No. 612,487. Patented Oct. 18, 1898.

S. M. CUTTER.

PEGGING MACHINE.

(Application filed July 14, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

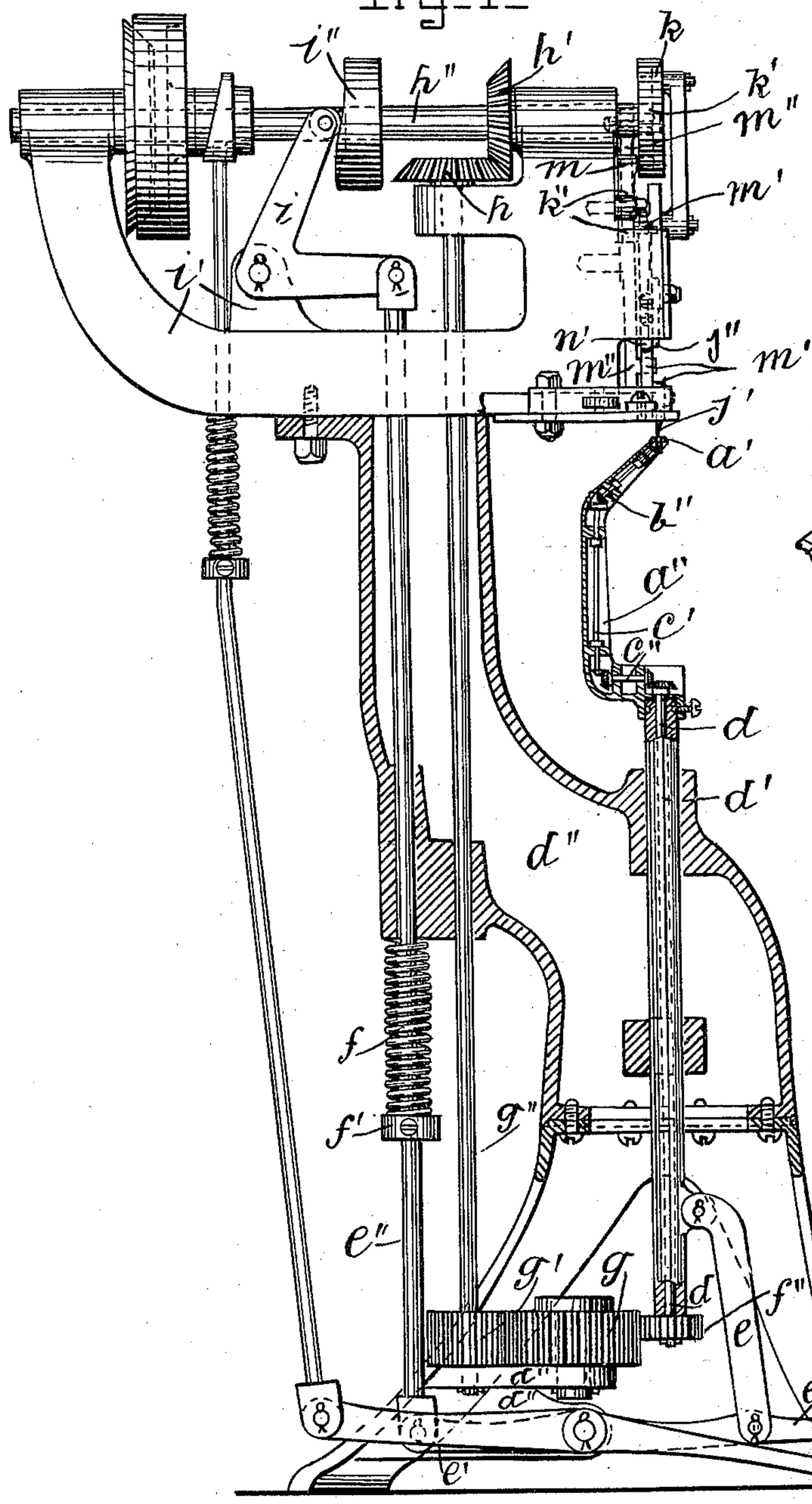

Fig. 2.

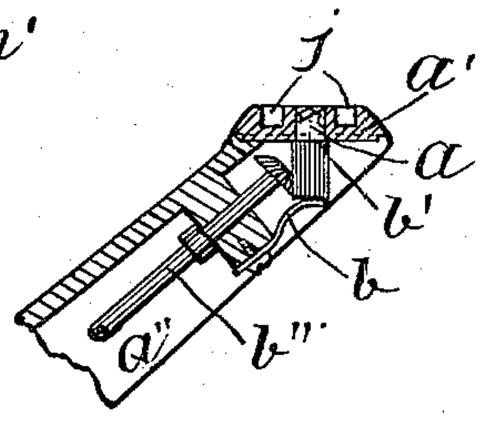

Fig. 3.

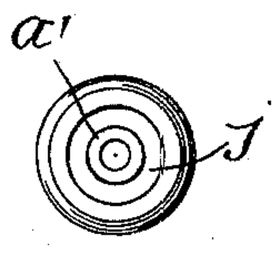

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Fig. 4.

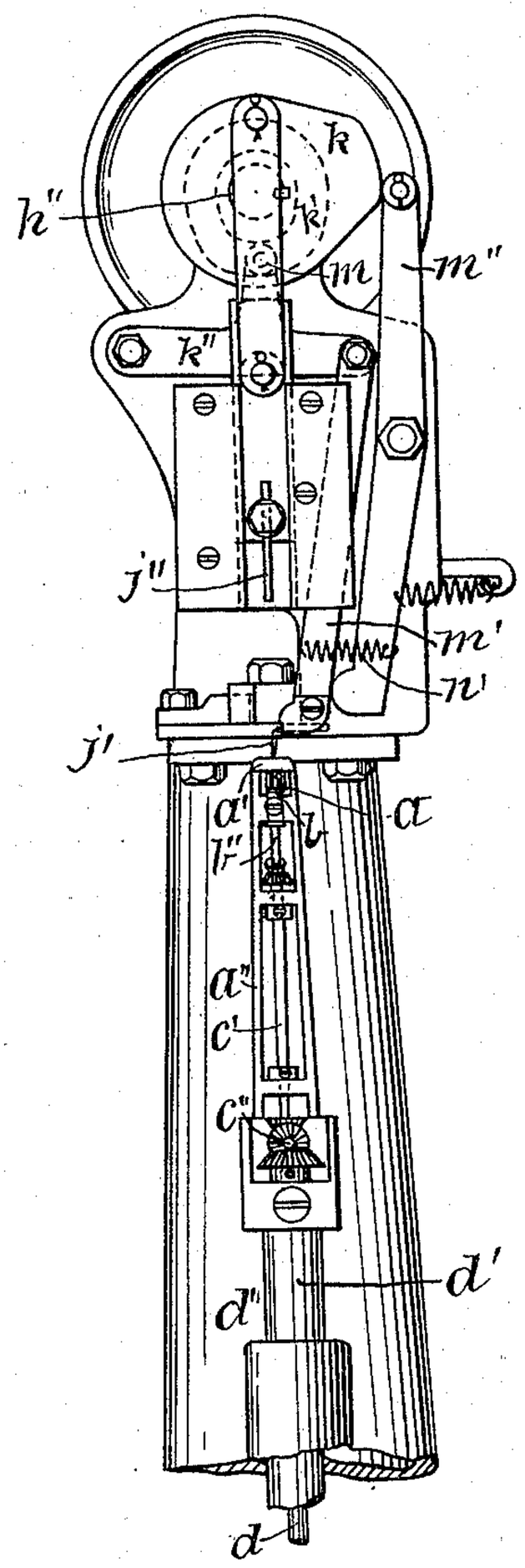


Fig. 5.

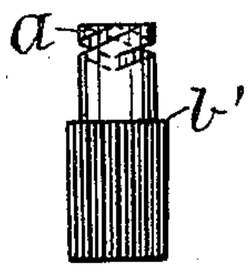
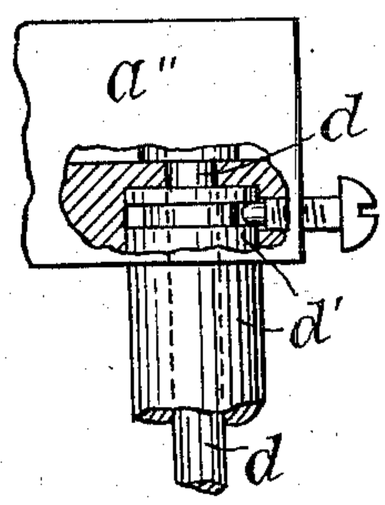


Fig. 6.



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UNITED STATES PATENT OFFICE.

SOLOMON MARCELLA CUTTER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE McKAY SHOE MACHINERY COMPANY, OF MAINE.

PEGGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 612,487, dated October 18, 1898.

Application filed July 14, 1897. Serial No. 644,536. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON MARCELLA CUTTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pegging-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is the construction of mechanism whereby pegs made of a suitable material are smoothly cut off close to the stock when driven through it.

Figure 1 of the accompanying drawings is a side elevation of a machine embodying my invention, the standard and stock-support being in section. Fig. 2 is an enlarged side view of the peg-cutter and a sectional view of the upper part of the stock-support. Fig. 3 is a top view of the head or tip of the stock-support. Fig. 4 is a front view of the upper part of Fig. 1. Fig. 5 is a side view of the peg-cutter. Fig. 6 is a side view, partly in section, of a part of the lower end of the stock-support and of the upper end of the shaft carrying the stock-support.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

I shall confine my description of the machine to my invention and to parts necessary for an understanding of my invention.

The cutter *a* has a vertical position in a perforation of the head *a'* of the stock-support *a''*. The lower part of this cutter extends below the head *a'* and is provided with longitudinal notches, and a spring *b* presses against the lower end, tending to force the cutter upward, but the cutter is prevented from being moved too far upward by a shoulder *b'* on the cutter.

The upper part of the cutter *a* is shown drill-shaped in Fig. 2 and the upper end even with the top of the head *a'*; but this end, however, can be made in any other suitable shape, and can also be provided with any other kind of suitable cutting edges than the drill-shaped without departing from my invention. The stock-support is curved in a shape common to many in use in this kind of machines.

A shaft *b''* has its bearings in the oblique part of the stock-support *a''*, and has a gear at each end, the upper gear meshing into said notches on the cutter *a*, whereby the cutter is rotated by the rotation of the shaft *b''*. Another shaft *c'* has bearings in the vertical part of the stock-support, and is also provided with a gear at each end. The upper gear is in contact with the lower gear on the shaft *b''* and the lower gear is in contact with a gear carried by a shaft *c''*. This shaft has its bearings in the horizontal part of the stock-support and carries another gear which is in contact with a gear carried by a shaft *d* at its upper end. The shaft *d* extends longitudinally through another vertical shaft *d'* and into the stock-support. The latter shaft extends into and against the bottom of a vertical perforation which is made in the stock-support, thereby carrying the stock-support. A set-screw *s* is screwed through a perforation in the stock-support and extends loosely into a groove which extends around the shaft, thereby holding the stock-support on the shaft, but permitting the stock-support to be turned by the operator. The shaft *d'* is supported in vertical bearings which are formed in parts of the standard *d''*, and is periodically depressed by means as will be described, thereby causing the stock-support to be lowered.

The shaft *d* carries a gear *f'''* below the shaft *d'*, and another gear *g*, pivotally attached to the standard, is in contact with the gear *f'''* and with another gear *g'*, carried by a shaft *g''*. This shaft *g''* is supported in vertical bearings and carries a gear *h* at its upper end, which gear is engaged by a gear *h'*, mounted on the driving-shaft *h''* of the machine. It will be seen that the cutter *a* will be rotated by its said connection to the driving-shaft when the driving-shaft is in rotation and by the relation of said gears to each other, as shown in Fig. 1, receiving a greater speed than the driving-shaft.

A bar *e* is pivotally attached to the shaft *d'* and to a treadle *e'*. This treadle is pivotally attached back of the bar *e* to the standard and has a rod *e''* attached to its rear end. A coil-spring *f* surrounds the rod *e''* between a bearing of the rod and an adjustable collar *f'* on the rod, the tendency of this spring being to force the rod downward, and consequently to force the stock-support upward by their connection. The upper end of the rod *e''* is attached to one end of a bell-crank lever *i*, which is pivotally attached to the frame *i'*

of the machine, and has its other end operated by a cam i'', whereby the rod e'' is periodically lowered and raised. The coil-spring f, by its downward pressure on the rod e'', tends to hold the bell-crank lever in contact with the cam i''.

The cam k on the driving-shaft h'' has a cam-groove k', (shown in dotted lines in Fig. 1,) and a lever k'' of well-known construction, has a cam-roller at m, extending into the groove, and has a bar m' attached to it, and, by the operation of the cam, moves the bar m' up and down. This bar m' carries the awl j' at its lower end in a well-known manner, thereby forcing the awl to pierce the stock and to withdraw from it. A lever m'', also of a well-known construction and mostly shown in dotted lines in Fig. 1, is operated by the periphery of the cam k, and thereby forces the bar m' to move the awl toward the driver j'' when the awl is in the stock, thereby feeding the stock. A spring n', also mostly shown in dotted lines in Fig. 1, moves the bar m' and the awl outward from the driver when the awl is withdrawn from the stock, and the lever m'' permits the bar m' to be moved in the latter said direction.

A circular groove j is formed in the head a' of the stock-support and has the same center as the cutter a. When the awl pierces the stock and reaches below it, which is desirable in this kind of machines, the awl will enter the groove j without coming in contact with the head a'.

When the rod e'' is raised, the stock-support is lowered by its connection to the rod e, and the top of the head of the stock-support will come below the point of the awl, and the awl is thereby permitted to feed the stock without any interference of the stock-support. The awl is moved upward at the same time as the stock-support or a little before, so as to insure the awl not coming in contact with the cutter.

When the pegs are driven through the stock, the cutter is by its rotation cutting off the pegs; but the spring b permits the cutter to be moved downward by the pegs when they are driven through faster than the cutter is able to cut them off. The cutter will when yielding have sufficient time to cut the pegs close to the stock before the stock is moved next time by the awl. This spring b can be substituted by any other suitable means holding the cutter a in position without departing from my invention.

When it is desired to lower the stock-support for removal or placing of stock, the front end of the treadle e' is depressed and the stock-support will be lowered.

Having thus described my invention, what I claim is—

1. In a pegging-machine, in combination, a peg-driving mechanism, a stock-support, a cutter in the stock-support, and means to actuate the cutter, and the cutter arranged to cut off pegs driven through the stock by the peg-driving mechanism, and means independent of vertical movement of the stock-support to yieldingly force the cutter against the pegs when cutting them, for the purpose set forth.

2. In a pegging-machine, in combination, a stock-support, and means to force the stock-support to press stock against a part of the machine and to periodically release the stock, a peg-driving mechanism to drive pegs into the stock, a cutter in the stock-support, and the cutter arranged and operated to cut off pegs driven through the stock by the peg-driving mechanism, and means independent of vertical movement of the stock-support to yieldingly force the cutter against the pegs when cutting them, for the purpose set forth.

3. In a pegging-machine, in combination, a stock-support adapted to force stock against a part of the machine, a cutter secured yieldingly in the stock-support, and means to rotate the cutter, and the cutter arranged to cut off pegs driven through the stock, for the purpose set forth.

4. In a pegging-machine, in combination, a peg-driving mechanism, a stock-support, and means to depress the stock-support, a cutter arranged yieldingly in the stock-support and provided with cutting edges on its upper end, means to rotate the cutter, and the cutter arranged to cut off pegs driven through stock by the peg-driving mechanism, for the purpose set forth.

5. In a pegging-machine, in combination, a stock-support, a peg-driving mechanism to drive pegs into stock supported by the stock-support, a vertical cutter in the stock-support, and the cutter having its cutting edges on its upper end, and the cutter adapted to be moved vertically in the stock-support and to be operated to cut off pegs driven through the stock by the peg-driving mechanism, for the purpose set forth.

6. In a pegging-machine, a stock-support, a peg-driving mechanism to drive pegs into stock supported by the stock-support, a cutter in the stock-support, and means to rotate the cutter, and the cutter adapted to be moved vertically in the stock-support and to cut off pegs driven through the stock by the peg-driving mechanism, for the purpose set forth.

7. In a pegging-machine, in combination, a peg-driving mechanism, a stock-support, a cutter in the stock-support, and means to rotate the cutter, and the cutter arranged to cut off pegs driven through stock by the peg-driving mechanism, a spring in contact with the cutter, and the spring tending to force the cutter upward, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of July, A. D. 1897.

SOLOMON MARCELLA CUTTER.

Witnesses:
C. R. SHATTUCK,
M. R. KENDALL.