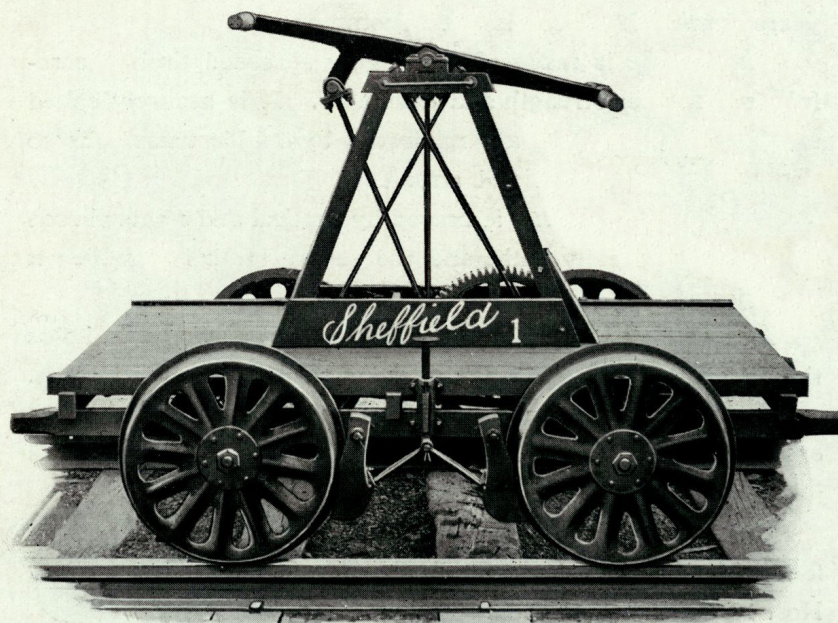


# Sheffield

## Hand Cars—Push Cars



BULLETIN 105F

(Copyright, 1917, by Fairbanks, Morse & Co.)



## Sheffield Hand Cars

**T**HE history of *Sheffield* Hand Cars is the history of the development of the Hand Car and every important improvement in its construction. Our factory has manufactured the *Sheffield* Cars for over 35 years, and the fact that they are used by railroads throughout the world, and are standard on a large number of them is a tribute to our success in building cars to meet the most exacting requirements of railroad service.

Every detail has been carefully considered to make the *Sheffield* cars the best that money can buy. Ten to fifteen years service for a car is not uncommon.

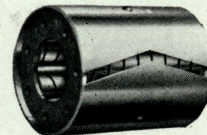
**The frame** is made of thoroughly seasoned timber, carefully selected for strength and durability. It is securely bolted and braced and the sills are reinforced by double truss rods so that the cars are rigid and strong.

**The gallows frame** is braced by vertical and diagonal rods so that it will rigidly withstand the severe strains to which it is subjected.

**The self-adjusting steady box** on the driving axle holds the pinion in proper mesh with driving gear under all conditions.

**Axle bearings** on all *Sheffield* Hand and Push Cars except Nos. 12, 33 and 111 Push Cars, are Standard with brass journal bearings.

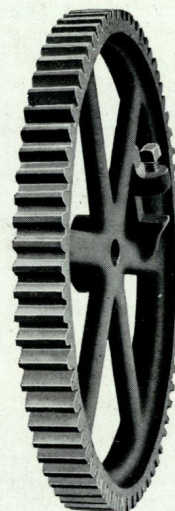
**Hyatt roller bearings** can be furnished for all Standard Hand and Push Cars except Nos. 12, 33 and 111, at extra price.



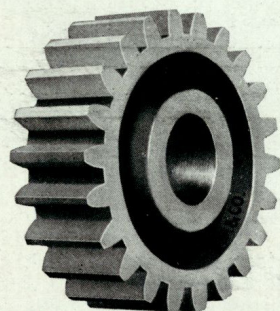


**Machine Cut Gears** are features of *Sheffield* cars, possessing many important advantages. All the teeth are made an exact size and shape and perfectly smooth, in contrast with the rough and uneven teeth on the ordinary cast gear. Result: The drive gear and pinion work together with a minimum amount of friction and wear, cars run much easier (a saving of time and labor), and the life of the gears is greatly prolonged (a saving of repairs).

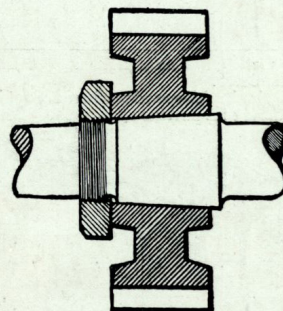
**Tapering Wheel Fit.** By making the ends of the axles tapering and boring the hubs of the wheels to fit, the screwing on of the nut forces the two cones together so as to make a tight fit without the troublesome and objectionable key-seating. By this method the wheels are kept absolutely true—not the case with keyseated wheels.



(Fig. RC5201)



(Fig. RC5202)



(Fig. RC5203)  
Showing Taper Fit for Pinion Axle

**Pinion Gear.** Provision has also been made for securing the pinion gear to the driving axle by tapering fit, because by the old method, the driving of the key forced this gear out of center with the axle, consequently it described an eccentric circle and would bind more or less on the drive gear at a certain point in every revolution. This of course, interfered with the smooth and easy running of the car. With the taper fit this gear revolves in a true circle.

**Insulated Wheels** are furnished on any of our standard hand cars for use where electric signals are in use. These are always extra and should be specially ordered if wanted.

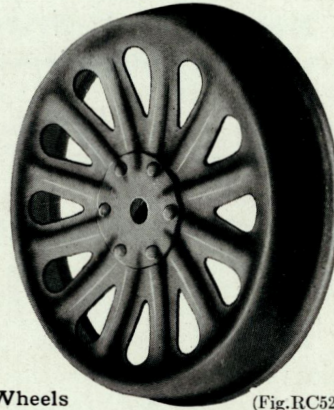
**The real and best test is actual service, and those wishing to determine which is the best car in this way will find us ready to offer liberal inducement to that end.**



## Sheffield Hand Cars

### Pressed Steel Wheels

So long have the *Sheffield* pressed steel wheels been on the market, so widely distributed and satisfactory have they been, that we doubt if there is a man in the road department of any railroad not familiar with their merits. Pressed to shape from toughened homogeneous steel plate, with dished and ribbed web, master car builders' turnover flange, it makes a light, strong and long wearing wheel for section cars. The hub is a drop forging, riveted to web and corrugated to fit the raised ribs. No surplus metal to add unnecessary weight; no parts to work loose. It is the pioneer pressed steel wheel, and experience has shown it combines in the best manner all the essentials of strength and great durability.



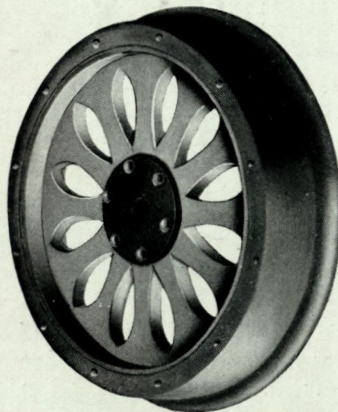
*Sheffield* Pressed Steel Wheels

(Fig. RC5204)

No.	Diam. Inches	Description	Shipping Weight Pounds	Code Word	Axle Size, Inches
H 1754	*18	$\frac{5}{16}$ -inch stock, 2.16-inch taper bore, for insulation.....	49	Magistral	2
H 1225	18	$\frac{5}{16}$ -inch stock, 1 $\frac{1}{2}$ -inch straight bore, key seated, heavy hub.....	49	Magistrate	2
H 1228	18	$\frac{5}{16}$ -inch stock, 1 $\frac{1}{2}$ -inch straight bore, smooth, heavy hub.....	49	Magnesia	2
H 1004	20	$\frac{1}{2}$ -inch stock, 1 $\frac{1}{16}$ -inch taper bore, standard hub.....	45	Magnify	1 $\frac{1}{2}$
H 1729	20	$\frac{1}{2}$ -inch stock, 1 $\frac{1}{16}$ -inch taper bore, standard hub, flange $\frac{1}{4}$ -in. high.....	40	Magpie	1 $\frac{1}{2}$
H 996	*20	$\frac{1}{2}$ -inch stock, 1.66-inch taper bore, for insulation.....	43	Mailable	1 $\frac{1}{2}$
H 1741	*20	$\frac{1}{2}$ -inch stock, 1.66-inch taper bore, for insulation, flange $\frac{1}{4}$ -in. high.....	39	Mailclad	1 $\frac{1}{2}$

Wheels with standard hubs can be bored otherwise up to 1 $\frac{1}{2}$ -inch diameter and with heavy hubs up to 1 $\frac{3}{8}$ -inch diameter.

\*Insulating bushings and washers are not included with the wheels above, but can be furnished at an extra price. When ordering insulations specify the wheel they are for and the size of bore at large end or the size of the axle.



(Fig. RC5205)

### Wood Center, Steel-Tired Wheel

This is a strong, serviceable wheel, and is preferred by some on account of running more quietly than the steel wheel. Except in hot, dry sections it will give as good service as the pressed steel.

It is especially adapted for use on roads that have electric block signals, inasmuch as the wooden centers form a perfect insulation between the tire and the axle.

It is a combination of steel and wood, the spokes being of hard maple thoroughly seasoned. The tire is of toughened steel  $\frac{3}{16}$ -inch thick, cone tread, master car builders' turn-over flange. Hub and hub plate for same, steel forging. The hub is 2 $\frac{1}{2}$  inches in diameter, upon which the inner ends of the spokes are closely fitted. These are tightly and securely held by the steel tire, which is forced on by a heavy press. The outside diameter of spokes and retaining rings are turned to furnish a continuous bearing for this tire.

*Sheffield* Wood Center Wheels

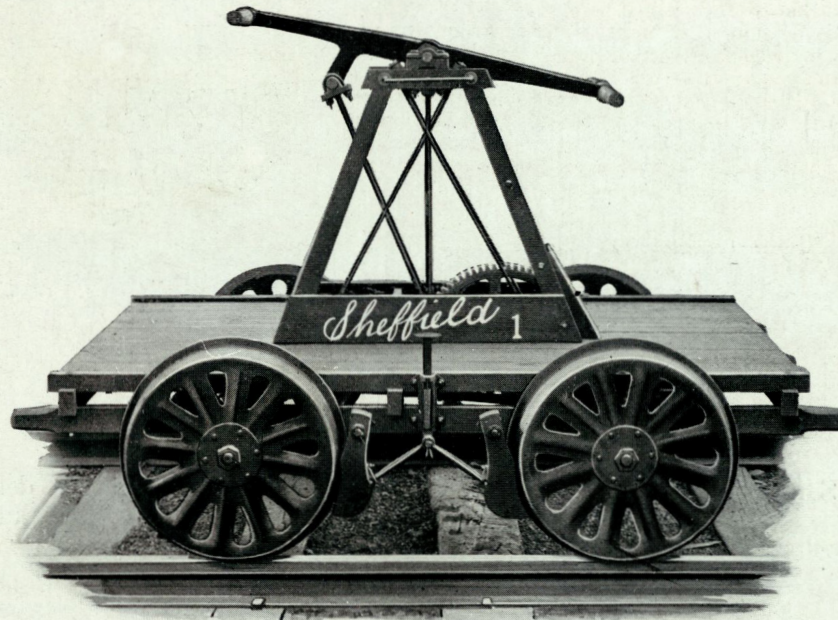
No.	Diam. Inches	Description	Shipping Weight, Pounds	Code Word	Axle Size, Inches
H 1010	20	1 $\frac{7}{16}$ -inch taper bore, standard hub.....	38	Madam	1 $\frac{1}{2}$
H 1011	20	1 $\frac{1}{2}$ -inch straight bore, key seated, standard hub.....	38	Madbrain	1 $\frac{1}{2}$
H 1012	20	1 $\frac{1}{2}$ -inch straight bore, smooth, standard hub.....	38	Madcap	1 $\frac{1}{2}$
H 1013	22	1 $\frac{7}{16}$ -inch taper bore, standard hub.....	42	Madden	1 $\frac{1}{2}$
H 1014	22	1 $\frac{1}{2}$ -inch straight bore, key seated, standard hub.....	42	Maddened	1 $\frac{1}{2}$
H 1015	22	1 $\frac{1}{2}$ -inch straight bore, smooth, standard hub.....	42	Maddening	1 $\frac{1}{2}$

Wheels with standard hubs can be bored otherwise up to 1 $\frac{1}{2}$ " diameter. Wheels with special heavy hubs can be bored otherwise up to 1 $\frac{3}{8}$ " diameter. Any of the above wheels can, when so ordered, be supplied with special heavy hubs at an extra price.



## Sheffield Hand Cars

$\frac{5}{105F}$



### No. 1 Standard Section Hand Car

These hand cars have a record for long service

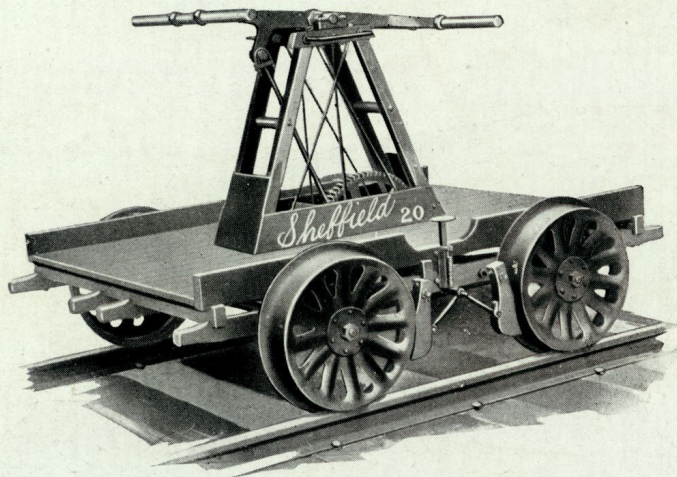
Platform, 6 feet 1 inch long, by 4 feet  $4\frac{1}{4}$  inches wide. Pressed Steel Wheels, 20 inches in diameter. Wood center wheels of same diameter can be furnished at an additional price. Capacity, 4,000 lbs.

Steel wheel cars can be insulated for use on roads having the electric block signal system.

Weight, 540 lbs. Packed for export, 760 lbs.; 39 cu. ft. Code word, Marmot.

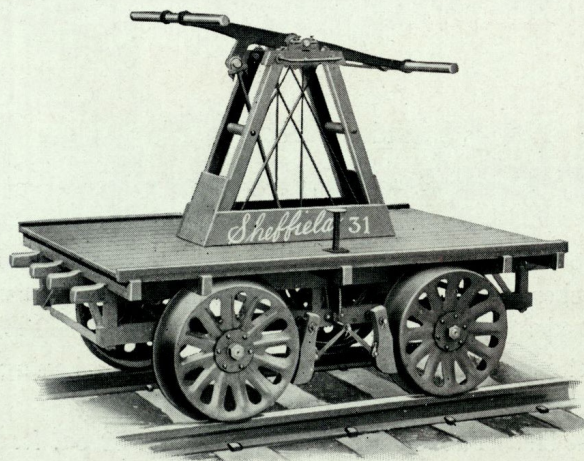


## Sheffield Hand Cars



### No. 20 Standard Section Hand Car

Same as No. 1, but with side rails extending 3 inches above deck. Capacity, 4000 lbs. Actual weight, 555 lbs. Packed for export, 800 lbs.; 45 cubic feet. Code word, Maroon.



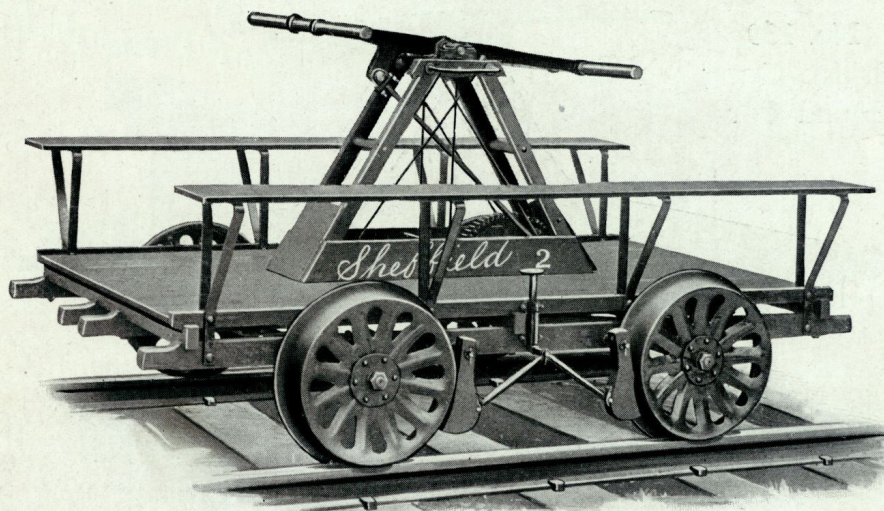
### No. 31 Narrow-Gauge Hand Car

Platform 6 feet 1 inch long by 4 feet wide. Pressed Steel Wheels, 20 inches in diameter. Capacity, 4,000 lbs. Actual weight, 525 lbs. Packed for export, 740 lbs.; 47 cu. ft. Code word, Marry.



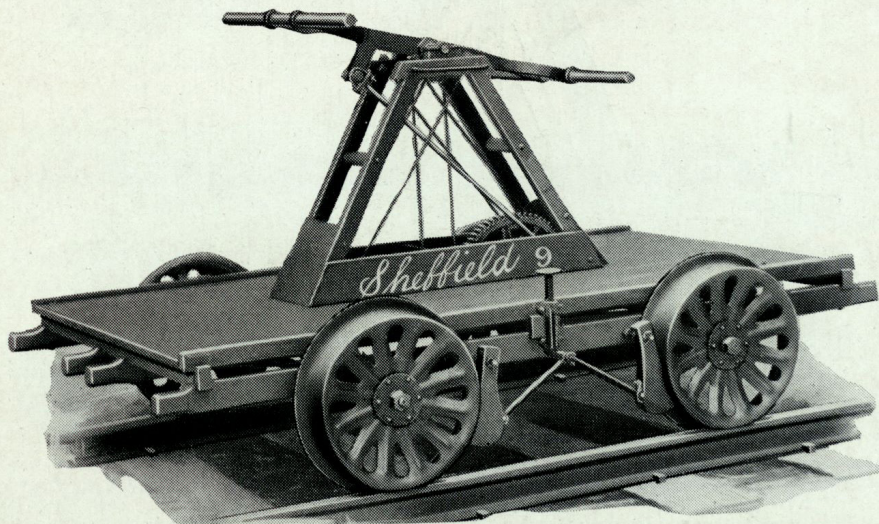
## Sheffield Hand Cars

7  
105F



### No. 2 Hand Car

Platform 7 feet 6 inches by 4 feet 4 $\frac{1}{4}$  inches. Frame heavier than No. 1 car. Seats running lengthwise over wheels, supported by four steel brackets. Pressed Steel Wheels, 20 inches in diameter. Wood center wheels of same diameter can be furnished at an additional price. Capacity, 4,000 lbs. Actual weight, 650 lbs. Packed for export, 890 lbs.; 48 cu. ft. Code word, Marquis.



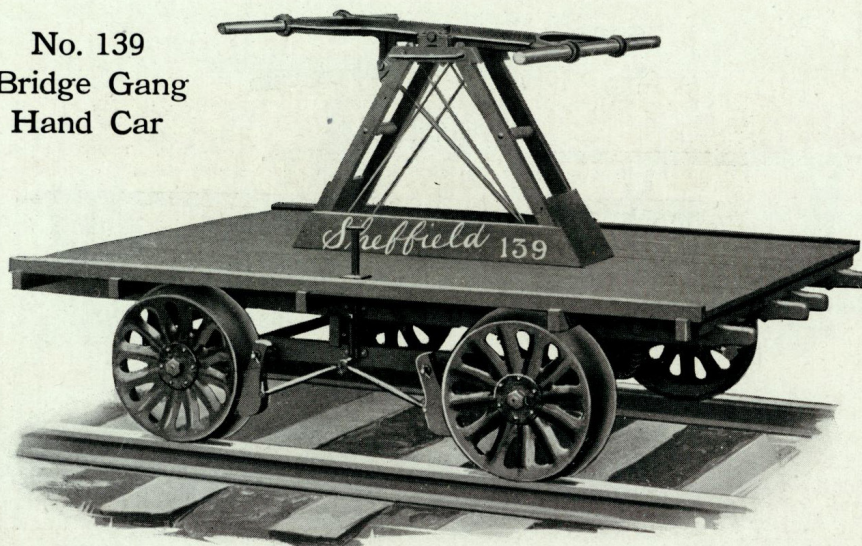
### No. 9 Hand Car

Same as No. 2, but without side seats. Capacity, 4,000 lbs. Actual weight, 570 lbs. Packed for export, 810 lbs.; 49 cu. ft. Code word, Marriage.



## Sheffield Hand Cars

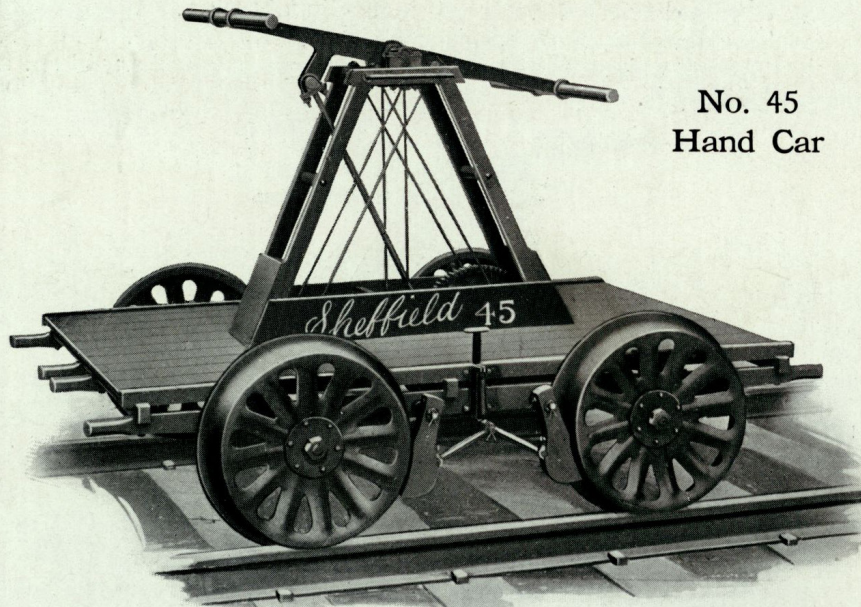
No. 139  
Bridge Gang  
Hand Car



Platform 8 feet long by 5 feet 8 inches wide. Pressed Steel Wheels, 20 inches in diameter. Axle,  $1\frac{1}{2}$  inches. Capacity, 4,000 lbs. Weight, 650 lbs. Packed for export, 950 lbs.; 87 cu. ft. Code word, Magellan.

This car is also built with side seats, similar to No. 2 Hand Car, when so ordered.

No. 45  
Hand Car

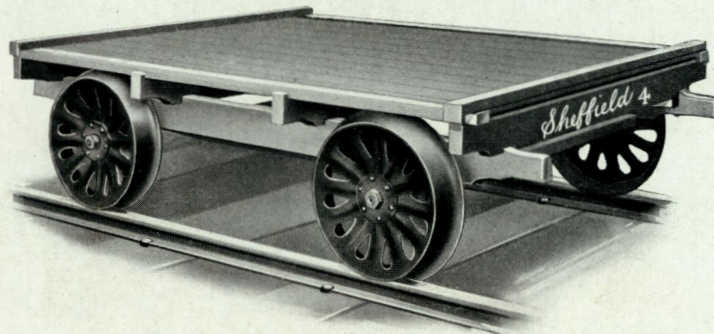


Designed to meet the demand for a lighter section hand car than ordinarily used. Platform 6 feet 1 inch long by 4 feet  $4\frac{3}{8}$  inches wide. The axles are  $1\frac{1}{2}$  inches diameter. Pressed Steel Wheels, 20 inches in diameter. A 20-inch or 22-inch diameter wood center wheel will be substituted for the 20-inch steel wheel, if preferred, at an additional price. Capacity, 2,500 lbs. Weight, 450 lbs. Packed for export, 670 lbs.; 31 cu. ft. Code word, Marplot.



## Sheffield Push Cars

9  
105F

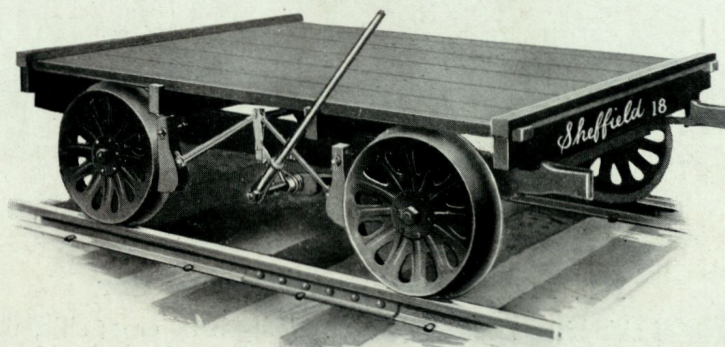


### No. 4 Standard-Gauge Push Car

Platform 6 feet  $10\frac{3}{4}$  inches by 5 feet  $6\frac{1}{4}$  inches. Pressed Steel Wheels, 20 inches in diameter. Best materials and strongly made. Deck cleated across each end of car. Cleat covered with  $2\frac{1}{4}$ -inch by  $\frac{3}{8}$ -inch steel strap. Capacity, 4,000 lbs. Actual weight, 500 lbs. Packed for export, 750 lbs.; 61 cu. ft. Code word, Major.

### No. 32 Narrow-Gauge Push Car

This is the narrow gauge form of No. 4 push car. Platform 6 feet  $10\frac{3}{4}$  inches long by 5 feet wide. Capacity, 4,000 lbs. Weight, 480 lbs. Packed for export, 720 lbs.; 55 cu. ft. Code word, Majority.

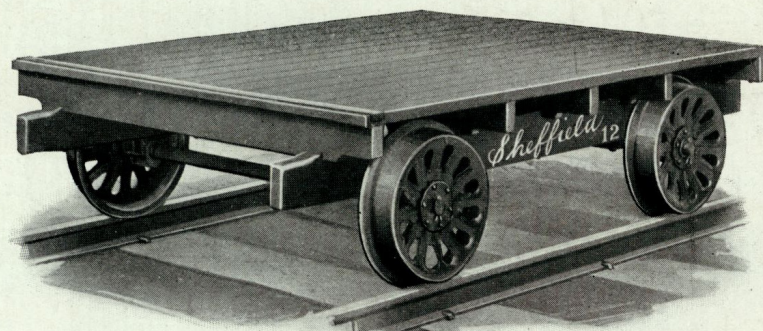


### No. 18 Push Car

Same as No. 4 push car, but furnished with socket lever brake, as shown. Capacity, 4,000 lbs. Actual weight, 560 lbs.; packed for export, 810 lbs.; 61 cu. ft. Code word, Matinee.



## Sheffield Push Cars

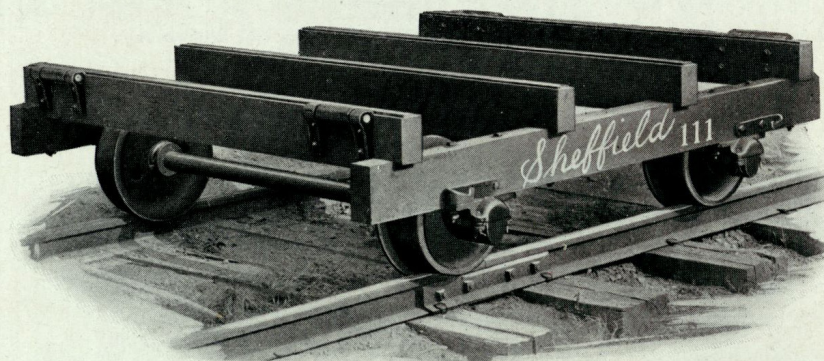


### No. 12 Extra Heavy Push Car

For construction work. Axles and frame timbers extra large size to carry heavy loads. Platform 7 feet  $\frac{1}{2}$  inch long by 5 feet  $8\frac{1}{4}$  inches wide. Pressed Steel Wheels, heavy pattern, 18 inches in diameter. Capacity, 8,000 lbs. Actual weight, 710 lbs.; packed for export, 960 lbs.; 69 cu. ft. Code word, Matchless.

### No. 33 Extra Heavy Push Car

This is the narrow gauge form of the No. 12 car. Platform 7 feet  $\frac{1}{2}$  inch long by 5 feet wide. Capacity, 8,000 lbs. Weight, 650 lbs. Packed for export, 850 lbs.; 46 cu. ft. Code word, Manz.



### No. 111 Heavy Track-Laying Car

Length of side sills, 7 feet 8 inches. Length of cross sills, 6 feet  $5\frac{1}{2}$  inches. Height above top of rails, 23 inches. Length of wheel base, 4 feet 5 inches. Four cast iron wheels, 16 inches in diameter. These are double plate chilled wheels, having  $5\frac{1}{2}$ -inch tread. One loose wheel and one tight wheel on each axle. Loose wheels placed diagonally opposite each other. Tight wheels are pressed on. Keyed on for export. Capacity, 16,000 lbs. Weight of car about 1,550 lbs.; packed for export, 1,840 lbs.; 76 cu. ft. Code word, Matting.



*Send for Catalogs*

*if interested in*

Velocipede Cars

Section Motor Cars

Inspection Motor Cars

Locomotive Water Cranes

Centrifugal Pumps

Steam Pumps

Oil or Gasoline Pumpers

Oil or Gasoline Engines

Marine Oil Engines

Electric Motors

Battery Charging Outfits



## *Sheffield* Hand and Push Cars

### FAIRBANKS, MORSE & CO. (INCORPORATED)

Chicago, Ill.

Atlanta, Ga.  
Baltimore, Md.  
Boston, Mass.  
Buenos Aires  
Cincinnati, Ohio  
Cleveland, Ohio  
Dallas, Tex.  
Denver, Colo.  
Des Moines, Ia.  
Detroit, Mich.  
Indianapolis, Ind.  
Jacksonville, Fla.  
Kansas City, Mo.  
London



Los Angeles, Cal.  
Louisville, Ky.  
Milwaukee, Wis.  
Minneapolis, Minn.  
New Orleans, La.  
New York, N. Y.  
Omaha, Neb.  
Portland, Ore.  
Salt Lake City, Utah  
San Francisco, Cal.  
Seattle, Wash.  
Spokane, Wash.  
St. Louis, Mo.  
St. Paul, Minn.

### The Canadian Fairbanks-Morse Co., Limited

Calgary  
Edmonton  
Hamilton  
Montreal

Ottawa  
Quebec  
Saskatoon  
St. John, N. B.

Toronto  
Vancouver  
Victoria  
Winnipeg