J. I., H. & H. PELLERIN.

Trimming Attachment for Sewing-Machines

No. 221,420. Patented Nov. 11, 1879.

Fig. 1.

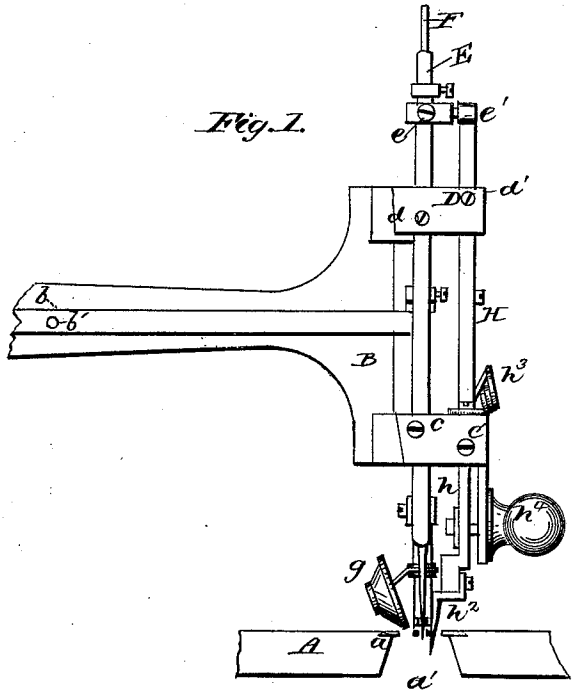


Fig. 2.

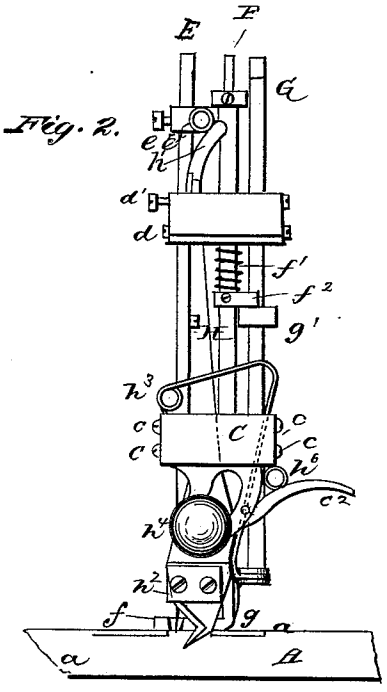
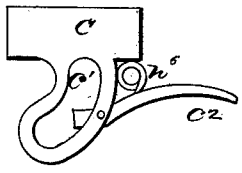


Fig. 3.



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IMPROVEMENT IN TRIMMING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **221,420**, dated November 11, 1879; application filed August 12, 1879.

To all whom it may concern:

Be it known that we, JOSEPH ISAÏE PELLERIN, HECTOR PELLERIN, and J. HORMIDAS PELLERIN, of Montreal, in the Province of Quebec and Dominion of Canada, have invented new and useful Improvements in Trimming Attachments for Sewing-Machines; and we do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which the same letters designate corresponding parts.

Our invention relates to the attachment to sewing-machines of a leather-cutting knife receiving its forward motion from the downward action of the needle-bar, requiring but little power, and the blade of which is interchangeable, adjustable, and works close to the sewing-needle in such a manner that it can trim the leather near the seam, following easily the shortest sinuosities to be given to the edge of the sewed leather, and having an escapement, to enable the operator to release the knife quickly when not required.

Figure 1 is a side elevation of the frame of the sewing-machine, with the leather-trimming attachment. Fig. 2 is an end elevation of the same. Fig. 3 is a detached view of the knife-escapement.

A is the table of the sewing-machine; B, the arm bearing the sewing-needle and leather-trimming attachment; C, lower frame of the attachment bearing the axis or center-bolt of the knife-holder, the escapement, and the spring for raising the knife-holder. It is held in place by screws *c c*. D, upper frame of the attachment, held by screws *d*; *a a*, plate in which, besides the slot for the feeder and the hole for the needle, is cut a narrow slit, *a'*, in which the cutting-knife moves; *b*, lever working the needle; *b'*, fulcrum of the lever; E, needle-bar; *e*, adjustable arm on the needle-bar, provided at its end with an anti-friction roller, *e'*, which, in its descent, pushes back the inclined plane or bent end *h'* of the knife-holder; F, presser-bar. It is constructed as usual, except that it has a round hole perforated in its foot *f*, instead of a fork, for the passage of the needle. This presser-foot is kept down, as usual, by a spiral or other spring, *f'*, bearing upon an adjustable shoulder, f^2, and is raised by the upper arm on the needle-bar when the needle is high enough to have withdrawn from the leather. Another presser, G, is placed over the feeder, where it remains all the time during the sewing. Its foot may be flat, or, what is better, be a presser-roller, *g*. This last presser is not new; but we combine it with the other, so as to better prevent the wrinkling of the leather while it is being sewed and cut.

H is the knife-holder. It is a long upright lever of the first class, pivoted at *h*. The end of the longer arm is bent backward at *h'*, so as to form an inclined plane, against which the arm or the anti-friction roller *e'* acts while the needle descends, thereby pushing backward the long arm of the knife-bearing lever and moving forward the knife h^2, attached to its lower short arm. This knife can have its cutting-edge formed in the shape of a horizontal **V**, as seen in the drawings, this shape being better adapted for cutting in a straight line, or nearly so, on thick leather; but the blade's cutting-edge may be straight when it is desired to cut in a scalloped or short broken line.

The lever is pivoted on a center-bolt terminated at its inner end by a nut and screw and at its outer end by a shoulder and knob, h^4, by which it may be lowered to its place. This center-bolt is held in a curved slot, *c'*, forming part of frame C, in the lower part of which it is kept, when in action, by the lower end of a lever-catch, c^2. This catch serves as an escapement to quickly release the knife-bearer, which, when not required, is drawn up by the spring h^3. The catch is kept in position by the spring h^6.

The two presser-feet are raised out of the way, when not required, by a lever pivoted on the arm B, and one arm of which works in the rod bearing the roller *g*, the adjustable ring *g'* pushing up the arm f^2. The upper end of the knife-bearer works in a groove cut or cast in the upper frame, D. The backward motion of the knife is regulated by the thumb-screw *d'*.

The operation of our device is simple, and may be understood by the mere inspection of the drawings.

We are aware that knives have been auto-

matically used for trimming leather while it is being sewed, but those knives generally cut downward, being pushed quickly by the needle-bar; but, as the motion is direct and short, much power is required. The position, motion, and construction of these knives are not adapted to cut small scallops or short and sharp sinuosities. In our system, on the contrary, the knife is placed upon the short arm of a long lever, while the power is applied, during the whole descent of the needle, to an inclined plane on the long arm of the lever, and therefore the power required is applied during a longer space of time, and is, consequently, more effectual in its action. Our presser-foot, combined with the roller-presser, secures better, more regular, and more delicate work than could be executed before on leather.

We apply the attachment we have just described to all kinds of sewing-machines generally used, with such modifications as are necessitated by their different forms, and which any mechanic experienced in the art will understand without difficulty.

What we claim as our invention, and desire to secure by Letters Patent, is—

The upright oscillating lever H, provided with the knife h^2 and incline h', in combination with the needle-bar provided with the friction-rollers e' substantially as described.

The above specification of our said invention signed and witnessed at Montreal this 31st day of January, A. D. 1878.

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Witnesses:
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