(No Model.)

S. LASKEY.

HEMMER.

No. 495,814. Patented Apr. 18, 1893.

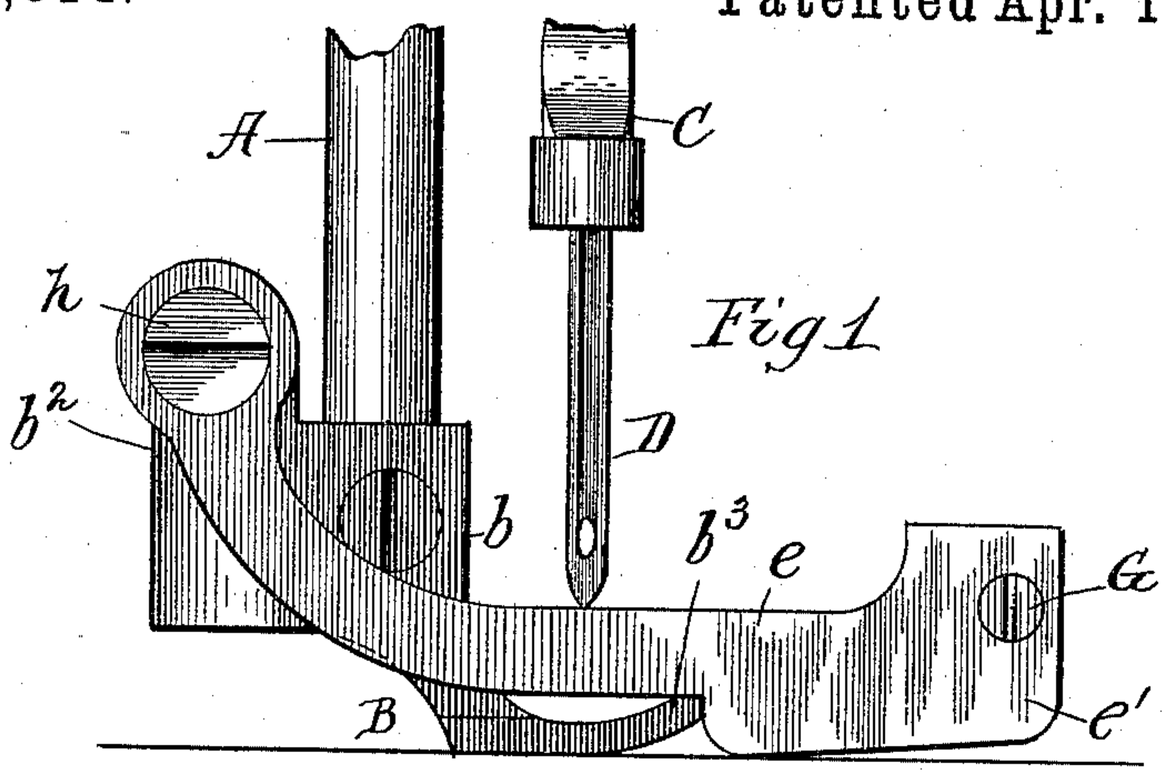

Fig 1

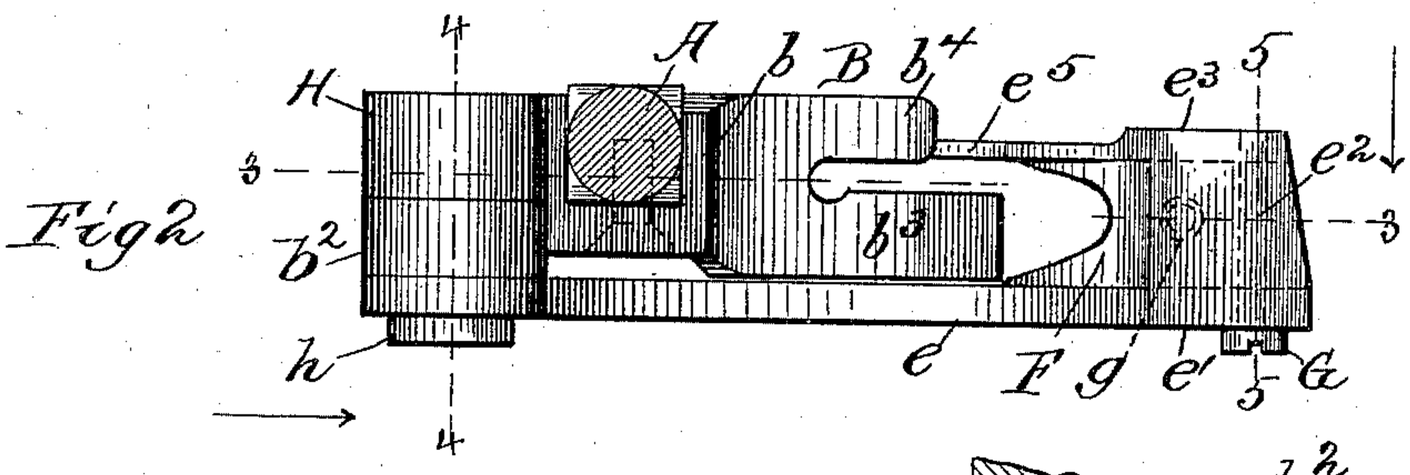

Fig 2

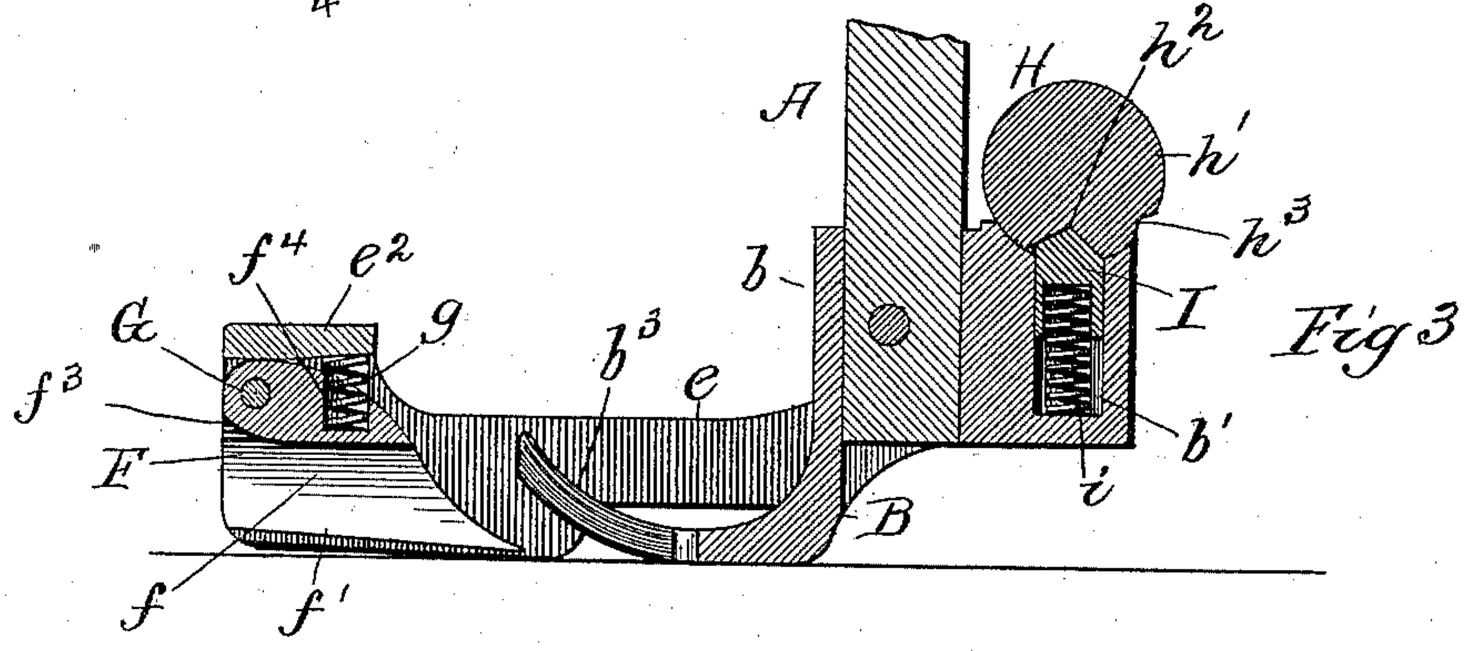

Fig 3

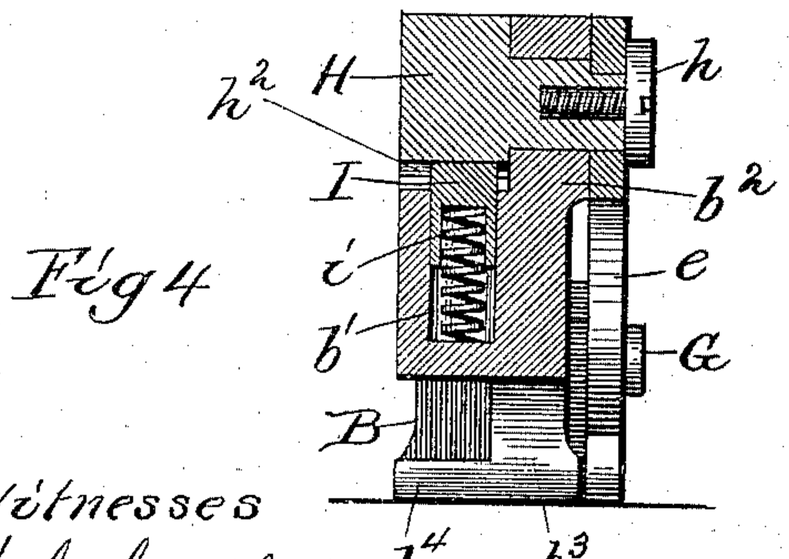

Fig 4

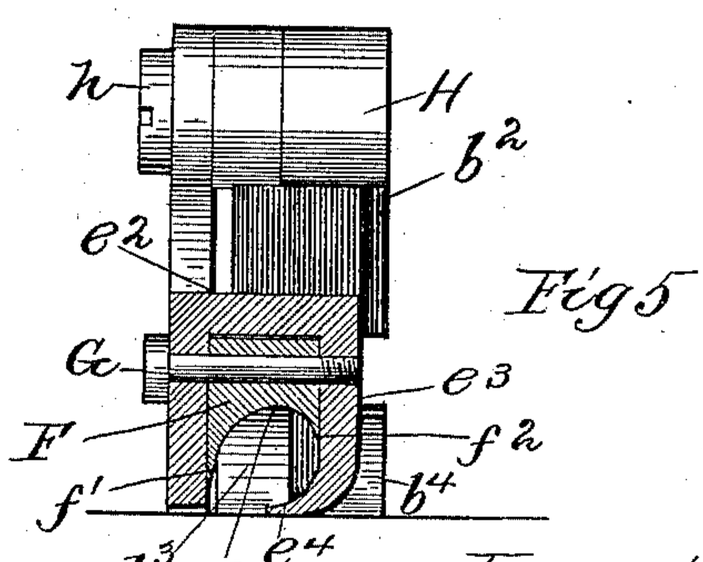

Fig 5

Witnesses
W. C. Corliss
A. M. Best

Inventor
Stephen Laskey
By Coburn & Thacher
Attys

UNITED STATES PATENT OFFICE.

STEPHEN LASKEY, OF CHICAGO, ILLINOIS.

HEMMER.

SPECIFICATION forming part of Letters Patent No. 495,814, dated April 18, 1893.

Application filed March 23, 1891. Serial No. 386,017. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN LASKEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Hemmers, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a presser-foot with my improved hemmer attached, in connection with the needle and lower ends of the presser and needle-bars; Fig. 2, a plan view of the same, the presser-bar being in section; Fig. 3, a vertical longitudinal section, taken on the broken line 3, 3, of Fig. 2; Fig. 4, a cross-section, taken on the line 4, 4, of Fig. 2; and Fig. 5, a similar section, taken on the line 5, 5, of Fig. 2.

My invention relates to a hemmer designed as an attachment for sewing machines, and the invention consists in certain special features of construction, whereby the necessary yielding of the hemmer is obtained and also in the attachment thereof to the machine, so that, while permanent, it may be readily turned out of working position when not desired for use.

The invention is of the same general nature as that set forth in my patent No. 457,785, and may be regarded as an improvement upon the hemmer and feller set forth therein.

As this invention relates only to the hemmer, it is entirely unnecessary to show a complete sewing machine; hence I have only shown in the drawings the presser-foot and needle with the lower ends of their respective bars in connection with my improved hemmer, these parts being sufficient for an understanding of the construction and operation of my present invention.

I will proceed to describe the construction and operation of these devices and will then point out in claims the improvements which I believe to be new and wish to secure by Letters Patent.

In the drawings, A represents the presser-bar of a sewing machine; B, the presser-foot attached thereto; C, the needle-bar; and, D, the needle mounted, as usual, in the latter.

The presser-foot is of ordinary construction, so far as the foot itself is concerned; but the shank, by which it is attached to the bar, is constructed with quite a large heel or projection, *b*, extending in rear of the lower end of the presser-bar and in this heel or projection, a vertical socket, *b'*, is provided, as seen in Fig. 3 of the drawings. This heel is also provided with a short upright standard, b^2, rising from one side thereof, as seen in Figs. 4 and 5. This extension of the presser-foot is provided for the attachment of the hemmer, and the latter will now be described. The hemmer, is carried by an arm, *e*, which is of such length as to extend backward beyond and alongside the presser-foot to the heel of the latter to which it is pivoted, its rear end being curved upward for this purpose, as seen in Fig. 1. This arm is widened at its front end, being extended downward from its front end some ways back and also upward a less distance, thereby providing the outer wall or face, *e'*, of the hemmer, as seen in Fig. 1. This wall is vertical and from its upper edge projects a horizontal section or flange, e^2, extending inward in front of the presser-foot and from its inner edge depends a vertical flange, e^3, which constitutes the inner wall of the device and which, at its lower edge, is curved inward toward the opposite wall and beveled, so as to form a thin curved lip, e^4, which forms the lower member of the turning devices. This lip extends about half way across to the opposite or outer wall and is on the same plane as the lower edge of the latter, as will be seen from an inspection of Fig. 5. It will also be noticed from an examination of Fig. 5 that the construction described above provides a small substantially rectangular chamber or space above the turning lip and on the outer end of the supporting arm;—in other words, there is a kind of box at this end of the hemmer arm which may be called the head of the hemmer. Within this head is mounted the upper member, F, of the turning devices. This piece is a kind of block, having three straight sides, so that it is adapted to fit within the box and it is mounted therein by means of a pivot pin, G, which passes through the front end of the block and the front upper corner of the head, as seen in Figs. 3 and 5. The upper side of this block is curved downward and rearward in the direction of its length, as seen in Fig. 3; and the under side

is curved in the direction of its width, so as to present a concave surface, *f*, in cross-section, as seen in Fig. 5. The edge, *f'*, on the outer side of this concave extends down somewhat lower on the outer wall of the box than the opposite or inner edge, f^2, on the inner wall, as seen in Fig. 5. In fact it must be brought down almost to the extremity of this wall, as indicated in Fig. 3. The front end of this pivoted turner is beveled or rounded below the pivot, as seen at f^3, Fig. 3, so as to present a kind of inclined surface at this point. In rear of the pivot, a small socket, f^4, is sunk in the upper side of the block within which is set a spring, *g*, its upper end being confined underneath the cross piece of the head, as seen in Fig. 3. This spring holds the upper turner down in normal position but at the same time permits it to yield by swinging upward on its pivot when occasion demands. The turning sides or edges of the block F are extended backward somewhat farther than the body or upper portion of this member, the rear of the block being sloped or curved downward, as seen in Fig. 3, in which it will be seen that the outer edge of the turner extends back just underneath the longer toe, b^3, of the presser-foot. The inner wall e^3 or side of the head is also provided with a finger e^5, which extends to the rear reaching just underneath the end of the shorter toe, b^4, of the presser-foot, with which it stands in line.

The supporting arm *e* of the hemmer is pivoted to the heel of the presser-foot by means of a journal pin, H, which is mounted in the standard b^2 and to which the arm is secured outside of said standard by means of a clamping screw, *h*. On the inside of the standard, this journal pin is provided with a head, *h'*, the under side of which is provided with notches, h^2, h^3, with which a locking pin, I, is adapted to engage, the latter being set in the socket *b'* of the heel and actuated by a spring, *i*, arranged in the socket underneath the pin. The construction and arrangement of these parts is such that when the arm is down in normal position and the pin is engaged with the notch h^2, as seen in Fig. 3, the position of the hemmer, resting on the bed of the machine, will be such as to slightly elevate the front end thereof, leaving a wedge-shaped space thereunder, as seen in Fig. 1. This mode of mounting and supporting the hemmer is the same as shown and described in another application of even date herewith, Serial No. 386,018, and is not claimed in the present case. Its operation is the same as described in the said application, whereby it permits the hemmer to yield upward slightly in work and also provides for throwing it up vertically out of working position when not in use, in which position it is held by the stop pin I engaging with the notch h^3. Further description of this device will not be necessary here.

The general operation of the cloth turners in the work of hemming and felling will be readily understood from my prior application above referred to, the turning of the edges of the cloth being effected by the curved upper and lower members herein described in a similar way to that described in the said application. The main purpose of the construction herein described, is to obtain the results of the yielding of the turning members set forth in my said application. The lower member will yield upward to accommodate any inequalities in the cloth passing underneath it by the upward yielding of the arm, already mentioned. This movement carries with it the upper member also—in other words, the entire hemmer yields bodily. But the upper turning member has a yielding movement by itself and independent of the lower, this movement being a vibration upon its pivot against the force of its retracting spring. The main opening between the two members, when in normal position, as seen in Fig. 3, is designed to be sufficient only for the natural thicknesses of the fabric. Now if there are any substantial inequalities in the fabric, or seams already formed, it is evident they cannot pass through, unless there is an enlargement of this opening. Such an enlargement is obtained by the upward vibration of the pivoted member, which yields as the enlargements or projections strike against the bevel face at its front end and on account of this bevel or curve the passage is enlarged directly back by the swinging up of the member, thus permitting the enlargements to pass through freely with the under surface of this turner resting constantly, however, upon the enlargement as it passes through the spring keeping it in this constant contact, but without any pinching effect upon the fabric at any point. The parts constructed and described with curves and fingers conduct the turned fabric in proper shape directly to the presser-foot, so that there can be no disarrangement before it reaches the point where the needle comes into operation. When the supporting arm is turned up upon its pivot, the entire hemmer is, of course, thrown up out of working position and out of the way, so that the machine can be used for ordinary sewing, but without necessitating the removal of the hemmer.

In details of form, arrangement, &c., there may be changes without losing the characteristics of my present improvement, and I wish to be understood as contemplating such changes within my present invention.

It is obvious that the hollow head may be made in two or more pieces, if desired, and properly secured to the arm, though for cheapness and simplicity the construction, in one piece, here shown and described, is preferred.

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

1. In a hemmer for sewing machines, a hollow or box-shaped head carrying a stationary

lower cloth turner e^4, in combination with an upper turner F, pivoted at its forward end within the box, and a retracting spring arranged to turn said member downward toward the lower member, substantially as described.

2. In a hemmer, a hollow or box-shaped head provided with a fixed lower cloth turner, e^4, in combination with the upper cloth turner F pivoted at its front end within said head and having a curve or bevel f^3 in front of and below the pivot, and the spring g, substantially as described.

3. In a hemmer for sewing machines, a supporting arm e pivoted to a support on the presser-bar by a yielding connection which permits elastic vertical movement thereof, in combination with a hollow head at the outer or vibrating end of said arm, provided with the fixed lower turner e^4, the upper turner F mounted on a horizontal pivot at its front end within the head and beveled underneath said pivot, and a spring g arranged in rear of the pivot to turn the block F downward, substantially as described.

STEPHEN LASKEY.

Witnesses:
CARRIE FEIGEL,
A. M. BEST.