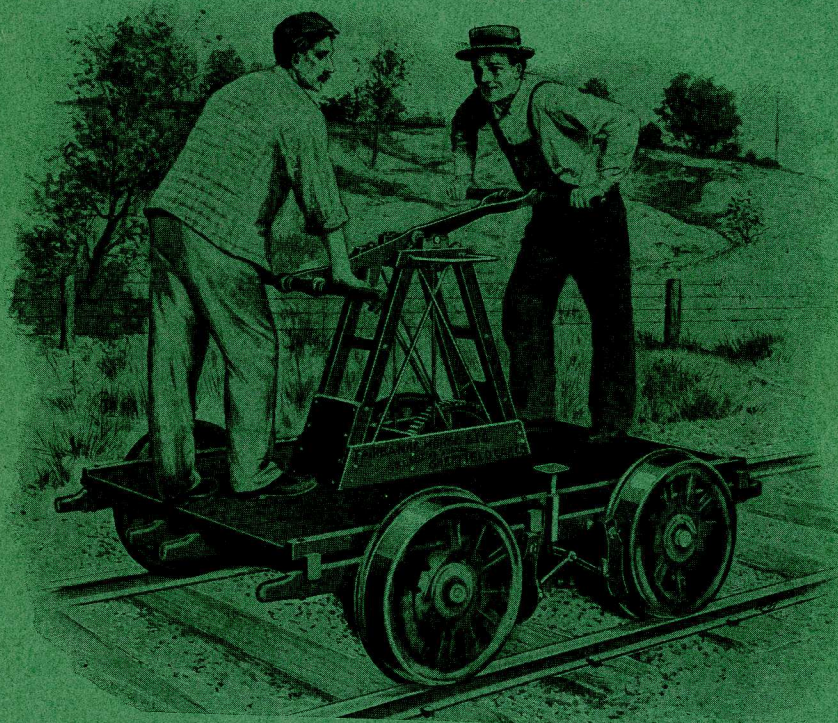


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RAILWAY HAND CARS AND PUSH CARS

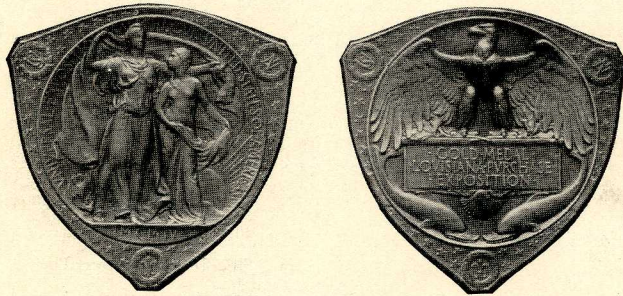
CATALOGUE No. 105A



FAIRBANKS, MORSE & CO.

Sheffield Hand Cars and Push Cars

CATALOGUE No. 105A



GOLD MEDAL

Awarded Sheffield Hand Cars and Push Cars at the
Louisiana Purchase Exposition,
St. Louis, in 1904

We reserve the right to make any changes in detail on our Hand Cars and Push Cars which may, in our opinion, develop an improvement or gain convenience for the operator, without reference to the description and cuts shown in this catalogue.

FAIRBANKS, MORSE & CO.

Address Our Nearest Warehouse

Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Louisville, Ky.
Detroit, Mich.

St. Louis, Mo.
Indianapolis, Ind.
Kansas City, Mo.
Omaha, Neb.
Minneapolis, Minn.
New York, N. Y.

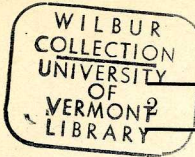


St. Paul, Minn.
Salt Lake City, Utah
Spokane, Wash.
Seattle, Wash.
Denver, Colo.
London, England

Los Angeles, Cal.
San Francisco, Cal.
Bakersfield, Cal.
Santa Maria, Cal.
Portland, Ore.

5M-5-07.

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Wilk
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We issue catalogues, pamphlets and circulars covering all of our different lines as classified in the following list. If interested in any particular subject, as indicated, we shall be pleased to furnish special printed matter on request.

ELECTRICAL BULLETINS.

Table with 2 columns: No. Pages and Description. Includes items like Alternating Current 'B' Type Constant Speed Induction Motors, etc.

MISCELLANEOUS MACHINERY, INCLUDING HOISTS, AIR COMPRESSORS, ETC.

Table with 2 columns: No. Pages and Description. Includes items like Air Compressors—Direct Connected to Engine and Belt Driven Types, etc.

FAIRBANKS SCALES.

Table with 2 columns: No. Pages and Description. Includes items like Agate Bearing Scales, Automatic Scales, etc.

PUMPING MACHINERY AND IRRIGATION

Table with 2 columns: No. Pages and Description. Includes items like Centrifugal Pumps, Domestic Water and Light, etc.

RAILWAY MACHINERY AND SUPPLIES.

Table with 2 columns: No. Pages and Description. Includes items like Coaling Stations, Electric Lighting for Railway Stations, etc.

GAS AND GASOLINE ENGINES AND SUC-TION GAS PRODUCERS.

Table with 2 columns: No. Pages and Description. Includes items like Gas Producers, Producer Gas Engines and Multi-Cylinder Vertical Engines, etc.

STEAM ENGINES AND BOILERS.

Table with 2 columns: No. Pages and Description. Includes items like Horizontal Tubular Boilers, Hartford Specifications—125 Lbs. Working Pressure, etc.

MINING MACHINERY.

Table with 2 columns: No. Pages and Description. Includes items like Mining Machinery, Nissen Booklet—Modern Stamp Milling, etc.

WINDMILLS, PUMPS AND GENERAL MACHINERY SUPPLIES.

Table with 2 columns: No. Pages and Description. Includes items like Machinery Supplies—Pumps, Windmills, Pipe and Fittings, etc.

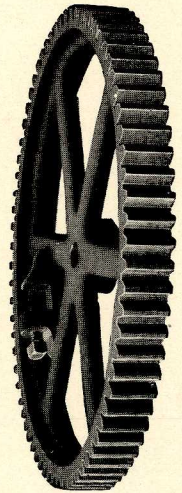
Section Hand Cars

IMPROVEMENTS IN FOUR-WHEEL CARS

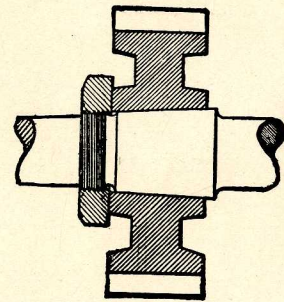
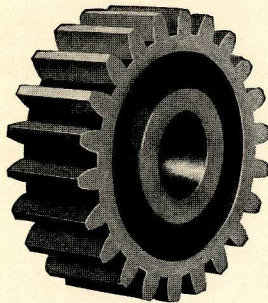
MACHINE CUT GEARS—These are exclusive features of our cars, possessing many important advantages. All the teeth are made an exact size and shape and perfectly smooth, in contrast with the rough and uneven teeth on the ordinary cast gear. Result: The drive gear and pinion work together with minimum amount 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 ends of axles tapering and boring hubs of wheels in same manner, 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 made absolutely perpendicular and revolve in a perfect circle—not the case with keyseated wheels.

UPSET COLLAR ON THE AXLE—This is a comparatively new feature which effectually stops lateral or end play after the axles become worn. The collar being a part of the axle itself will never give annoyance by coming loose, as was formerly sometimes the case.



PINION GEAR



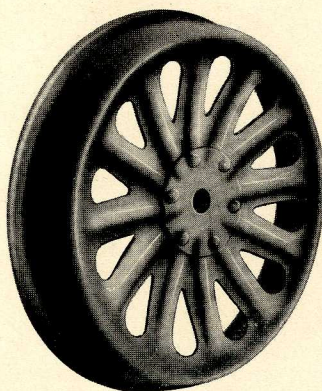
Showing Taper Fit for Pinion Axle

Provision has also been made for securing the pinion gear to driving axle by tapering fit, because by the old method, the driving of the key forced this wheel 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 wheel revolves in a true circle.

INSULATED AXLES—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.

There are several other good points on which we might enlarge, such as the self-adjusting steady box on driving axle, the bracing of the gallows frame by vertical and diagonal rods, the bracing of frame and reinforcement of timbers by double truss rods, but most of these are too well known to need special mention here.

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.



Pressed Steel Wheels

PRESSED STEEL WHEELS—So long have our 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' turn-over flange, makes the lightest, strongest and best wearing wheel for section cars ever made. Hub is a drop forging, riveted to web. 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.

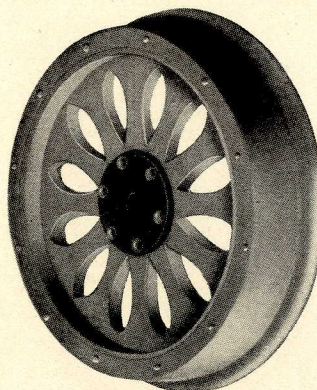
PRESSED STEEL WHEELS

No.	Diam., Inches	Description	Shipping Weight, Pounds	Code Word	Price
H 1225	18	$\frac{5}{16}$ -inch stock, $1\frac{1}{2}$ -inch straight bore, keyseated.....	50	Stelwel	\$4.50
H 1228	18	$\frac{5}{16}$ -inch stock, $1\frac{1}{2}$ -inch straight bore, smooth.....	50	Stelyim	4.50
H 1073	20	-inch stock, $1\frac{1}{8}$ -inch taper bore.....	25	Stelzon	4.50
H 688	*20	-inch stock, $1\frac{1}{8}$ -inch taper bore for insulated wheel.....	25	Stelbup	4.50
H 1001	20	-inch stock, $1\frac{1}{8}$ -inch taper bore.....	25	Stelcas	4.50
H 778	*20	-inch stock, $1\frac{1}{8}$ -inch taper bore for insulated wheel.....	25	Stelfit	4.50
H 993	20	-inch stock, $1\frac{1}{8}$ -inch taper bore.....	44	Stelhow	4.50
H 996	*20	-inch stock, $1\frac{1}{8}$ -inch taper bore for insulated wheel.....	44	Stelkux	4.50
H 1243	20	-inch stock, $1\frac{1}{8}$ -inch taper bore.....	46	Stellaz	4.50
H 679	*20	-inch stock, $1\frac{1}{8}$ -inch taper bore for insulated wheel.....	46	Stelmeb	4.50
H 998	24	-inch stock, $1\frac{1}{8}$ -inch taper bore.....	60	Stelnic	5.00

Wheels can be bored otherwise up to $1\frac{1}{8}$ -inch diameter.

*Insulating bushing and washers not included with wheels above.

Insulating bushing and washers, per wheel.....\$0.55



Wooden 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.

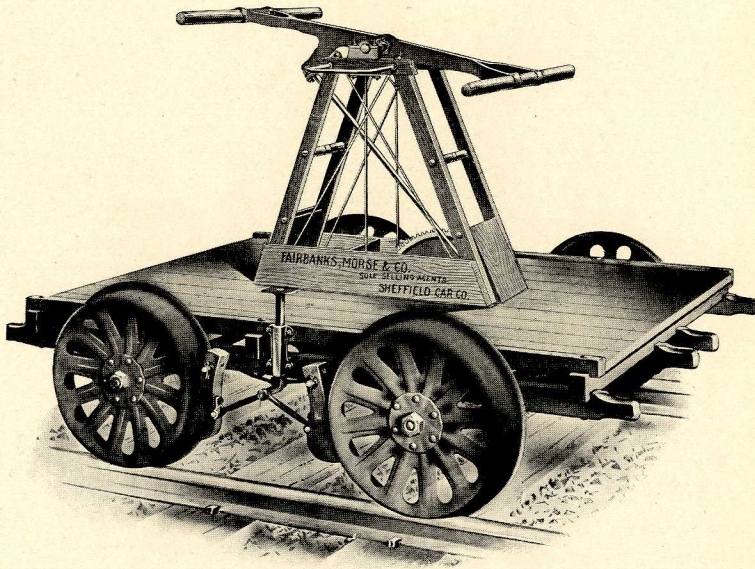
It is especially adapted for use on roads that have electric block signals, inasmuch as the wooden centers form a perfect insulation between the tire and the axle.

It is a combination of steel and wood, the spokes being of hard maple thoroughly seasoned. The tire is of toughened steel $\frac{1}{4}$ inch thick, cone tread, master car builders' turn-over flange. Hub and plate for same, steel forging. The hub is $2\frac{1}{2}$ inches in diameter, upon inner end of which spokes are closely fitted. These are driven tightly on hub 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.

WOOD CENTER WHEELS

No.	Diam., Inches	Description	Shipping Weight, Pounds	Code Word	Price
H 1010	20	$1\frac{7}{8}$ -inch taper bore.....	38	Woodwel	\$4.50
H 1011	20	$1\frac{3}{8}$ -inch straight bore, keyseated.....	38	Woodyim	4.50
H 1012	20	$1\frac{3}{8}$ -inch straight bore, smooth.....	38	Woodzon	4.50
H 1013	22	$1\frac{7}{8}$ -inch taper bore.....	40	Woodbup	4.50
H 1014	22	$1\frac{3}{8}$ -inch straight bore, keyseated.....	40	Woodcas	4.50
H 1015	22	$1\frac{3}{8}$ -inch straight bore, smooth.....	40	Woodfit	4.50
H 1016	24	$1\frac{7}{8}$ -inch taper bore.....	50	Woodhow	5.00
H 1017	24	$1\frac{3}{8}$ -inch straight bore, keyseated.....	50	Woodkux	5.00
H 1018	24	$1\frac{3}{8}$ -inch straight bore, smooth.....	50	Woodlaz	5.00
H 1019	26	$1\frac{7}{8}$ -inch taper bore.....	65	Woodmeb	5.50
H 1020	26	$1\frac{3}{8}$ -inch straight bore, keyseated.....	65	Woodnic	5.50
H 1021	26	$1\frac{3}{8}$ -inch straight bore, smooth.....	65	Woodpod	5.50

Wheels can be bored otherwise up to $1\frac{3}{4}$ -inch diameter.



No. 1 Standard Section Hand Car

(STANDARD GAUGE)

Weight, 525 lbs. Packed for export, 835 lbs.

Code Word, Marmot

THE SHEFFIELD HAND CARS ARE THE BEST MADE

Platform, 6 feet long by 4 feet 4 inches wide. Wheels, all-steel or wood center, 20 inches in diameter. Steel wheels are standard and always furnished unless otherwise ordered.

Diameter of wheels—20-inch wheels are furnished on all hand cars unless otherwise specified, but any other size ordinarily used can be furnished if desired.

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

Improved Pressed Steel Gallows Frame

PATENTED

Formed from a single sheet of metal

This style frame can be furnished instead of the usual wooden gallows frame when specially ordered, and at extra cost, on the following cars: Nos. 1, 20, 25, 27 and 31.

