No. 841,623. PATENTED JAN. 15. 1907.

H. F. CASTLE.

WHEEL RUNNER FOR SLEDS.

APPLICATION FILED JULY 19, 1906.

2 SHEETS—SHEET 1.

Fig. I.

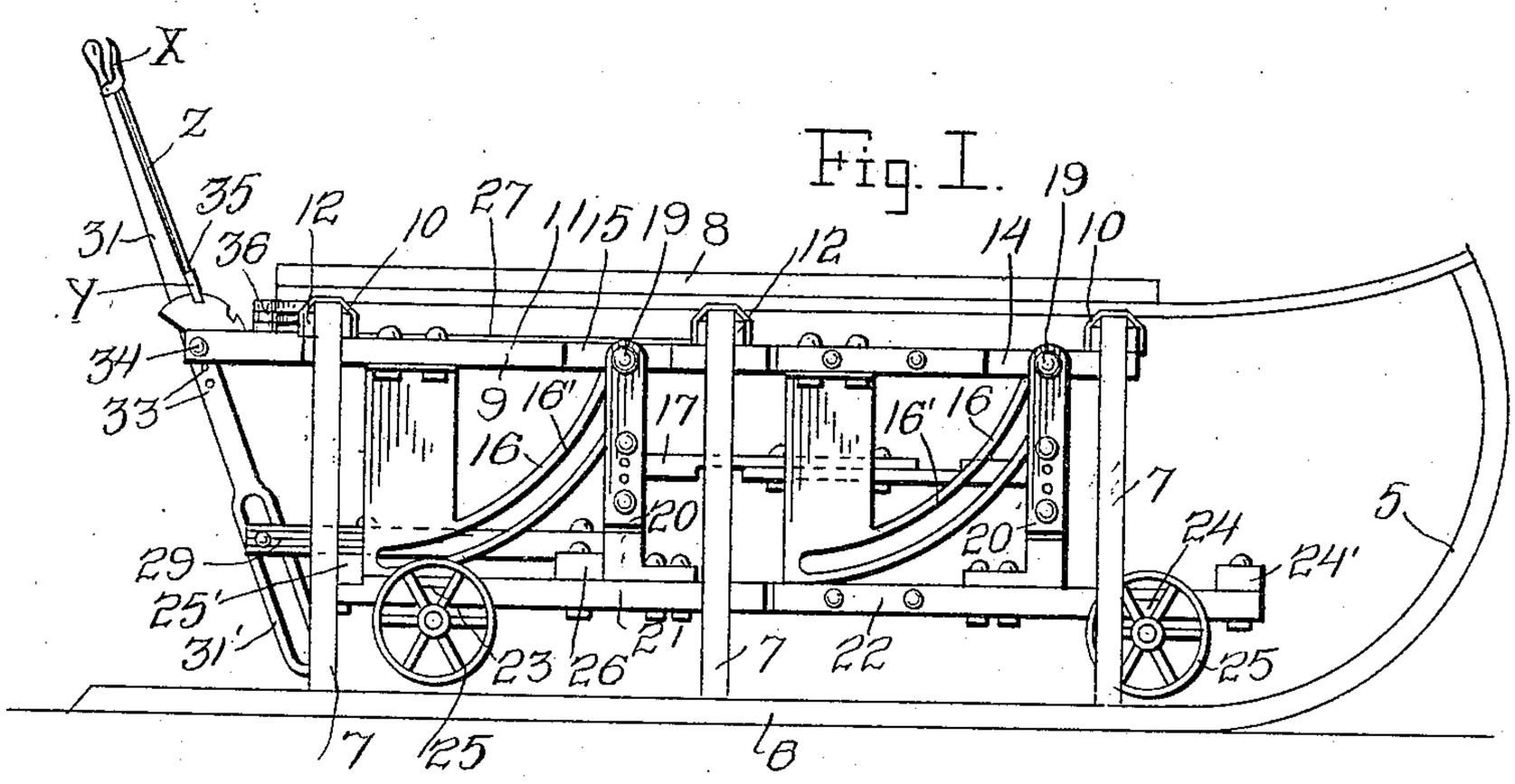
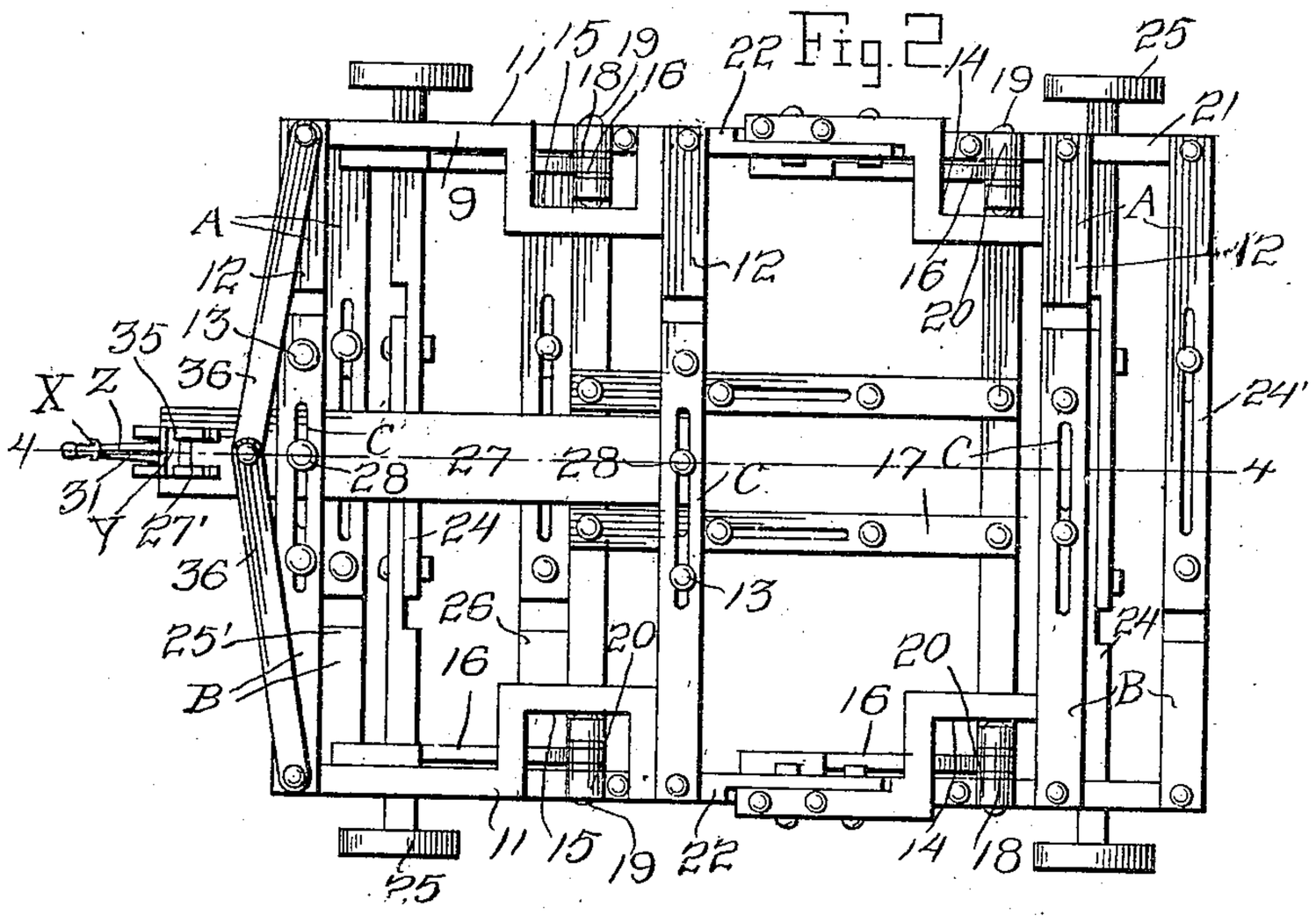


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

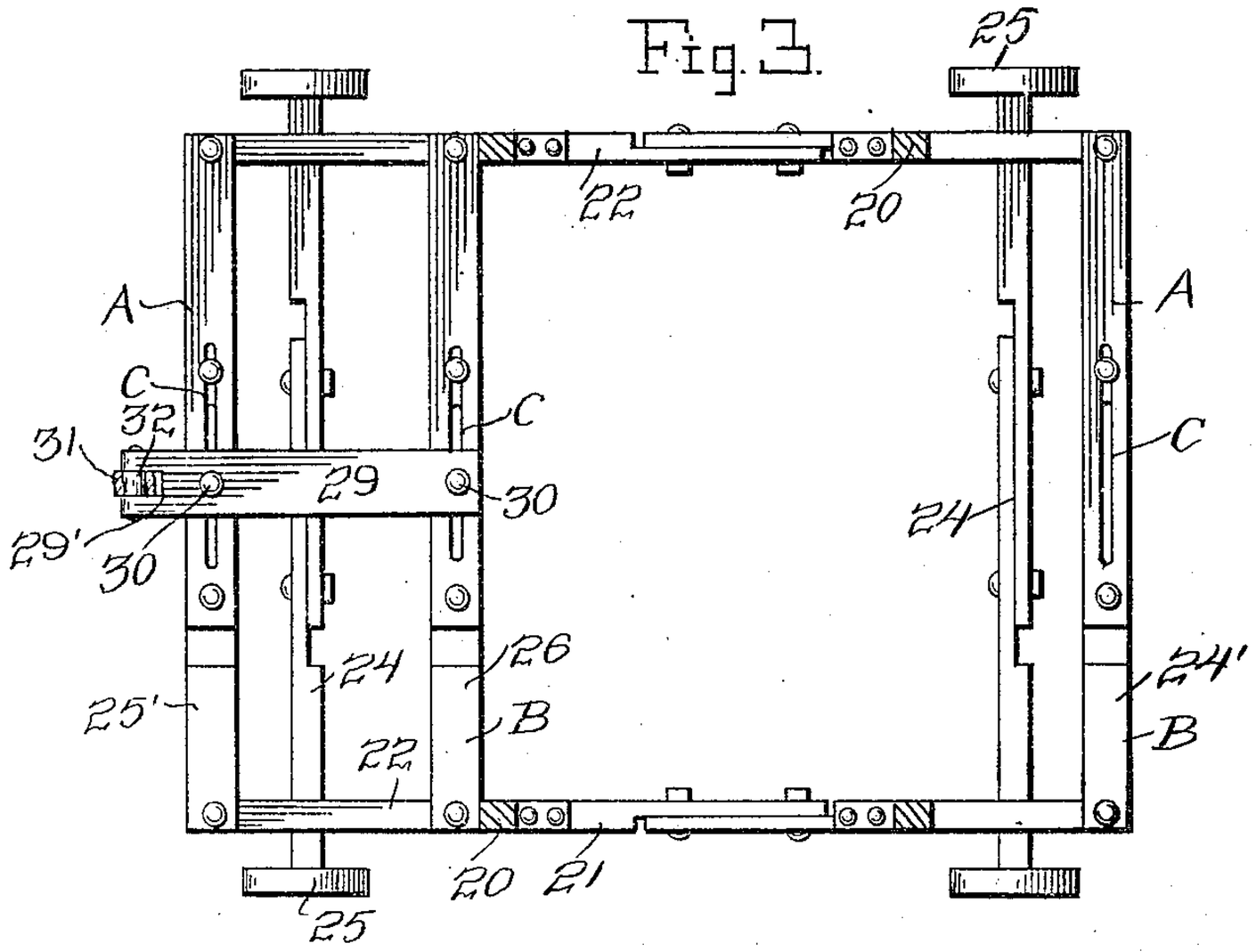
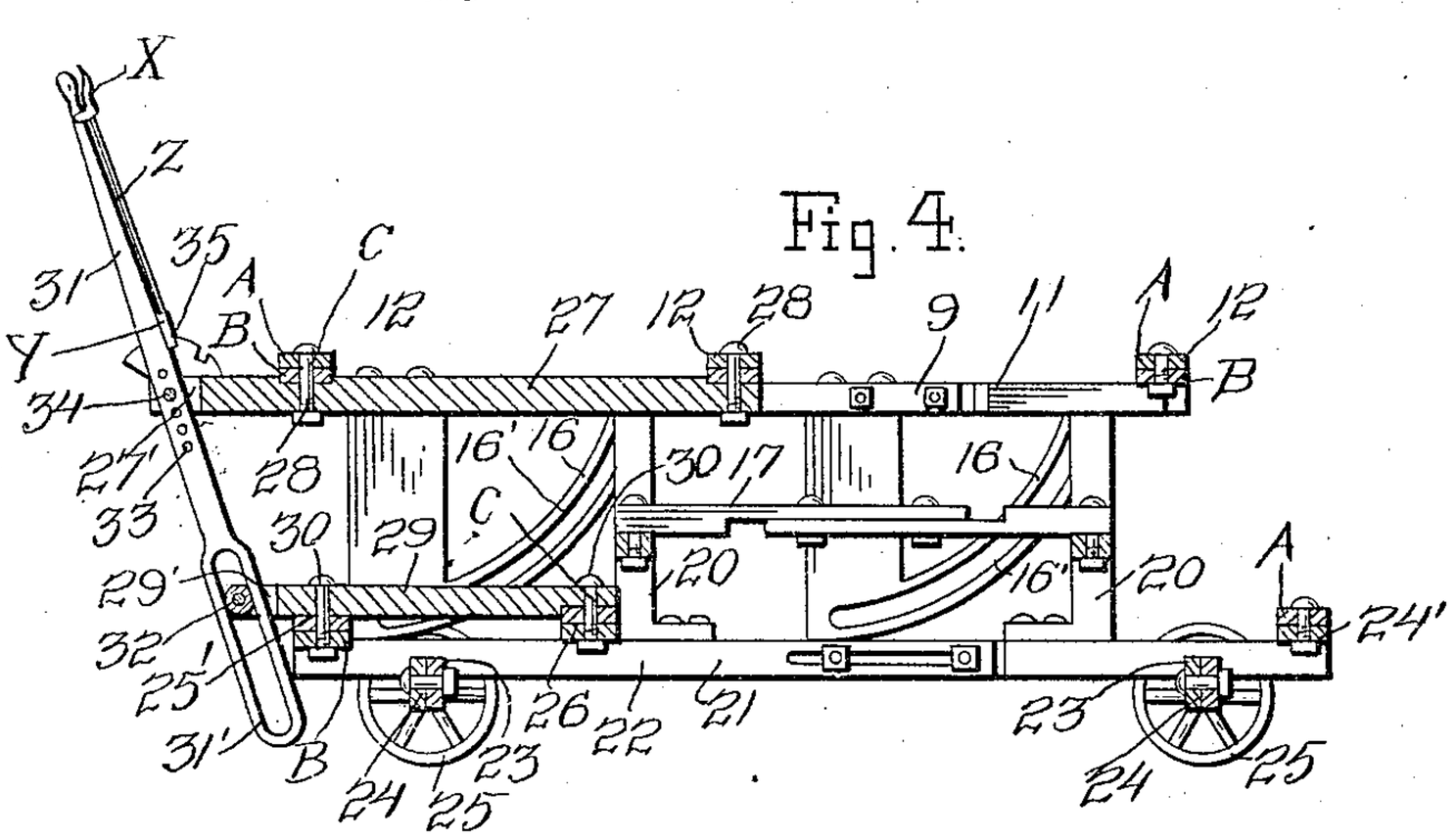


Fig. 4.



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WHEEL-RUNNER FOR SLEDS.

No. 841,623. Specification of Letters Patent. Patented Jan. 15, 1907.

Application filed July 19, 1906. Serial No. 326,898.

To all whom it may concern:

Be it known that I, HARRY F. CASTLE, a citizen of the United States, residing at Utica, in the county of Oneida, State of New York, have invented certain new and useful Improvements in Wheel Attachments for Sleds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sleds, and more particularly to attachments therefor, and has for its object to provide a wheel attachment so constructed that the wheels may be easily and quickly moved into and out of position to support the sled with the runners clear of the ground, so that it may be easily transported over areas free from snow.

Another object is to provide an attachment adjustable to suit sleds of different sizes.

It is to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

In the drawings forming a portion of this specification, and in which like characters of reference indicate similar parts in the several views, Figure 1 is an elevational view of a sled provided with the present invention. Fig. 2 is a top plan view of the attachment removed. Fig. 3 is a horizontal section showing the lower frame in top plan. Fig. 4 is a central longitudinal section on line 4 4 of Fig. 2.

Referring now to the drawings, there is shown a sled 5, including runners 6, connecting-bows 7, and the usual top board 8. A frame 9 is secured to the bows by means of clamps 10, and, as shown, this frame 9 consists of longitudinally-extensible side members 11 and extensible connecting cross members 12, bolts 13 being provided to hold these extensible portions at different points of their adjustment.

The side members 11 each have a pair of forward and rearward inwardly-offset portions 14 and 15, respectively, and rearwardly of each of these offset portions there is secured to the respective members 11 a forwardly and upwardly inclined guide 16, these guides extending into the offset portions.

A longitudinally and laterally extensible intermediate frame 17 is located beneath the frame 9 and within the inclosure of the guides 16, and this frame has journaled thereupon a plurality of outwardly-extending rollers 18, one of which is engaged in each of the guides 16. These rollers are mounted upon shafts 19, which extend outwardly therebeyond and which are engaged in the upper ends of vertical longitudinally-extensible supporting-uprights 20, these uprights being secured at their lower ends to a frame 21. This frame, as well as the frames 9 and 17, extends horizontally, and it consists of extensible side members 22, having axle-receiving notches 23 in their under surfaces, and secured in these notches there are transversely-extending longitudinally-extensible axles 24, having wheels 25 revolubly mounted upon their outer ends. The side members 22 are connected by forward and rearward extensible cross members 24′ and 25′, respectively, and by an intervening cross member 26. These connecting members and the connecting members 12 of the upper frame 9 consist each of two overlapped sections A and B, which are provided with registering longitudinal slots C, receiving the clamping-bolt 13 above referred to.

A longitudinally-extending supporting-plate 27 is disposed beneath the rearmost pair of connecting members 12 and has bolts 28 engaged therein and in the slots C of these members. It will thus be seen that although these members are extended the plate 27 being movable with respect thereto may be positioned midway between the side members 11. A lower supporting-plate 29, corresponding to the plate 27, is secured upon the connecting members 25′ and 26 in a similar manner by means of bolts 30 and may thus also be positioned centrally of the members to which it is attached. The rearward ends of these plates 27 and 29 are bifurcated, as shown at 27′ and 29′, respectively, and pivoted in the bifurcation 27 there is a vertically-extending hand-lever 31. The lower portion of this hand-lever is longitudinally slotted, as shown at 31′, and the slot receives a horizontal roller 32, which is journaled within the bifurcation 29′ of the plate 29. As shown, the hand-lever 31 is adjustable vertically with respect to the plate 27, having a plurality of openings 33, in which its pivot-bolt 34 may be engaged. A hand dog-and-rack mechanism 35 is provided to hold the lever at different points of its pivotal

movement. Links 36 are pivoted at their outer ends to the outer extremities of the rearward cross member 12 and at their inner ends to the plate 27, rearwardly of this member 12, and thus act as supports for the rearward portion of the plate. It will thus be seen that forward movement of the lower end of the lever 31 will cause the lower frame 21, with the wheels, to move forwardly and upwardly, the movement being regulated by the guides 16, these guides having slots 16′, in which the rollers 18 are engaged, and the wheels will thus be brought above the runners 6. Reverse movement of the lever will of course bring the wheels into operative position and the attachment being longitudinally, transversely, and vertically adjustable is adapted for attachment to suit sleds of different sizes.

The dog-and-rack mechanism 35, referred to above, includes a hand-lever X and dog Y, which are connected by an extensible link Z, this link permitting of the vertical adjustment of the lever 31, as will be readily understood.

What is claimed is—

1. An attachment of the class described comprising an extensible frame, attaching devices carried by the frame, guides adjustably connected with the frame, a second frame connected with the guides for movement diagonally toward and away from the first frame, wheels connected with the second frame, said frame being adjustable, a lever connected with the first frame for pivotal movement, and connections between the lever and the second frame for movement of said frame toward and away from the first frame when the lever is moved.

2. An attachment for sleds comprising an adjustable attaching-frame, guides carried by the frame, rollers engaged in the guides, an adjustable frame located below the attaching-frame, adjustable connections between the rollers and the lower frame, means for moving the lower frame longitudinally, said guides being arranged to move the lower frame upwardly when it is moved longitudinally, wheels connected with the lower frame, and means for holding the lower frame at different points of its movement.

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

HARRY F. CASTLE.

Witnesses:
M. V. B. McGraw,
J. W. Rayhill.