

H. PARSONS.
Cloth-Cutting Attachments for Sewing-Machines.
No. 155,334. Patented Sept. 22, 1874.

Fig. 1.

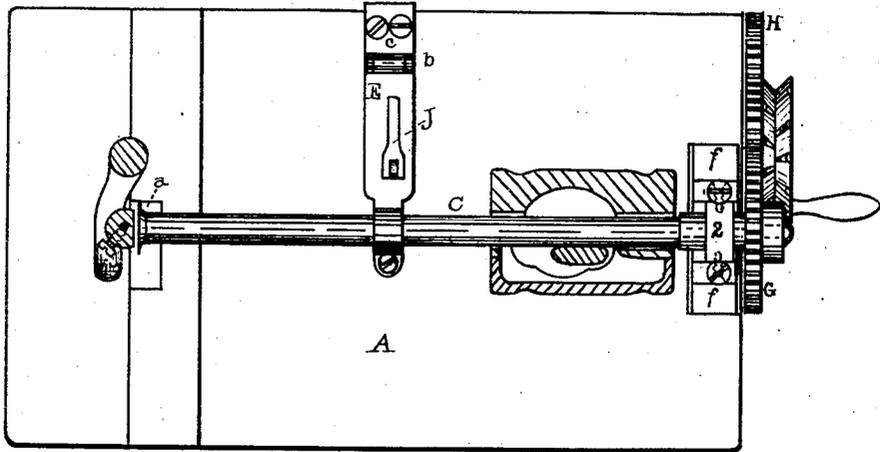
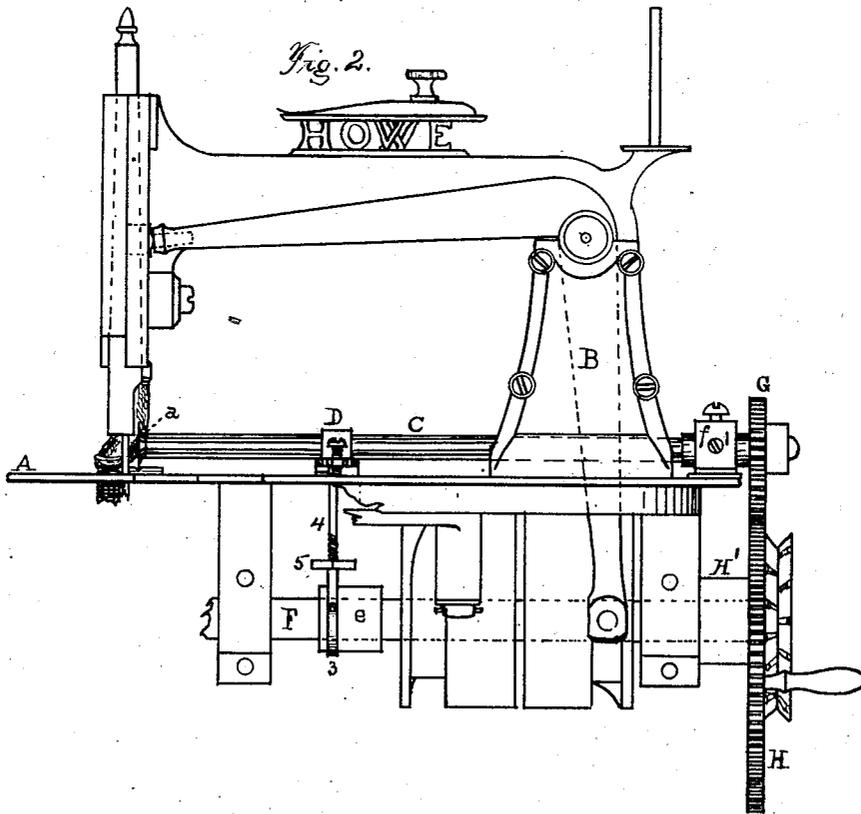


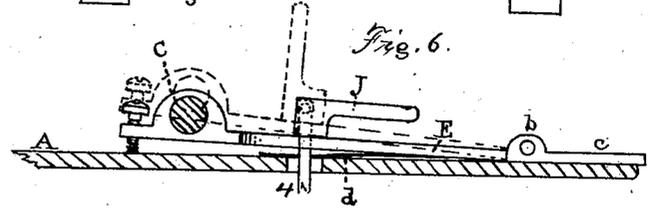
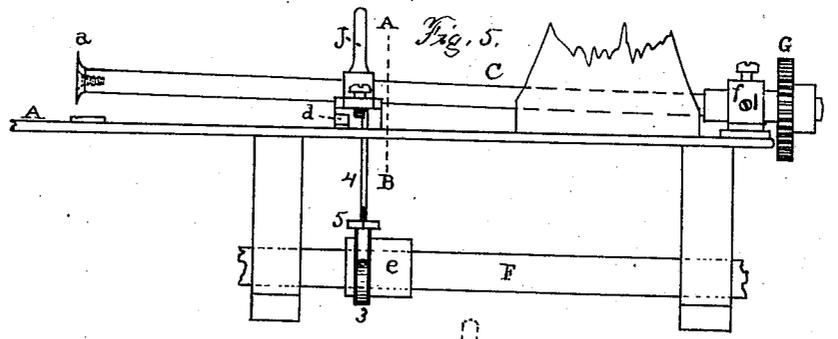
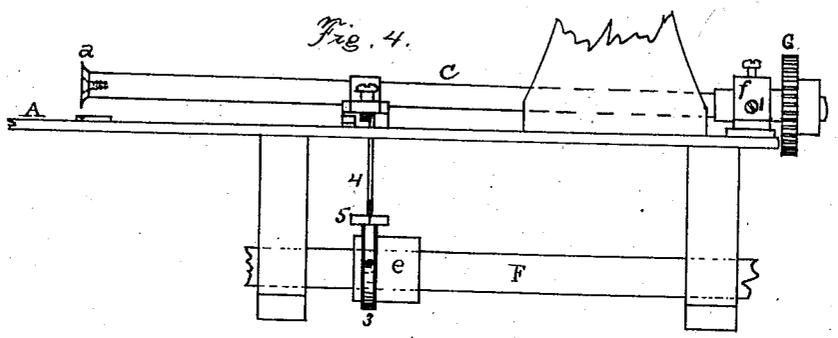
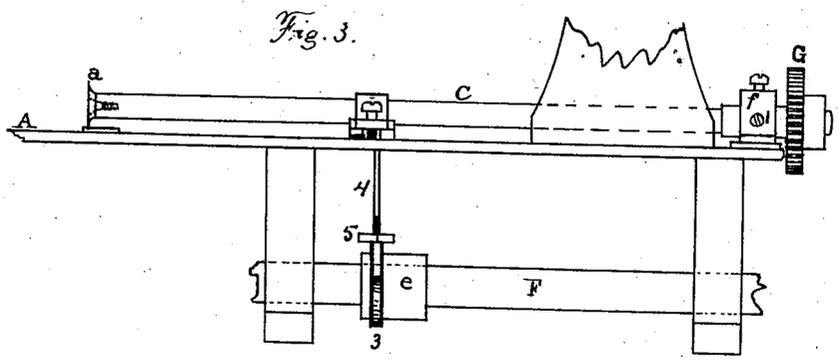
Fig. 2.



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IMPROVEMENT IN CLOTH-CUTTING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **155,334**, dated September 22, 1874; application filed August 21, 1874.

To all whom it may concern:

Be it known that I, HENRY PARSONS, of Marlborough, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Trimming or Cutting Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, and in which—

Figure 1 represents a top or plan view of my said improvement, together with so much of a Howe sewing-machine as is necessary to illustrate the invention, a portion of the sewing-machine being shown in section. Fig. 2 represents a side view of the said improvements, together with so much of a side view of a Howe sewing-machine as is necessary to illustrate the invention. Figs. 3, 4, and 5 represent side views of the attachment in the different positions in which it is used, as will be hereafter more fully described; and Fig. 6 represents a cross-section on line A B, Fig. 5.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

My invention is an improvement upon the devices for which Letters Patent were granted to William A. Springer, August 26, 1873, and to William A. Springer, assignor to himself, Henry Exley, and Henry Parsons, February 10, 1874; and consists in extending the shaft which supports the rotating trimmer or cutter through the sewing-machine arm to the rear end of the sewing-machine frame, and supporting it at that end in a bearing, substantially such as hereafter described, which permits the front end of the shaft to which the trimming-cutter is attached to vibrate freely during the operation of the machine.

In the drawings, the part marked A represents a table of a sewing-machine, of the Howe pattern in this instance; and B, the stand or frame which supports the needle-arm or presser-foot arm; but as these and other parts of the sewing-machine proper are and may be of the usual and well-known form and construction, no detailed description of the same is necessary, except that the stand or

frame B must be made with a hole sufficient to allow of the proper elevation and depression of the trimmer-shaft C, to the front end of which a circular trimming-cutter, *a*, is properly secured. D is a bearing on the front end of hinged plate E, in which shaft C turns. Said plate is hinged at *b* to a piece, *c*, which in turn is fastened to the table A. Underneath the hinged plate E is arranged a flat spring, *d*, the tendency of which is to throw hinged plate E, with its bearing D and shaft C, up, as shown in Figs. 4 and 5, when the eccentric *e* on shaft F is in a certain position, as will be hereafter explained. A hole is made in the stand B large enough to allow the front end of shaft C to vibrate up and down, as indicated in Figs. 3, 4, and 5. To the rear end of table A are attached two angle bearing-pieces, *ff*, and into these are screwed bearing-pins 1, the inner beveled ends of which pins enter corresponding holes in the bearing-piece 2, in which the rear end of shaft C is fitted to turn, the beveled ends of said pins being shown in dotted lines, Fig. 1, said beveled pins, after they have been properly adjusted, being held in place by set-screws in the bearing-pieces *ff*. The rear end of shaft C is fitted to turn in bearing-piece 2, and kept from a longitudinal movement by proper shoulders, hubs, or collars secured to shaft C, to turn on each side of bearing-piece 2. Shaft C receives its motion by means of gear G, which meshes into gear H, the hub H' of which is fastened to the main shaft F, which gives motion to the needle-arm and feeding mechanism. Upon shaft F is also secured an eccentric, *e*, around which is arranged an eccentric strap, 3, into which is secured the lower end of rod 4, it being held in place after adjustment by a set-nut, 5. The upper end of rod 4 passes up through slotted table A, and through a slot in hinged plate E, and is hinged or pivoted to the clamping holding-piece J.

The operation of the machine is as follows: When the sewing-machine is put into operation shaft C is rotated rapidly, and eccentric *e* is so arranged that it will lift rod 4 and clamping-pin J when the needle is raised, thereby permitting spring *d* to elevate the hinged bearing-piece E, together with the front end of shaft C, every time the needle is raised, thus

allowing the material to be fed through the machine, while the trimming-cutter is raised above the table and material, as indicated in Fig. 4. The eccentric is also so arranged that when the needle descends rod 4 will be depressed or drawn down, thereby drawing down hinged bearing-piece E and rotating shaft C, thereby bringing the trimming-cutter down to its work, as indicated in Fig. 3.

It will thus be seen that the trimming-cutter is caused to act intermittingly upon the material, so as to give a drawing cut, and that, too, while the material is at rest and held firmly down by the presser-foot of the sewing-machine.

When it is desired to turn corners, if the operator turns up clamp-piece J, as shown in Fig. 6, spring *d* will throw up the hinged bearing-piece E, as indicated in full lines, Fig. 5, and dotted lines, Fig. 6, thus leaving additional room between the table and the trimming-cutter *a*.

It will be seen that by extending the shaft C back to the rear end of the sewing-machine frame, and gearing it from that end, in combination with a bearing substantially such as herein described, which permits the front end of the shaft to vibrate rapidly without binding and without being thrown out of gear, the trimming attachment is rendered very perfect and desirable, while all danger of the material be-

ing sewed and trimmed being caught in the driving-gearing is obviated.

A rotary trimmer thus arranged and operated, and having a plate secured to the table for it to cut against with a shearing action, has proved very useful and valuable, particularly in the manufacture of boots and shoes, as the work can be trimmed very evenly and smoothly at the same time that it is stitched.

Having described my improvements in trimming attachments for sewing-machines, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the rotating shaft C, having a rotating trimming-cutter secured to its front end, and operated intermittingly upon the material to be trimmed, of a supporting-bearing, substantially such as described, which permits the front end of shaft C to be elevated and depressed, as occasion may require, without cramping or binding.

2. The combination with the shaft C, to which the trimming-cutter is attached, of the bearing-supporting pieces *ff*, bearing-piece 2, and screw bearing-pins 1 1, substantially as and for the purposes set forth.

HENRY PARSONS.

Witnesses:

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