

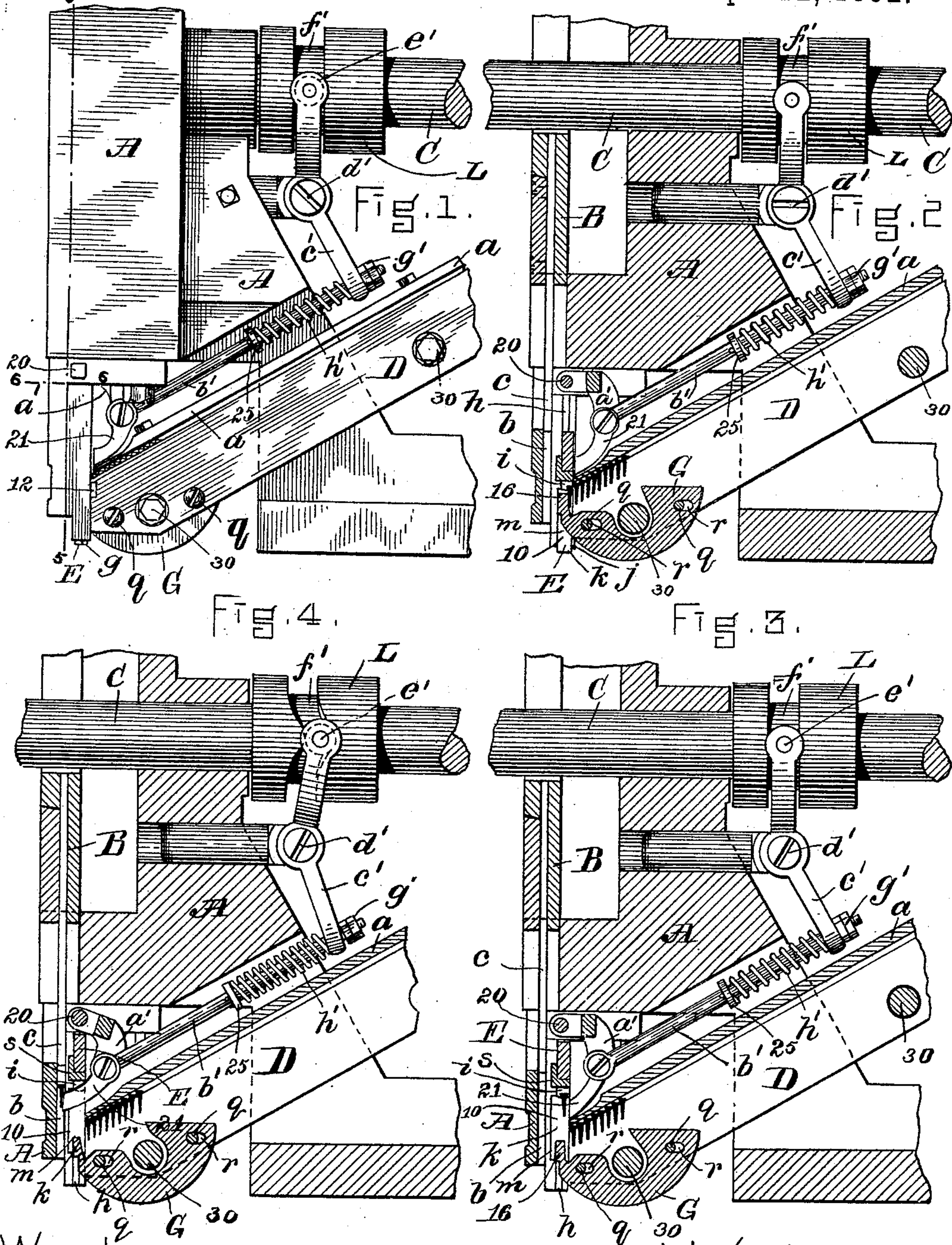
(No Model.)

2 Sheets—Sheet 1.

J. HYSLOP, Jr.
PEGGING MACHINE.

No. 472,638.

Patented Apr. 12, 1892.



WITNESSES.

J. Henry Marsh.
Henry H. Allen.

INVENTOR.

John Hyslop Jr.
by J. E. Schenck

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2 Sheets—Sheet 2.

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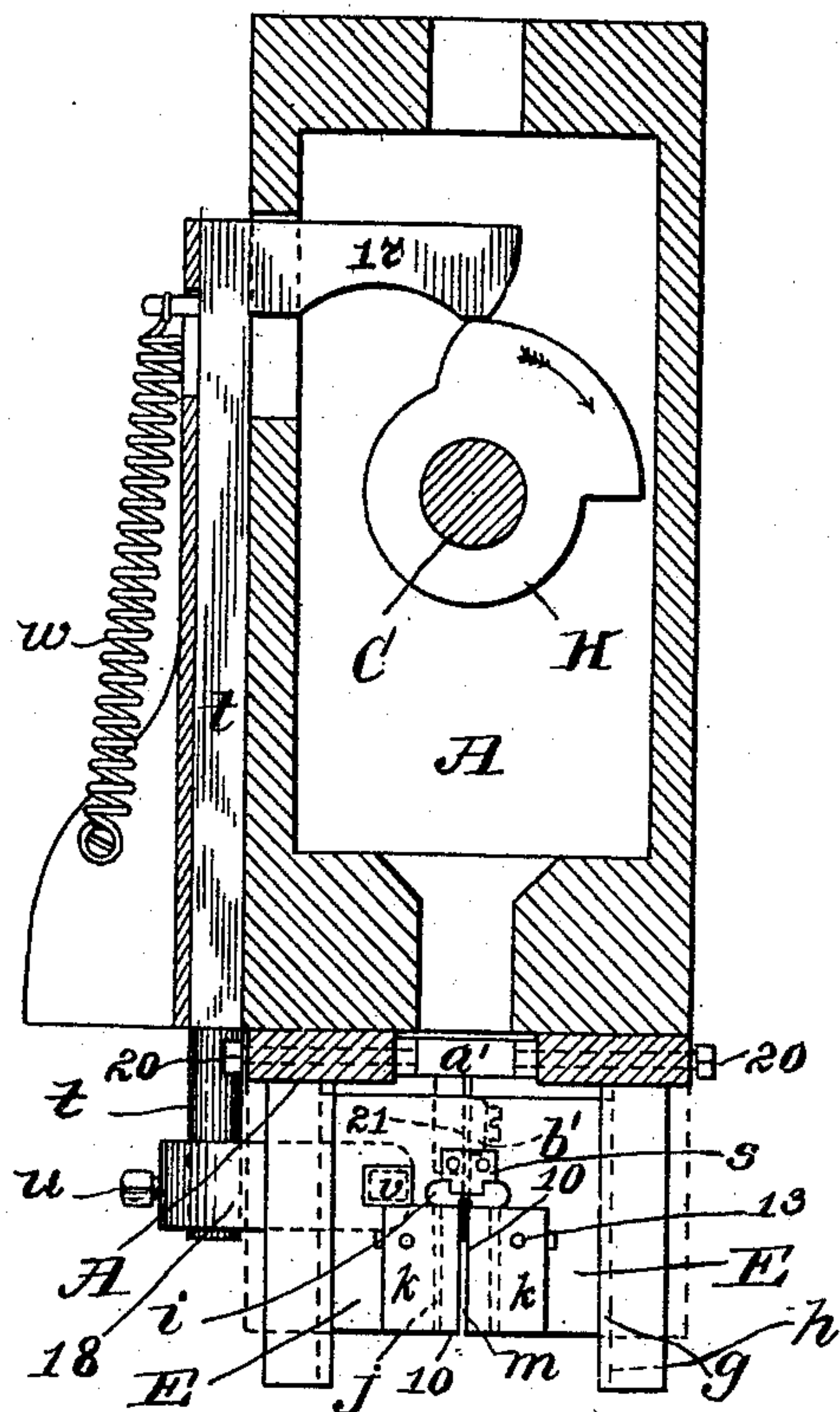


Fig. 5.

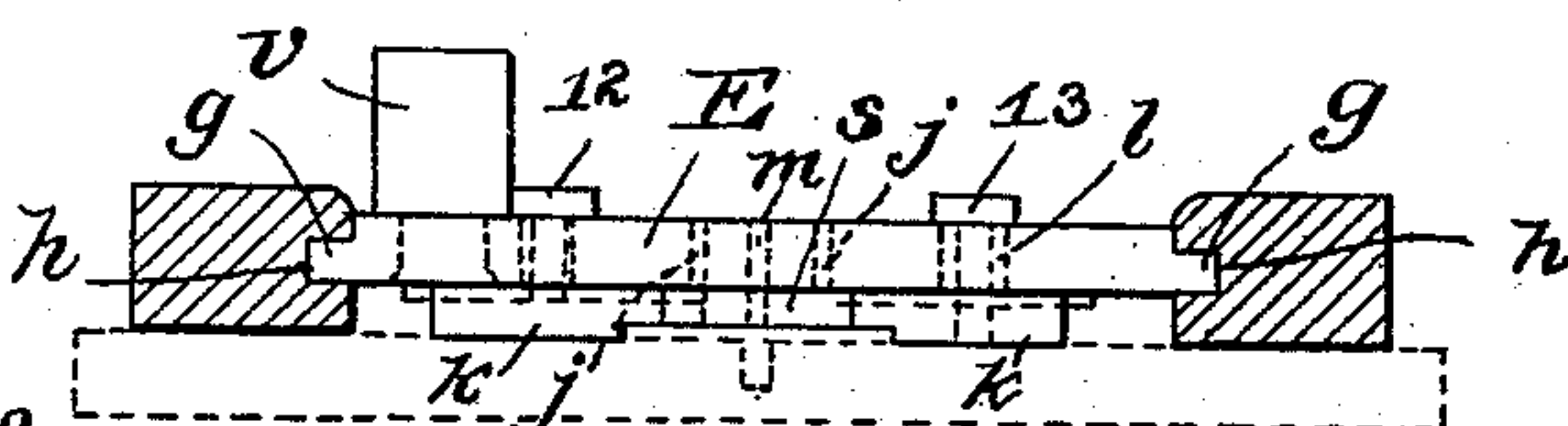


Fig. 6.

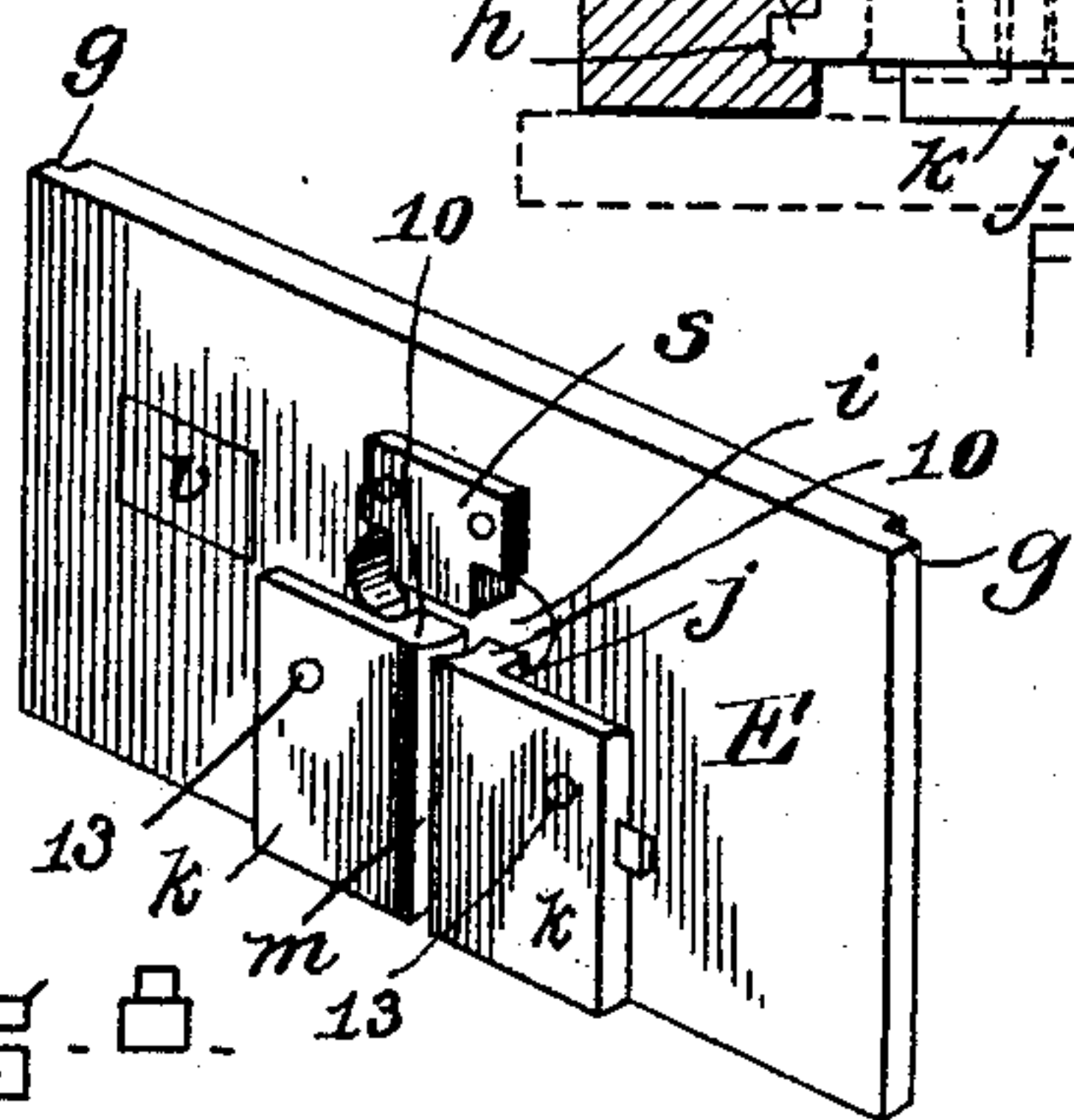


Fig. 7.

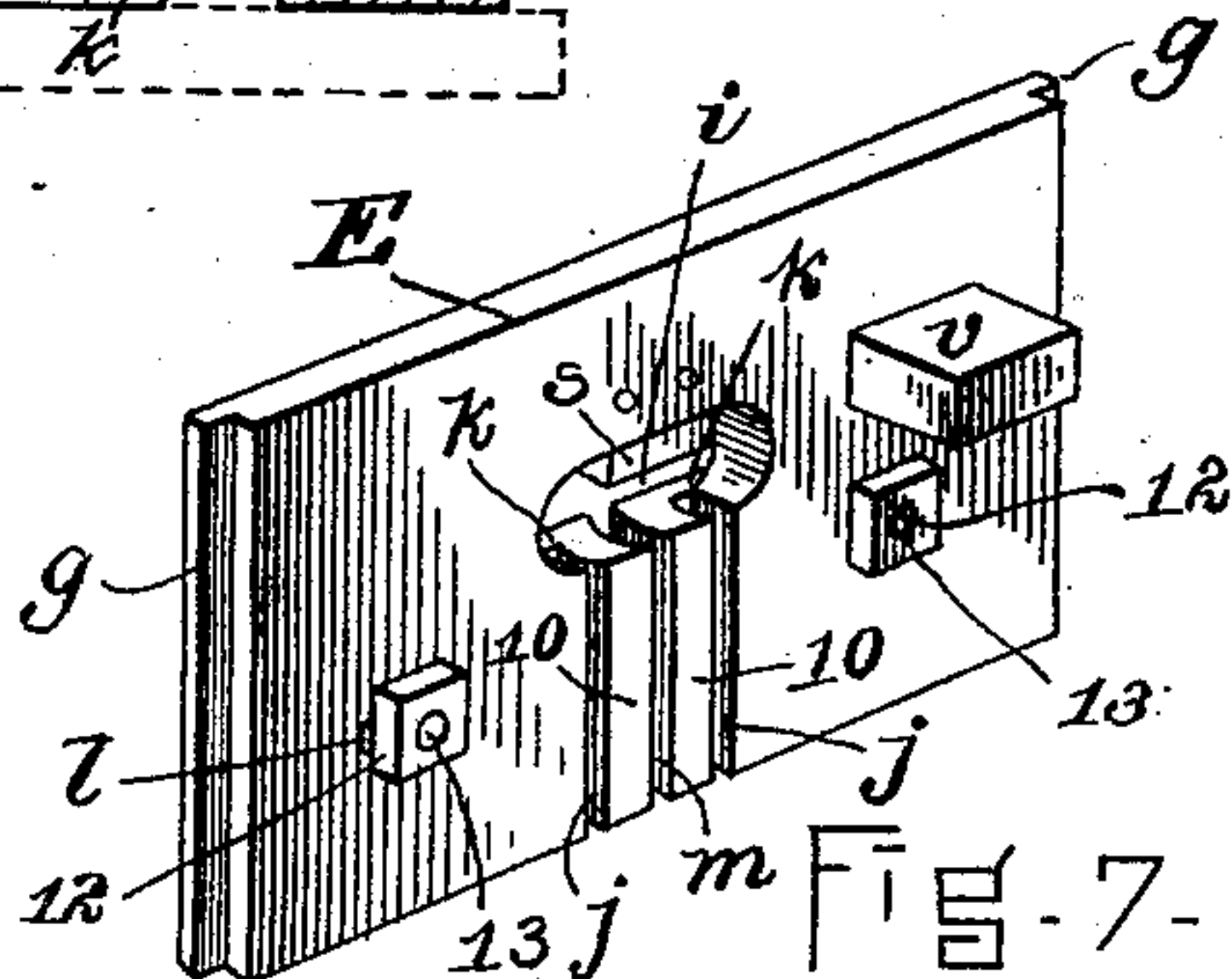


Fig. 8.

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UNITED STATES PATENT OFFICE.

JOHN HYSLOP, JR., OF ABINGTON, MASSACHUSETTS.

PEGGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 472,638, dated April 12, 1892.

Application filed August 22, 1891. Serial No. 403,461. (No model.)

To all whom it may concern:

Be it known that I, JOHN HYSLOP, Jr., a citizen of the United States, residing at Abington, in the county of Plymouth and State of Massachusetts, have invented certain improvements in nail selecting or separating devices for nailing and other machines requiring the selection of one or more nails at a time from a mass or quantity, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a portion of the head of a nailing-machine having my improved nail selecting or separating device applied thereto. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a similar section with the parts in the positions which they occupy after the selected nail or nails have been separated from the others in the line or row. Fig. 4 is a similar section showing the positions of the parts after the selected and separated nail or nails have been pushed into the nail-channel. Fig. 5 is a vertical section on the line 5 5 of Fig. 1. Fig. 6 is a horizontal section on the line 6 6 of Fig. 1 enlarged. Figs. 7 and 8 are perspective views of the front and rear sides of the plate which forms one portion of the nail-selecting device.

In nail selecting or separating devices as heretofore constructed considerable difficulty has been experienced in separating the end nail or nails from the others in the raceway or track, especially when long nails having small heads were employed, as the points of the nails frequently crossed each other or became entangled, rendering it exceedingly difficult to separate them with any degree of certainty. When a picker was used, it would frequently be prevented from passing between the nails by this crossing of their points, which resulted in sometimes separating two nails at a time and at other times none at all. The same difficulties have been encountered when a revolving carrying-cylinder was used or when the track or raceway was moved sideways, and in either case, unless the nails hung vertically in the raceway, the machine was liable to become obstructed and the nail would

not be taken, or two nails would be taken when only one was required.

My invention has for its object to overcome these difficulties and to provide a simple, effective, and positive nail selecting or separating device which is especially adapted for nailing, pegging, or other machines where loose nails or pegs are employed; and to this end my invention consists in certain combinations of parts and details of construction, as hereinafter set forth, and specifically claimed.

In the said drawings, which represent my improvements as applied to a nailing-machine, A represents a portion of the head of the machine, having, as usual, a nail-channel *b*, within which fits the nail-driver *c*, secured to the driver-bar B, the latter operated in a well-known manner by mechanism (not shown) connected with the main or driving shaft C.

The nails are conducted to the point where they are to be used—in the present instance the nail-channel of a nailing-machine—by means of a nail selecting or separating device consisting of an inclined track or raceway, into the upper end of the stationary part D of which the nails are fed in any suitable or well-known manner, the heads of the nails resting upon and being supported by the edges of the raceway, as seen in Figs. 2, 3, and 4. The part D is provided with a cap or cover *a*, which is formed and screwed down thereon in such manner as to leave a space between it and the edge of the raceway to permit of the free passage of the nails as they slide down and at the same time prevent them from being displaced or thrown out by any jar or concussion to which they may be subjected. The lower part of the track or raceway consists of a plate or block E, having a vertical movement with relation to the part D, the edges *g* of said plate fitting and sliding within vertical ways or grooves *h* in the head A, and said plate abutting closely against the lower end of the part D and forming a longitudinal continuation or extension thereof.

The plate E is cut away at the center, forming an aperture *i* from which to the lower edge it is also cut away, leaving a vertical

opening *j* for the reception of the ends or portions 10 10 of two plates *k k*, the rear portions of which lie flat against the plate E and are secured thereto by nuts and bolts 12 13, the latter passing through slots *l* in the plate E, whereby a lateral adjustment of the plates *k k*, which are supported by and slide on suitable guides, may be effected to vary the width of the central vertical space or throat *m* between them, through which the nails pass to the nail-channel *b* in a manner to be hereinafter described, said space being made adjustable in width by moving the plates *k k* to accommodate nails of different sizes. For a similar purpose the two inclined bars which form the stationary part D of the raceway are made adjustable toward and from each other by means of screws 30 to vary the width of the space between them through which the nails pass to the space *m*. The upper ends of the portions 10 of the plates *k k* which lie within the opening *j* of the plate E, are made slightly concave and are on a level with the end of the main portion D of the raceway or track, forming a longitudinal continuation or extension thereof, so that each nail as it slides down to the bottom of the said portion D will pass into the vertical space *m*, with its head resting on the concave ends of the portions 10 of the plates *k k*. The shank of the nail as it enters the space *m* comes into contact with the upper end 16 of a narrow plate G, which lies within said space and forms a stop for the nail, as seen in Figs. 2 and 3. The plate G is secured to the stationary part D of the track by means of screws *q* and slots *r*, whereby it is made adjustable horizontally to vary the position of the stop 16 within the space *m*, in order to allow one or more nails at a time to enter the said space.

When in the position seen in Figs. 2 and 3, the stop 16 will admit a single nail only, the head of which lies immediately under the block *s*, fitting within the aperture *i*, but by moving the stop-plate G to the left two or more nails will be allowed to pass from the part D into the space *m*, the last one just clearing the end of the part D of the track.

The plate E or vertically-movable portion of the raceway is raised to separate the nail or nails which have been allowed to pass into the space *m* from those in the part D of the raceway by means of a cam H on the driving-shaft C, which acts upon the horizontal arm 17 of a bar *t*, sliding in a suitable bearing, and secured at its lower end by means of a set-screw *u* to an arm 18, Fig. 5, the inner end of which is bifurcated and embraces a lug *v*, projecting from one side of the plate E, a spiral spring *w* returning the parts to their normal positions as soon as the cam H has ceased to act on the arm 17. After the selected nail or nails have been separated from the others by the upward movement of the portion E of the raceway they may be disposed of in any manner desired. One device

or mechanism will now be described; but other devices may be employed in accordance with the nature of the machine to which my improved selecting or separating device is applied.

As the plate E rises, the nail is carried up above the stop-plate G into a position opposite to the end of a pusher-lever *a'*, fulcrumed at 20, the lower portion of which consists of a thin blade or plate 21, adapted to enter the space *m* and push the nail or nails there-through into the nail-channel *b*, ready to be acted upon by the nail-driver in the usual manner. The lever *a'* is actuated at the proper times to effect the delivery of the nail or nails into the nail-channel by an inclined rod *b'*, pivoted thereto, and connected at its upper end with a lever *c'*, fulcrumed at *d'* and carrying at its upper end an anti-friction roll *e'*, fitting within the groove *f'* of a cam-wheel L on the driving-shaft. The lever *c'* is secured to the rod *b'* by screw-nuts *g'* at the outer end of said rod, and between a collar 25 and the end of the lever *c'* the rod *b'* is encircled by a stiff spiral spring *h'*, which permits the lever *c'* to yield or slide over the end of the rod *b'* in case of any obstruction, which might prevent the movement of the said lever, thus avoiding any breakage or injury of the parts as might otherwise occur. The thin portion of the plate 21 of the lever *a'* is made removable, so that another can be substituted therefor corresponding to the width of the space *m*, which, as before stated, can be varied for nails of different sizes or shapes. As soon as the nail has been pushed into the nail-channel the plate 21 of the pusher *a'* is withdrawn from the space *m*, when the movable portion E of the raceway descends to its original position to receive another nail or nails, when the operation continues as before.

The above-described nail-selecting device composed of two separate parts, one of which is movable vertically with respect to the other, is simple, durable, perfectly reliable in its action, and not liable to get out of order, and will be found to be equally effective with nails of all sizes and shapes, which is a very important consideration in devices of this character.

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

1. A nail selecting or separating device consisting of a track or raceway composed of a stationary part D and a movable part E, arranged longitudinally in line with each other, said part E having the laterally-adjustable spaced plates *k k*, between which the nail is received and upon which the nail-head is supported, and means for reciprocating the movable part of the raceway, whereby the nail received from the stationary portion D is moved vertically upward away from the column or line of nails therein, substantially as herein described.

2. In a nail selecting or separating device, the combination, substantially as set forth, of a track or raceway composed of two parts D and E, arranged longitudinally in line with each other, said part E having a vertical movement with relation to the part D, whereby a nail received from the latter is moved vertically upward away from the column or line of nails in the part D, means for vertically reciprocating the movable part of the raceway, and an adjustable stop G, adapted to project into the nail-space or throat of the lowermost portion of the track to regulate the number of nails which are permitted to pass from one portion of the raceway to the other at each operation, substantially as described.

3. In a nail selecting or separating device, the combination of a track or raceway composed of a stationary part and a movable part arranged longitudinally in line with each other, the laterally-adjustable plates *k k* within the movable portion separated from each other to form the nail space or throat and adapted to suspend the selected nail by its head, a pusher adapted to enter the space between said plates when the movable part of the raceway is elevated to its highest point and eject the selected nail therefrom, and means for operating the pusher and movable part of the raceway, substantially as herein described.

4. In a nail selecting or separating device, the combination of a track or raceway composed of two parts D and E, arranged longitudinally in line with each other, said part E having a vertical movement with relation to the part D, whereby a nail received from the latter is moved vertically upward away from the column or line of nails in the part D, a pusher *a'* above the stationary part of the raceway to enter the space or throat *m* of the part E when the latter is raised and eject the selected nail therefrom, a stop G on the stationary part of the raceway to project into the nail space or throat *m* of the movable part

E, and means for operating the pusher, substantially as set forth.

5. In a nail selecting or separating device, the combination of the track or raceway composed of the stationary part D and the vertically-movable part E, arranged longitudinally in line with each other, said part E having an aperture *i* and a vertical opening *j*, the laterally-adjustable plates *k k*, having their portions 10 arranged within said opening *j*, forming between them a throat or space *m* for the reception of the nail, the adjustable stop-plate G, adapted to project into the space *m*, and the pusher *a'*, adapted to enter the space *m* on the ascent of the movable part E and eject the nail therefrom, all constructed to operate substantially as set forth.

6. In a nail selecting or separating device, the combination, with a raceway or track composed of the stationary part D and the movable part E, provided with the adjustable plates *k k*, of a horizontally-adjustable stop secured to the part D and projecting into the space *m* between the plates *k k*, substantially as and for the purpose set forth.

7. In a nail selecting or separating device, the combination of the raceway or track composed of the stationary part D and the movable part E, provided with the aperture *i* and vertical space or throat *m*, and means for actuating said part E, the stop-plate G, the pusher-lever *a'*, having the blade or thin portion 21, adapted to enter the space *m* between the plates *k k*, the rod *b'*, lever *c'*, actuating-cam L, and a yielding or spring connection between the lever *c'* and the rod *b'*, all operating substantially in the manner and for the purpose set forth.

Witness my hand this 17th day of August, A. D. 1891.

JOHN HYSLOP, JR.

In presence of—

NATHL. P. CARVER,
OTIS W. SOULE.