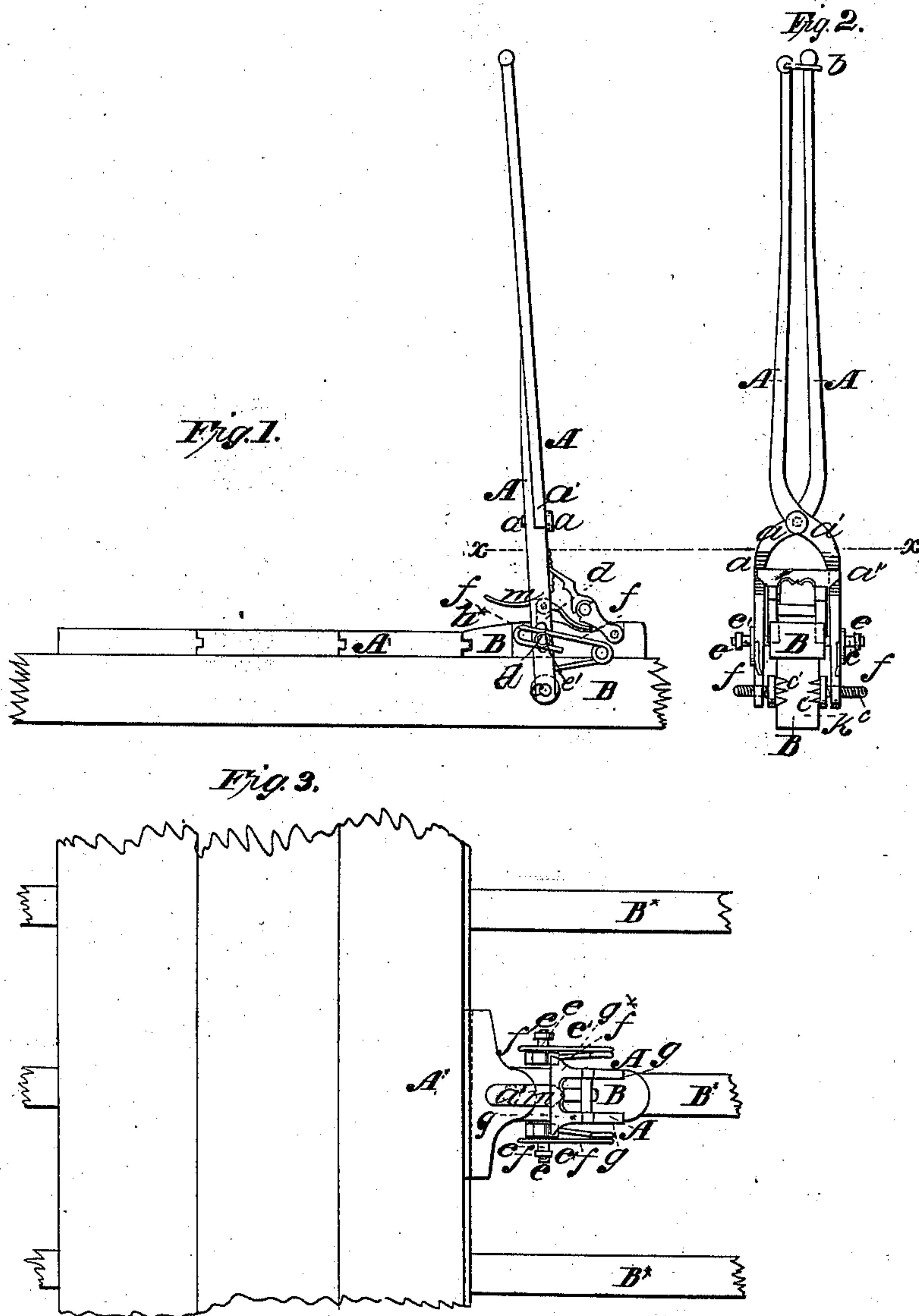


D. D. Mackay,

Floor Clamp.

N^o 81,803.

Patented Sep. 1, 1868.



Witnesses:
W. C. Combs,
A. Schellerg.

Inventor:
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United States Patent Office.

DONALD D. MACKAY, OF WHITESTONE, NEW YORK.

Letters Patent No. 81,803, dated September 1, 1868.

IMPROVEMENT IN FLOORING-CLAMP.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DONALD D. MACKAY, of Whitestone, in the county of Queens, and State of New York, have invented certain new and useful Improvements in Flooring-Clamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a side view of an apparatus made according to my invention.

Figure 2 is a back view of the same.

Figure 3 is a horizontal section of the same, taken in the line *x x* of figs. 1 and 2.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to provide a means whereby flooring may be snugly and firmly held in position while being laid down.

The invention consists in combining a pusher-block with two levers pivoted together, and furnished at their lower ends with appropriate fulcrum-stems or pins, in such manner that the boards or planks from which the floor is formed may, as they are successively laid down, have their edges brought closely together, as required, preparatory to nailing and securing such boards in place.

The invention further consists in the combination, with the parts just mentioned, of a toggle-brace and relieving-lever, whereby the apparatus is enabled to firmly retain the flooring in place during the operation of nailing or fastening the same, and to release its hold thereon when fastened.

And, furthermore, the invention consists in certain novel means, whereby the more efficient operation of the principal features of the invention is insured.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A indicates two levers, curved as shown at *a'*, so as to cross each other, and pivoted together by a suitable pivot, *a*.

Provided at the upper end of one of these levers is a loose ring, *b*, which, being slipped over the corresponding end of the other lever, serves to hold the two in close proximity when required, the purpose of which will hereinafter appear.

Passing transversely through the lower end of each of the levers is a screw-stem, *c*, the inner extremity of which is enlarged and provided with any desired number of pointed spurs or teeth, *c'*.

Formed transversely in the lower portion or arm of each lever, between the stems *c*, just described, and the pivot *a*, is a transverse slot, *d*; and placed between such lower arms of the levers is a pusher-block, B, formed in two parts, the forward one being pivoted to the other by a vertical pivot at *a**, so that when the apparatus is in use, as hereinafter fully set forth, such forward portion may adjust itself readily to the edge of the board or plank in bringing it into its place. The forward edge, *b**, of the forward portion of this pusher-block is grooved longitudinally, so that the tongue formed on the edge of the board may not be injured in bringing the latter to its requisite position.

Projecting from each side of the rear part of the pusher-block is a pin or pivot, *e*, which extends through the slot *d* of the adjacent arm of the lever, such pins *e* being of sufficient length to permit a considerable lateral movement of the arms just mentioned of the levers A, and furnished with nuts *e'*, which prevent the arms from slipping off therefrom.

Situated, one at each side of the pusher-block B, are two springs, *f*, the free extremities of which are curved or shaped to form guides *f'*, passing around the outermost portions of the pins *e*, in such manner and position as, under ordinary circumstances, to retain the same at about the centre of the slots *d*.

The back surface of the lower arm of each lever A is notched transversely in such a way that studs or shoulders, *a''*, are formed thereon.

Attached to the rear end or portion of the presser-block is a toggle-brace, composed of the two bars *g g**,

which, when placed in line with each other, and against the studs or shoulders a'' of the levers, serve to hold the same in position when the apparatus is in use, as hereinafter presently set forth.

Also, pivoted upon the pusher-block, but near the centre thereof, is a lever, m , the inner or rear end of which is situated below the central joint of the toggle-brace $g g^*$, in such manner that by pressing downward the forward end thereof, the lever m will be caused to force upward the central part of the toggle-brace $g g^*$, as required in releasing the apparatus from the flooring, as presently herein further set forth.

In order to use the apparatus in laying the floor shown in red outline at A^* in the drawings upon the sleepers, indicated also in red color at B^* , the two levers are spread apart to permit the lower ends thereof to be placed astride of one of the sleepers at any suitable point along the length of the plank or board which it is desired to tighten to its place, and the stems c , being placed at a suitable distance from the edge of such board or plank, with the edge of the pusher-block against the edge of each board or plank, the upper arms of the levers A are brought together and held in this position by means of the ring b , as hereinbefore explained, the pointed studs c' , on the stems c , biting into the sleeper, so that the stems, being prevented from slipping, may serve as the fulcrum of the levers in the operation of the apparatus, as presently explained.

The levers are then pushed forward, thus forcing the board or plank snugly against the one behind it, whereupon the free end of the toggle-brace $g g^*$ is placed under one of the studs or shoulders a'' on the lever, and the centre of the brace is then depressed to bring the brace into a straight condition, which, by forcing forward the levers, still further tightens the board or plank, and also serves to retain it in such tightened condition while being nailed or otherwise secured, which being done, the forward end of the lever m is depressed more conveniently by placing the foot thereon, which, by elevating the rear end of such lever, throws upward the centre of the toggle-brace, and thus releases the levers A therefrom.

The ring b is then thrown from the end of one of the levers, so that the latter may be spread apart and the apparatus moved as required in laying down and securing in place the succeeding board or plank.

As the springs f allow the pins or pivots of the pusher-block B to move within the slots d , it follows that any strain which would otherwise be exerted upon the pivots by the moving of the levers A upon an arc is wholly obviated, and, inasmuch as the stem c may be screwed in or out to increase or diminish the space between them when the levers are brought together, the apparatus may be readily adjusted for application to sleepers of any ordinary width. Furthermore, when desired, instead of making the two levers A of metal throughout their length, their upper portions may be of wood, fitted into suitable sockets provided on the lower portions thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The levers A , pivoted together as at a , and furnished at their lower ends with adjustable fulcrum-stems c , having spurs c' , substantially as shown and described, for the purpose specified.
2. The combination of the tripping-lever m with the pusher-block B , the toggle-brace $g g^*$, and the levers A , substantially as and for the purpose specified.
3. The arrangement of the pivots e of the pusher-block, the slots d in the levers A , and the springs f , substantially as and for the purpose herein set forth.
4. The arrangement of the ring b , at the upper ends of the levers A , carrying the pusher-block B and toggle-brace $g g^*$, substantially as and for the purpose specified.

D. D. MACKAY.

Witnesses:

HENRY T. BROWN,
J. W. COOMBS.