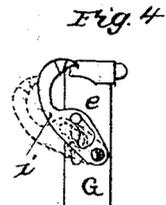
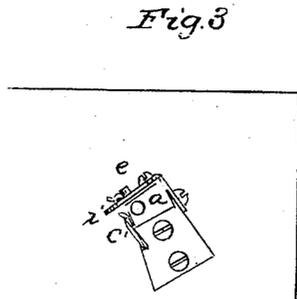
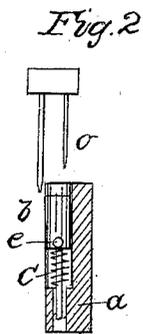
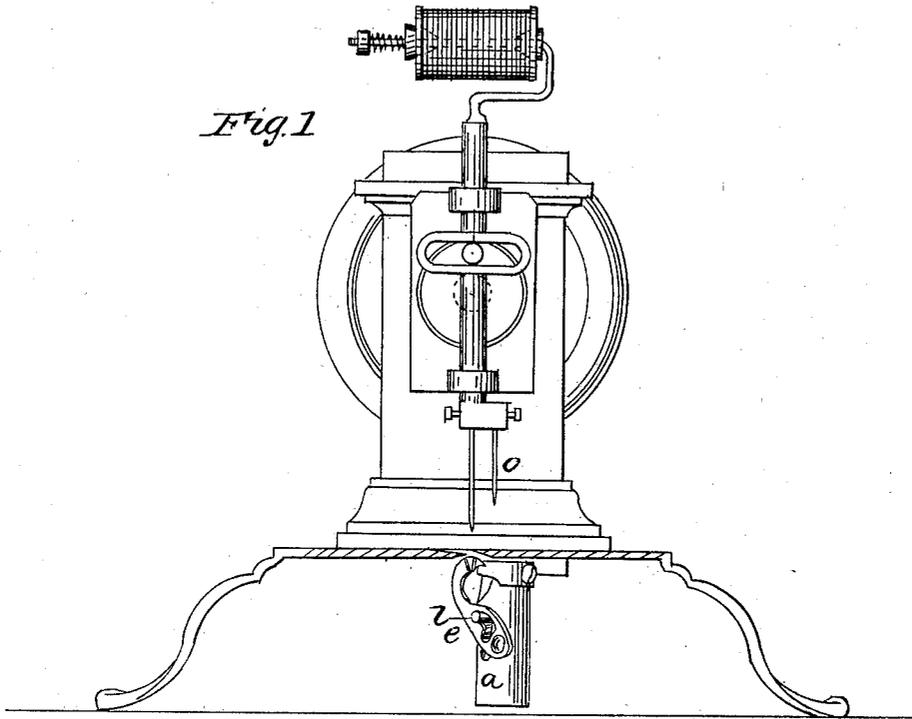


G. W. HUBBARD.
Sewing Machine.

No. 21,833.

Patented Oct. 19, 1858.



INVENTOR
G. W. Hubbard

UNITED STATES PATENT OFFICE.

GEO. W. HUBBARD, OF WEST MERIDEN, CONNECTICUT.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 21,833, dated October 19, 1858.

To all whom it may concern:

Be it known that I, GEORGE W. HUBBARD, of West Meriden, county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawings, making a part of this specification, in which—

Figure I is an end view or elevation, partly in section. Figs. II, III, and IV are views of parts in detail; and similar letters indicate similar parts throughout.

My invention consists in an improved construction of the loopers of sewing-machines, and in the manner of operating the same.

The looper consists of a hook so shaped as to engage and spread the loop in a well-known manner. It is, however, so constructed as to be capable of being operated by a fixture attached to the needle-bar, which fixture being carried up and down with the needle effects the working at the proper time and in a very simple and certain manner. This fixture consists of a pin sharpened at its end, so as to readily pierce the cloth in the same manner as the needle does, thence passing through a hole in the table it comes into contact with the mechanism by which the looping-hook is actuated. Beneath the table at *a* is a post secured in a vertical position near to the hole through which the needle passes. This post has a hole through it, as seen in Fig. II, into which a piston is fitted to play easily, as at *b*. From beneath the piston a guide-rod descends and passes through a small hole, a spiral spring being introduced, as at *c*, to keep the piston up. There is a slot in the side of the post, as seen in Fig. I, through which a stud projects from the side of the piston, as at *e*. This stud communicates motion from the piston to the looper, which latter is shown at *i*, being secured to the side of the post by a pivot-screw, upon which it turns. Through the side of the hook an angularly-shaped slot is cut, for the purpose of causing the stud and piston to give motion to the hook only through a portion of their stroke.

The driving-pin is seen at *o*, and is fixed to the needle-stock, so as to stand parallel with the needle and in advance of it, directly in the line of feed of the cloth.

All the other parts of the machine being as

usual, the operation will be as follows: The needle, it will be seen, is longer than the pin, and hence passes through the cloth first and through the previous loop then held up on the hook *i*. (The work is supposed to have been going on.) The pin *o* then strikes upon the top of the piston *b*, driving it down, and thus throwing open the looper *i*. This brings the lower angle of the slot into a vertical position, as seen in the duplicate lines in Fig. IV. The needle can thus complete its stroke and return part way without imparting motion to the looper. By this means the loop of thread may be thrown out in time for the hook to enter when the return motion takes place, which it does as soon as the stud *e* gets to act upon the upper half or angle of the said slot. The return motion is produced by the force of the recoil-spring *C*. A feed of cloth now takes place, and the operation is repeated as before.

The top of the piston *b* may be covered with some yielding material to receive the blow of the pin's point, so as not to blunt it, or it may be countersunk in such way that the beveled end only shall strike, the point being thereby protected.

The puncturing of the materials with an additional set of holes by reason of the action of the pin *o* might be considered objectionable; but in practical working upon cotton and other like soft cloth I have not found such to be the case. In sewing leather this feature is not only not objectionable, but constitutes, on the other hand, rather an advantage when the curve is of considerable size, for the feed may be so adjusted that the needle shall enter those holes pierced by the pin, and thus the latter acts as an awl, consequently decreasing the risk of breaking the needle. This arrangement avoids the necessity for the cam-work heretofore required to drive the loopers of such sewing-machines.

I claim—

Operating the looper by means of a pin working in conjunction with the needle, in the manner substantially as described herein.

In testimony whereof I have hereunto subscribed my name.

GEO. W. HUBBARD.

Witnesses:

ORVILLE H. PLATT,
TIMOTHY C. RANSOM.