

A. STEWARD.
Ruffler for Sewing Machines.

No. 69,946.

Patented Oct. 15, 1867.

FIG. 1.

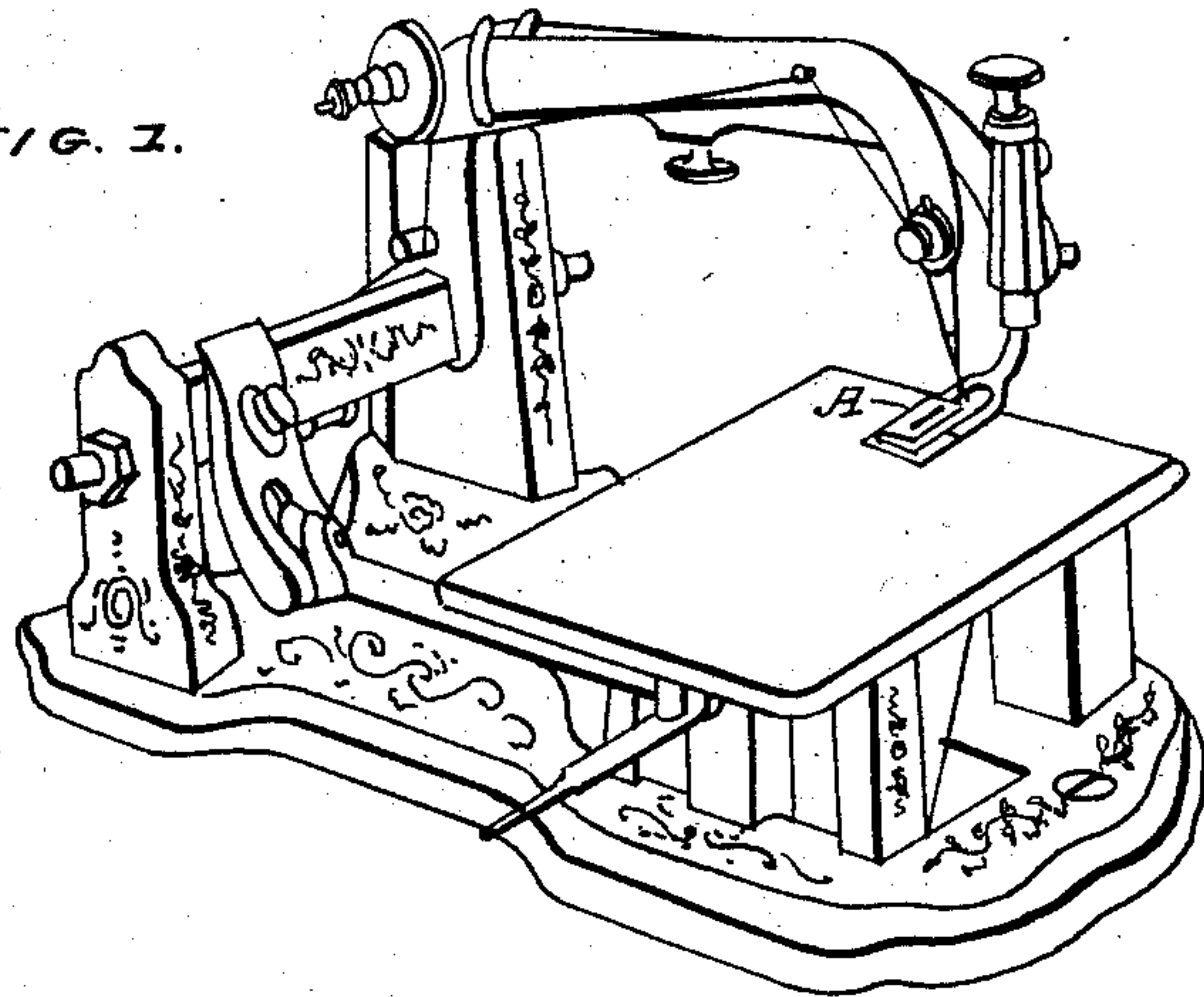


FIG. 2.

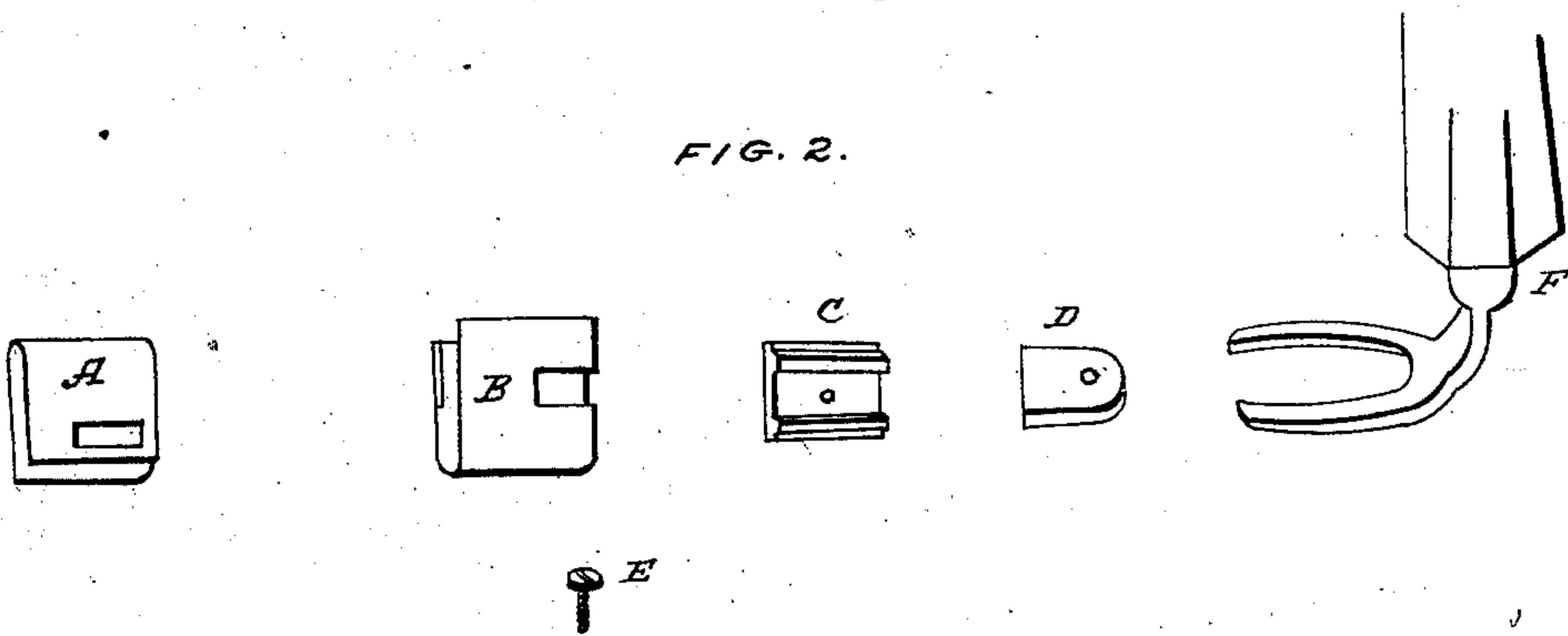
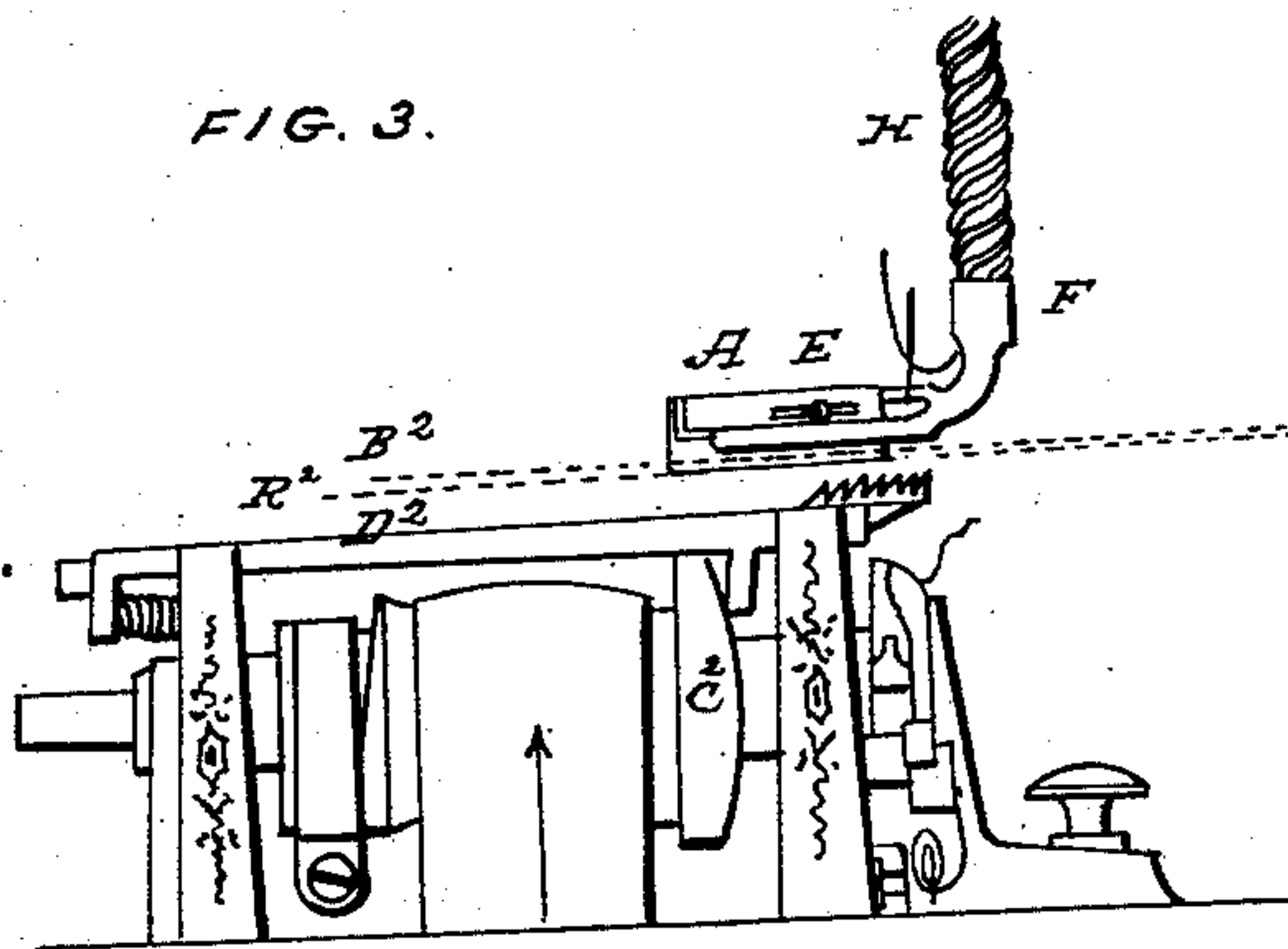


FIG. 3.



WITNESSES:

G. H. Steward
H. B. Matthews

INVENTOR.

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United States Patent Office.

A. STEWARD, OF PLANO, ILLINOIS.

Letters Patent No. 69,946, dated October 15, 1867.

IMPROVEMENT IN RUFFLER FOR SEWING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. STEWARD, of Plano, in the county of Kendall, and State of Illinois, have invented a new and useful Attachment for Sewing Machines, namely, a Ruffler for the purpose of gathering a ruffle and sewing it on to the band at one operation; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 shows the working part of a sewing machine with ruffler attached.

Figure 2 shows parts of ruffler with the cloth-presser of a sewing machine, parts lettered as follows: A, spring-plate of ruffler, top view; B, spring-plate of ruffler, bottom view; C, bed-piece of ruffler; D, part of cloth-presser of sewing machine; E, screw; F, cloth-presser piston of sewing machine.

Figure 3 shows the feeding apparatus of a sewing machine in connection with ruffler, parts lettered as follows: A, spring-plate of ruffler; C², cam of sewing machine; D, feed-bar; F, cloth-presser piston; H, spring for cloth-presser piston.

In ruffling, puffing, &c., two pieces of cloth or other textile fabric are used, and for convenience the piece to be gathered I call a ruffle, and the piece to which it is sewed I call a band. These I also show in fig. 3, the band being shown by dotted lines B², and the ruffle by dotted lines R².

I construct my improvement as follows: I attach to the sewing machine a thin plate of metal or other suitable material, in such a manner that it may extend between the cloth-presser and the feeding apparatus and prevent those parts from coming in contact during a portion of the feed-stroke. I construct this plate as shown by A and B, fig. 2, and after inserting the part D and bed-piece C into the grooves between the forks of the cloth-presser piston F, all of fig. 2, I secure it by the screw E through the slot in A to the bed-piece C, the part D and bed-piece C thus forming the cloth-presser, and the plate secured to the top of the same extends around underneath and between it and the feeding apparatus, there being space enough between this plate and the bottom of the cloth-presser to allow the cloth to pass freely between them when no pressure is exerted on the under side of the plate, but the plate is made thin enough to yield easily to pressure from below and be pressed against the cloth to prevent it from moving except when released, and at the proper time.

The operation of my improvement is as follows, and shown by fig. 3: I insert the ruffle between the cloth-presser, with ruffles attached, and the feeding apparatus, as shown by dotted line R²; I then insert the band above the same, and between the spring-plate A and the bottom of the cloth-presser, as shown by dotted line B². I now allow the cloth-presser to drop down, as in ordinary sewing. It is forced down by the spring H, thus holding the band B² between the spring-plate A and the bed-piece C, and the spring-plate yielding, as before stated, is pressed against the upper side of the ruffle R², thus pressing both pieces of cloth, with the spring-plate inserted between them, down firmly upon the cloth-plate, (not shown in fig. 3,) of the sewing machine. I now start the machine, when the cam C², operating upon the feed-bar D², causes it to rise until its teeth passing through slot in cloth-plate presses against the ruffle R², raising both pieces of fabric, the ruffler and cloth-presser a little more than the thickness of the spring plate A, then moving forward carries the ruffle R² with it, the band B² being held stationary between the spring-plate A and the cloth-presser until all the teeth of the feed-bar have passed the spring-plate A, when the feed-bar seizes also the band B², and the spring-plate A, no longer pressing the teeth of the feed-bar, recoils to its first position, releasing the band B², and allowing it to be moved with the ruffle R² the remainder of the feed-stroke, then the feed-bar D² is allowed by the cam C² to drop down below the surface of the cloth-plate, when the cloth-presser holds both pieces of cloth as before, the feed-bar goes back, and the next revolution of the cam C² causes it to rise, move forward, and repeat the process. Thus, by carrying the ruffle R² a greater distance forward than I do the band B², the two being sewed together as they pass the needle, a fold or gather must be made in the ruffle R² at each operation of the feeding apparatus, which fold, as it passes the needle, is secured by sewing to the band B², thereby gathering the ruffle and sewing it on to the band with one operation. Now, if I wish to gather more of the ruffle on to the same quantity of band, I lengthen the stroke of the feed-bar in the ordinary manner, which allows the feed-bar to recoil a greater distance and seize a greater quantity of the ruffle, carrying it forward until the teeth of the feed-bar pass the spring-plate as before, and seize also the band and carry it the same distance as in the first operation.

But if I wish to gather the same quantity of the ruffle as in the first operation on to a less quantity of band, I adjust the spring-plate of the ruffler by means of the slot in the same, and screw E, fig. 2, moving it nearer the needle, in order that the feed-bar shall move farther with the ruffle before and not so far after passing the spring-plate and seizing the band. By this means I am enabled to regulate with precision the fullness of the ruffle upon coarse or fine fabrics, as occasion requires.

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

The spring-plate A B, constructed as described, combined with the presser, and arranged to operate in connection with the feeding apparatus as and for the purposes described.

A. STEWARD.

Witnesses:

G. H. STEWARD,

H. B. MATHEWS.