



INJECTORS, VALVES, PIPE FITTINGS

FINE QUALITY

AND

Accessories

FOR THE



LIVESSTEAM FRATERNITY



367–A BECKETT PLACE GROVER BEACH, CALIFORNIA 93433-1551 USA

NJECTORS

NATHAN SIMPLEX LIFTING INJECTOR 1.6" SCALE



Part No. 13-01

Actual size

The NATHAN SIMPLEX LIFTING INJECTOR is a precise scale model of the full-size #11 injector. It was the most popular style of lifting injector used by railroads throughout the country until the end of steam, and was a favorite of engine crews because of its reliability and ease of operation. Since its introduction in 1980, this model injector has earned the same reputation.

The injector is started by briskly pulling the handle back, and is shut off by pushing the handle forward. The water valve under the handle is used to adjust the water flow into the injector as it is operating. A remote valve on the tender should be the on-off water valve. The valve handle above the overflow chamber is non-operational. The overflow check valve is directly beneath this handle. A complete set of instructions accompanies each injector. Invented in the 1850s, an injector has three key components: a steam nozzle, through which the operating steam from the boiler enters the injector, a combining and condensing nozzle, in which the steam condenses and transmits its dynamic force to the water, and a delivery nozzle, from which the pressure of the combined mixture of steam and water overcomes the pressure of the boiler.

An injector must have the proportions of steam, water and delivery areas so designed that the velocity of the moving mixture of steam and water will be greater than the velocity at which a jet of water would flow from the boiler under the same pressure. For a boiler at 120 psi, this final velocity is about 170 feet per second. In order to achieve this in such a small size, SUPERSCALE injectors are made to tolerances of less than a thousandth of an inch.

SPECIFICATIONS

Part No. 13-01 Delivery rate: 4.5 pints/minute (33 gal./hr.) Working pressure: Max.: 160+ psi, Min.: 35 psi Length o/a: 4.15" Steam line: 5/16" copper tubing Delivery line: 5/16" copper tubing Water line: 3/8" copper tubing Overflow line: 7/16" copper tubing (3/8" min.) Injector will lift water Each unit is tested on steam before delivery

INJECTORS

CHICAGO INJECTOR 1.6" SCALE



Part No. 13-02

Actual size

he CHICAGO injector is intended to be mounted below the tender water level under the cab floor and is reversible for use on either side of the locomotive. Although the injector will lift water as does the Nathan injector, the full-size injector was a non-lifting type and was controlled via rods running through the cab floor. The water control valve is functional. The overflow shut-off valve is non-functional but provided to complete the detail. We recommend our injector starting valves listed on page 9 for use with the CHICAGO injector.

SPECIFICATIONS

Part No. 13-02 Delivery rate: 4.5 pints/minute (33 gal./hr.) Working pressure: Max.: 160+ psi, Min.: 25 psi Height o/a: 3.04" Steam line: 5/16" copper tubing Delivery line: 5/16" copper tubing Water line: 3/8" copper tubing Overflow line: 3/8" O.D. Injector will lift water Each unit is tested on steam before delivery

ECONOMY INJECTOR



Part No. 13-03

Actual size

The ECONOMY injector was developed to answer the call for a good yet inexpensive injector for utility use. It has found itself at home on locomotives, boats, stationary engines, traction engines and contraptions still unnamed by man. And, although available at an economical price, this injector is made with the same quality materials and standards of workmanship common to all SUPERSCALE products. We recommend our injector starting valves listed on page 9 for use with the ECONOMY injector.

SPECIFICATIONS

Part No. 13-03 Delivery rate: 4.5 pints/minute (33 gal./hr.) Working pressure: Max.: 160+ psi, Min.: 25 psi Height o/a: 2.96" Steam line: 5/16" copper tubing Delivery line: 5/16" copper tubing Water line: 5/16" copper tubing Overflow line: 3/8" O.D. Injector will lift water Will interchange with the Ohlenkamp injector

SAFETY VALVES

UNMUFFLED SAFETY VALVE



Part No. 14-01

MUFFLED SAFETY VALVE



Part No. 14-02

differential (the difference between pop-off pressure and

re-seat pressure) is set to function between 4 psi to 7 psi,

S UPERSCALE SAFETY VALVES are precision scale models of the prototypes made by the CONSOLIDATED

SAFETY VALVE CO., whose history dates to 1852 and who remains in business today. Every boiler should have at least two safety valves; some large boilers may need more. You should not be able to over-fire the pop pressure of the highest-set valve. The relieving capacity is listed below. Be sure you have enough valves installed to relieve all the steam your boiler is capable of generating. The muffler on our 14-02

valve is more than just for looks as it does quiet the valve. Our valves are tested and factory set on steam using a precision laboratory-grade test gauge, and the valves consistently pop off within 1 psi of the set pressure. The blowdown

Boiler fitting 1/4 NPT



Part No. 14-04-250

Boiler fitting 1/8 NPT



Part No. 14-04-125

and doesn't vary by more than 1/2 psi from the factory setting. The reseat is sharp and tight. You can re-set the pressure between 70 and 160 psi by turning the top screw, and change the blowdown differential by loosening the small side screw and rotating the ring inside the valve. Each valve includes a boiler fitting to adapt the valve to the 1/4 NPT or 1/8 NPT threads in your steam dome. When ordering, please specify the thread size

for the boiler fitting as well as the pop-off pressure setting. Replacement boiler fittings are also available separately. Detailed instructions for installing, adjusting and cleaning your safety valves are provided with each purchase.

SPECIFICATIONS

Pressure range: 70–160 psi (adjustable) Blowdown differential: 4–7 psi (adjustable) Relieving capacity at 125 psi: 134 lbs./hr. or 16 gal./hr. Boiler fitting thread: 1/8 NPT or 1/4 NPT

O.D. of valve w/o muffler: .92" O.D. of valve with muffler: 1.01" Height: 1.75" Scale: 1.6"

BOILER CHECK VALVES

NATHAN BOILER CHECK VALVES 1.6" SCALE







Part No. 14–06

THESE NATHAN BOILER CHECK VALVES all use the same body and shut-off valve assembly. The shut-off valve is functional allowing removal of the internal check poppet while the boiler is under steam. When piping this valve, we recommend 5/16" copper tubing soldered into the inlet coupling. The mounting thread on the back side of



Part No. 14-07

Part No. 14-08

the flange is male 1/8 NPT. The valves are reversible for either side of the boiler. The mounting flange diameter is 1". The center of the outlet to the bottom of the inlet tailpiece on part numbers 14-05 and 14-07 is 1.31". The center of the outlet to the bottom of the inlet spanner nut on part numbers 14-06 and 14-08 is 1.14".

HANCOCK BOILER CHECK VALVES 1.6" SCALE



Part No. 14-09



Part No. 14-10



Part No. 14-11

Part No. 14–12

THESE HANCOCK BOILER CHECK VALVES have different inlet pipe designs on a common body, and use 3/8" tube for the inlet piping. Operable either vertically or horizontally, they mount to the boiler with a 1/8 NPT thread. They have a larger capacity than the NATHAN valves

above. The mounting flange diameter is 1". The center of the outlet to the bottom of the inlet tailpiece on part numbers 14-09 and 14-11 is 1.82". The center of the outlet to the bottom of the inlet spanner nut on part numbers 14-10 and 14-12 is 1.66".

PIPE FITTING BOILER CHECK VALVE 1.6" SCALE

 $F^{\text{REQUENTLY SEEN ON LOGGING LOCOMOTIVES}$, this style of boiler check valve is made up of the 11-33-FM-312 union globe check valve and the 11-29-FF-312 union angle valve. This mounts to a 5/16" nipple, which goes into the boiler, and a 5/16" feedwater line.





WHISTLES & COUPLERS

WHISTLES 1.6" SCALE





Part No. 15-02-3

Part No. 15-02-4

• EORGE STEPHENSON INVENTED a steam trumpet in 1833 ${f J}$ and whistles have been a part of steam railroading ever since. These beautiful examples emit a sound made up of the tones from each chamber. They are fully assembled, tested and ready for installation on your boiler. The inlet for the steam pipe is threaded 1/4" MTP. Optimum pres-



Part No. 15-02-5



Part No. 15-02-6

sure range is 80-130 psi, air or steam, and the loudness of each whistle increases with increasing pressure. One of these whistles added to the display base shown on page 13 makes a unique desk piece and an ideal gift. The whistle bell is 7/8" O.D. and the heights are: 3-chime, 3.00"; 4-chime, 2.53"; 5-chime, 2.43"; 6-chime, 3.00".

COUPLERS 1.5" SCALE



Part No. 15-06





Part No. 15-08

HESE EXQUISITE COUPLERS are investment L cast in 17-4 stainless steel, which has a tenisle strength of 160,000 psi. They are super strong - none has been known to break. Furnished as 5-piece kits, they are easy to assemble. No machine work is necessary except reaming the pin holes in the body and knuckle to clean them up. The pilot coupler (P/N 15-06) goes with the extended floor coupler pocket (P/N 03-02) as shown.



Part Nos. 15-06 and 03-02

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PIPE FITTINGS

FOR ALL SCALES



HESE SCALE PIPE FITTINGS have been precisely modeled after the AAR standard line of 300 lb. fittings which were manufactured by the CRANE and WALWORTH companies — two major pipe fitting suppliers

to the American railroads. The castings are silicon bronze and are cored to the correct size to accept MTP taps and dies. All of the other fittings are manufactured from brass. You'll notice that



Return bend P/N 11-38-250-U in use on condensor line

the union (nut and tailpieces) has octagonal sides which was railroad practice. This allows the use of wrenches to grip the components so that installation can be accomplished

a locomotive but there are no hard and fast rules. An excelpublished by Kalmbach Publishing Co.

without the use of pliers. Two new threads have been intro-

duced for use with thin-wall tubing: 5/16"-40 and 3/8"-40.

These threads have the same taper as other MTP threads. Two suppliers of the taps and dies for these threads

are American Model

Engineering Supply and

Coles Power Models. Our

unions, nipples, fittings

with unions, and most of

our valves can be set up

with these threads. We are

often asked about piping



THESE SUPERSCALE STEAM VALVES are made with fea-L tures not found in any other model valve and have a world-wide reputation for quality and durability. As with the prototype, the bonnet is held in place by a separate bonnet nut. The Teflon® packing is retained by a gland, and the handwheel end of the stainless steel stem is squared and tapered for a perfect fit with the handwheel which is secured with a nut. The handwheel will not work loose.

GLOBE VALVES AND UNION GLOBE VALVES









Fig. D



Fig. A

Fig. B

Fig. C

Fig. E

Figure	Size	Description	Part No.
A	3/16	MTP thread	11-25-187
А	1/4	MTP thread	11-25-250
А	5/16	MTP thread	11-25-312
В	5/16	Male 1/8 NPT inlet, female 5/16" MTP outlet	11-26-MF-312
С	5/16	Male 1/8 NPT inlet, male 5/16" MTP outlet	11-26-MM-312
D	5/16	Female 5/16" MTP inlet, female 5/16" MTP outlet	11-26-FF-312
Е	5/16	Female 5/16" MTP inlet, male 5/16" MTP outlet	11-26-FM-312

ANGLE VALVES AND UNION ANGLE VALVES













Fig. A





Fig. D

Fig. F

Figure	Size	Description	Part No.
A	5/16	Female 5/16" MTP inlet, female 5/16" MTP outlet	11-27-312
B	5/16	Male 1/8 NPT inlet, female 5/16" MTP outlet	11-28-312
C	1/4	Male 5/16" MTP inlet, female 1/4" MTP outlet	11-29-MF-250
C	5/16	Male 1/8 NPT inlet, female 5/16" MTP outlet	11-29-MF-312
D	1/4	Male 5/16" MTP inlet, male 1/4" MTP outlet	11-29-MM-250
D	5/16	Male 1/8 NPT inlet, male 5/16" MTP outlet	11-29-MM-312
E	1/4	Female 1/4" MTP inlet, female 1/4" MTP outlet	11-29-FF-250
E	5/16	Female 5/16" MTP inlet, female 5/16" MTP outlet	11-29-FF-312
F	1/4	Female 1/4" MTP inlet, male 1/4" MTP outlet	11-29-FM-250
F	5/16	Female 5/16" MTP inlet, male 5/16" MTP outlet	11-29-FM-312

CHECK VALVES

S uperScale's check valves have investment-cast silicon bronze bodies and brass caps. The 1/4-inch and 5/16-inch valves are poppet-style valves just like the prototype, a SUPERSCALE exclusive. We have found that poppet valves, combined with the accuracy of our CNC manufacturing process, allow a

higher flow rate than ball checks seated with a hammer as sold by other manufacturers. The 3/16-inch valve uses a ball check because of its small size. The union connections match with all SUPERSCALE union fittings, and you'll see an interesting combination of steam valve and check valve on page 4.

GLOBE CHECK VALVES AND UNION GLOBE CHECK VALVES











Fig. A

Fig. B

Fig. C

Fig. E

Figure	Size	Description	Part No.
А	3/16	MTP thread	11-30-187
А	1/4	MTP thread	11-30-250
А	5/16	MTP thread	11-30-312
В	5/16	Male 1/8 NPT inlet, female 5/16" MTP outlet	11-33-MF-312
С	5/16	Male 1/8 NPT inlet, male 5/16" MTP outlet	11-33-MM-312
D	5/16	Female 5/16" MTP inlet, female 5/16" MTP outlet	11-33-FF-312
Е	5/16	Female 5/16" MTP inlet, male 5/16" MTP outlet	11-33-FM-312

ANGLE CHECK VALVES AND UNION ANGLE CHECK VALVES









Fig. A



Fig. D

Fig. E

Figure	Size	Description	Part No.
А	5/16	MTP thread	.11-31-312
B	1/4	Male 5/16" MTP inlet, female 1/4" MTP outlet	.11-32-MF-250
B	5/16	Male 1/8 NPT inlet, female 5/16" MTP outlet	.11-32-MF-312
C	1/4	Male 5/16" MTP inlet, male 1/4" MTP outlet	.11-32-MM-250
C	5/16	Male 1/8 NPT inlet, male 5/16" MTP outlet	.11-32-MM-312
D	1/4	Female 1/4" MTP inlet, female 1/4" MTP outlet	.11-32-FF-250
D	5/16	Female 5/16" MTP inlet, female 5/16" MTP outlet	.11-32-FF-312
E	1/4	Female 1/4" MTP inlet, male 1/4" MTP outlet	.11-32-FM-250
E	5/16	Female 5/16" MTP inlet, male 5/16" MTP outlet	.11-32-FM-312

SPECIALTY VALVES

INJECTOR STARTING VALVES



Part No. 12-01

This quick-opening value features a push-pull operation. The male thread is 1/8 NPT for a heavy duty connection to the steam manifold. The union at the outlet is 5/16" MTP.



Part No. 12-02

S IMILAR IN OPERATION to the value at left, this value is used for in-line installations where it is not desirable to mount the value on the turret. Openings into the value are threaded 5/16" MTP.

3-WAY EXHAUSTING VALVE



Part No. 12-04

U SE THIS VALVE TO OPERATE cylinder cocks. The "steam on" to the "steam off" position is accomplished by approximately one-half turn of the handwheel. "Steam on" pressurizes the steam line to the cylinder cocks and closes the exhaust port in the valve. "Steam off" releases the pressure in the steam line through the exhaust port. It is tapped 3/16" MTP for 3/16" tubing.

ATOMIZER **V**ALVE



THIS VALVE PROVIDES FINE ADJUSTMENT OF the flow of air or steam for such things as a small bell ringer on up to the control of atomizing steam for the largest 1 1/2-inch scale oil burning locomotives. Fine adjustment of the fire is possible without the fear of putting it out by opening or closing the atomizer valve too fast as with conventional on-off valves. It is tapped 3/16" MTP for 3/16" tubing.

SPECIALTY VALVES

CYLINDER COCK 1.6" SCALE



Part No. 12-05

S UPERSCALE IS PROUD TO PRESENT the most accurate reproduction of the PRIME automatic cylinder cock. Steam is piped to the side of the body via the 1/8" MTP tapped hole. "Steam on" closes the valve; however, the valve will be automatically forced open in the event of a hydraulic ram in the cylinder. "Steam off" allows the valve to open and drain the cylinder. The 1/4" MTP thread on the top mounts into the cylinder block through a reducer. The exhaust elbow in the bottom can be adjusted to any position with a locking thread sealant. Overall height is 1.1". Installed height is .94". Diameter is .60".

STEAM CHEST VACUUM VALVE



Part No. 12-06

WHEN A LOCOMOTIVE IS COASTING, a vacuum is created which will draw cinders and dirt back through the exhaust into the cylinders. To break this vacuum, a steam chest vacuum valve, or snifter valve, is installed on the valve chest of the cylinder block. Our steam chest vacuum valve is an accurate 1.6-inch scale working model of those used on piston-valve locomotives. If your cylinder block does not include a boss for the valve, we can provide an adapter which produces an excellent result. The overall height of the valve is 1.22" and the distance across the corners of the valve head is .95".

BLOW-OFF VALVE 1.6" SCALE



Part No. 12-07-LH



Part No. 12-07-RH

THIS IS A PRECISION MODEL of the OKADEE blow-off valve which was used on thousands of locomotives through the end of the steam era. It features a one-piece cast silicon bronze body with a 1/8 NPT boiler mounting thread and a 1/4" outlet hole threaded 5/16"-40 MTP. The mounting flange is 1" diameter. Valves are available either right or left handed; please specify when ordering. Order handle and clevis separately.

INSTALLATION NOTE: Left and right refers to the valve, not the installed location. Each valve may be installed on either side of the engine according to the builder's choice. They should be mounted such that gravity acts to close the valve.



Part No. 12-07-HAND



Part No. 12-07-CLEV

All blow-off parts shown actual size



ELECTRICAL JUNCTION BOX 1.6" SCALE

THE PYLE-NATIONAL electrical junction box is used on handrails or where electrical conduits intersect. The kit consists of body, lid and o-ring. Length across handrail bosses: .725".





SUPERHEATER PLATE 1.6" SCALE

THIS BRONZE CASTING is the identification plate used on locomotives equipped with superheater units. It is applied to the right-hand side of the smokebox above the builder's plate. Length: 2.075".



Part No. 16-02

HURON SMOKEBOX INSPECTION PLUG 1.6" SCALE

THIS HURON inspection plug can be functional or dummy. The lid was usually connected to the smokebox with a chain. The kit consists of a base and cover (chain not included). O.D.: .98".



Part No. 16-03

T-Z SMOKEBOX INSPECTION PLUG 1.6" SCALE

THE T-Z COMPANY'S inspection plug serves the same function as the Huron plug. Both plugs were also used as tender drain plugs. The kit consists of a base and cover (chain not included). O.D.: .98".

THE SIPHON DIFFUSER attach-

es to the injector overflow

pipe to spread the overflow

discharge, preventing dam-

age to the ballast or kicking

dirt onto the locomotive.

Openings should face front

to 7/16".



Part No. 16–04

FLAG STANDARD 1.6" SCALE

THIS CASTING WAS USED on each end of the bumper beam and held flags or marker lamps. Use a $#4-40 \ge 1/2"$ socket head cap screw for attachment. Height: 1.375".



Part No. 16-05

NATHAN SPANNER NUT 1.6" SCALE

to back. Tubing sizes: 5/16"

SIPHON DIFFUSER 1.6" SCALE

Part No. 16-06

AAR SPANNER NUT 1.6" SCALE

THE NATHAN style of spanner nut was used to connect piping to boiler check valves and injectors. Available for 1/4", 5/16", 3/8" and 7/16" fittings. Use with couplings and tailpieces shown on the Pipe Fittings page.



Part No. 16-07

THE AAR STYLE of spanner nut is available for 1/4", 5/16" and 3/8" fittings. Use with couplings and tailpieces shown on the Pipe Fittings page.



Part No. 16-08



GRAHAM-WHITE SANDER 1.6" SCALE

THIS WORKING SANDER uses air at 1–2 psi. Sand flows into the body by gravity and a puff of air shoots the sand into the delivery pipe. It is supplied as a machined kit; simple assembly required. Length: 1.7".



Part No. 17–01

TENDER STEP 1.6" SCALE

THE TENDER STEP mounts at the front of the tender below the apron level. Available for R/H and L/H sides. Length: 1.17", width: .84".



Part No. 17–02

WASHOUT PLUG 1.6" SCALE

WASHOUT PLUGS were placed in the boiler to assist in boiler washing. These dummy plugs are mounted to the boiler jacket. The O.D. is 13/16" and the depth is 3/8". Available assembled or unassembled.



Part No. 17-04

CAB STAND 1.6" SCALE

THE CAB STAND mounts on the cab floor and supports the control rod from the injector water valve. Use a pair of u-joints to connect the water valve to the control rod. Height: .77", hole diameter: .086".



Part No. 17-05

BOILER STEP — ABOVE CENTER 1.6" SCALE

STEPS WERE PLACED on the boiler so that engine men could safely reach certain areas on top of the boiler. This is the upper-most step which was set above the boiler centerline. Length: 1.56".



Part No. 17-06

BOILER STEP — BELOW CENTER 1.6" SCALE

THIS STEP was placed below the boiler centerline, usually in an appropriate place on the smokebox. Length: 1.56".



Part No. 17–08

BOILER STEP - ON CENTER 1.6" SCALE

This STEP was placed at or slightly above the boiler center line. Length: 1.56".



Part No. 17-07

GLADHAND AND ANGLE COCK 1.5" SCALE

THIS SET OF 2 non-functional castings is 1.5" scale and is ideal for detailing your equipment. Each item sold individually or as a two-part set. Hose not included but commercially available.



Part No. 17-09

12



FLANGE 1.6" SCALE

USED IN PAIRS and bolted together, the large size fits the HANCOCK boiler check valve and can be used with 1/2" tubing. Hole diameter is .550". The 5/16" and 3/8" flanges fit 5/16" and 3/8" tailpieces and couplings.



Part No. 16–09

ALEMITE GREASE FITTING 1.6" SCALE

GREASE GUN COUPLER — ALEMITE FITTING

DISPLAY BASE

USE THIS SCALE grease fitting on your side rods. It features a spring loaded plunger in the body to keep out dirt. The 1/4"-28 thread is the same as used on "zerk" fittings. Installed height: .275".

THE GREASE GUN COUPLER

attaches to the end of a

grease gun by a female 1/8

NPT thread. An o-ring in

the end of the coupler pro-

vides the seal. A flexible

hose is recommended.



Part No. 17-10

UNIVERSAL JOINT 1.6" SCALE

FOR REMOTE connections on valves, etc., to handwheels inside the cab. The clevis can be drilled and tapped for #2-56 threads or soldered to a control rod (.086" dia.). Use .031" music wire for the pins. Supplied as a kit w/o the wire. O.A.L.: .47".



Part No. 16-10

ALEMITE GREASE FITTING SOCKET WRENCH

TO MAINTAIN A SCALE appearance, the hex on the ALEMITE fitting is not a standard size. Therefore, to install the fitting without damaging it or the side rod, use this special socket wrench.



Part No. 19-02

STAINLESS STEEL BALL

For use in check values, pumps or any other application requiring an accurate, corrosion-free ball, these non-magnetic type 316 stainless steel balls are available in 1/8", 5/32", 3/16", 7/32", 1/4", and 5/16" diameters.



Part No. 11-37

#10-56 TAP AND DIE

IDEAL FOR DISPLAYING small parts such as the whistle, the aluminum display base is tapped 1/4" MTP in the center. Felt is applied to the bottom. Diameter: 2.25".



Part No. 19-01

Part No. 19-03

THE #10-56 THREAD is used on handrails, balls and flanges. We offer these hard-to-find taps and dies for builders who plan to use our fittings. The tap is a plug type and the split die is 13/16'' diameter.



Tap: Part No. 19–04 Die: Part No. 19–05

13

HANDRAIL COLUMNS 1.6" SCALE





Part No. 20-01

Part No. 20-02

TANDRAIL COLUMNS (handrail stanchions) are avail- \mathbf{I} able in two scale sizes: 1" pipe and 1 1/4" pipe. The 1" pipe handrail was the most common size. The columns are available from 4" to 10" prototype length (1.6" scale) as measured from the bottom of the base to the center of the ball. Part numbers for the various sizes are shown on the price list.

You will need to drill and tap the columns as required. The 1" pipe handrail columns should have a .188" dia. hole in the ball end to take a 3/16" tube or rod. A #5-40, #6-32 or #8-32 thread should be tapped in the bottom of the column for mounting purposes.



Part No. 20-03



Part No. 20-04

The flanges are used to attach the handrail ends to cab walls, running boards and other flat surfaces. Flanges are available either fully machined or as blanks. The fully machined flanges are threaded with a #10-56 handrail hole along with four .047" dia. mounting holes, for #00-90 screws, drilled through the flange. The blank flange has a .157" dia. center hole and no mounting holes. We recommend using a #10-56 thread and we have #10-56 taps and dies available.

The handrail balls, used to cap off the end of an open handrail, are fully machined and threaded with a #10-56 thread for the 1" pipe handrails.

VALVE HANDWHEELS 1.6" SCALE



Part No. 11-22-187-U

Part No. 11-23-250-U

UR VALVE HANDWHEELS are sturdy yet delicate in appearance for that scale look. These are the same ones used on our globe and angle valves, and are offered separately for any application where a handwheel is needed. The smallest one, at left above, is .60" dia., fits our 3/16" valves and is cast in beryllium copper. Part No. 11-24

The others are in silicon bronze. All are unmachined. Part number 11-23-250-U is .70" dia. and fits our 1/4" valves, while part number 11-23-312-U is .77" dia. and fits our 5/16" valves. The largest wheel, part number 11-24, is a utility wheel and is .96" dia. It has a .12" square hole cast in.

AIR BRAKE FITTINGS

GLADHANDS AND ANGLE COCKS 2.5" SCALE

S UPERSCALE IS PROUD to present these precise reproductions of steam era air brake fittings. The gladhands are fitted with a customdesigned seal which makes a tight connection rated to 100 psi for air or water, and vacuum. Our angle cocks function just as the original — the valve handle lifts and locks in either the open or closed position. In keeping with the quality and detail you expect from SUPERSCALE, all



the pattern and patent numbers of the original are cast into the gladhand and angle cock bodies. The gladhands will pull apart without damaging any of the components of the system and, when under pressure, they will sound off with a pop just like those on the full-size cars. Built to 2 1/2" scale for reliability, these accurate fittings look great on 1 1/2" scale cars, and their popularity attests to their success.

Fig. A*



A B	Complete Set, includes P/N 21-01, 2 of 21-03, 2 of 21-04, 21-05, 21-06, 21-07 and 21-09 Gladhand and Hose Set, includes P/N 21-01, 2 of 21-03, 2 of 21-04, 21-05 and 21-06	21-A
	to fit hose to angle cock	21-B1
В	Gladhand and Hose Set, includes P/N 21-01, 2 of 21-03, 2 of 21-04, 21-05 and 21-08	
	to fit hose to female 1/8 NPT fitting	21-B2
С	Gladhand and Hose Set, includes P/N 21-01, 21-03, 21-04 and 21-05	21-C
D	Gladhand w/seal	21-01
Е	Angle Cock, threaded .346" SMPT [†] both ends	21-07
F	Seal, gladhand body	21-02
G	Clamp, hose D	21-03
Н	Nut and Bolt, #0-80	
I	Hose, 6" length 🗆	21-05
J	Hose Nipple, .346" SMPT [†] , fits hose to angle cock	
К	Hose Nipple, 1/8 NPT	21-08
L	Adapter Nipple, .346" SMPT [†] , adapts angle cock to train line	21-09
Μ	Dust Cover, fits gladhand	21-10
	[†] SMPT is a 2 1/2" scale version of the full-size pipe thread	

LOCOMOTIVE CHASSIS

FRAME PARTS 1.6" SCALE



Part No. 03–06

Part No. 03–07

Part No. 03–08

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	Part No.	Description
	03-01-NT	43" Wheel — Trailing Truck. Dia.: 4.90" (wheel w/o tire), max. axle dia.: 1.50", 4340 carbon steel
	03-01-T	43" Wheel — Trailing Truck. Dia.: 6.25" (wheel w/tire), max. axle dia.: 1.50", 4340 carbon steel
	03-02	Extended-Floor Coupler Pocket. Base dimensions: 2.56" x 1.87", overall height: 2.43", 17-4 stainless steel
	03-03	Combination Bumper Bracket and Pilot Truck Center Pin Support. Width at frame: 4.75", machined width, min.: 4.6", overall width: 9.5", length: 5.5", center line of hole to front: 2.62", 303 stainless steel
	03-04	Crosstie — Brake Shaft and Pilot Truck Radius Bar Fulcrum. Height: 5.6", width: 4.8", machined width, min.: 4.64", silicon bronze
	03-05	Frame Crosstie. Height: 3.2", width: 4.9", machined width, min.: 4.64", silicon bronze
	03-06	Crosstie — Guide Yoke and Brake Cylinder Support. Width at frame: 4.77", machined width, min.: 4.63", silicon bronze
	03-07	Support Knee — Link Yoke. R/H or L/H. Frame to top of casting: 1.73", R/H shown, silicon bronze
	03-08	Waist Sheet Support. Width at frame: 4.77", machined width, min.: 4.63", total width: 5.87", silicon bronze

LOCOMOTIVE CHASSIS

CROSSHEAD 1.6" SCALE



Part No. 04-08

This SILICON BRONZE CROSSHEAD is supplied as a kit of three pieces: a body and two shoes. The shoes contain prototypical oil wells which you can drill through so oil will flow to the bottom crosshead guide. The rear of the neck is flattened to allow side rod clearance. The tapered piston rod hole is cored from 5/8"to 1/2" for a prototypical fit, but is left rough for the builder to bore or ream as required. The nuts and bolts seen in the photo are not included.

SPECIFICATIONS

Length o/a: 3.81" Width: 1.25" Distance between guides, max.: 2.56", min.: 2.37" Width of guides, max.: .88", min.: .75" Shoe length: 3.43"

FRAME AND SUSPENSION PARTS 1.6" SCALE



Figure	Description	Part No.
А	Frame Filling — Driver Equalizer and Brake Hanger Lever Fulcrum. Length o/a: 4.16",	
	width: 1.73", bolt hole vertical spacing: 3.08", silicon bronze	04-01
В	Frame Filling — Brake Hanger Lever Fulcrum. Length o/a: 4.16", width: 1.73",	
	bolt hole vertical spacing: 3.08", silicon bronze	04-02
С	Fulcrum — Pilot Truck Equalizer. Length: 1.86", width: 1.96",	
	height: 1.65", hole dia.: .37", silicon bronze	04-03
D	Saddle — Axle Box. Height (spring seat to bottom of casting): 1.78",	
	spring opening: .83", frame opening: .90", silicon bronze	04-07
Е	Axle Box, 10" x 13". Hole dia.: 1.10", pedestal spacing: 2.07"	04-04-10x13
Е	Axle Box, 11" x 13". Hole dia.: 1.34", pedestal spacing: 2.14"	04-04-11x13
E	Axle Box, 12" x 13". Hole dia.: 1.43", pedestal spacing: 2.28"	04-04-12x13
F	Cellar, to fit 10" x 13" axle box	04-05-10x13
F	Cellar, to fit 12" x 13" axle box	04-05-12x13
G	Cellar Cover, to fit 10" x 13" cellar	04-06-10x13
G	Cellar Cover, to fit 12" x 13" cellar	04-06-12x13

LOCOMOTIVE CHASSIS

BRAKE RIGGING 1.6" SCALE



SPRING RIGGING 1.6" SCALE



Part No. 08-05

Part No. 08-06

Part No. 08–07

Part No. 08-08

Part No.	Description	Length	Width	Depth	Hole Ctrs.
08-01	Gib	.80"	.32"	.13"	—
08-02F	Spring Pad	.81"	.81"	.15"	—
08-02W	Spring Pad	.81"	.81"	.15"	—
08-03	Sword Hanger	1.67"	.53"	.53"	—
08-04	Sword Hanger	1.88"	.52"	.34"	—
08-05	Equalizer — Drivers	4.01"	.80"	.53"	3.47"
08-06	Transverse Equalizer — Rear	6.18"	1.07"	.20"	—
08-07	Hanger Lever — Long	3.23"	.53"	.30"	2.68"
08-08	Hanger Lever — Short	2.66"	.53"	.30"	2.14"

Part numbers 08-01, 08-02, 08-04 & 08-06 require no machine work. Part numbers 08-03, 08-05, 08-07 & 08-08 require reaming or boring. All parts are silicon bronze lost-wax castings.