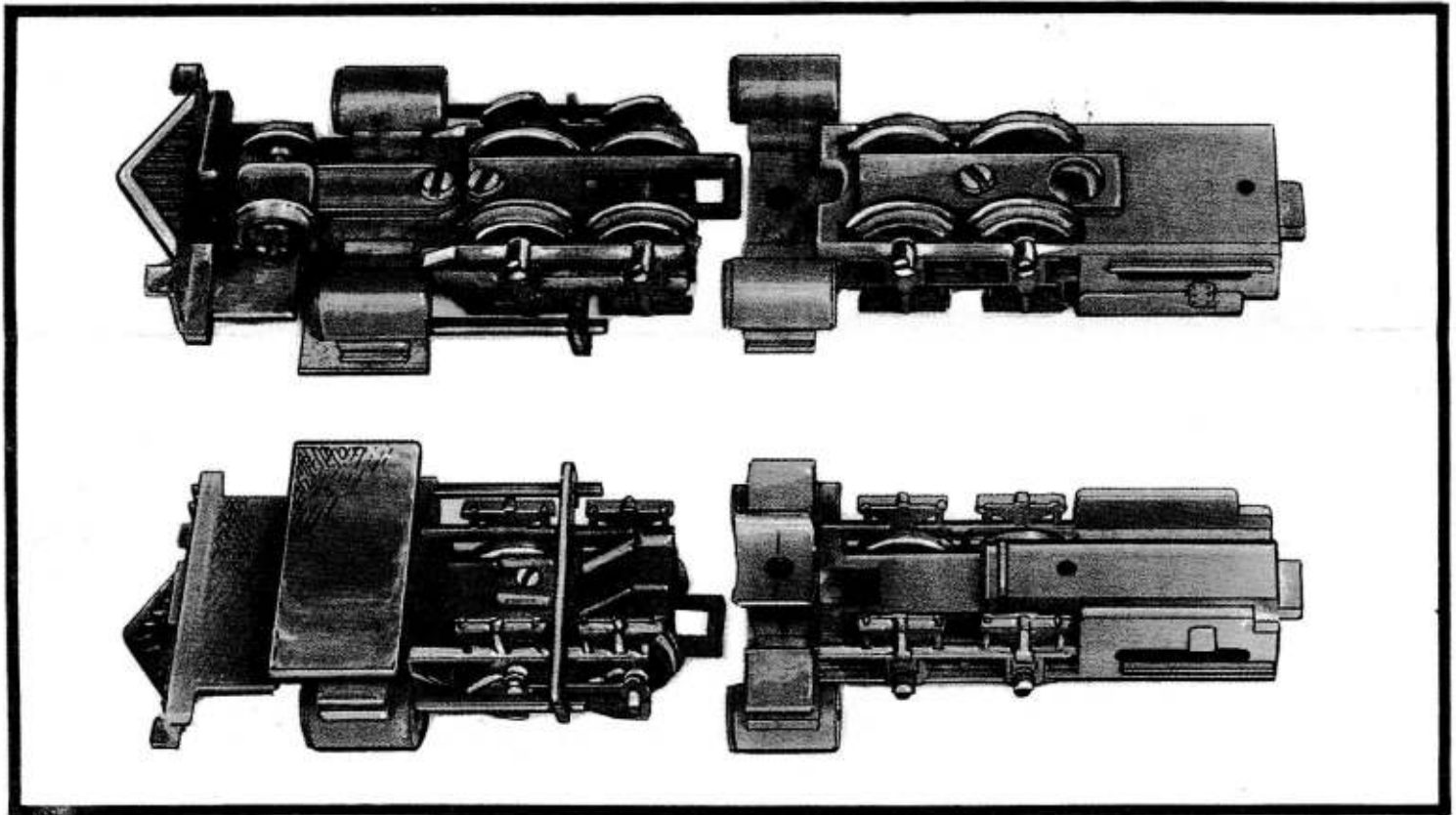
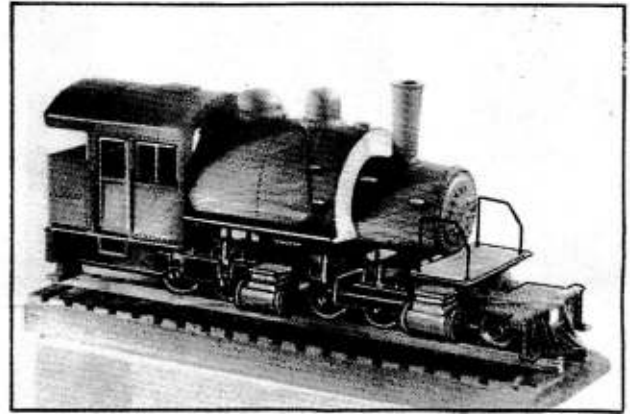
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Cont.P.6

HOn3: 2-4-4-OT FRAME MODIFICATION

This is a bit tricky to do and if you're not a "Hacker & Filer", study the photos and take your time with the frame modification.

- 1) Cut underframe into (2) sections. Note placement of cut: Should be to the front edge of center frame support as you look down on top of frame.
- 2) Front frame half: Study detail photo for (orientation). Next cut away unused metal portions around both sides of leaf springs.
- 3) Front steam cylinder modification: File away top portion of saddle until level. Attach styrene platform (not supplied). Use .040 plastic 1/2" wide by 1-1/4" long. Refer to photos. Epoxy platform in place.
- 4) Construct driver assemblies (refer to chassis assembly, p. 3 paragraphs 2, 3 and 4).
- 5) Bearing plate modification: (Thin plate which attaches to bottom of underframe holding drivers in place.) Plate is cut (as illustrated in photos) into two (2) sections; study photo showing bottom view of bearing plate. Make cut as illustrated; also, note that only center section is used.
- 6) Large metal counterweight assembly: Kit contains (2) sets of metal counterweights. Read over p. 3 paragraphs 5, 6 and 7 which relate to their use. The articulated loco differs in assembly; use counterweights with (long stud) on rear drivers.
- 7) Side rod modification: Cut center section out of both side rods.



8) Main rods: We do not have mains that are short enough to work on this model; therefore, you will have to improvise and shorten the main rods furnished. Study p. 4 illustration (7).

9) Yoke Assembly, p. 4, illustration (8). Follow procedure as outlined in paragraphs 11, 12, 13 and 14.

REAR FRAME ASSEMBLY

Refer to photographs illustrating the top and bottom views.

1) Frame Modification: Cut away vertical protrusion from top front of underframe. Also, trim away extensions around top spring hangers. Remove center support that connects frame to outside frame; otherwise, drivers will not seal into axle slots.

2) Insert finished drivers.

3) Front cylinder attachment: The easy way to accomplish this is to use

epoxy and glue cylinder to front of frame. Position so that center hole in rear cylinder face is on line with access of axle ends.

4) Your chassis assembly should now look like instruction sheet photos.

FINALIZING YOUR NON-WORKING CHASSIS

As you will not need to power this engine, you have nothing else to do except make a plastic saddle which fits to the loco superstructure for the rear steam cylinder to rest on.

Remember if you desire to build a powered model out of this new found locomotive, it hasn't been done by MDC, so don't write and ask us!! Pray that some model railroader does it and gets it published in RMC magazine and then we can all try our luck at making a powered 2-4-4-OT! ... Happy "hacking & filing" until then. ■ ...The Staff

A most improbable locomotive

Powering an MDC static model in HO_n3/AI Turner

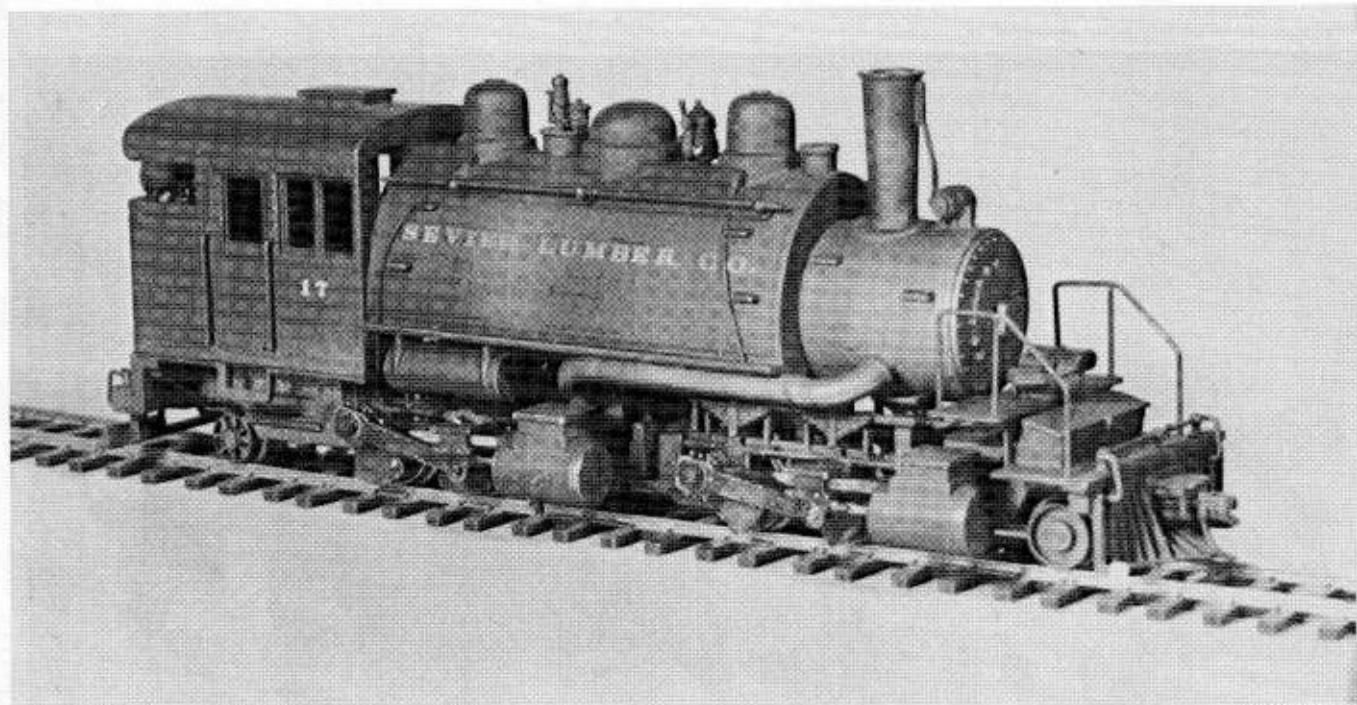


PHOTO BY AL TURNER

Model Die Casting is the only major kit manufacturer, to my knowledge, that has formally recognized the model railroad art of kitbashing. Their series of three-in-one kits are a builder's treasure chest of components from many of their regular kits.

Each of these three-in-ones contains enough car bodies, frames and parts to construct at least three models with parts left over. The subject of this article, a tiny narrow gauge Mallet, is developed from one of the ideas advanced in their No. 1550 Static Steam Series kits. Of the several engines described, one was for an HO_n3 2-4-4-0T, unpowered like the rest, but with today's availability of power components and a little ingenuity, all could be made operational.

While it is unlikely that a prototype of this engine ever existed, one that looks like it certainly could have. It looks good and was fun to build, and there is a place for that kind of model in our hobby. Also, building it involves most of the skills one would use to kitbash or detail many steam engines, so the steps that follow have a wider application than just on this engine.

Unfortunately, as far as powering the locomotive is concerned, MDC has only included unmounted drivers with plastic centers. They do have brass rims and steel axles and assembly itself presents no problems. The problem is

power pick up. The kit drivers could be used with a method devised for pick up, but the easiest solution is to purchase new MDC driver sets. For this locomotive all drivers must be flanged and, since we will be using a different drive system, geared drivers are not required. I obtained four sets of MDC 20151 drivers before starting.

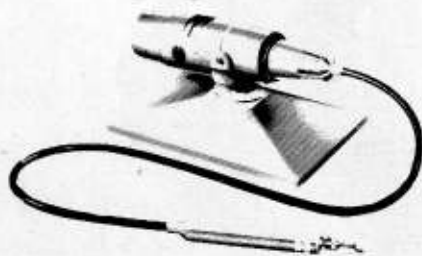
Unless the forward "engine" is to be a dummy, a drive system on both frames is required. I used two NorthWest Short Line 146-6 gearboxes, an NWSL 482-6 universal set and a Sagami 16203-9 motor. We'll proceed through the model in a step-by-step manner and get the mechanism done this month. In the next issue of RMC, we will finish the superstructure and detailing.

Step 1. Using a razor saw, cut the frame into two sections. The cut line is along the front edge of the rear gear support, which is also the front edge of the center frame support.

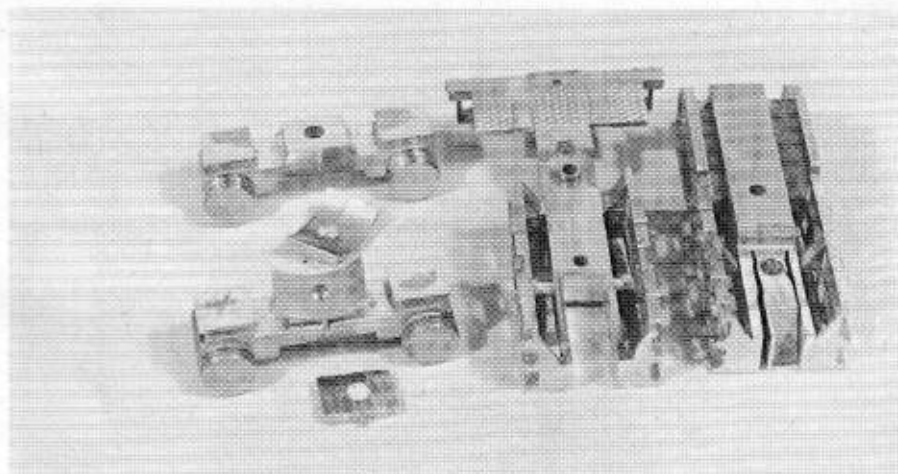
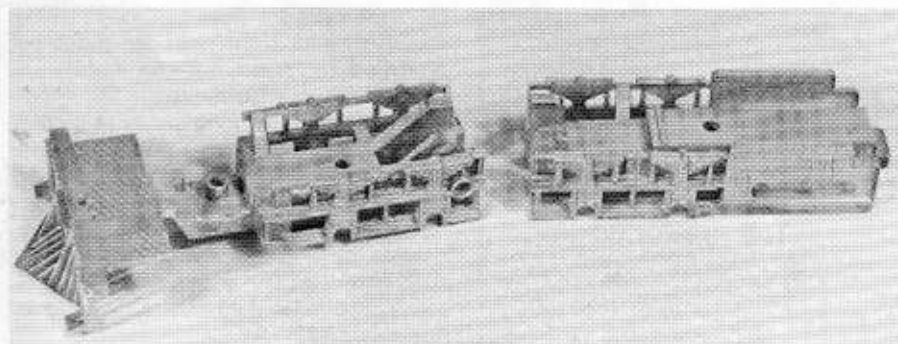
Step 2. Remove the gear support castings flush with the top of the frame. A jeweler's saw works well. File the top of the frame smooth and file and square the cut ends of the frame.

Step 3. Center the gear slots in the

RMC/Dremel Kitbashing Award



AT LEAST \$25 and a Dremel Moto-Flex Tool are awarded to competition winners. To be eligible, entries must consist of two or more 8x10 glossy black-and-white photos (original color transparencies may also be submitted with the B&W prints) of a kitbashed railroad model utilizing currently-available commercial parts for over 50% of its construction. Entries not judged potential winners may be used in **Boomer Trail**. Include return envelope and postage



Start by cutting the frame in two. The cut line is just in front of the rear notch of the gear support (top). The gear slots must be widened and extended on the front frame and cut into the rear one (at right), and the cylinders for the front engine modified so they can swivel. Remove the front saddle, as shown at the upper left.

frames, cutting the wide side down to match the thin side. Extend the slot in the front frame $\frac{3}{32}$ " forward and extend the rear slot back to the motor mount step base.

Step 4. On the center support of the front frame, file an angle on the bottom of each side to clear the driver flanges. Remove only enough to clear the flanges, allowing a little play.

Step 5. Add $\frac{1}{8}$ " \times $\frac{1}{4}$ " \times $2\frac{3}{32}$ " brass frame extensions to both the rear of the front frame and the front of the rear frame, attaching them with 00-90 flat-head screws. First drill No. 55 mounting holes in the upper corners of the brass strips, $\frac{1}{16}$ " down and $\frac{3}{16}$ " in from each corner. Countersink for the 00-90 screws, then epoxy the extenders to the frame. When cured, drill No. 60 holes and tap for 00-90; use short screws so they don't interfere with the drivers.

Step 6. Sweat solder another section of $\frac{1}{8}$ " \times $\frac{1}{4}$ " \times $1\frac{7}{32}$ " brass, with the rear corners angled, to the rear of the frame extension.

Step 7. The cast cylinder mount on the front frame must be duplicated from brass for the rear. First cut a $\frac{7}{32}$ "-long spacer from $\frac{1}{32}$ " \times $\frac{1}{4}$ " brass strip.

Next cut the cylinder support from $\frac{1}{8}$ " \times $\frac{1}{4}$ " brass. Make it $1\frac{10}{32}$ " long.

Temporarily place the spacer flat

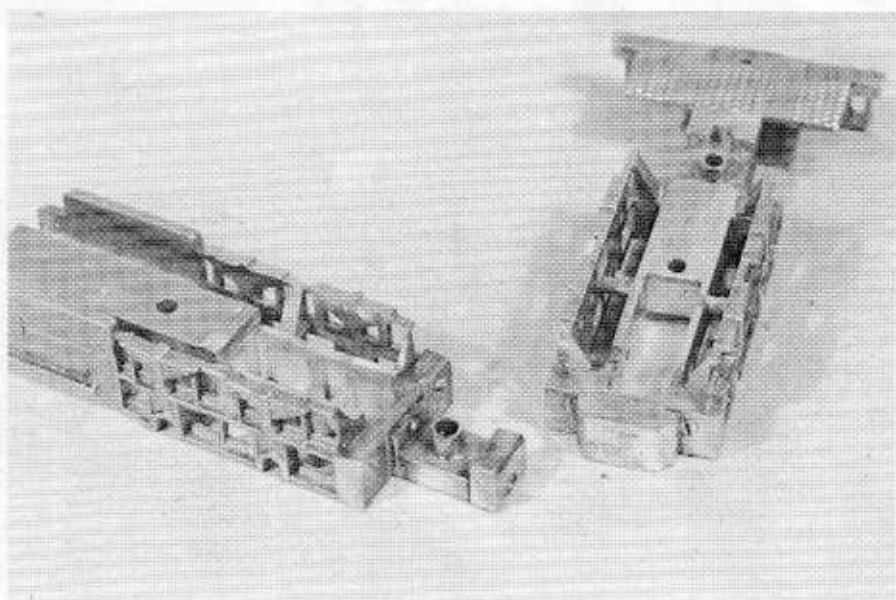
against the front of the rear frame extension and place the cylinder support lengthwise against it. Set the cylinder casting centered on the support and, while holding the assembly tight against the front of the rear frame, mark the center of the hole in the cylinder casting on the support.

Step 8. Drill a $\frac{1}{8}$ " hole in the marked center of the support and insert a $\frac{1}{4}$ " length of $\frac{1}{8}$ " brass tubing.

Step 9. Fabricate the cylinder front support from $\frac{3}{8}$ " \times $\frac{1}{4}$ " brass $\frac{7}{32}$ " long. File a $\frac{1}{4}$ "-wide groove along one side of the centerline to match the flange in the front of the cylinder casting.

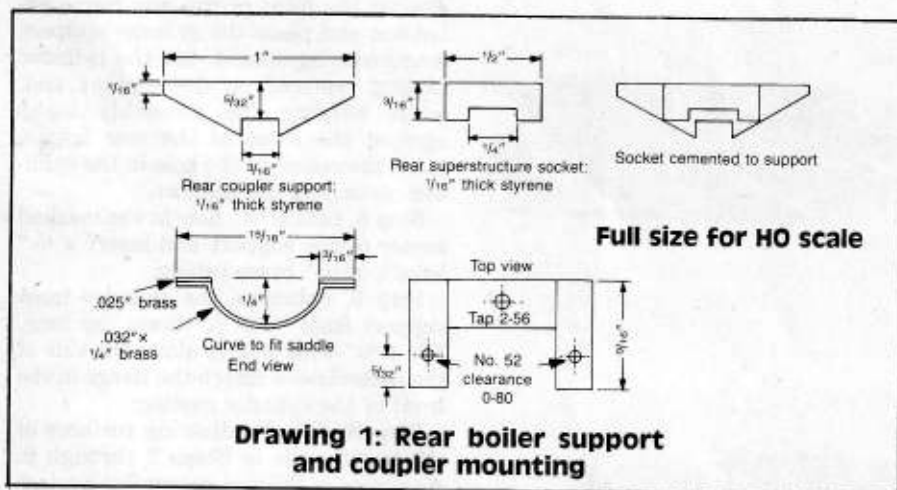
Step 10. Tin all adjoining surfaces of the parts made in Steps 7 through 9. Assemble as follows: spacer flat against the rear frame extension; the cylinder support butted against it; followed by the front support with the groove facing inward. Place all the parts on a scrap board and, securing everything with small nails or pins, solder them together. Check the cylinder for fit and make any adjustments.

Step 11. The bottom cover plates require considerable modification. The gear box slots have to be widened and lengthened to match those in the frames. The original mounting holes in the front plate are used, with the self-tapping screw in the second hole from the front. A No. 47 hole was drilled into the brass frame extension at the rear for the second screw, and the outer sides were trimmed back equal with the frame. My kit was missing the second plate, so I fabricated one from $\frac{1}{32}$ " brass. The forward mounting hole for this plate is the 2-56 screw through the



Frame extensions are made from brass bar stock epoxied and screwed to the frame. The extensions close off the cut frame ends, and clearance for the gearboxes are filed.

A most improbable loco



the rear cylinder does not need to be modified. The front cylinder must be modified by removing the saddle so that it is flush with the top of the cylinders. The forward cylinder is mounted to the front frame with a 2-56 screw and nut. Countersink the top of the cylinder mounting hole for a flathead 2-56 screw. Use a burr in a power tool to enlarge the bottom only of the mounting hole on the bottom of the frame so the nut is countersunk. Do not enlarge the mounting hole itself.

Step 13. Tap the crosshead guides into the upper hole of both cylinder castings. Cut them off so they extend $\frac{1}{2}$ " from the cylinders. Angle the underside at the rear.

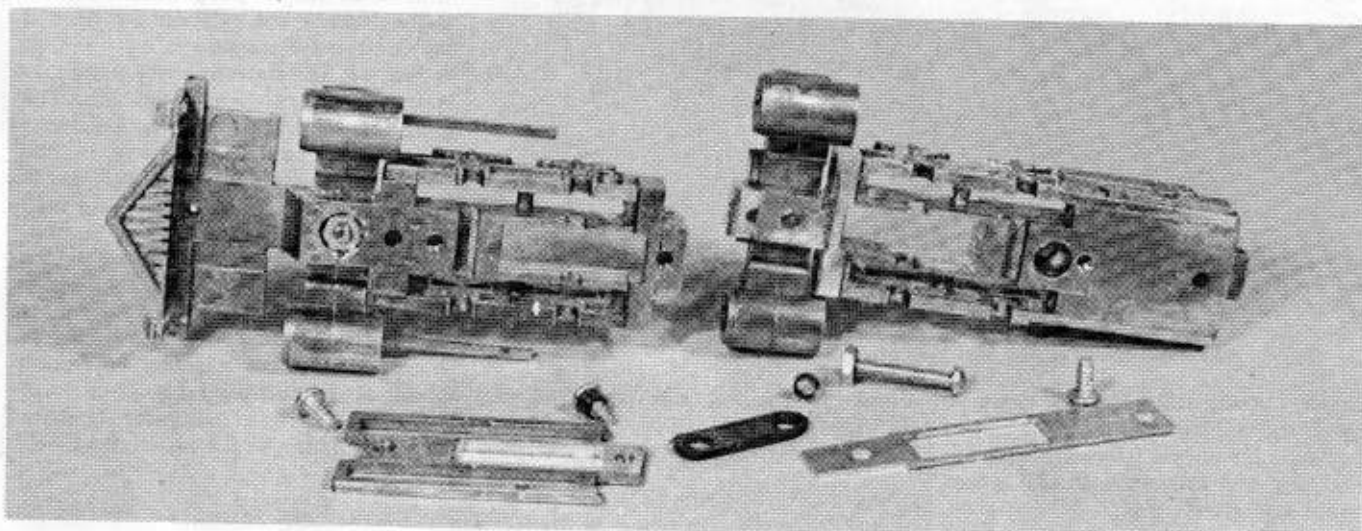
Step 14. Install the front cylinder with the 2-56 screw and nut. Cut the screw off flush with the nut and file it smooth.

Step 15. Having constructed and op-

cyliner. The rear hole is just forward of the original motor mount hole. The mounting of the cast plate on the rear

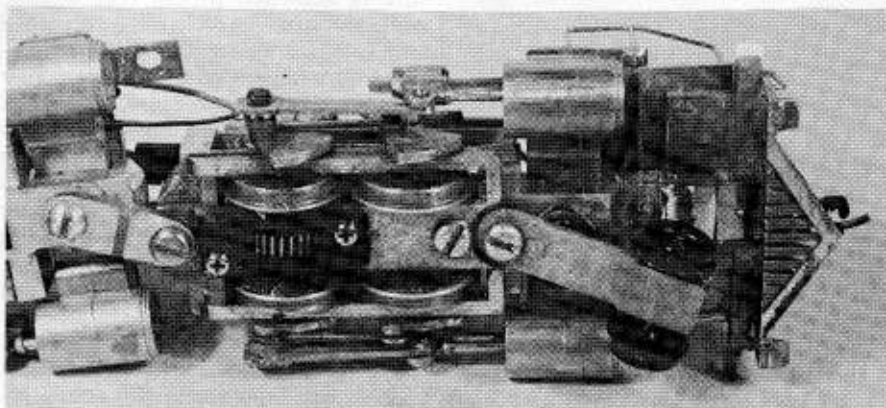
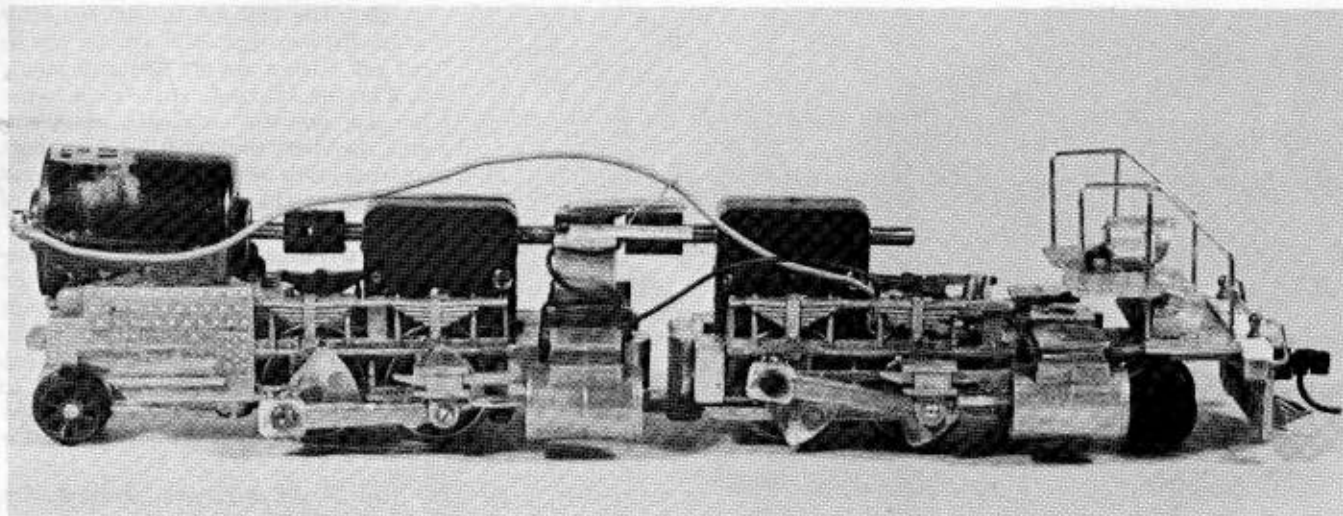
would be similar.

Step 12. Although I modified both cylinders, as is evident from the photos,



The underside view of the completed frames shows the cover plates, attaching screws and drawbar (top). The front cover plate has clearance for the mounting screw that goes into the 2-56 nut

under the front cylinders and cut outs to clear the wheels. Since the drawbar must be an insulating material, a scrap piece of fiberglass-reinforced PC board may be used.



The completed chassis uses shortened crosshead guides and rods on each engine; no crosshead yoke is used, and it is not missed on the locomotive. To provide enough room, part of the firebox is cut away at the trailing truck. Note the simple lead truck mount.

the rear of the crosshead casting. Remove this and use it as the center to drill a No. 55 hole through the crosshead.

Measure back $\frac{1}{16}$ " from the front end of the main rod and drill No. 60 and tap 00-90. Round off around the hole and assemble the rod to the crosshead with a 00-90 screw. The rod must move freely in the crosshead. Cut the screw off flush with the rod and peen slightly.

Step 24. Install the main rod/crosshead assemblies on the frames. Check the motion carefully. It must be free, with no binding. make sure the rods are clear of the guides, and when operation is satisfactory, install the nuts on the rear counterweight pins. (Note: the guides are too short to use the yokes, so forget them. They really will not be missed.)

Step 25. The two frames are connected by a drawbar. Since they are opposite polarity, the drawbar must be some insulating material, such as plastic. However, it cannot be too flexible. I used a section of fiberglass perflboard, $\frac{3}{32}$ " thick by $\frac{3}{16}$ " wide by $\frac{3}{4}$ " long, with $\frac{1}{8}$ " holes on $\frac{7}{16}$ " centers near each end. The ends were rounded and sections of $\frac{1}{8}$ " brass tubing were inserted in the holes as bushings and filed almost flush on each side.

Step 26. To install the drawbar and connect the two frames, remove the rear cover plate from the front frame and, inserting it through one of the drawbar bushings, screw it back into place. To connect the rear frame, remove the cylinder screw, insert it through the bushing of the drawbar,

erated a number of MDC engines, I have concluded that the pilots on their narrow gauge engines ride a little too low and can short out on some trackage. I solve the problem by cutting off the pilot $\frac{1}{16}$ " from the rear of the deck and raising it with a sandwich of $\frac{1}{32}$ " \times $\frac{1}{4}$ " \times $\frac{3}{16}$ " brass on a piece $\frac{1}{32}$ " \times $\frac{1}{4}$ " \times $\frac{5}{16}$ ". See Drawing 1. The sections are fastened together with 00-90 screws.

Step 16. Assemble the NWSL gearboxes according to their instructions. However, do not install the cover plates. The lower part of the gearboxes have to be narrowed from the idler gear shaft down. File both sides of the boxes until they slip easily into the frames. They should not be too tight; some play is needed. The slots will have to be lengthened slightly into the brass frames, as a little rocking play is also needed.

Step 17. When the gearboxes have been fitted, the lower side screws can be installed. Countersink the head side and file off the protruding screw flush. The screw head can also be filed slightly.

Step 18. Install the axle gears on two sides of the axles. Even though the gears and axles are supposedly of the same diameter, the gears fit a little

loose on the axle. I use a small pair of pliers to slightly burr the center of the axle. The gear must be in the exact center of the axle.

Step 19. Hone out the axle slots in the frames and make sure that the wheels turn freely in them. Check the fit of the gears and gearboxes, but do not install either yet.

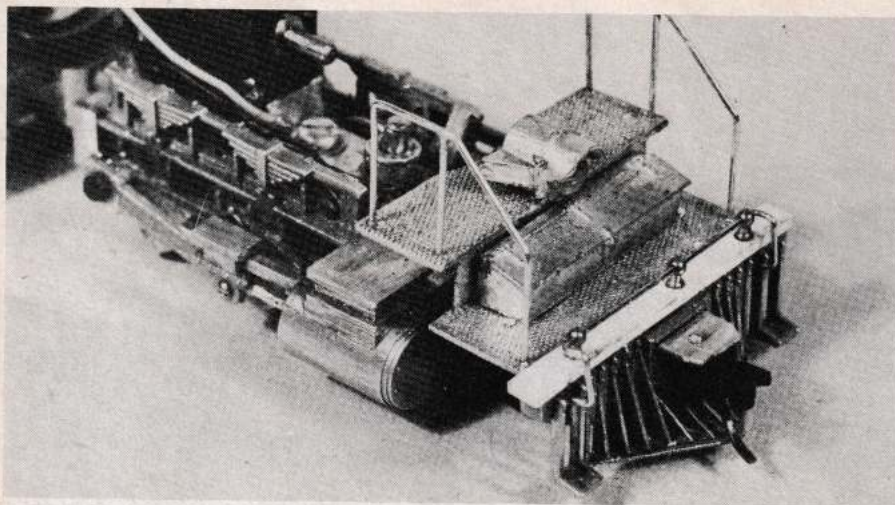
Step 20. Install your choice of counterbalances on the driver axle.

Step 21. The drivers and bottom frame covers may now be installed, but wait with the gearboxes. This is a tank loco, so the drivers will pick up from both rails. The front frame (looking towards the front) has the insulated drivers on the the left, while they are on the right on the rear frame.

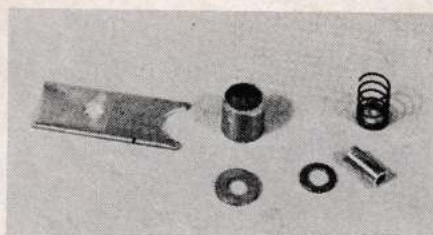
Step 22. Remove the center section from the brass side rods to yield the necessary four short rods. Smooth out any roughness on these stampings and install them on the pins of the counterweights. Put the nuts on the forward pins only at this time.

Step 23. The main rods have to be shortened to $\frac{22}{32}$ " long, measured from the rear of the rod. The width of the shortened rod will not allow a large-enough hole to use the cast-on rivet on

A most improbable loco



Raising the pilot beam will stop the pilot from dragging on the rails in some situations, which causes a short circuit. The pin for the sprung front boiler support shows just behind the rear railing in the top photo. Its construction is shown at right.



and replace the screw.

Step 27. The photos illustrate the installation of the power train. This is primarily a cut and fit operation. The shafts are best cut with a cut-off disc in a motor tool. Remember, it is always better to cut long, rather than short. You can always take off a little more. The horned balls should fit well into the cup so they do not drop out too easily, yet they should push against the end of the cup.

Step 28. When the power train has been installed, check its operation by turning the rear extended motor shaft. It should be left uncut for the time being. Since the coupled frames are somewhat flexible, this operation is most easily done on a sheet of smooth plastic or plate glass. When you are satisfied that it is operating OK, fasten the mo-

tor in place with a piece of masking tape and test it under power with test leads to the motor.

Step 29. If the mechanism operates well, the motor can be permanently mounted. I use GE Silicon II®, but there are many other similar products. First, make up two small electrical terminals from brass. The size is not too important, but the smaller the better. One hole should be about a No. 43, just big enough for standard hook-up wire. Solder a short, 1" or so, length of wire to one and about a 4½" length to the other.

Secure the terminal with the short wire to the inside of the rear frame with a 2-56 screw and nut through the original motor mounting hole in the frame. The motor can now be secured with the silicone.

Allow the silicone to set up, after which the rear shaft of the motor can be cut off. (Use a cut-off disc and motor tool for this.) Do not cut too close to the bushing nor the terminals, and heat-sink the shaft while cutting. The short wire may now be trimmed to length and soldered to the minus (-) terminal of the motor.

The terminal of the longer wire is secured with a self-tapping screw in the guide yoke hole immediately in front of the gearbox on the front frame. The wire is then brought back along the top of both frames, allowing a little slack to let the front engine swivel, then soldered to the other terminal of the motor (+).

Step 30. As is general practice with articulated locomotives, the superstructure is attached to the rear engine, while the front swivels freely, attached only by the drawbar. Two different supports were fabricated to secure the rear frame to the superstructure. Drawing 2 illustrates the saddle support for the front of the frame. The main body of the support is ½" x ¼" brass bent to a "U" shape conforming to the curvature of the cylinder saddle. The drawing gives the measurements.

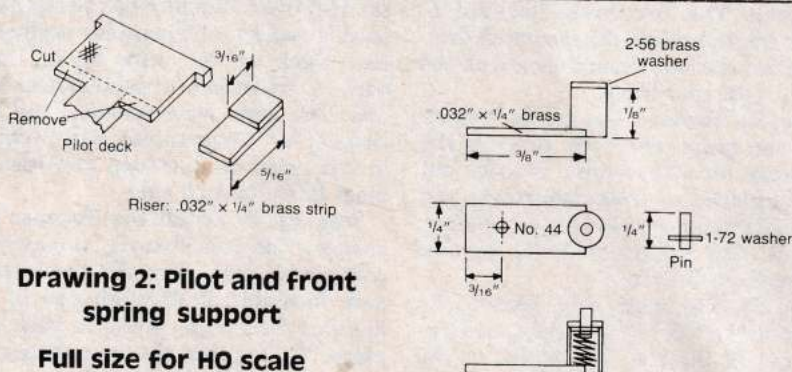
The tapped 2-56 hole in the center of the support will replace the the 2-56 nut now securing the cylinder to the frame. The two "ears" soldered to the bent ends of the support are the actual superstructure supports and point toward the front of the loco.

Next month. With the mechanism together and broken in, we will go on to the superstructure of this little HO3 Mallet next month.

Parts list

No. 1550 MDC 3 in 1 Steam Series kit
 No. 16203-9 Sagami motor
 NorthWest Short Line 146-6 gearbox, 3/32" axle, 2mm shaft (2 required)
 NWSL 482-6 universal coupler set
 MDC 20151 flanged drivers (4 sets)
 1/64" x 1/4" brass strip (K&S 235 or equivalent)
 1/32" x 1/4" brass strip (K&S 240)
 1/8" x 1/4" brass strip
 Precision Scale Co. Wabash running boards, No. 31418
 PSC smokebox front, No. 31681
 Kadee HO3 couplers, No. 714

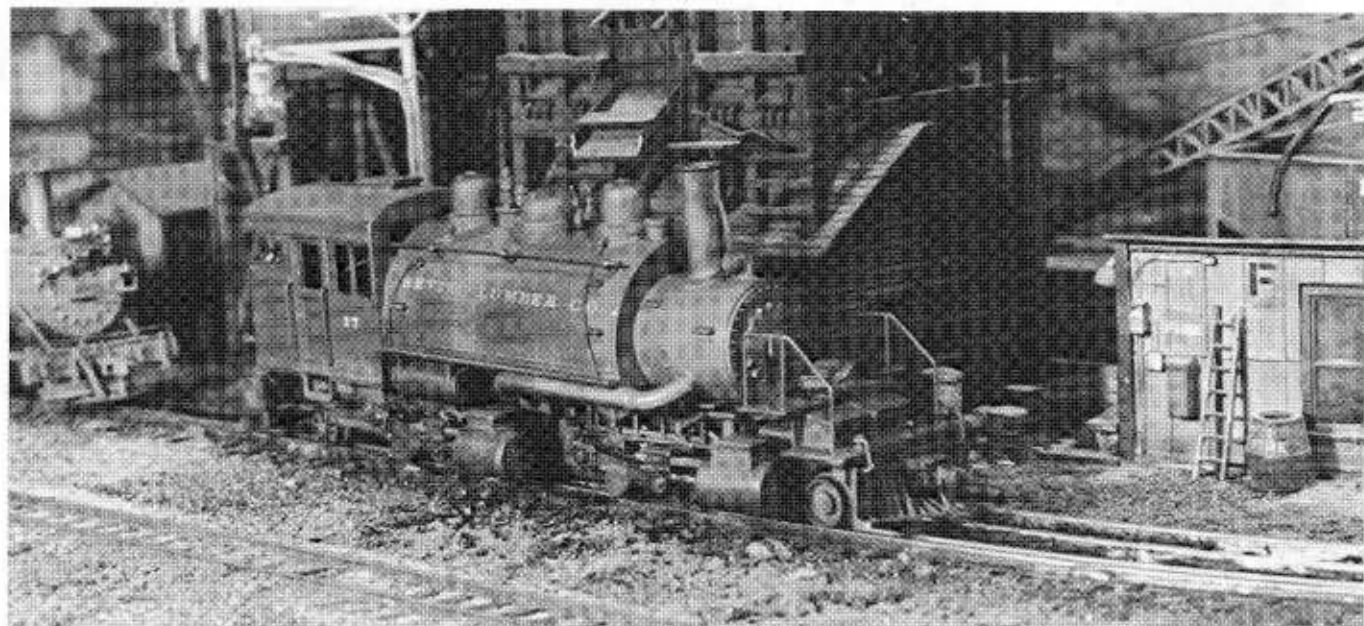
Optional
 Air pump, PSC No. 30922 or Cal-Scale No. 240
 Cal-Scale No. 228 auxiliary dome
 Cal-Scale No. 206 or 207 headlight
 Cal-Scale No. 285 bell or equivalent
 Mantua boiler support assembly (needed only if not fabricated): MO-195, boiler support holder; MO-196, pin; MO-197, spring
 Kadee N scale couplers



A most improbable locomotive

Part II: completion

Adding the superstructure and details/Al Turner



PHOTOS BY AL TURNER

With the completion of the chassis, as described in last month's RMC, we can turn to the superstructure (boiler, cab, side tanks) and details to finish up this little HO_{n3} articulated.

The kit's superstructure is standard gauge and, in my opinion, large for narrow gauge. I decided to remove a scale 18" from the center of the tank. From my photos, it is obvious that I initially removed the same amount from the center of the cab, but I subsequently decided that this did not help its looks so restored it with strip styrene.

Step 1. Using a razor saw, carefully cut the smokebox from the front of the tank.

Step 2. Remove all the domes and other hardware from the top of the tank. Cut them off as squarely as possible so they can be used again.

Step 3. Cut around the front of the cab, freeing it from the tank.

Step 4. Using the mold parting line down the top center of the cab as a guide, measure 9 scale inches to each side at the front and rear of the tank.

Scribe a line between the marks with a sharp knife. This will provide a guide for the saw.

Carefully saw along the scribe line, keeping the saw as square as possible with the cut. The small section across the bottom at the front of the tank will have to be removed.

Step 5. Place a sheet of sandpaper on a flat surface and use it to square up the cut of the two tank halves. The tank halves can then be cemented back together.

Step 6. When the cement joining the halves has thoroughly set, all the joint lines should be smoothed out, including the front and rear of the tank. The front of the cab should also be sanded square, as well as the rear of the smokebox. If you plan on replacing the molded-on piping and handrails, this is a good time to remove them.

Step 7. Either before attaching the cab or after the cement has set, cut off the rear footboards flush with the bottom of the bunker.

Step 8. Fabricate new bases for the domes from a sandwich of three thicknesses of .030" sheet styrene. File the

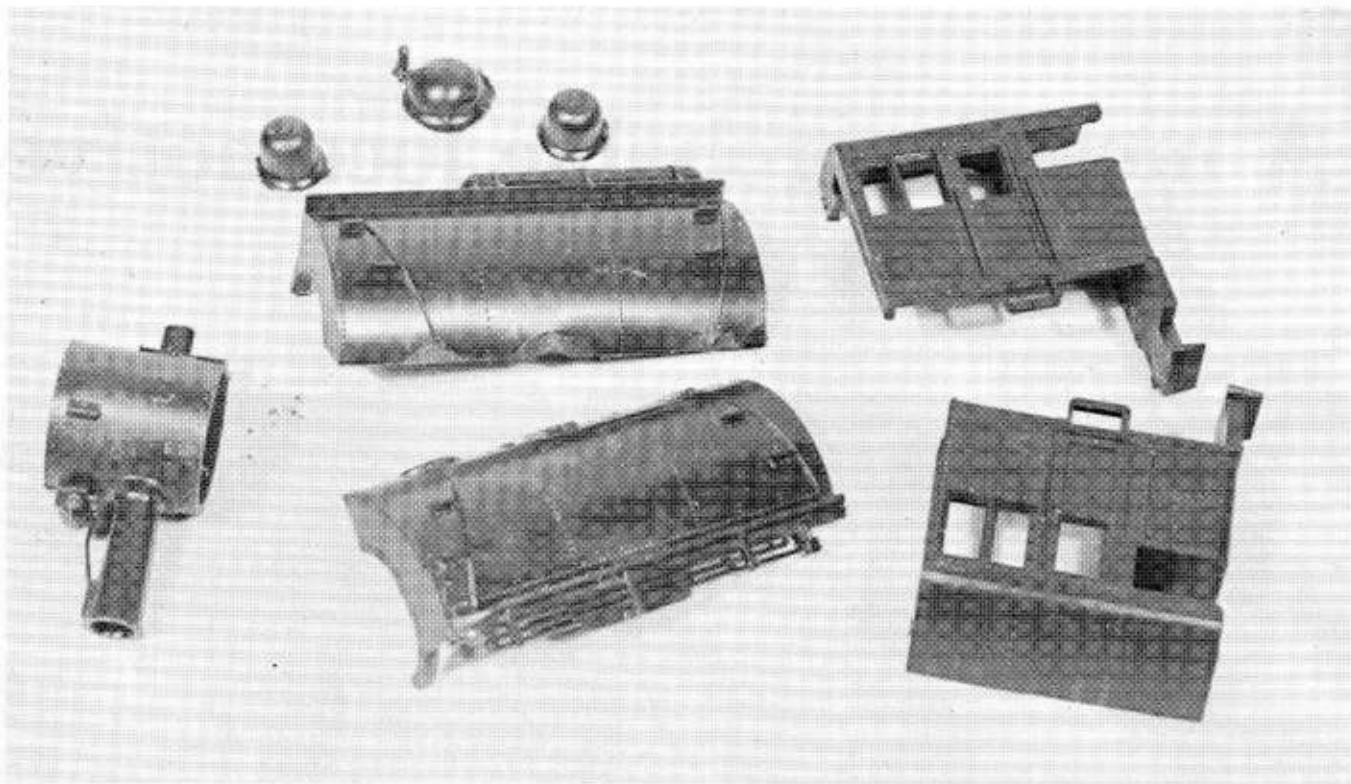
bottoms of the domes flat and cement them to the stacks of styrene, then shape them for the dome bases when the cement has dried completely. I discovered that a drum sander in a motor tool was helpful for this, as well as for making the curvature in the dome bottoms to fit the tank. Final shaping for the dome bottoms was done by holding a piece of sandpaper face-out on the tank itself and rubbing the dome back and forth.

Step 9. The superstructure can now be reassembled. First, using the tank joint line as a guide, reinstall the domes, then the cab and smokebox. (Also see Step 20a.) Sight frequently along the assembly from the front to make sure everything is square and lined up.

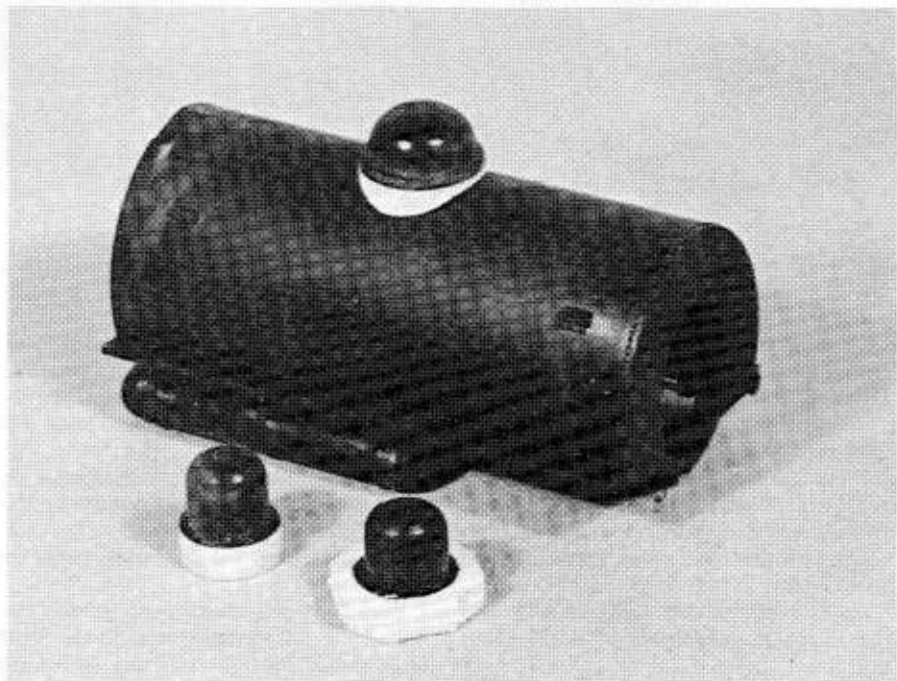
Step 10. Add an "end sill" of 12"×12" styrene across the bottom of the bunker at the rear of the cab. Remove any molded-on detail behind this strip prior to cementing it in place. It is 1 1/8" long. When the cement has set, file a 7/32" wide × 1/32" deep notch in the center of the sill for a Kadee No. 714 coupler.

Step 11. The coupler pocket, along

A most improbable loco



The author felt the superstructure, the tank and cab section of the kit, was too wide for a narrow gauge engine, so he removed 18" from the center; he went back to widen the cab because it looked better. Prior to narrowing, one should salvage the boiler front and stack assembly and the domes. The domes are restored to their positions sitting on three layers of sheet styrene cut and shaped to match them and the tank contour.



with the parts shown in the drawings last month, form the rear retainer holding the superstructure to the frame. First, cut a section of 4"×6" strip styrene, 1¹/₈" long, and cement it flat against the outer edges of the bunker and against the upper end sill at the rear interior. The rear coupler support gets cemented to the bottom of this, against the sill. The rear superstructure socket is then glued on top of this. The

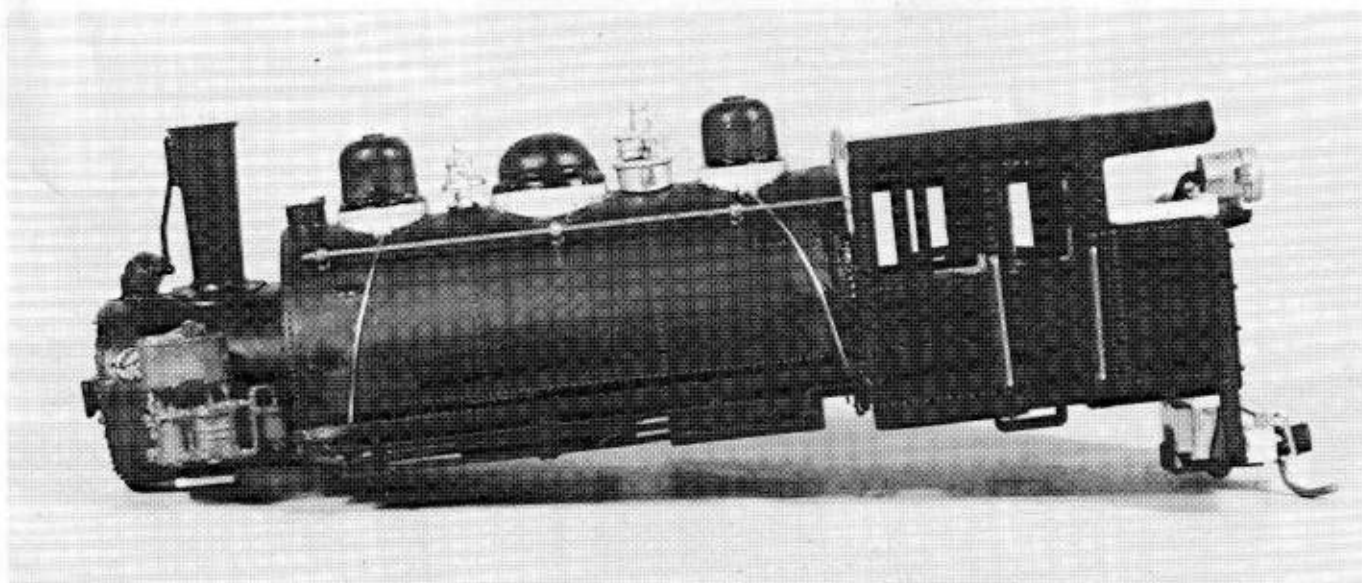
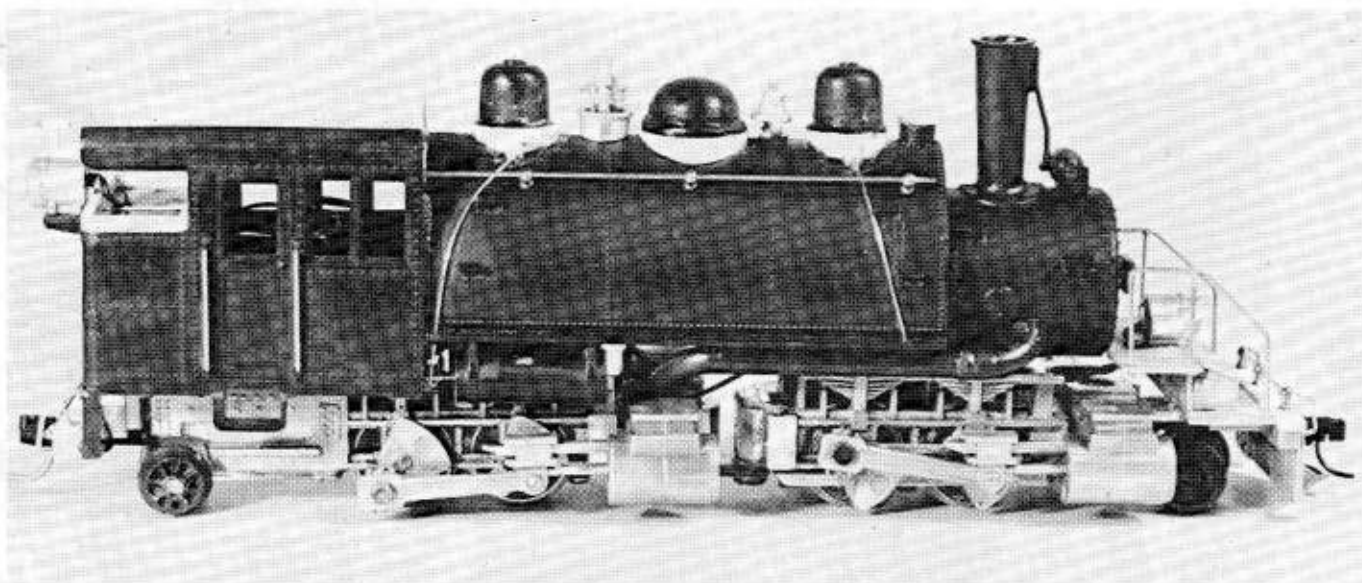
tops of all parts are against the 4"×6".

Step 12. We may now mount the superstructure on the mechanism. Narrow the mounting lug at the rear of the rear frame to fit into the socket above the coupler at the rear of the cab. With a cut-off disc or saw, remove the lower ¹/₃₂" of the lug and file it so it slips into the socket above the coupler pocket. Shorten the lug if needed.

Step 13. The boiler saddle support

should be mounted on the rear cylinder saddle, but one more modification is needed. The long air tank just ahead of the cab and under the water tank hits the cylinder. Remove the front third of the air tank just in front of the bracket. The rounded rear end of the air tank can be squared off to match the front.

Step 14. Make up two ³/₄"-long supports for the rear boiler saddle from ¹/₈"-square styrene and cement them on



The completed, but unpainted, locomotive has had most of its details installed. A new pump is on the left side, and brass wire replaces the molded-on sand pipes and railings. The steam pipes for

the rear cylinders are scrap plastic runners. To allow the rear engine to swivel, unprototypical but practical on a model, the air tank on the right side is shortened.

each side of the interior of the tank in line with the kit's original supports and about $\frac{5}{32}$ " up from the bottom. Set the mechanism on a flat surface and place the superstructure on it. The rear lug must be in its socket. If the superstructure is not sitting level, adjust the support blocks on the inside of the tank.

When the fit of the superstructure is satisfactory, turn the whole loco upside-down and mark the holes in the support blocks. Drill these No. 56 and tap for 0-80 fillister head screws.

Step 15. To provide a means of keeping the front frame on the track and give it some weight for traction, yet allow it to swing freely, a spring-loaded pin riding against a slide plate is best. Drawing 2 on page 60 of the January

RMC illustrates it. The spring holder is a piece of $\frac{3}{16}$ " brass tubing, $\frac{1}{8}$ " long. Solder a 2-56 brass washer atop this, then solder the bottom of the tube to a $\frac{3}{8}$ "-long section of $\frac{1}{32}$ " \times $\frac{1}{4}$ " brass strip with a curved notch at one end to fit the $\frac{3}{16}$ " tubing. Drill a No. 44 hole on center $\frac{3}{32}$ " from the other end of the strip.

The pin itself is a $\frac{1}{4}$ "-long section of $\frac{3}{32}$ " brass tubing. A 1-72 washer is soldered $\frac{1}{16}$ " from one end. Make sure the washer is square on the tubing and slides freely up and down inside the holder. I used a light kingpin spring that fit inside the holder and around the pin. The spring tension must be very slight; only one or two coils are needed.

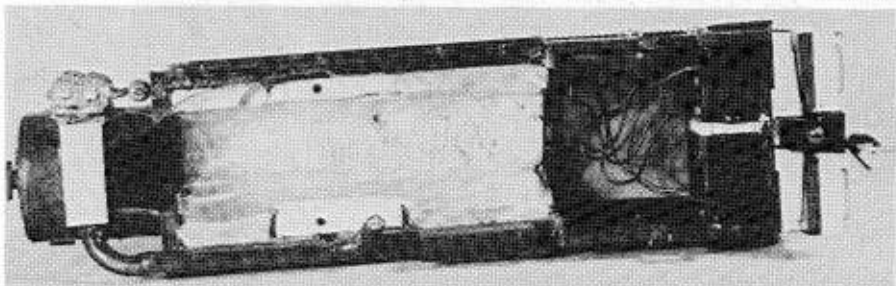
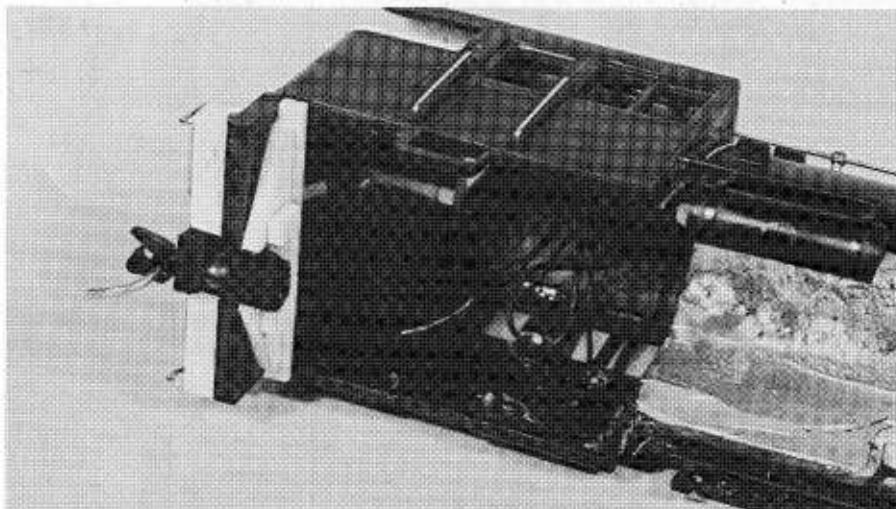
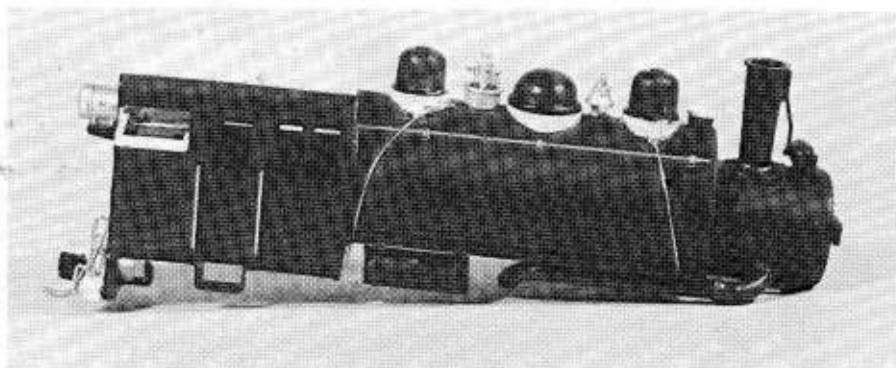
Step 16. The front spring support

mounts on the front frame, using the same yoke hole as was used for the motor terminal. Reinstall the terminal on top of the spring support bracket. I installed a large bank pin head (using cyanoacrylate cement) on top of the spring pin tube to serve as a cap bearing.

Step 17. Cut the slide plate for the spring pin from a piece of .020" styrene, $\frac{7}{32}$ " wide \times $1\frac{9}{32}$ " long. Measure $\frac{3}{16}$ " along the bottom from the front of the smokebox and file a flat spot across the bottom and this point. Glue the slide plate in place. Make sure that it is square with the superstructure.

Step 18. The pilot deck is a two-step affair, and it looks better if it has safety tread. One inexpensive way to get enough of this material is to obtain a set

A most improbable loco



The in-progress photos show the details of the locomotive's construction. The fact that the MDC kit uses plastic for many of the parts makes it easy to do modifications. The engine reuses its domes and boiler front, but has new fittings and a coupler pocket solidly mounted on a built-up sill, as shown. The boiler has room for added weight.

of Precision Scale Company's Wabash running boards, No. 31418. Make the lower deck $\frac{3}{8}$ " wide \times $1\frac{5}{32}$ " long, and for the step riser, use plain sheet brass, $\frac{3}{16}$ " wide and 1" long. Make the upper deck the same dimensions as the lower one, and solder the three pieces together like stair steps. The railings are about 3'-0" high; bend them from .020" wire and solder them into holes drilled near the edges of the decks.

Step 19. To solve the clearance problem for couplers on the pilot, I used a Kadee No. 1027 N scale coupler and pocket. I mounted the coupler on a piece of $\frac{1}{64}$ " \times $\frac{1}{4}$ " brass strip, $\frac{3}{8}$ " long

and drilled No. 60 holes on the centerline $\frac{3}{32}$ " in from the ends, tapping them 00-90.

Fasten the coupler to the underside of one end of the strip and file it slightly to allow it to slip into the pilot. When the rear of the coupler is just about even with the inside of the pilot, mark the hole, drill through the pilot and countersink for a flathead 00-90. Now screw the strip with the coupler in place. It protrudes, but the pin clears the pilot and it looks good.

Step 20. Add the new pilot. I cemented it on top of the original deck, which would probably suffice, but I also

drilled and tapped the original deck for 00-90 screws. Clearance holes were drilled and countersunk in the new deck for the flathead screws. Glue a strip of 4" \times 8" styrene, $1\frac{5}{16}$ " long, to the top of the pilot to bring its height up to the new deck.


Step 20a. Prior to mounting the deck, I positioned a new headlight casting in the center of the upper deck. The smokebox front in the kit has a molded-on headlight which is improperly placed for an articulated. Modifying the front would be difficult, so I replaced it with a PSC No. 31681 smokebox casting.

Step 21. Install the lead truck on the front frame according to the kit design. I made one slight addition—the indentation of the cylinder nut provided a good location for one of Mantua's No. 7008 conical pilot springs.

Step 22. The long overhang at the rear of the locomotive seemed to cry out for some support, so I added a trailing truck to turn the model into a 2-4-4-2T, a more pleasing wheel arrangement in any case. To provide clearance for the trailing truck, remove the bottom rear section of the firebox by using a drum cutter in a motor tool. The tongue of the truck must be shortened by drilling a new $\frac{1}{8}$ " hole $1\frac{1}{16}$ " from the rear of the truck and the excess tongue removed. Make a $\frac{1}{8}$ " tubular bushing and use the rear bottom cover plate screw to install the truck. I drilled a small indent just behind the screw and cemented a small spring in it to improve the truck's tracking.

Step 23. I will not be explicit on the many details that can be added to the model, since it is, after all, a freelance design. The kit itself contains many plastic parts, such as headlights, bells, and pumps to use, or you can do as I did and replace many of these with brass castings. I also added many other details, such as wire piping, handrails, and coupler lift bars, and encourage you to do the same. The steam pipes are simply sections of plastic runner, as is the filler cap on the top of the tank.

The cavernous interior allows plenty of weight to be added. If you have never tried the low-melting point metals, this is a good place to try. The molten metal may be poured directly into the interior of the plastic shell without harm. Use an aluminum foil former to maintain clearance for the gearboxes and motor.

This locomotive isn't an easy one to build, but it really isn't that difficult, either. You'll have to admit that it is undoubtedly one of the strangest, yet appealing, engines that you will ever run on your pike. One thing's for sure: it is not too likely that anyone else on the block will have one like it, that is not until they see yours. 

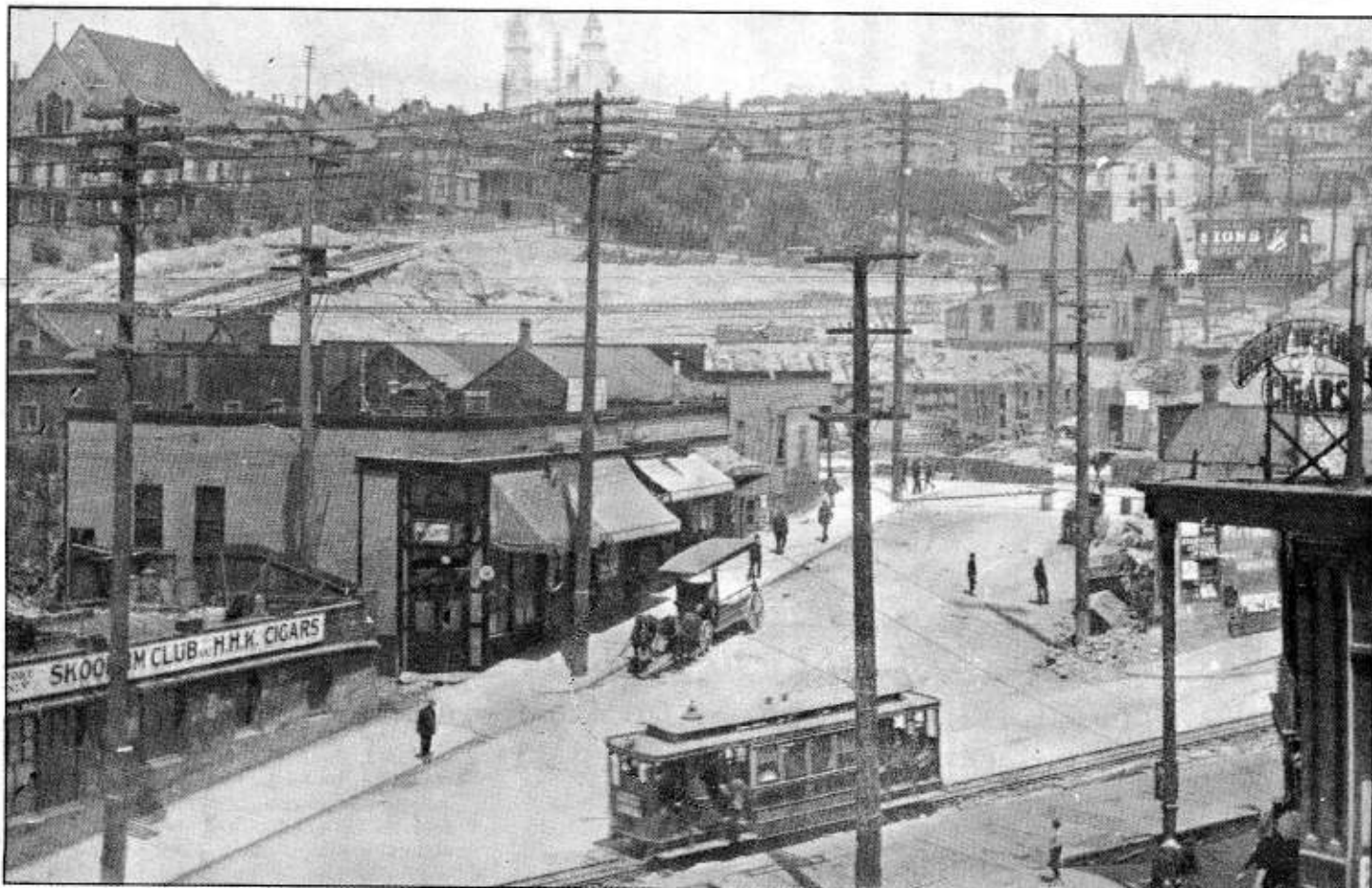
VICTORIA SQUARE

3rd in a series of Roundhouse Products (3 in 1) "Theme Kits"



BEENA SERIES

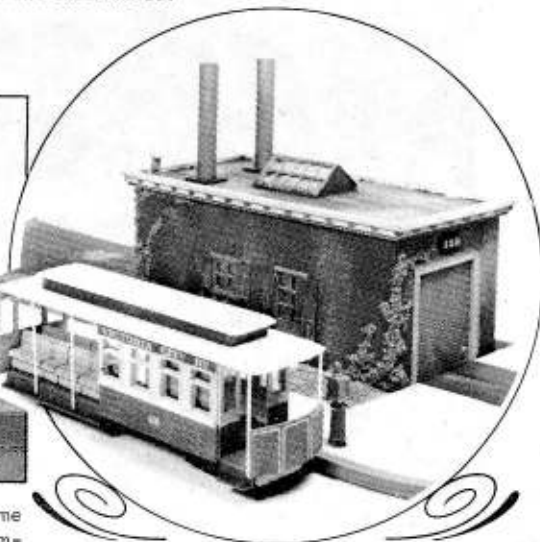
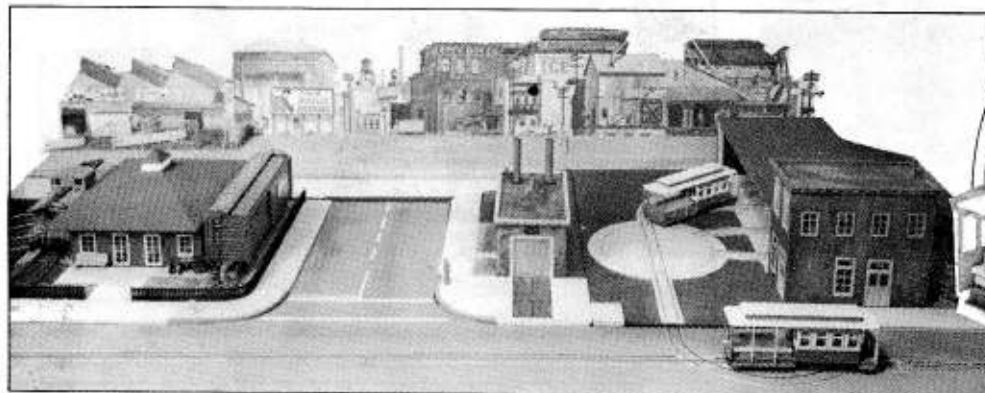
New addition to the Roundhouse Products line of (3 in 1) kit series, the "Theme Kit". "Theme Kits" represent the use of more than one kit which can be combined with "partner" kits, to produce an overall theme. Roundhouse's first theme kit was our "Shanty Town" wayside structure series



Victoria Square represents a mythical place in America's history; and is appropriate on model layouts from early 1900 right up to today's most modern period. Everyone knows of the "Victoria Station", or restaurant chain; what we are doing is a recreation in a visual "look-alike".

"Victoria Square" is achieved utilizing three individual (3 in 1) kits: #1511, #1512, and #1513. Each (3 in 1) kit retails for \$6.50 each. All (3 in 1) kits require kit bashing and some parts from other manufacturers. Kits are unpainted and unassembled.

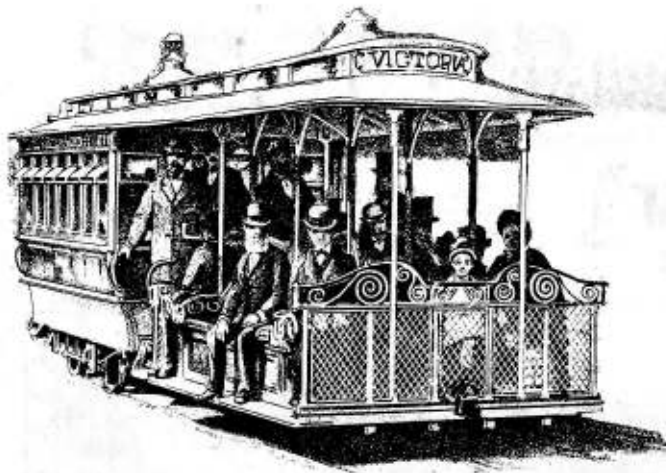
"VICTORIA SQUARE" (3 in 1) REAL ESTATE BOOM COMES TO CITY



All Roundhouse Products (3 in 1) kits are made up from Company stock parts and super detailing parts for use as a starter for a "kit bashed" model. (3 in 1) "theme kits" do not always contain three

individual kits. Kits are undecorated and some require kit bashing techniques; also some kit components must be purchased from other manufacturers.

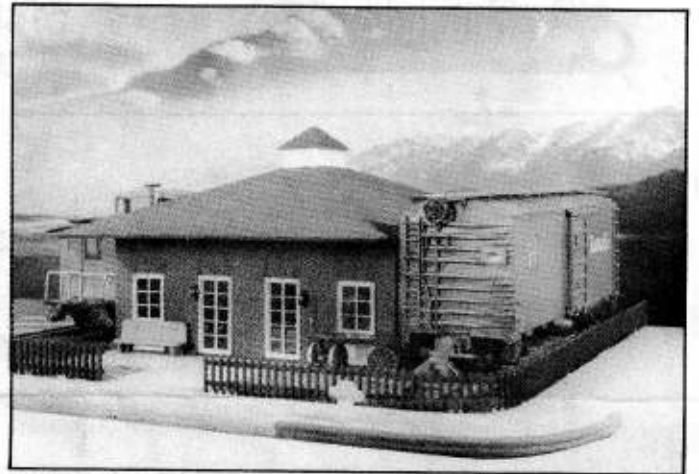
12-77 91893



VICTORIA SQUARE

STREET WIRE ROPE RAIL ROAD. FORMERLY A HORSE ROAD

#1511, #1512, #1513 (3 in 1) Theme Kits, Retail \$6.50 each.



KIT BASHING & SOME PARTS AS ILLUSTRATED NOT ENCLUDED!

STREET RAIL ROAD



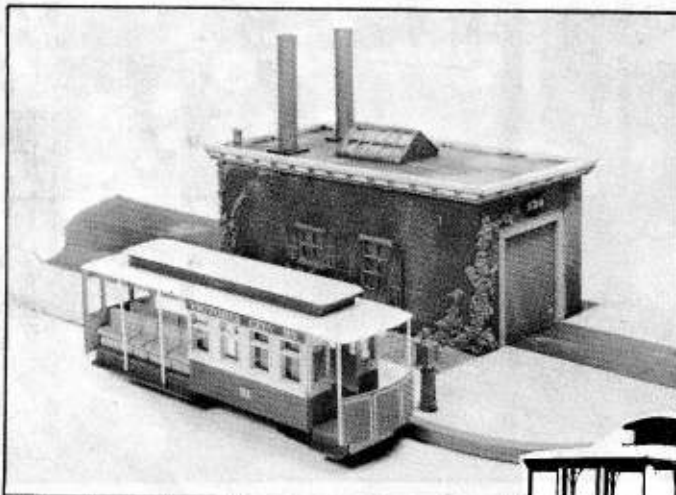
Cable car is constructed from passenger car!

Kit #1512, Victoria Cable Car and Power House. We will utilize our 34' Overton Passenger car and a single-story brick building kit. Instructions will cover the cable railway and illustrate some of the major prototype functions of the "Big Wheel", which moved the cable car empire.

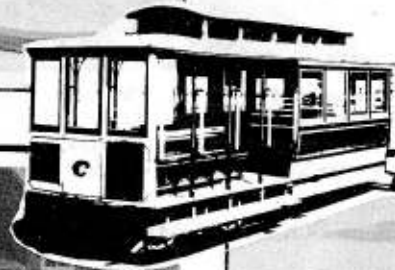
kits require kit bashing and some parts from other manufacturers.

RESTAURANT AND STATION

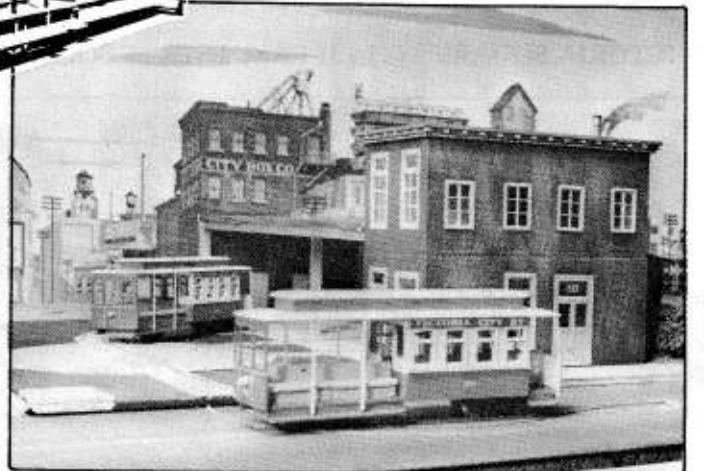
Kit #1511 will contain two car kits: a modern style steel 40' AAR box car and a modern steel sheathed, 2-window caboose. Model kits are undecorated. Kit also contains a special building kit. The instructions illustrate the Victoria Station "look-alike" model version of the famous restaurant.



Cable Car as pictured is not available!



Kit #1513, Victoria Brick Car Barn and Repair Shop, complete with a special sheet of idea starters. This kit can be built utilizing the components to achieve a "typical old time street scene", just like San Francisco during the turn of the century, or the modeler can make a cable car barn. Both ideas are fully covered in the instructions.



CABLE CAR BARN

MODEL DIE CASTING INC.

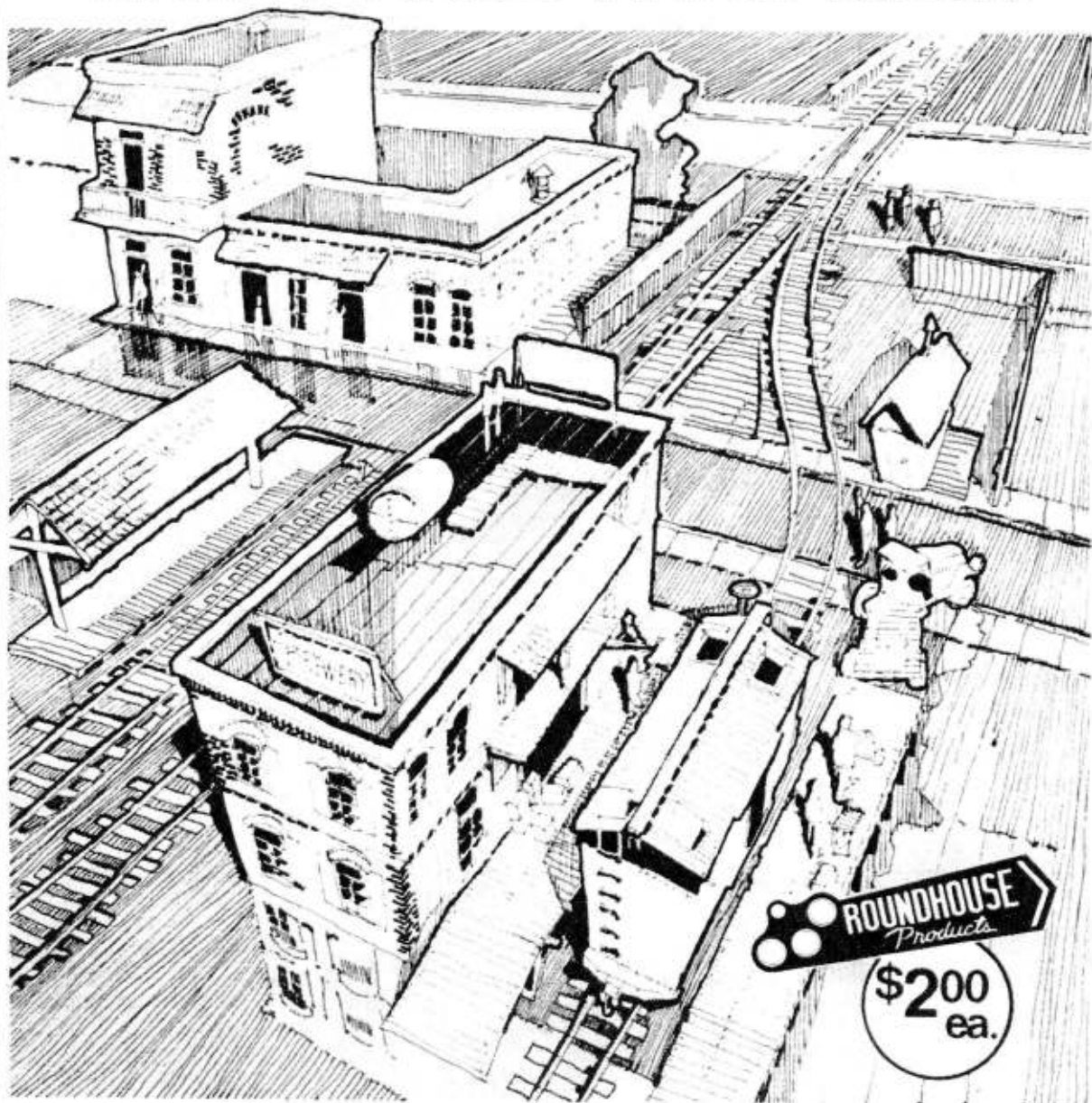
3811-15 W. ROSECRANS, BOX 926 • HAWTHORNE, CA. 90250

Start Building with...

ROUNDHOUSE OLD TIMER series Kits and Module Packs

...Made EASY with Our

HANDY HINTS HAND BOOK





OLD TIMER SINGLE STORY BUILDING (1-01&1-02)series

INSTRUCTION SHEET

ABOUT YOUR "OLD TIMER" BUILDING

When gold was discovered at Sutters Creek in 1848, a sleepy country awoke. Buildings sprang up overnight. These first buildings were nothing more than rough planks and canvas.

From these early styled buildings grew what was to become the permanent town buildings of brick and stone and iron-shuttered doors.

Today this style of building is found in all large cities throughout the United States. The only real difference in the buildings of yesterday and those found in your town today is mainly the absence of the steel shutters on the doors and windows.

PLEASE READ THE INSTRUCTIONS CAREFULLY AND STUDY THE DRAWINGS BEFORE STARTING.

NOTE: When attaching plastic moldings, use only styrene plastic glue. Apply the least amount. Glue will attack the paint and will not attach.

CONSTRUCTION

1. Attach doors and windows per instructions, using drawing (A) for reference.
2. Attach shutters. Refer to drawing (A)
3. The roof is molded in two parts. You will find four moldings designated as cornices, two long moldings and two short moldings, and a flat black section. The cornices glue



to the flat roof section. Apply glue to location pins on roof edge and attach to the four cornice moldings.

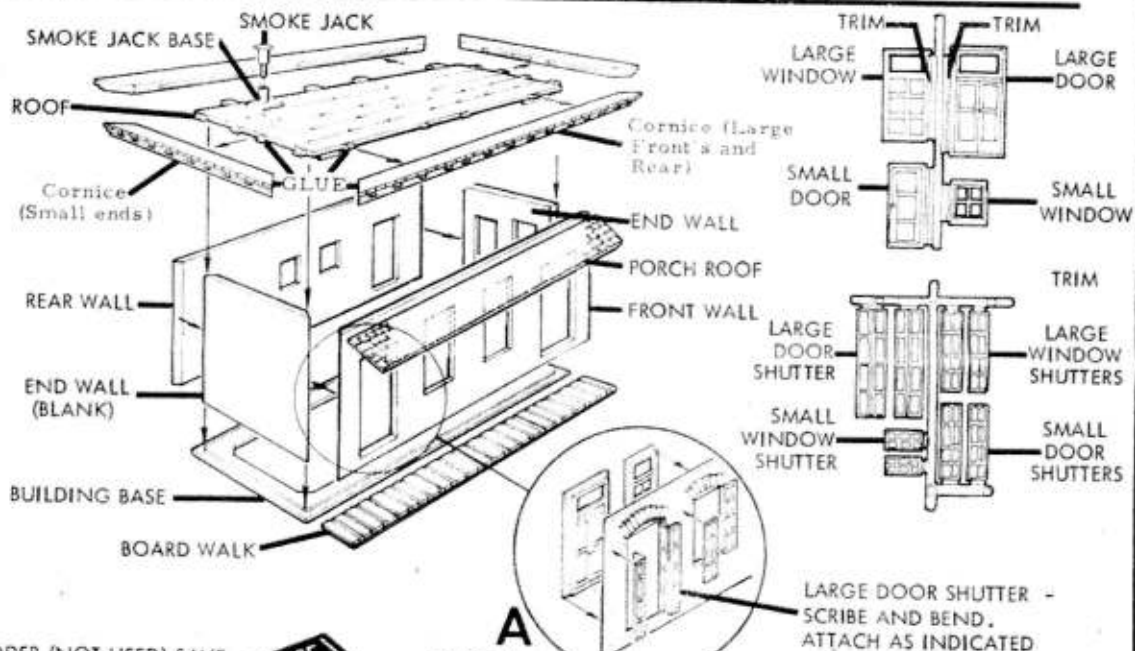
4. Base - Glue walls and ends to base. Be careful not to get glue on outside wall detail. Glue should be applied along the beveled edges as well as on the bottom of each wall. Place front wall in place and butt both side walls to front. Affix rear wall into place and adjust trueness. Attach and glue roof.

BOARDWALK AND PORCH ROOF

Glue edge of boardwalk and attach to the bottom of the front wall. Glue edge of porch roof to top edge of front wall. Note position below roof molding. The porch should be approximately at a 45 degree angle.

NOTE:

When you are butting two buildings next to each other, do not glue cornice to roof at the side butting of the adjoining building. This procedure is used to give an appearance of one continuous wall.



LADDER (NOT USED) SAVE



DOOR AND SHUTTER DETAIL DRAWING

NOTE: Glue windows and doors from the back side of molding.

MODEL DIE CASTING INC

3811-15 W ROSECRANS • BOX 926 • HAWTHORNE, CALIF 90250 • (714) 771-7171

IDEA STARTER USING BUILDING PARTS

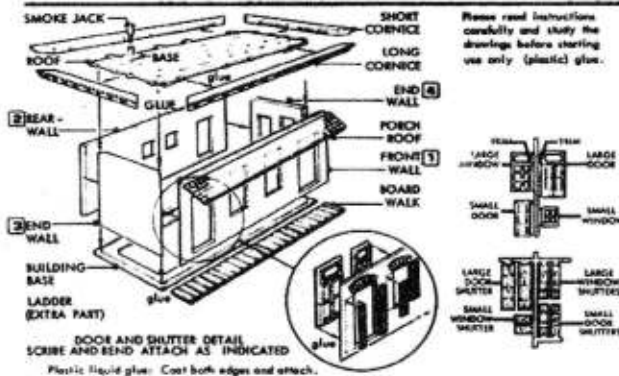
TYPICAL BUILDING KIT ASSEMBLY

Instructions used with kits:

1504, 1505, 1506, 1509, 1511 & 1512

Note: Parts may vary depending on kit.

1. Walls & Base: Glue walls and ends to base. Be careful not to get glue on outside wall detail. Glue should be applied along the beveled edges, as well as on the bottom of each wall. Place front wall in place and butt both side walls to front. Affix rear wall into place and adjust for trueness.
2. Roof: The roof is molded in two parts. You will find four moldings designated as cornices - two long moldings and two short moldings - and a flat black section. The cornices glue to the pins on the edges of the flat section and then attach to the walls.
3. Doors & Windows: Detail moldings can be attached either from the front or to the rear of openings. Picture of our (typical building, top left) illustrate doors and windows glued into place from the rear.
4. Steel Shutters: (Optional parts to this kit.) The steel shutters were used on old style stone and brick buildings for fire protection. To simulate a window area on a blank wall section, merely glue onto a wall.
5. Finish: Your building parts are made of molded plastic. If you are going to paint your finished building model, use only enamel paints (spray or brush). Artist oil paints lend themselves well for aging and special effects.

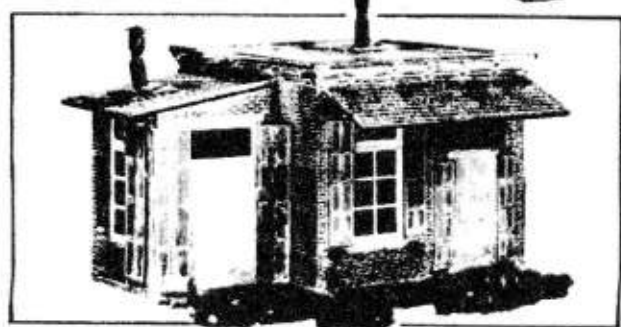
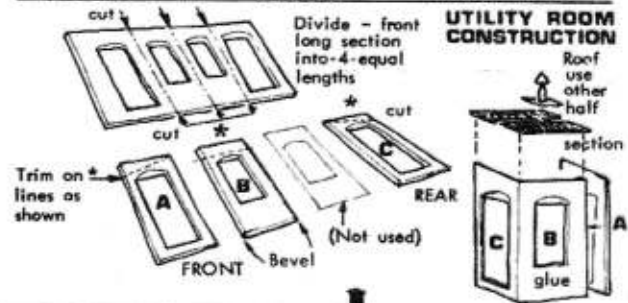
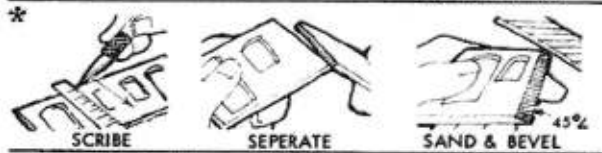
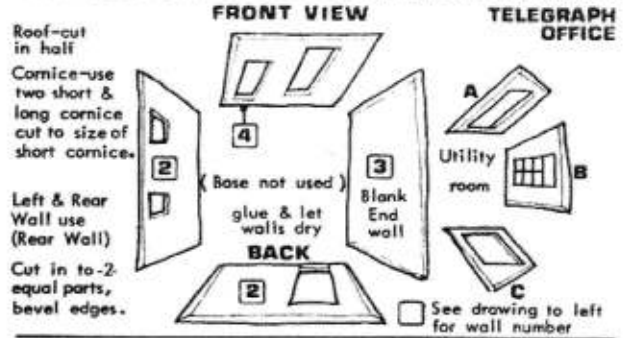


91897

MODEL DIE CASTING, INC.
P.O. Box 1827, Carson City, NV 89702, U.S.A.

1/78

* Follow these few simple techniques: To cut wall/roof sections, use a straight edge and cut a deep line. Next, bend away from cut line and snap parts into pieces needed. (If part bends, recut.) Sand edges smooth and when you have two sections that butt at a corner, sand each edge at a 45°



IDEA STARTERS

New Roundhouse Products proudly presents
our H-O Scale "Old Timer" building line.

- Injected molded plastic / for years of lasting beauty.
- Modular construction / ease of freelance designing.
- Super extra individual detailing parts / no two buildings alike.
- Space saving size / will fit any layout (large or small).

GOLD!! — The West . . . or the '49's — This was the Mother Lode country. The Mother Lode lies on both sides of "California Highway 49", winding along the western United States' slope of the Sierra Mountains in California.

When gold was found at Sutters Creek in 1848 by James Marshall, a sleepy country awoke! Buildings sprang up, saloon keepers appeared, and dance halls and bawdy houses rose up practically overnight. At first, they were nothing more than rough planks and canvas but, with time, "brick and iron door" buildings became the rule.

Each building in this series was designed on what we call "modular construction". With this series you can recreate any and all of those fascinating Gold Rush era buildings. Each kit contains an individually designed structure. By purchasing our different styles, you can combine them and, either by substitution of ends or sides, give your buildings your own character and charm. As an example, Roundhouse is producing two of the most sought after styles — stone wall and brick wall buildings. All you need is one of each to complete a mixed style; or combine the two, one on top of the other, for a two-story building.



EYE AND THE CAMERA

SECTION I

HOW TO MODEL WHAT YOU SEE

Next time the wife, you, and the children go for a Sunday drive or on vacation, take a camera ---- and bring back those fantastic buildings.

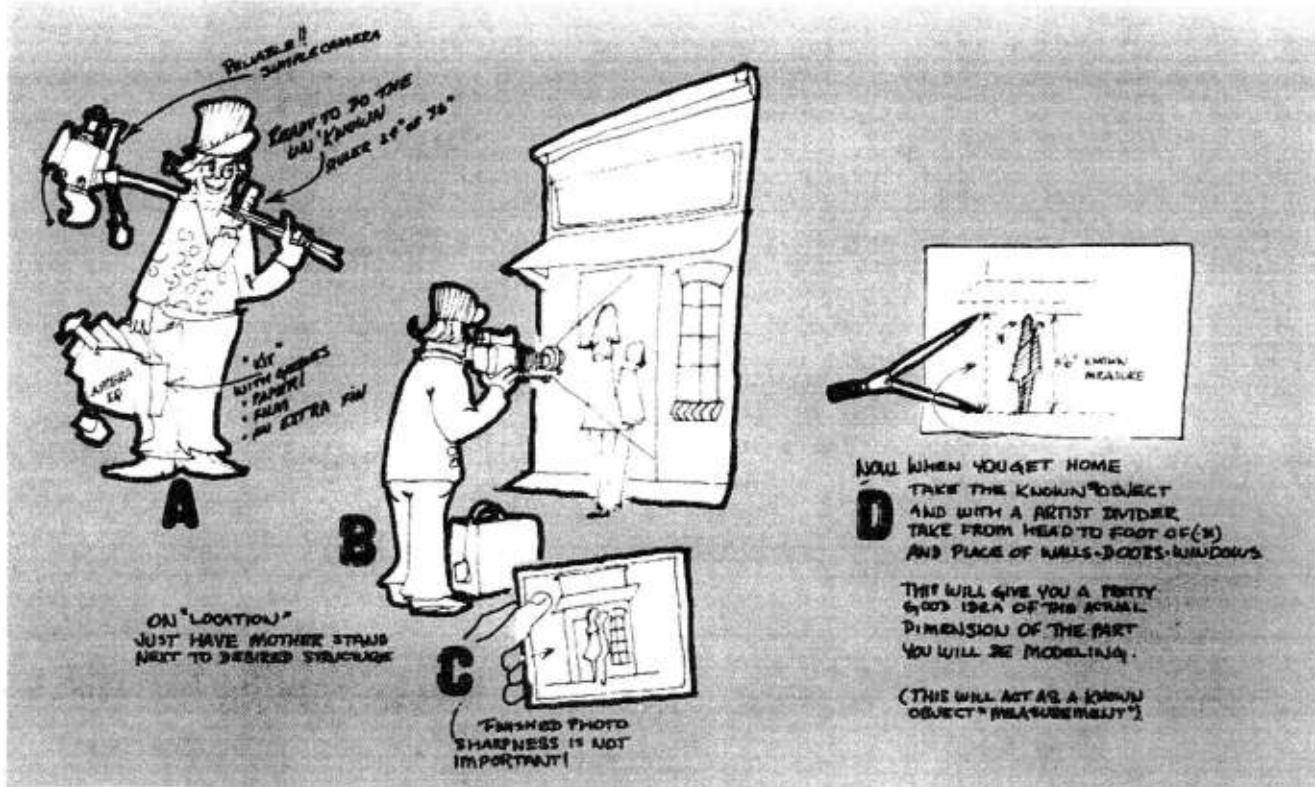
Right now, even around town, you can find any number of buildings to photograph and model.

The biggest problem to overcome is (HOW), simple.

Every building has a basic shape and many shapes can easily be modeled with a basic kit and module pack accessories.

Second (How), is the detailing of the shape.

Now here, you as a modeler can take a few liberties by substituting a window or door style. You can achieve just about the same building you have photographed.



The, (How) then starts with:

- (A) An inexpensive polaroid camera. Also, some form of measuring device -- the best yet is (B) mother - "Just Stand Over There". Two things accomplished at the same time. A photo for her and one for yourself.

Meanwhile, back home with your finished pictures in hand ... (C)

Let's get started on a sketch. (D)

Simple tools needed, "paper, pencil (H) or (2H) artist store variety and an artist divider, See sketch.

The first step in doing a drawing for a model is to measure the structure. See (D) and read.

Simple, Well, sort of! So you have a "thing".

Now we have to lay down a few ground rules on the subject of kit bashing with module pack parts.

MODULE CONSTRUCTION TECHNIQUES

INTRODUCTION

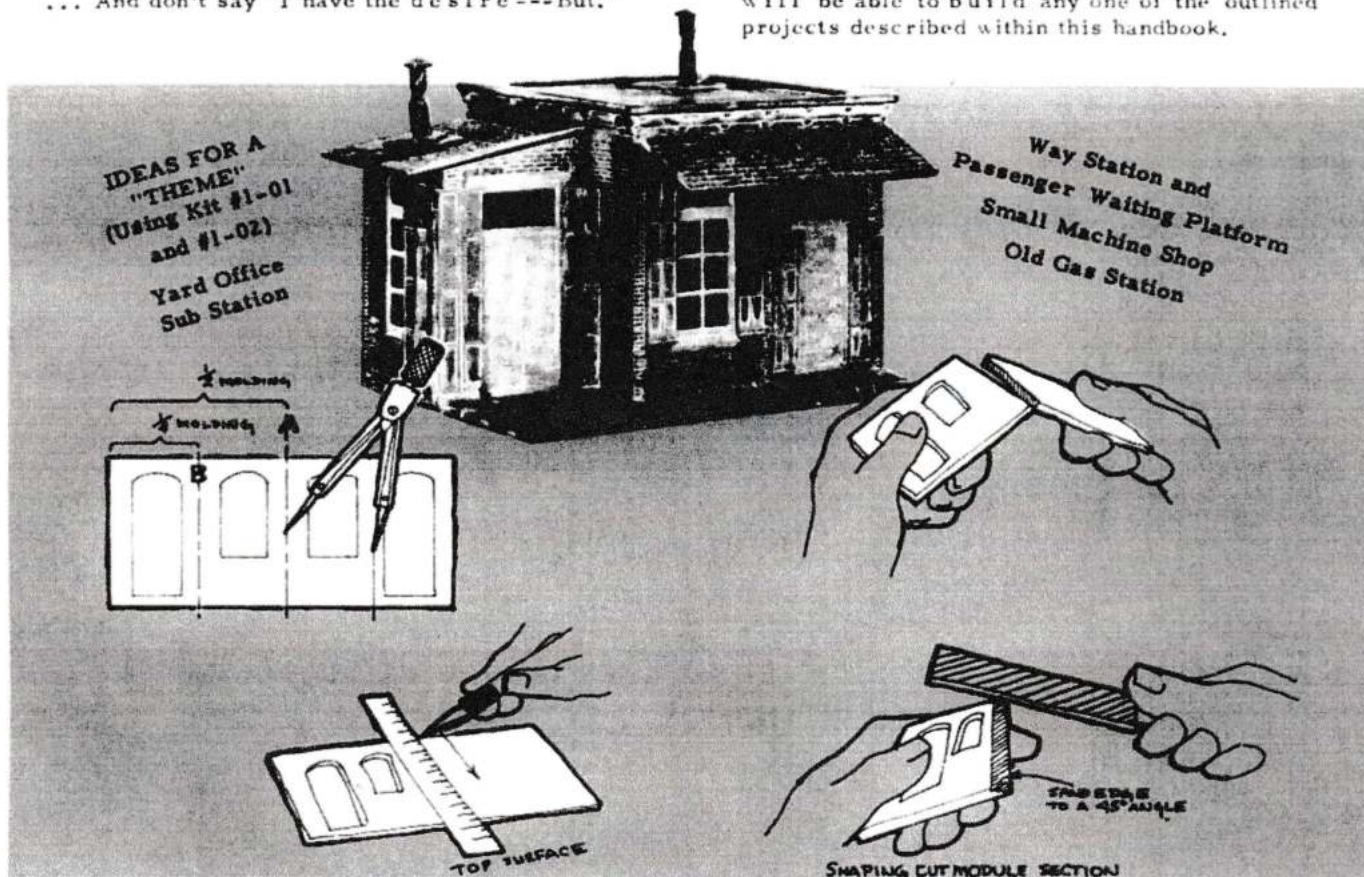
Getting started with "Module Packs" and "Kit Bashing".

"Kit Bashing" takes only the desire ...

That ability to imagine a finished structure, ... And don't say "I have the desire --- But!"

No "buts" with Roundhouse. We have taken them out ... and all of the long hours of work are out too!!

Whether you are an old hat at kit bashing, or a novice, by following a few simple techniques you will be able to build any one of the outlined projects described within this handbook.



WORKING WITH MODULES:

1. To cut plastic sides or ends of modules, always use a straight edge and cut on the detailed side, from the top down. Press firmly and repeat several times. It is not necessary to cut completely through plastic, only scribe the plastic.
2. To separate plastic on your scribe line, grasp part on each end and bend down. The plastic should snap immediately, not bend. If you find that the plastic is bending, repeat previous step.
3. Your Roundhouse kit is designed on a modular basis. To best understand the terms used throughout this instruction book, first look at a side molding illustration. You will notice

that the molding is divided into four (4) parts.

(A) line indicates 1/2 of the molding.

(B) line indicates 1/4 of the molding.

To find these points, we recommend the use of an artist divider or ruler.

It is important to always cut on the module, so each part fits into a squared form.

4. To join module parts after cutting:

(a) Sand or flat-file edge to a 45 degree angle.

(b) Using liquid glue, coat both edges and join together.

Project continued on next page.



KIT BASHING

To start off in kit bashing, with Roundhouse kits and Module Packs, I have chosen a very simple structure.

Step 1 -

CONSTRUCTION

Kit Bashing, using Kit #1-01 or 1-02, single-story brick or stone.

First, study the photo Page 5 of the building. Notice how the modules have been arranged.

Next, arrange your parts. From side molding front A - BC - D. Cut out A and D. Also cut side back molding in half. Trim edges to 45 degree angles.

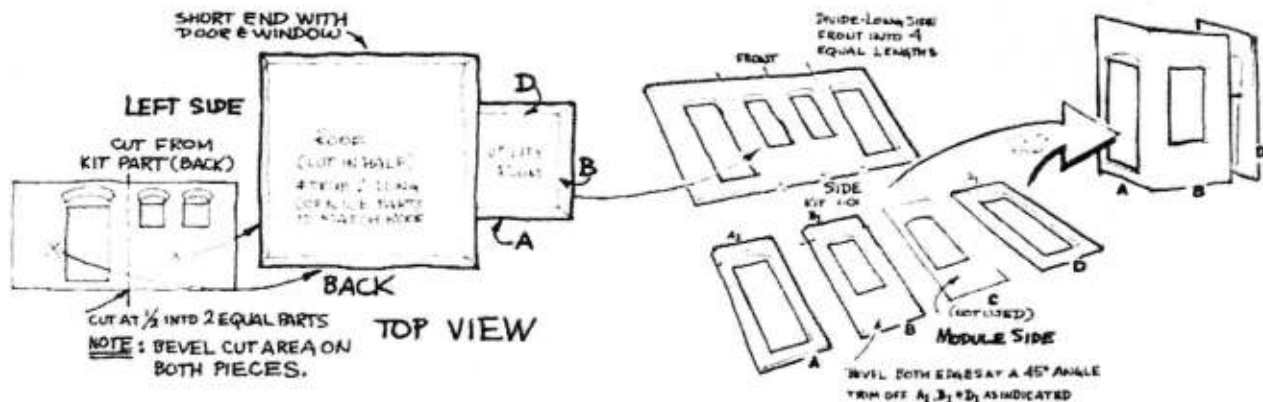
Place parts that you have trimmed corresponding to floor plan. You will have one square building and a smaller utility room.

Glue the four (4) sides of the main square building together and set aside to dry.

Next, Utility Room.

Trim the two side walls for roof angle as illustrated and trim third wall to match slope of roof. Then glue.

Glue and assemble large square main building and small adjoining room. After glue has dried, assemble roof sections.



Step 2. Roof Construction -

Main Roof: Cut in half the flat (blank) section and trim in half (2) long cornice parts. Glue cornice (4) onto roof. Glue roof to building.

Shed Roof: Take roof (shingle section) and divide in half. One half is used for porch on main building; cut the other half into two equal portions and glue both (small) sections one upon the edge of the other.

At this point, decide which type of building you need for your layout. As an "idea starter", refer to the following page.

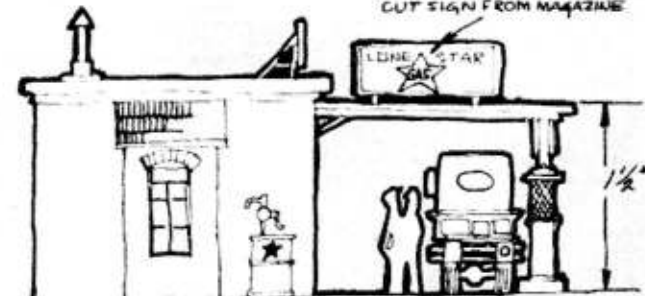
Step 3, Detailing -

Doors and Windows: Follow instructions as illustrated to locate and assemble doors, windows, and shutters.

On the next page, I have sketched some "Oldie but Goodies" for idea starters.

IDEA STARTERS

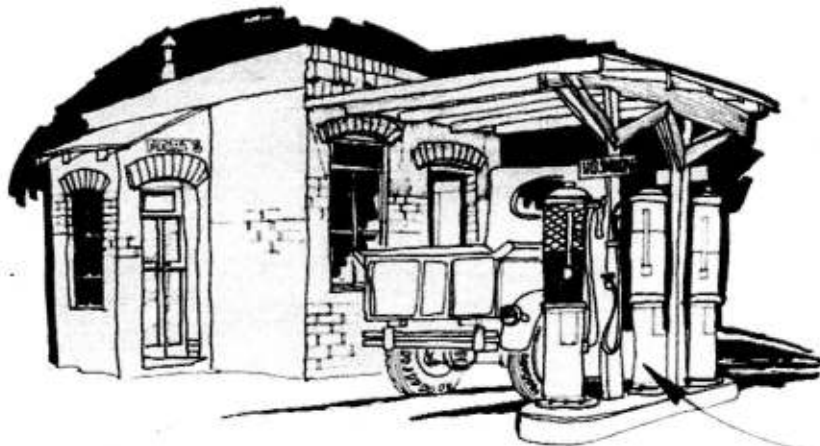
CUT SIGN FROM MAGAZINE



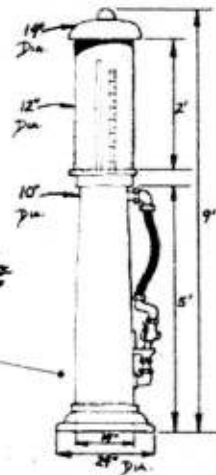
END VIEW

Continuation of Article

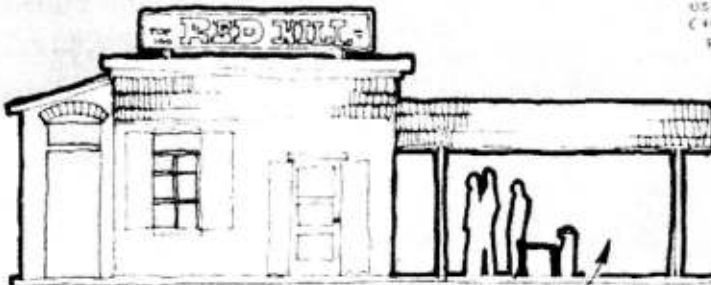
... Also ... Buildings are more than just buildings. They have a purpose. Now, each "Master" modeler, as I call them, has a purpose for his particular model railroad — so should you. When you build, ... just what is it going to be?



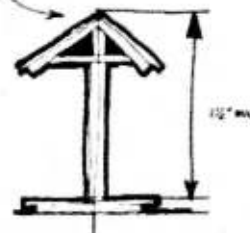
OLD TIME WESTERN GAS STATION



PASSENGER PLATFORM & SHELTER
USE MODULE BACK II (TRW)
(ARCH ROOF)
REST TOGETHER TO FORM FOOD.



SIDE VIEW
STATION
& PASSENGER SHELTER



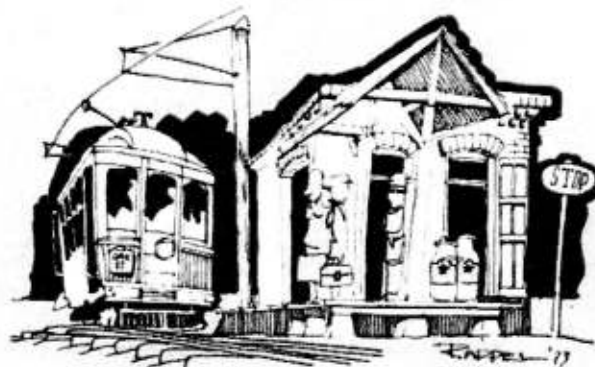
START AT BOTTOM
OF MODULES
TAKE FIRST PIECE OF
TAPE 1/2 OVER FIRST PIECE
SHOW DIRECTIONS FOR EACH
NOW.

TOO: USE ADHESIVE BOARD
& COVER WITH MASKING
TAPE.

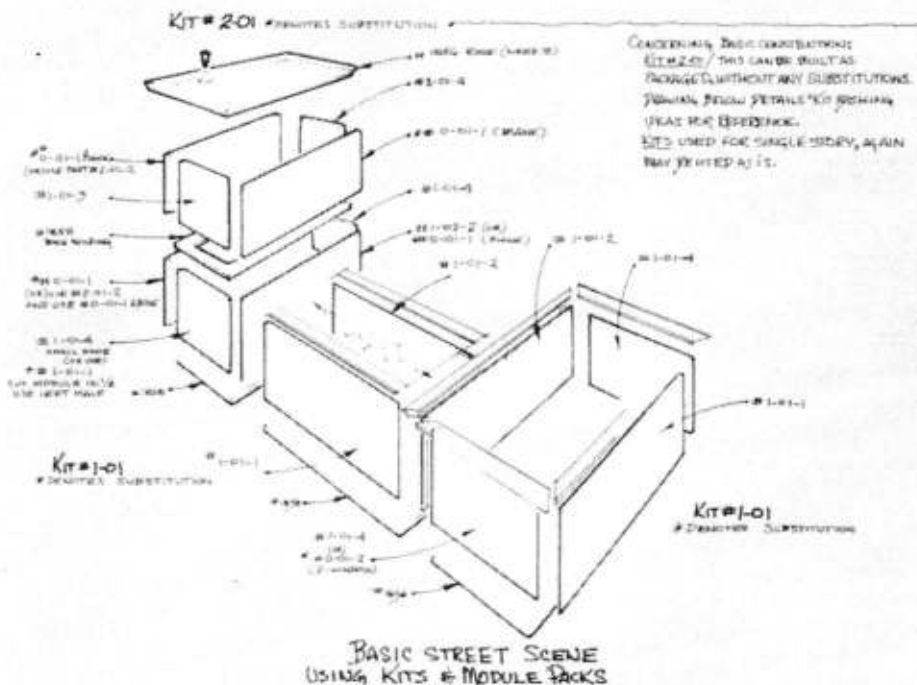
This type of construction can best illustrate the Roundhouse method of modular modeling.

REMEMBER —

Always work on a module. Using whole, half, or quarter modules, you can construct any building your imagination can envision.



TYPICAL STREET SCENE



INTRODUCTION

Our typical street scene setup could be any time or any place ... Around the corner or the local market downstairs with a hotel above. Green and white awnings with a 'Rooms for Rent' sign on the roof ... Stepping next door, the Daily Breeze newspaper ... a shoe shine stand ... The barber shop with the World Series and the gang waiting their turn ... Pool hall next door with 'Big Mike' running the table.

Ahh!! There's the place we were looking for. Our friendly model shop! ... On a side street

to be sure ... And, right in front, 20 feet out, a 'U' boat - on the local branch line?? ... Step to the rear. Scads of paper, ash cans, a '41 Packard on blocks and, say, what's that in the weeds? ... Aha! An NMRA membership application!!

... Good thing. Now you, too, can get in on the real thing - fellowship, opportunity, and fun with Roundhouse and NMRA.

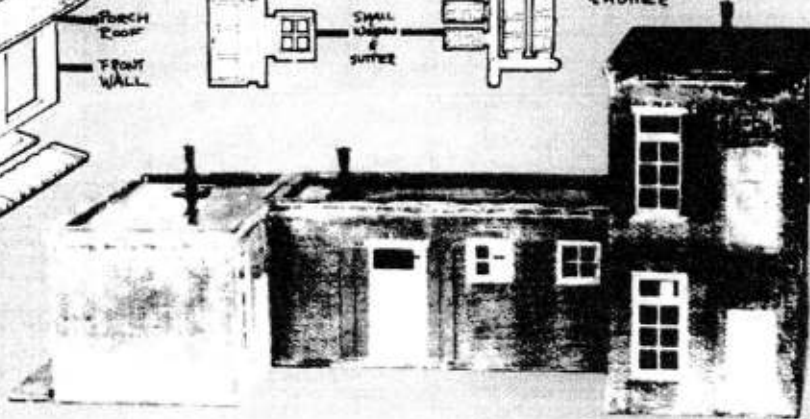
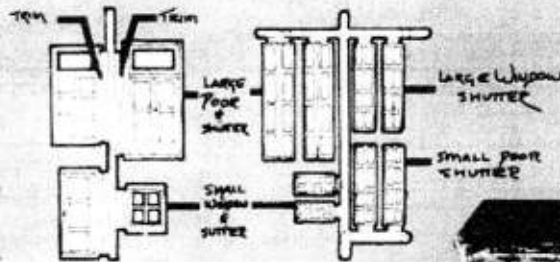
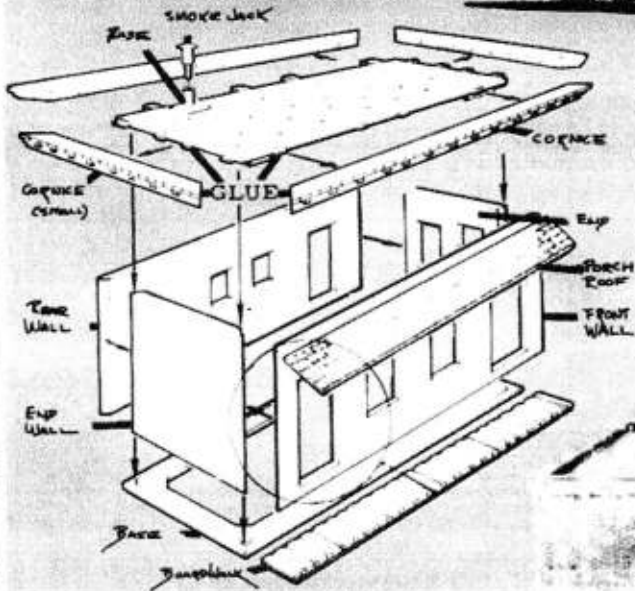
You can build a lasting partnership ... 'The best of friends'. Guaranteed satisfaction.

Continued next page.

**DOOR AND SHUTTER
DETAIL DRAWING**



NOTE: Glue windows and doors from the back side of molding.



CONSTRUCTION

Kit bashing can be simple, with basics. Start this project with one (1) kit #2-01 two-story, and two (2) kit #1-01 single-story brick buildings. Also, two (2) Module Pack #0-01-1 plain brick.

Step 1 -

Start with kit #2-01 and substitute all long walls with plain long brick sides from Module Pack #0-01-1. Construct kit per instructions and refer to photographs. **NOTE:** Use a blank end for upper front story; fake end doors by glueing long (door) steel shutters into place.

Step 2 -

Construct kit #1-02 without end walls and end cornice. **NOTE:** Trim 45° angles off long cornice to match length of roof. Glue structure to side of two-story building (refer to photograph for proper location).

Step 3 -

Corner building, kit #1-01. Construct as per instructions. Substitute rear blank end with extra end that has a door and window detail - from middle structure. This structure butts against horizontal center building.

FINALIZING YOUR MODEL

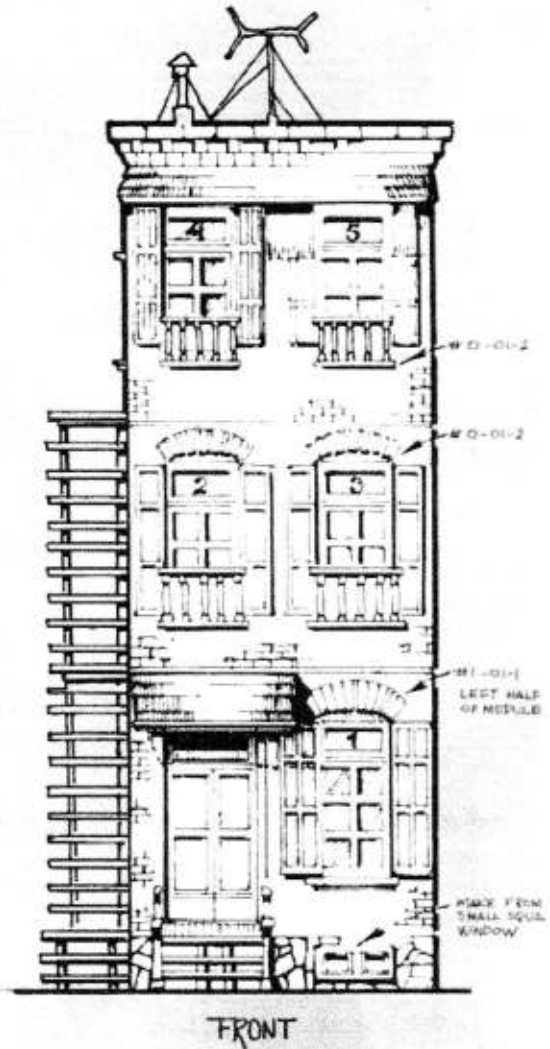
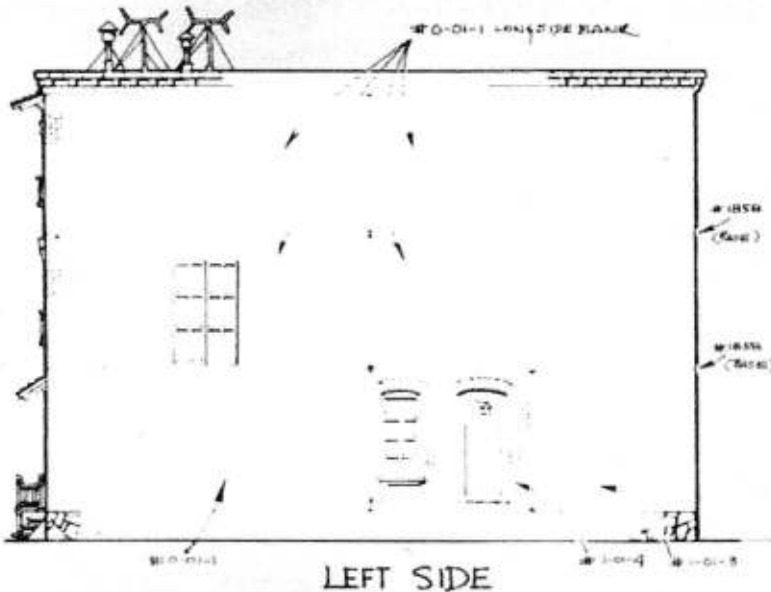
Windows should be cut from clear plastic and attached from rear.

Be careful not to get glue in the areas showing from the outside.

To add realism to your structures, use a clear spray over inside of windows. This will pull and give an appearance of age.

Now, to further enhance the front windows, cut brown paper and make shades. Attach shades to an uneven height and angle. (See detail drawing, B, for detailing windows and doors.) ■

OLD TOWN BROWNSTONE APARTMENTS



"Walk-ups" as the folks in the East call them. Now, at last, true to life models — just like the real structure: "thin and tall".

Just imagine this project on your "pike". A real attention getter! Remember... (out back — the fenced yard with a four-track main on the other side). And, to be sure, lots of detail! A modeler's dream come true!!

Module Packs are numbered to assist you in your planning. BUT! Be creative. Get that (2-H) pencil and do some mental kit bashing

with my idea as a starter.

HOW? How about, instead of one — do a whole street of these "brownstones"; just vary the heights and indent slightly here and there. I'll explain one thing about this (indenting). Indenting will cause shadows; thus creating individual three-story buildings. Without modeling this slight difference, you will have something that looks like one long wall. Also, vary windows and shutters and balconies. Make each vertical three-story front really different & distinctive.

Continued next page.