No. 613,285. Patented Nov. 1, 1898.

S. LASKEY.

FELLER FOR SEWING MACHINES.

(Application filed July 13, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

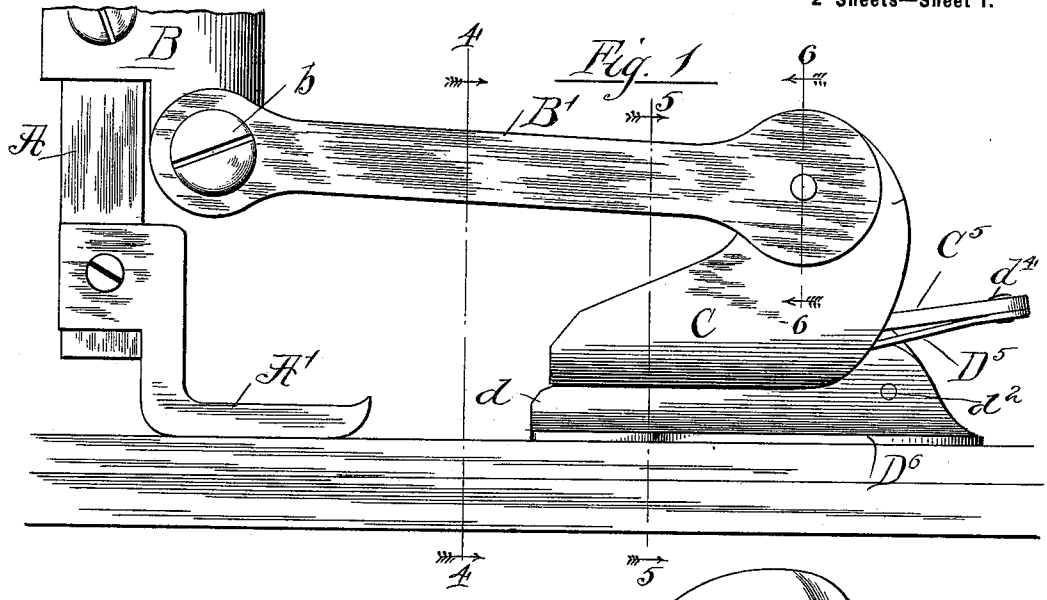


Fig. 2

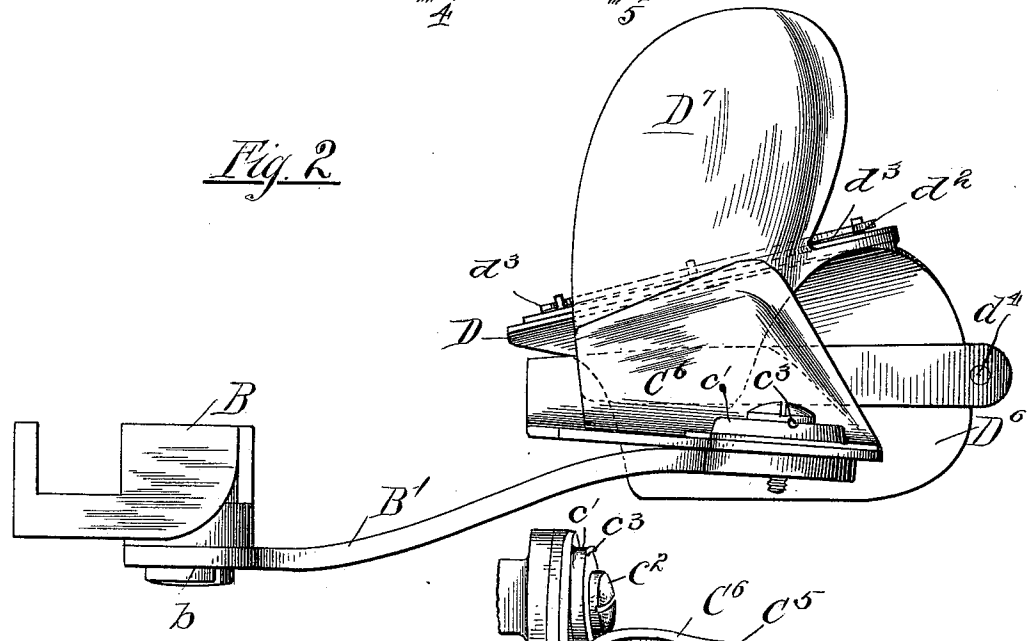
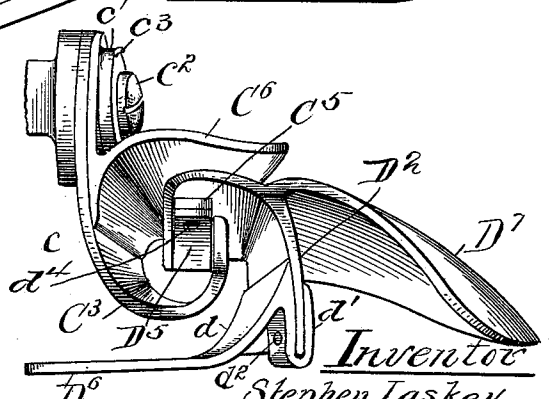


Fig. 3



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(No Model.) 2 Sheets—Sheet 2.

Fig. 4

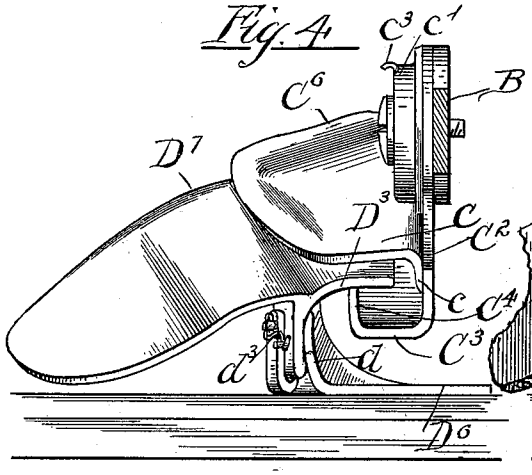


Fig. 5

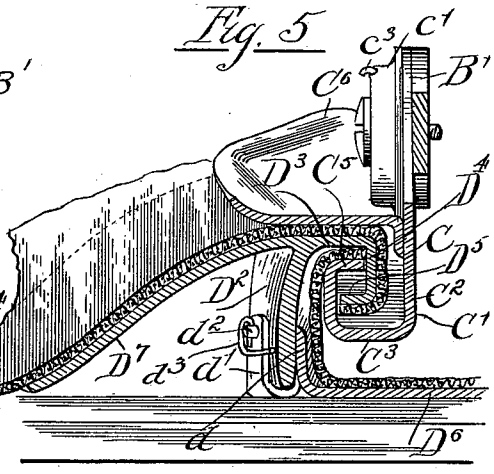


Fig. 6

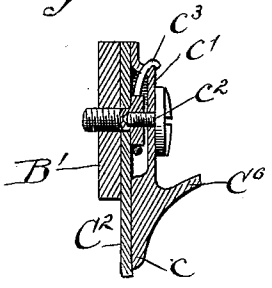


Fig. 7

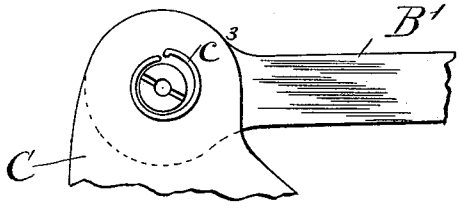


Fig. 8

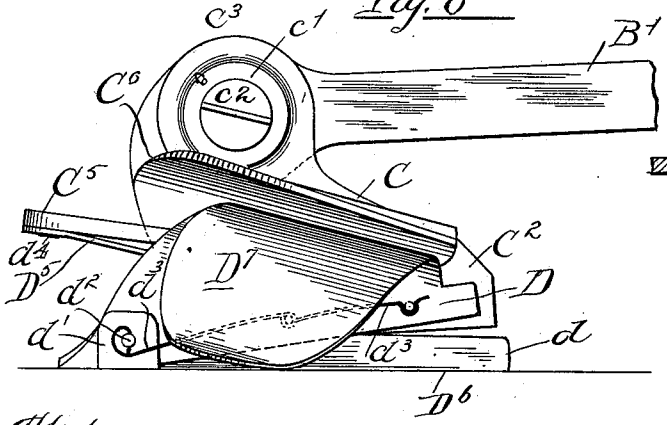
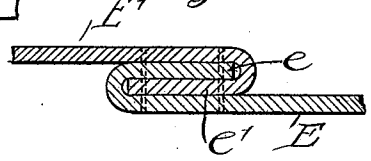


Fig. 9



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UNITED STATES PATENT OFFICE.

STEPHEN LASKEY, OF CHICAGO, ILLINOIS.

FELLER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 613,285, dated November 1, 1898.

Application filed July 13, 1897. Serial No. 644,427. (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 Fellers for Sewing-Machines, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing a feller constructed according to my invention attached to a presser-bar. Fig. 2 is a plan view thereof. Fig. 3 is a rear elevation thereof. Fig. 4 is substantially a front elevation thereof, being a vertical cross-section on the line 4 4 of Fig. 1, looking in the direction of the arrow. Fig. 5 is a vertical cross-section on the line 5 5 of Fig. 1, in the direction of the arrows. Fig. 6 is a vertical cross-section on the line 6 6 of Fig. 1, in the direction of the arrow. Fig. 7 is a detail view, in side elevation, with parts removed, of the structure shown in Fig. 6. Fig. 8 is a side elevation of the feller upon the opposite side of that shown in Fig. 1, with the lower half raised. Fig. 9 is a vertical cross-section of the seam which the feller is adapted to form.

My invention relates to fellers or scroll-hemmers for sewing-machines, and particularly to such as are adapted to join the edges of the material to be sewed in the form of a four-ply seam.

My invention is designed to adapt such a feller to sewing heavy materials, and particularly to enable it to fell without clogging or being otherwise impeded in the passage of cross-seams through the same.

My invention consists in a construction, one specific form of which I have shown in the drawings and shall now describe.

The details of construction shown are chiefly for purposes of illustration and do not necessarily constitute a part of my invention, which invention will be specifically stated in the claims.

Referring to the drawings by letter, A represents a presser-bar, and A′ a presser-foot. B designates a block adapted to be secured to the said presser-bar, to which block in turn is connected the lever B′ of the feller, pivoted, as at *b*, and preferably there provided with a spring-mounting. (Not shown in the drawings, but of ordinary construction and adapted to hold the lever both in and out of operative position.) The feller proper is double, as is requisite to make the seams of the form shown in Fig. 9, or may be considered to consist of two wings, an upper, C, and a lower, D. In the form shown in the drawings these two wings are substantially alike, one being reversed with respect to the other, and they are lettered and will be described with a view to the correspondence of their several component parts. Each wing comprises two principal portions, a main wing and an auxiliary wing. Referring first to the upper wing C, the main wing C′ comprises a vertical side wall C^2, a horizontal portion C^3, and an opposite vertical wall C^4, turned over at its upper edge to form a narrow horizontal shelf C^5. This main wing C′ of the upper wing C is rigidly mounted upon the lever B′.

The auxiliary wing C^6 of the upper wing C is provided with a curved flange *c*, which bears against the inner surface of the wall C^2 of the main wing C′ as the auxiliary wing rocks up and down on its pivotal mounting. This mounting comprises an ear *c*′, formed upon the said auxiliary wing near its rear end, pivoted to the lever B′, and preferably through the main wing C′, by the pin c^2. A spring c^3 permits the forward end of the auxiliary wing C^6 to rock upward upon this pivotal mounting under pressure, the spring normally holding the said wing downward in a given operative position. The lower wing D likewise consists of two parts; but, being reversed with respect to the upper wing C, the main wing D′ of the lower wing corresponds to the lower main wing C′ of the upper wing, the said main wing D′ comprising a vertical wall D^2, a horizontal portion D^3, an opposite wall D^4, and a narrow horizontal shelf D^5, all corresponding, respectively, to the parts C^2, C^3, C^4, and C^5 of the upper wing.

The auxiliary wing D^6 of the lower wing corresponds to the auxiliary wing C^6 of the upper wing and is provided with an upwardly-curved flange *d*, corresponding to the flange *c*, adapted to bear against the wall D^2 as the said auxiliary wing rocks upon its pivotal mounting. This mounting comprises an ear *d*′, formed upon the rear of the auxiliary wing D^6 and pivoted upon the lower edge of

the wall D^2 by the pin d^2. In case this wing is to be attached to a lever secured to the presser-bar in the specific form shown in the drawings there will be no necessity for any spring connection with this mounting of the lower wing. In case, however, the feller is to be mounted upon the bed-plate of the machine by attaching the auxiliary wing D^6 thereto or in any other equivalent way it will be desirable to provide a spring d^3, adapted to hold the forward end of the auxiliary wing D^6 upwardly and yieldingly.

The two wings C and D are preferably connected together so as to permit the lower to yield upwardly and downwardly with respect to the upper. The means I have shown for so connecting them consists in extending the shelf C^5 backward as a substantially rigid part and in similarly extending the shelf D^5 backward in the form of an elastic or spring shank and in riveting the two together, as at d^4. Finally, the lower wing D is preferably provided with a guide-wing D^7, of some such form as shown, for the purpose of guiding the material into the upper wing. In Fig. 9 there is illustrated in cross-section a seam such as that formed by the feller of the double type shown and to which my invention is applicable. E represents one portion of the material, the edge of which, e, is turned inward between the other portion of the material E′ and the edge e' thereof, whereby there is formed the well-known double seam, as shown.

The operation of this feller, the construction of which is hereinabove described, may next be referred to. When a heavy cross-seam enters the upper wing, the auxiliary wing thereof is adapted to rise and facilitate the passage thereof. When such a cross-seam passes through the lower wing alone, the two parts thereof will separate to the requisite degree, the main wing rising upward. At the same time the auxiliary wing of the upper wing will likewise rise upward to a sufficient degree to compensate for the contraction caused by the rise of the lower wing. When such a cross-seam enters each of the wings, the main wing of the lower wing will rise away from the auxiliary wing thereof, both by virtue of the pivotal mounting of the latter and of the spring-mounting of the former. This position of the parts is shown in Fig. 8. At the same time, the upper wing being thus contracted in space, the auxiliary wing thereof will rise not only sufficiently to counterbalance this contraction, but also a sufficient additional distance to allow the passage of the cross-seam through the upper wing as well. Afterward, when the cross-seams have passed, all the parts automatically resume their normal position. It will thus be seen that all of the three movable mountings—viz., of the auxiliary wing of the upper wing, of the entire lower wing, and of the auxiliary wing of the lower wing—all cooperate with one another very intimately in adjusting the entire feller to permit of the passage of the cross-seams.

One further advantage arising from the specific form of feller shown is that the shelves C^5 and D^5 receive the edges e' and e in such a way as to prevent the doubling over of the said edges, and thereby insure the evenness and certainty of the seam.

As already stated, the foregoing description and the drawings referred to therein illustrate one specific form in which my invention may be carried out. I do not, however, limit myself to such specific form; but

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

1. A feller comprising the two halves substantially reversed, each half consisting of a main wing and an auxiliary wing with means for yieldingly connecting the same to yield in a plane at substantially right angles to the plane of the material, the main wings taken together being substantially **S**-shaped in cross-section.

2. A feller comprising the two halves substantially reversed, each half consisting of a main wing and an auxiliary wing, and means for yieldingly connecting said wings, the main wings taken together being substantially **S**-shaped in cross-section and serving as guides to fell the edges of the material and prevent their contacting while passing therethrough, substantially as shown and described.

3. In a feller, an upper wing comprising an auxiliary and a main wing, with means for yieldingly mounting the auxiliary wing with respect to the main wing; and a lower wing connected to and coöperating with the said upper wing.

4. In a feller, an upper wing; and a lower wing comprising a main and an auxiliary wing, and means for yieldingly mounting the auxiliary wing in connection with the main wing; and means for yieldingly mounting the upper wing in relation to the lower wing.

5. In a feller, an upper wing comprising an auxiliary and a main wing, with means for yieldingly mounting the auxiliary wing with respect to its main wing; and the lower wing comprising a main and an auxiliary wing, with means for yieldingly mounting the auxiliary wing in connection with the main wing; and means for connecting the main wings to coöperate for the purpose described.

6. In a feller, an upper wing comprising a main wing and an auxiliary wing, said wings being contracted toward one end and pivotally connected to each other at the other end, and spring connections for holding the contracted ends yieldingly in proximity; and a lower wing connected to and operating with said upper wing, substantially as described.

7. In a feller, an upper wing comprising a main wing and an auxiliary wing, said wings being contracted toward one end and pivot-

ally connected to each other at the other end, and spring connections for holding the contracted ends yieldingly in proximity; and a similar lower wing yieldingly connected to the upper wing at their uncontracted ends, substantially as described.

8. In a feller, the main wing C′ of the upper wing, with the auxiliary wing C^6, and means for yieldingly mounting the wing C^6 upon the wing C′; with the main wing D′ of the lower wing, and means for yieldingly mounting the wing D′ upon the wing C′; and the auxiliary wing D^6 of the lower wing, and means for yieldingly mounting the wing D^6 upon the wing D′.

9. In a feller, the main wing of the upper wing comprising the wall C^2, bottom C^3, side C^4 and shelf C^5; the auxiliary wing C^6 of the upper wing yieldingly mounted on the wall C^2; the main wing of the lower wing comprising a wall D^2, top D^3, side D^4 and shelf D^5, the shelves C^5 and D^5 being yieldingly connected with one another; and the auxiliary wing D^6 of the lower wing yieldingly mounted on the wall D^2.

10. In a feller comprising upper and lower wings formed with corresponding parts, and reversed with respect to each other, the main wing C′ of the upper wing comprising a wall C^2, bottom C^3, side C^4 and shelf C^5; the auxiliary wing C^6 of the upper wing mounted upon the wall C^2; the main wing D′ of the lower wing comprising the wall D^2, top D^3, side D^4 and shelf D^5, corresponding respectively to the parts C^2, C^3, C^4 and C^5 of the main wing of the upper wing; a yielding connection between the shelves C^5 and D^5; the auxiliary wing D^6 of the upper wing yieldingly mounted upon the wall D^2; and the guide-wing D^7 mounted on the said wall.

STEPHEN LASKEY.

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