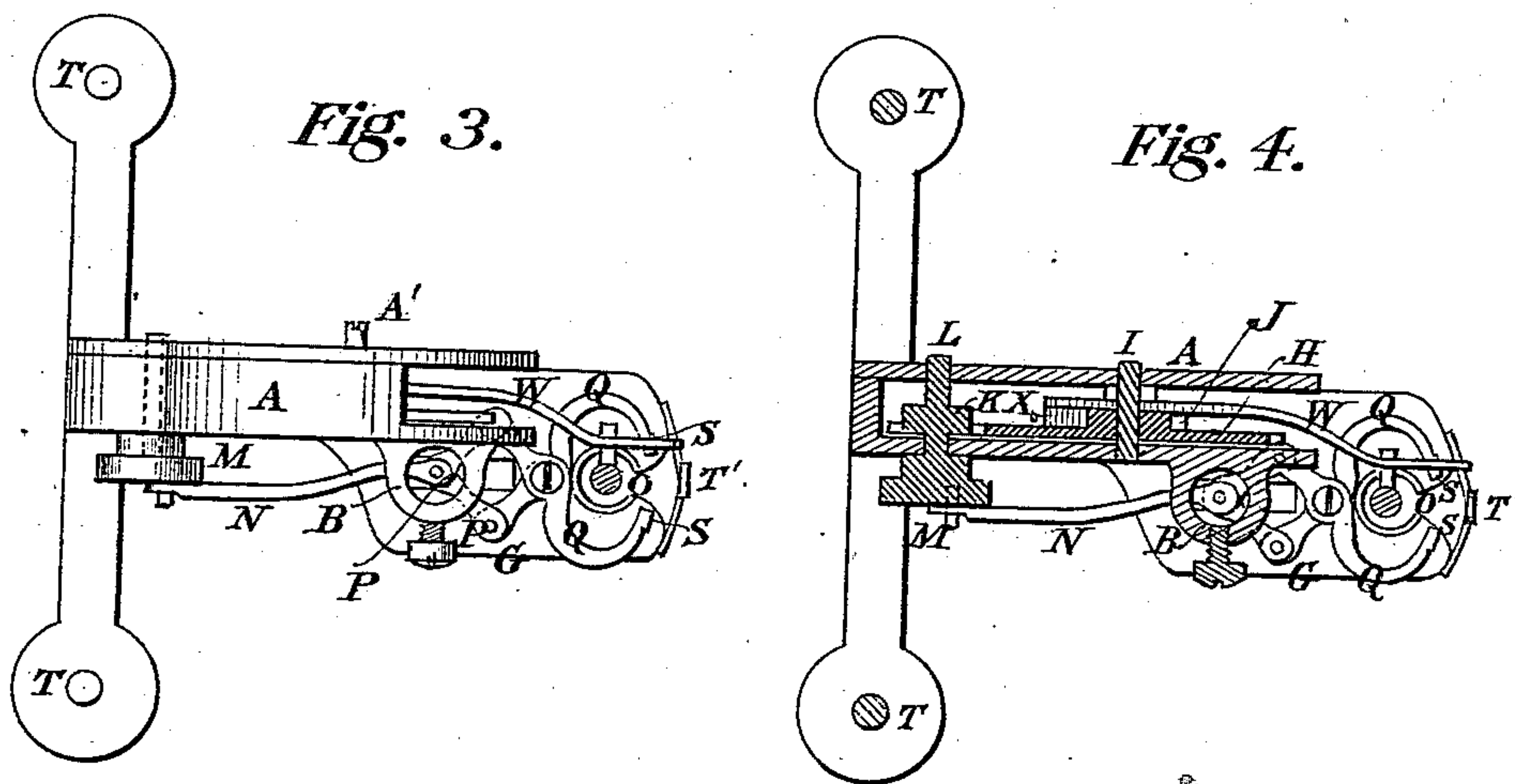
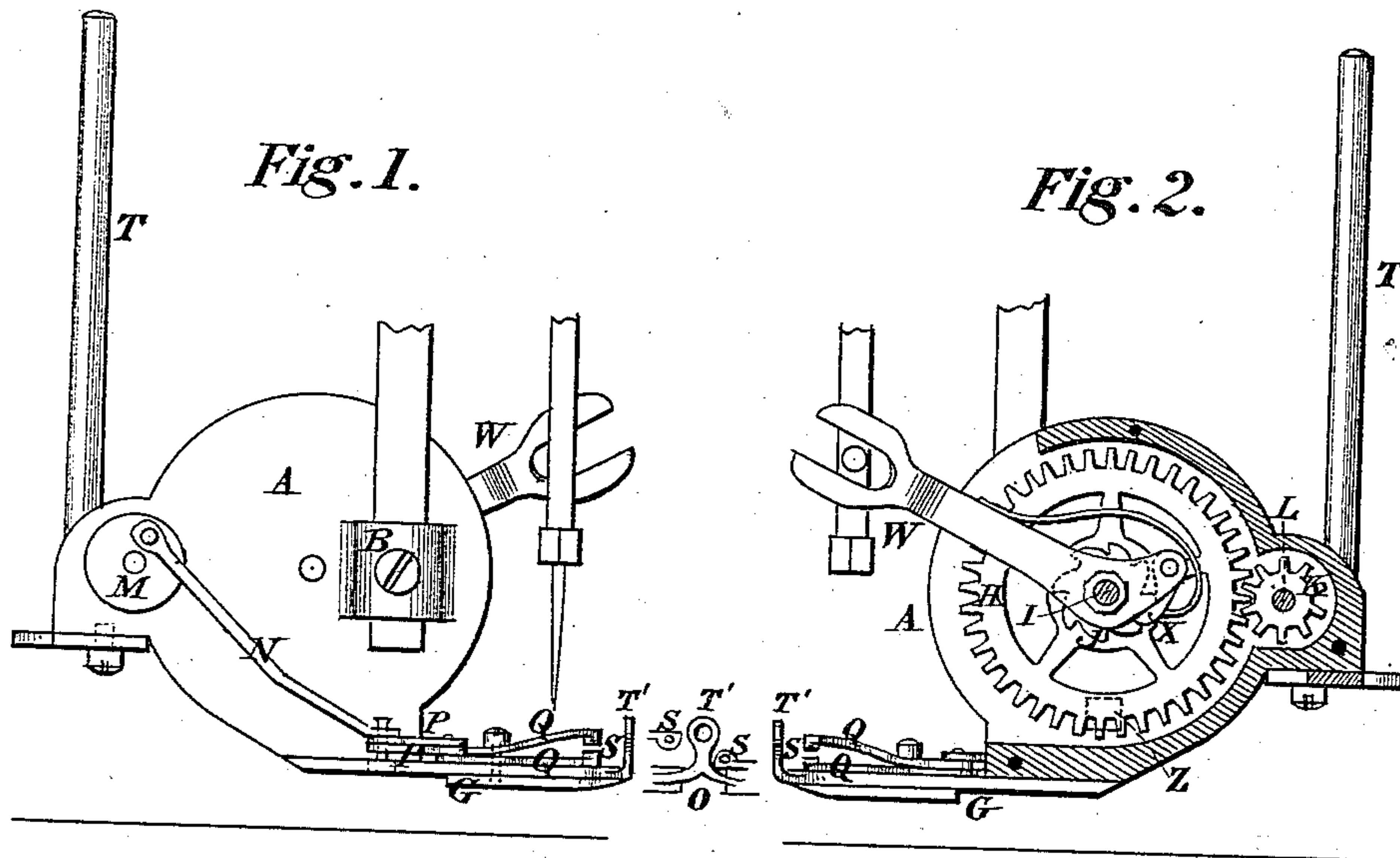


H. F. SCHLUETER.
Embroidering Attachment for Sewing-Machine.
No. 226,207.
Patented April 6, 1880.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

HENRY F. SCHLUETER, OF CINCINNATI, OHIO.

EMBROIDERING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 226,207, dated April 6, 1880.

Application filed December 20, 1879.

To all whom it may concern:

Be it known that I, HENRY F. SCHLUETER, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Embroidering Attachment for Sewing-Machines; and I do hereby declare the following to be a full, clear, concise, and exact description of the same, sufficient to enable those skilled in the art to make and use it, reference being had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a side elevation of the attachment. Fig. 2 is a similar view of the attachment reversed, and with one side removed to show the interior mechanism. Fig. 3 is a top-plan view; and Fig. 4 is a longitudinal section of the attachment, taken horizontally through the same.

Similar letters of reference in the drawings denote the same parts.

My invention has for its object to provide an improved embroidering attachment for sewing-machines which shall be positive and certain in its action under all circumstances, instead of depending upon the recoil of springs for any of its movements.

To this end the invention consists in the construction of the attachment, as I will now proceed to describe.

In the accompanying drawings, A represents an upright barrel or case, provided upon one side with a loop, B, to receive the presser-bar of a sewing-machine after the presser-foot is removed. A plate, G, is formed upon or attached to the lower edge of the barrel, to project laterally and to the front thereof, for the purpose of forming a guide and support for the loops which carry and lay the embroidery-thread, and to form a presser-foot for the work on the sewing-machine table.

H is a gear-wheel mounted loosely upon a central stud, I, within the barrel, and carrying a ratchet-wheel, J, upon one side. The gear-wheel engages with a pinion, K, also within the barrel or an offset thereof; but, instead of being mounted upon a stud, it carries a shaft, L, having bearings in the sides of the barrel. One end of this shaft extends through that side of the barrel A, and is there provided with a crank arm or wrist, M, to which

a pitman, N, is attached, so as to extend downward and forward upon the guide-plate in rear of the needle-hole O in the guide-plate and presser-foot G.

The front end of the pitman is pivoted to two short links, P P, which, in turn, are pivoted to the rear ends of two arms, Q Q, crossing each other in the rear of the needle-hole, and at their point of intersection pivoted to the guide-plate. These arms curve outward around the needle-hole to the front of the presser-foot, where they are provided with eyes S S for guiding and laying the embroidery-thread. By this construction it is evident that when the gear-wheel is rotated the pitman will be reciprocated on the guide-plate, and, through the medium of the links, will cause the arms Q Q to open and close, thereby moving the thread-eyes to and fro past each other in front of the needle-hole, and in plain view of the operator at the front of the sewing-machine.

The pitman and links are guided in their movements to prevent lateral displacement by extending the pivot which unites them into a slot in the guide-plate, or by any other suitable guide in said plate.

The spool-carriers T T for the embroidery-thread are mounted upon a cross-bar attached to the rear of the barrel, extending upon each side, and the threads are carried down to the front of the presser-foot, where they are inserted in a suitable loop, T', attached to such foot for the purpose, and are then passed rearward through the eyes S S, and down through the needle-hole onto the cloth to be embroidered. When the eyes are moved past each other they cross the embroidery-threads in front of the needle, in the usual manner, and the thread of the latter stitches them to the cloth at their points of crossing.

To operate the gearing intermittently from the needle-bar, a looped arm, W, is employed, mounted loosely upon the stud I of the gear-wheel, and provided with a spring-pawl, X, to engage with the ratchet-wheel. The arm projects through an opening in the front of the barrel, and its front end is forked to fit over a screw or pin in the side of the needle-bar. When the needle-bar descends the pawl X slips over the ratchet-wheel without turning

it, and therefore the gearing is not rotated; but when the needle-bar ascends the pawl engages the ratchet-wheel to rotate the gearing and reciprocate the thread-eyes S S.

5 Backward movement of the gear-wheel is prevented when the pawl is slipping over the ratchet-wheel, upon the descent of the needle, by a leather or other suitable brake, Z, (shown by dotted lines, Fig. 2,) bearing against the
10 side of the gear-wheel, and attached to the end of a set-screw, A', in the side of the barrel, by which the pressure of the brake can be adjusted. The descent of the needle occurs when the thread-eyes S S have crossed the
15 embroidery-threads, and therefore stitches them to the cloth, and its ascent occurs when the feed of the machine moves the cloth on the table. Therefore the thread-eyes cross the
20 thread to form a new loop on the ascent of the needle, and while the loop previously stitched is fed out of the way, and remains stationary while the stitch is being made.

One side of the barrel is adapted for removal in any convenient way for access to the
25 interior mechanism and to replace or repair the brake.

The attachment is applied to a sewing-machine by first removing the presser-foot of the latter, and then slipping the loop B of the at-
30 tachment upon the needle-bar, so that the needle-hole in the presser-foot of such attachment shall stand directly under the needle-bar. A set-screw on the side of the loop serves to hold the attachment in place and to adjust
35 its position with respect to the needle and table of the machine.

By constructing and applying the attachment as above described the thread-eyes are moved without the aid of springs, and are

therefore certain and positive in their action 40 under all circumstances.

Having thus described my invention, what I claim is—

1. The pinion K and its wrist or crank, combined with the gear-wheel H, mechanism for 45 operating the same from the needle-bar, the pitman N, links P P, and arms Q Q, carrying the guide-eyes S S, substantially as described, for the purpose specified.

2. In an embroidering attachment for sewing-machines, the combination of the gear-wheel H, lever W, pawl and ratchet-wheel J X, the pinion K, operated by the gear-wheel, with the arms Q Q, carrying the guide-eyes S S, and mechanism for operating said arms from the 55 pinion, substantially as described, for the purpose specified.

3. The embroidering attachment for sewing-machines, consisting of the barrel A and plate G, with which are combined the gear-wheel H, 60 pawl-arm W, the ratchet-wheel and pawl J X, the pinion K and its crank shaft or wrist, the pitman N, links P, and arms Q Q, carrying the guide-eyes S S, substantially as described, for the purpose specified. 65

4. The combination, with the barrel A and plate G, of the gear-wheel H, pawl-arm W, the ratchet-wheel and pawl J X, the pinion K and its crank shaft or wrist, the pitman N, links P, arms Q Q, carrying the guide-eyes S S, 70 and the brake Z, substantially as described, for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY F. SCHLUETER.

Witnesses:

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