

(No Model.)

W. J. TEMPLE.

SCRAPER ATTACHMENT FOR ICE PLANERS.

No. 354,361.

Patented Dec. 14, 1886.

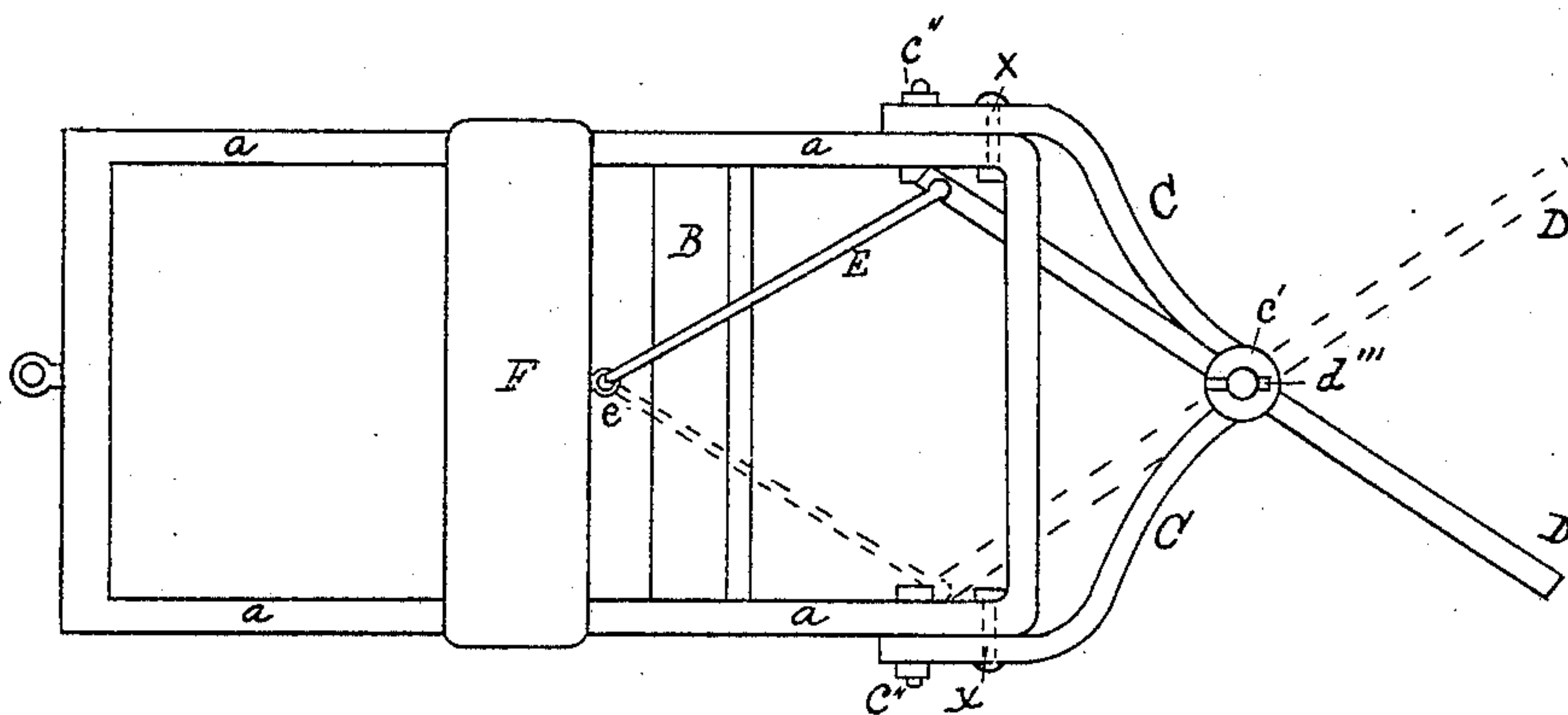


Fig. 1

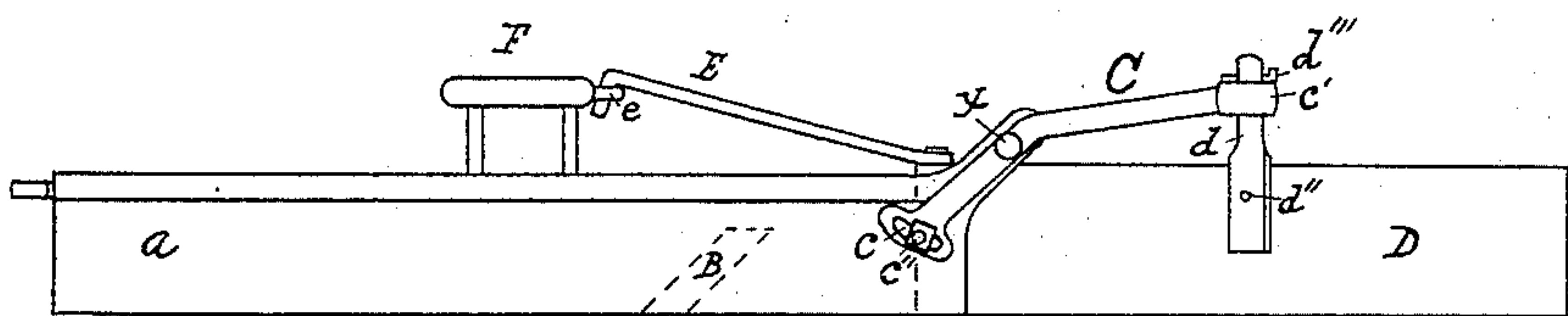


Fig. 2

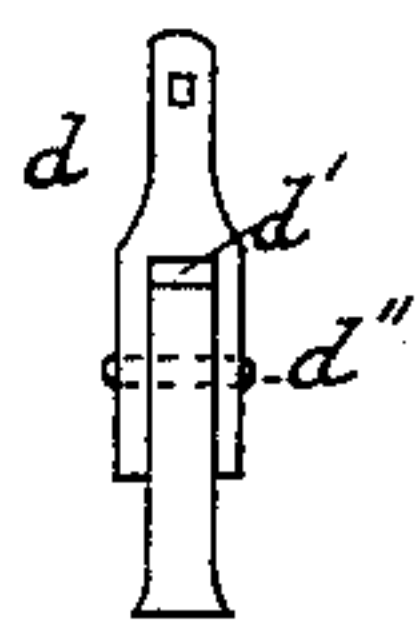


Fig. 3

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM J. TEMPLE, OF HAMPDEN, ASSIGNOR OF ONE-HALF TO HENRY McLAUGHLIN, OF BANGOR, MAINE.

SCRAPER ATTACHMENT FOR ICE-PLANERS.

SPECIFICATION forming part of Letters Patent No. 354,361, dated December 14, 1886.

Application filed April 15, 1886. Serial No. 198,931. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. TEMPLE, a citizen of the United States, residing at Hampden, in the county of Penobscot and State of Maine, have invented a new and useful Scraper Attachment for Ice-Planers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in ice-planers, consisting of a scraper attachment thereto, and is illustrated in the accompanying drawings, in which—

Figure 1 is a plan of an ice-planer with my scraper attachment. Fig. 2 is an elevation of the same. Fig. 3 is an end view, showing method of pivoting scraper attachment in jaw of bolt.

Similar letters refer to corresponding parts throughout the figures.

Hitherto ice-planers have been used without scraper attachments, and as they are usually operated with a pair of horses, the footing of one horse of the pair is constantly upon the loose snow and ice shavings thrown up over the planing-tool in the previous passage of the planer. One of the pair then walking upon a firm footing and the other upon a loose and uncertain footing, the work of the two horses is very unequal, and the full strength of both cannot be utilized. It is to remedy this difficulty that I have invented my device, which may easily be attached to the common rectangular frames of the planers now in use.

My improvement consists in the addition of a scraping-tool somewhat similar to those used in road-machines, and in the manner of attaching and operating the same.

To the side pieces, *a a*, of the rectangular frame of the planer, or to upward projections therefrom, and behind the planing-tool B, I pivot, as at *x x*, a hanger or support, C, bent to a bow or angle at *c'*, so that the bow *c'* of the hanger shall project behind the side pieces, *a a*, of the frame and be adjustable at any desired elevation within convenient limits. I further provide means of locking the hanger when adjusted at the desired elevation. This may be accomplished in various ways. That

which I have adopted is to prolong the extremities of the hanger below the points where they are pivoted to the frame, turning them downward at a considerable angle from that point and forming in them slightly-curved slots *c c*, through which they are bolted to the side pieces, *a a*, and secured by nuts *c''* at any desired point in the length of said slots, the exact point being determined by the amount of elevation to be given to the hanger.

Various forms of hangers may doubtless be devised, the essential points being that the hanger shall project behind the frame to afford a point of suspension for the scraping-tool hereinafter described, and shall be capable of being adjusted at different elevations.

I also provide a scraping-tool, D, preferably rectangular in shape. It is pivoted at *d''* edgewise, to allow either end to tilt upward or downward, and preferably off the middle of its length in a slot or jaw, *d'*, in the lower extremity of a round bolt, *d*. The upper extremity of the bolt *d* passes through a bolt-hole in the bow *c'* of the hanger C, and is secured on the upper side thereof, preferably detachably, by a nut or key, *d'''*. The scraper D is thus suspended from the hanger C, and when pivoted off the middle of its length is so adjusted that its longer end may swing within the side pieces, *a a*, of the frame.

To the inner end of the scraper D is pivoted the rigid rod E, preferably of such length that when the scraper is swung diagonally to the planing-tool and its inner end bears upon the inner side of one of the side pieces, *a a*, of the frame, the other end of the rod may be secured rigidly and detachably to some convenient point upon the machine, preferably within the reach of the driver. I have shown it bent over into a hook and resting in a staple, *e*, fixed in the back of the driver's seat F.

In operation the hanger C, pivoted at *x x*, is turned and set at any desired elevation and locked there, as before described. The scraper D is swung with its pivot *d* until its inner end bears upon the inner side of either one of the side pieces, *a a*, of the frame, as required, and the rod E hooked to the staple *e*, and the scraper is thus locked in that position and prevented from swinging. The machine be-

ing started and the planing commenced, the planings rise and fall over behind the planing-tool B in front of the scraper D, by which they are caught and shunted off to either side, 5 accordingly as the scraper is adjusted, which, in practice, is always upon the course last previously scraped, and the course thus planed and scraped is left clean, so that the horse traveling thereon at the next course has a clean, 10 hard, and smooth footing, and is enabled to pullequally with his mate. I find, practically, that when my scraper is used the same pair of horses can do much more work in a given time than without it, and that light horses can 15 perform the work for which heavy teams are usually required, and that a material saving is thus accomplished. When one course is completed and the planer is turned round to plane back to the starting-point, the rod E is disengaged from its attachment to the seat or 20 frame and the scraper swung round, so that its inner end rests and bears upon the opposite side of the frame and the rod hooked to its point of support, as before, and this may be done 25 without the driver's leaving his seat.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A scraper attachment for ice-planers, consisting of a scraping-tool pivoted at or near 30 the middle of its length to a vertically-adjustable hanger projecting behind the frame of the planer in such a manner that one end of said scraper may swing within the side pieces of said frame, and bear upon one of said pieces 35 when the machine is in operation, substantially as described.

2. A scraper attachment for ice-planers, consisting of the combination of a hanger projecting behind the frame of the planer, and vertically adjustable at various elevations thereon, a scraper pivotally suspended at or near 40

its mid-length from said hanger, in such a manner that one end of said scraper may swing within the side pieces of said frame, and 45 bear upon one of said side pieces when said scraper rests diagonally to the planing-tool, and a rigid rod pivoted at one end to the inner end of said scraper, and detachably securable at the other end to some convenient point of 50 said frame, substantially as described.

3. A scraper attachment for ice-planers, consisting of the combination of a hanger projecting behind the frame of the planer, and vertically adjustable at various elevations thereon, 55 a scraper pivotally suspended at or near its mid-length from said hanger, in such a manner that either end of said scraper may tilt upward or downward and that one end of said scraper may swing within the side pieces of 60 said frame, and bear upon one of said side pieces when said scraper rests diagonally to the planing-tool, and a rigid rod pivoted at one end to the inner end of said scraper, and detachably securable at the other end to some 65 convenient point of said frame, substantially as described.

4. In combination with an ice-planer and its frame, the herein-described scraper attachment, consisting of the combination of the 70 hanger C, pivoted to the side pieces, *a a*, of said frame, and having bow or angle *c'* and slots *c c*, bolts and nuts at *c'' c''*, scraper D, suspended from said hanger in such a manner as to swing both vertically and horizontally, 75 and rigid rod E, pivoted at one end to the inner end of said scraper, and detachably securable at the other end to some part of the frame or seat of said planer, substantially as described.

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Witnesses:

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