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Patented May 14, 1901.

W. E. WILDER.

DRAFT BAR CONSTRUCTION FOR ROLLING STOCK.

(Application filed Jan. 19, 1900.)

(No Model.)

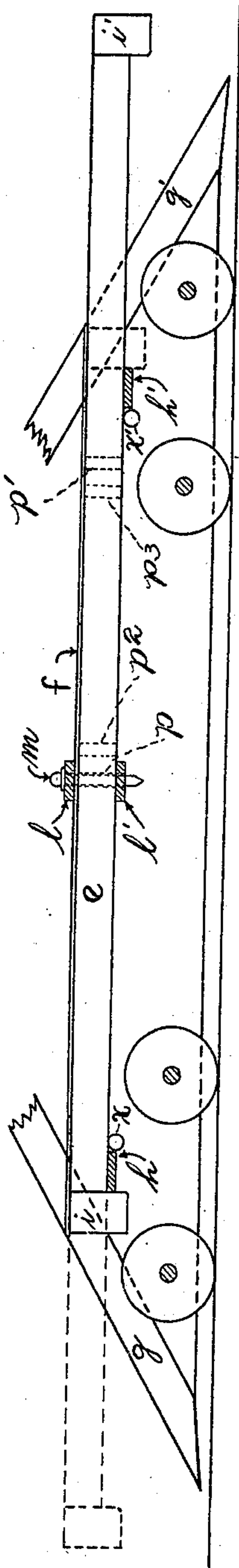


Fig. 1

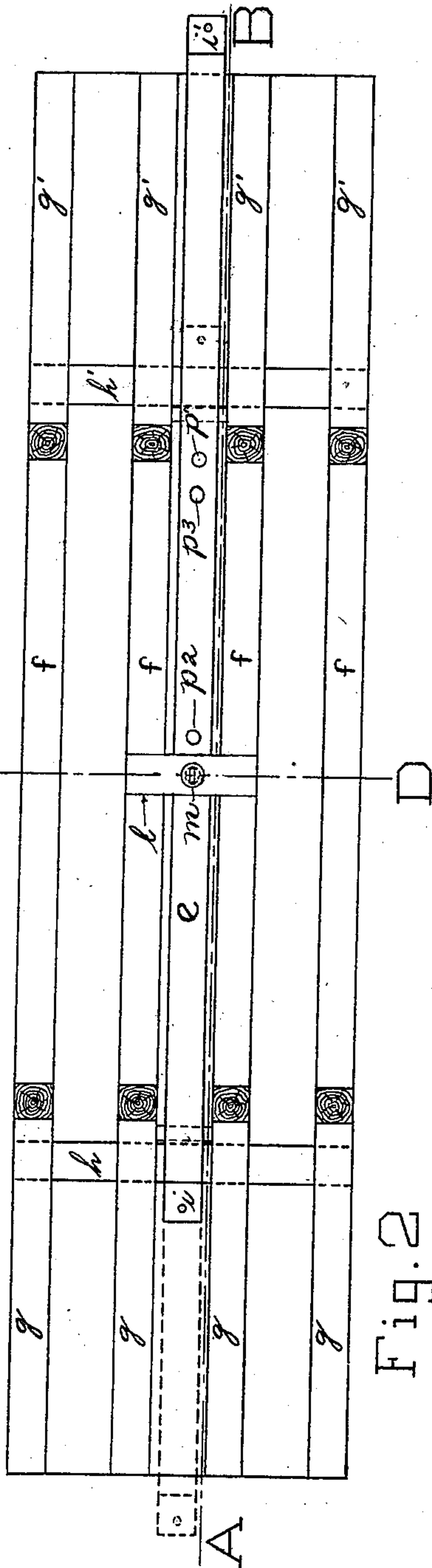


Fig. 2

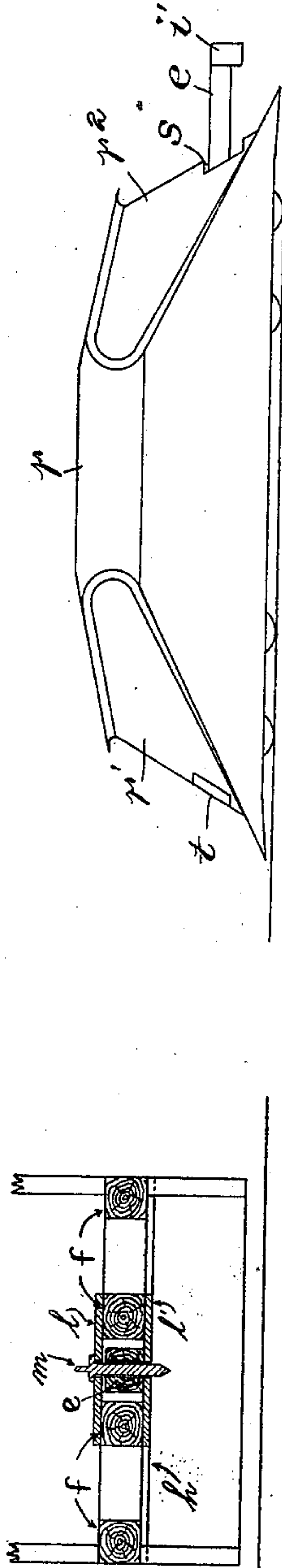


Fig. 3

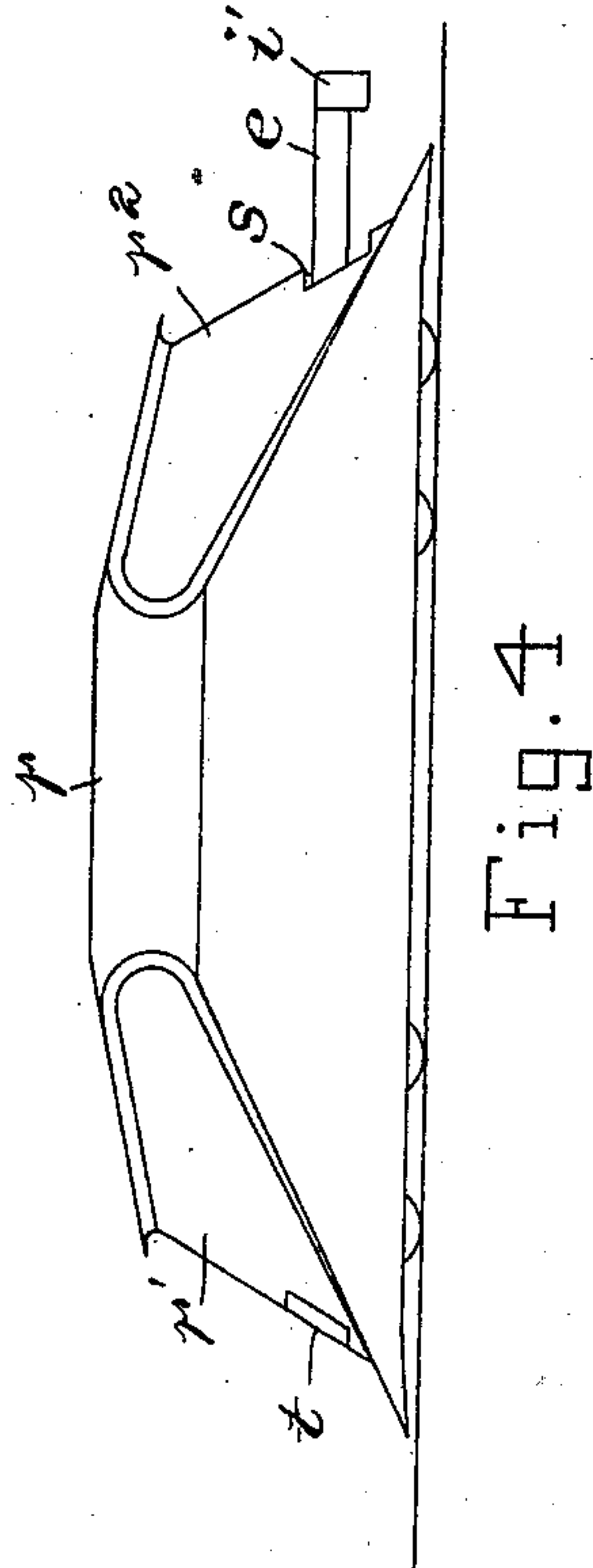


Fig. 4

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## DRAFT-BAR CONSTRUCTION FOR ROLLING-STOCK.

SPECIFICATION forming part of Letters Patent No. 674,328, dated May 14, 1901.

Application filed January 19, 1900. Serial No. 1,986. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. WILDER, of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Draft-Bar Constructions for Rolling-Stock, of which the following is a specification.

This invention relates in general to double-ended rolling equipment for railways, and, as hereinafter described, relates more particularly to double-ended railway snow-plows.

The invention has for its object to provide an improved draft-bar construction for equipment of this character, as more fully hereinafter explained, and pointed out in the claims.

Of the accompanying drawings, Figure 1 represents a vertical section of the lower framing of a snow-plow provided with my improvement. Fig. 2 represents a horizontal sectional view thereof. Fig. 3 represents a section on the line C D of Fig. 2. Fig. 4 represents a side elevation of a complete plow having my improvement.

The same reference characters indicate the same parts in all the figures.

The use of double-ended snow-plows necessitates the employment of a buffer or push-bar at both ends, and the construction of the prows or snow-clearers is such that this buffer or coupling must project a considerable distance beyond their slanting faces. These faces when used for clearing snow would be considerably obstructed if the said coupling were allowed to remain projecting to its full extent or to any considerable extent. As applied to double-ended snow-plows my invention overcomes this difficulty by the provision of an elongated draft-bar which is movable lengthwise of the plow, so that either of its ends can project beyond the end of the plow and be utilized as a push-beam, while the opposite end is retracted within the plow and the aperture in that end of the plow closed over, so as to provide a smooth and unobstructed prow or snow-clearer.

Referring to the drawings,  $f f$  represent the sills or floor-beams which form the lower framing of the plow, and  $g g'$  represent the inclined end timbers which form the main framing of the prows at the two ends of the plow.

In Fig. 4,  $r$  represents the outer casing or body of the plow, and  $r' r^2$  represent the snow-clearers or prows, having inclined faces of the usual or any suitable construction and arrangement.

$h h'$  represent bolsters or other transverse frame-bars running across the plow underneath the floor-beams  $f f$ , and  $l l'$  represent plates or bars connecting the two middle sills or floor-beams  $f f$  and located above and below the latter. The bolsters  $h h'$  and the lower plate  $l'$  support and guide an elongated draft bar or beam  $e$ , which extends from end to end of the plow and is adapted to project considerably beyond either end of the plow.  $i i'$  represent buffers located on the two ends of the draft-bar  $e$  and provided with suitable coupling members adapting the bar to be coupled to a draft or push bar on any other car or piece of rolling equipment. The construction and arrangement are such that one end of the draft-bar  $e$  can be extended a considerable distance beyond the corresponding end of the plow, while the opposite end of the draft-bar is retracted within or behind the opposite end of the plow. This disposition of the parts is represented in Figs. 1 and 2 by full lines and can be reversed when the opposite end of the plow is to be used, as illustrated by broken lines in the said figures. In order to secure the draft-bar to the plow in either of these positions, a suitable locking device may be provided, such as illustrated in Figs. 1, 2, and 3, and consisting of a locking-pin  $m$ , occupying a fixed socket formed by holes in the upper and lower plates  $l l'$  and adapted to pass through one or the other of two vertical holes  $p p'$ , formed at a suitable distance apart in the draft-bar  $e$ . Other holes, such as  $p^2 p^3$ , may be provided for the locking-pin for the purpose of varying the distance to which the end of the bar is extended beyond the end of the plow.

As seen in Fig. 4, the prow  $r^2$  is provided with an aperture  $s$ , through which the end of the draft-bar passes, and the prow  $r'$  at the opposite end of the plow is provided with a similar aperture, which is shown as closed by a door or other closure  $t$ , which preserves the continuity of the face of the snow-clearer or prow, so as to leave the same unobstructed. When



this end of the plow is used as the rear end, the opposite end being employed as the snow-clearer, the aperture having the door *t* is open, and the said door or closure or a similar one is applied to the aperture *s*, the draft-bar being then extended through the opening in the prow *r'*. This adjustment, it will be seen, is very simple and easily made, and it makes the plow an extremely efficient one for use in either direction without being turned around.

The construction illustrated and described comprises a draft and push bar which is supported to slide freely longitudinally of the car when not locked, said bar and its support constituting two members of the connection, which enables the car to be moved by power externally applied, such as an engine or another car coupled to one end of said bar, as hereinbefore described. One of said members (in the present instance the bar) has a plurality of stop or lock devices at different distances along its length, consisting of the vertical holes before mentioned. The other member has means for cooperating with said holes—viz., the pin *m*—for holding said bar in its adjusted position. The said stop or lock devices and the means cooperating therewith, in connection also with the structure whereby the draft and push bar may be slid freely longitudinally of the car when the pin is removed, enable said bar to be quickly adjusted either to a considerable extent or to a lesser extent, it requiring no greater appreciable time to effect a considerable adjustment than for a slight adjustment.

My invention is not confined to snow-plows, but may be applied to other cars or rolling equipment, such as lumber or logging cars, where the load frequently projects a considerable distance beyond the end of the car and renders the use of an adjustable draft or push bar advantageous.

Suitable antifriction-rollers *x x'* may be employed to make the bar move easily from one adjustment to another.

I claim—

1. A car or other piece of rolling equipment for railways, having a draft and push bar supported to slide freely longitudinally of the car, said bar and its support constituting two members of the connection for moving the car by power externally applied, one of said members having a plurality of stop or lock devices at different distances along its length, and the other having means for cooperating therewith to enable said bar to be quickly adjusted lengthwise of the car.

2. A car or other piece of rolling equipment for railways, having a draft and push bar freely movable longitudinally to different degrees of projection beyond the car and having a series of vertical holes corresponding to the said different adjustments, a pin adapted to enter any of said holes, and members with pin-sockets arranged on the car above and below the said bar and adapted to receive said pin, whereby said bar may be longitudi-

nally adjusted to a considerable extent in substantially the same length of time as required for a lesser adjustment.

3. A car or other piece of rolling equipment for railways, having a draft and push bar movable lengthwise of the car, and its ends adapted to project alternately beyond the respective ends of the car, and means to fix said bar to the car with either end projecting beyond the car and the other retracted within or behind the end of the car.

4. A car or other piece of rolling equipment for railways, having a draft and push bar movable lengthwise of the car, and its ends adapted to project alternately beyond the respective ends of the car, a locking-pin mounted in a socket on the car, and a series of holes in the bar adapted to receive the locking-pin and so located as to fix the bar with either end projecting beyond the corresponding end of the car, and the other end retracted within or behind the end of the car.

5. A railway snow-plow provided with prows or snow-clearers at both ends, and having a draft and push bar movable lengthwise of the plow and its ends adapted to project alternately beyond the respective ends of the plow, apertures in the prows or snow-clearers through which the bar may project, means to fix the bar to the plow with either end projecting beyond the corresponding end of the plow and the other end retracted within the plow, and means to close the aperture corresponding to the retracted end of the bar.

6. A car or other piece of rolling equipment for railways, having a draft and push bar supported to be moved freely longitudinally of the car, means for locking said bar against longitudinal movement in one of a plurality of predetermined positions, and antifriction-rollers for easing the movement of said bar.

7. A railway-car provided at each end with a snow-plow having a long coupling or push bar movable lengthwise of the car or snow-plow, and its ends adapted to project alternately beyond the inclines at opposite ends of the snow-plow, openings in both ends of the car or snow-plow through which the push-bar projects, means to fix or secure the bar to the snow-plow with either end projecting beyond the corresponding incline or end of the snow-plow, while the other end of the bar is retracted or drawn within the snow-plow, substantially as described.

8. A railway-car provided at each end with a snow-plow having a long coupling or push bar movable lengthwise of the car or snow-plow and its ends adapted to project alternately beyond the inclines at opposite ends of the snow-plow, openings in both ends of the car or snow-plow through which the push-bar projects, and means to close such opening at the retracted end of the bar, means to fix or secure the bar to the snow-plow with either end projecting beyond the corresponding incline or end of the snow-plow, while the other end of the bar is retracted or drawn



within the snow-plow, substantially as described.

9. A railway snow-plow having a solid-surfaced snow-clearing end or prow provided  
5 with an aperture, a draft and push beam permanently associated with the plow and movable longitudinally thereof to project its coupling end through said aperture beyond the

prow or retract it within the plow, and a closure for said opening.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM E. WILDER.

Witnesses:

R. M. PIERSON,  
M. B. MAY.

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