

A. STEWARD.
Sewing Machine.

No. 125,498.

Patented April 9, 1872.

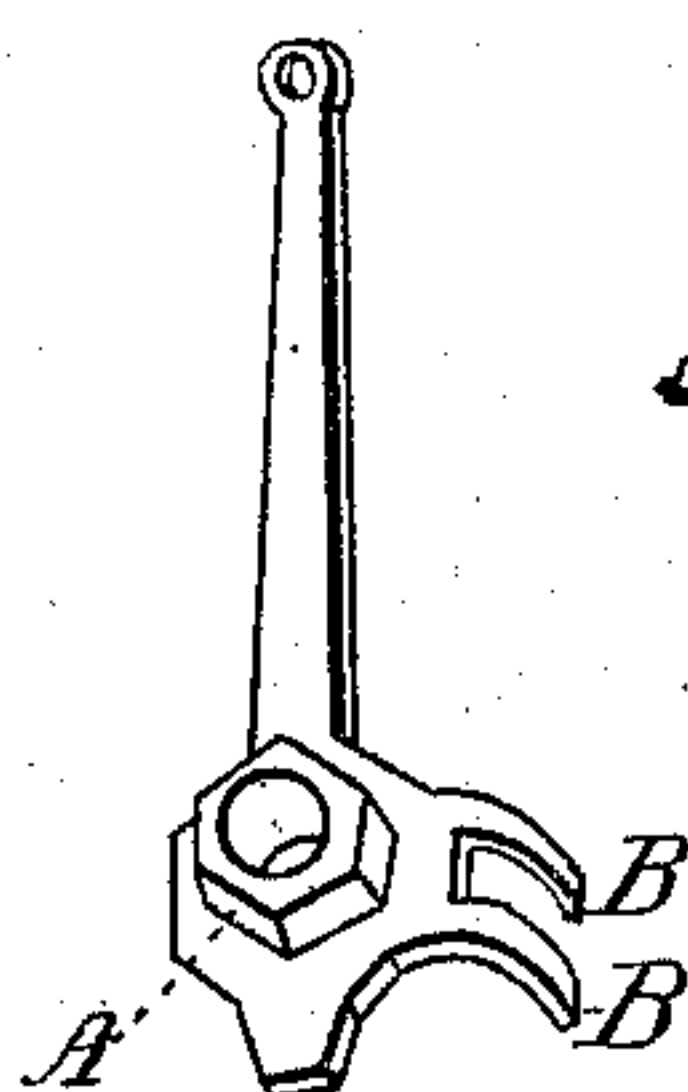
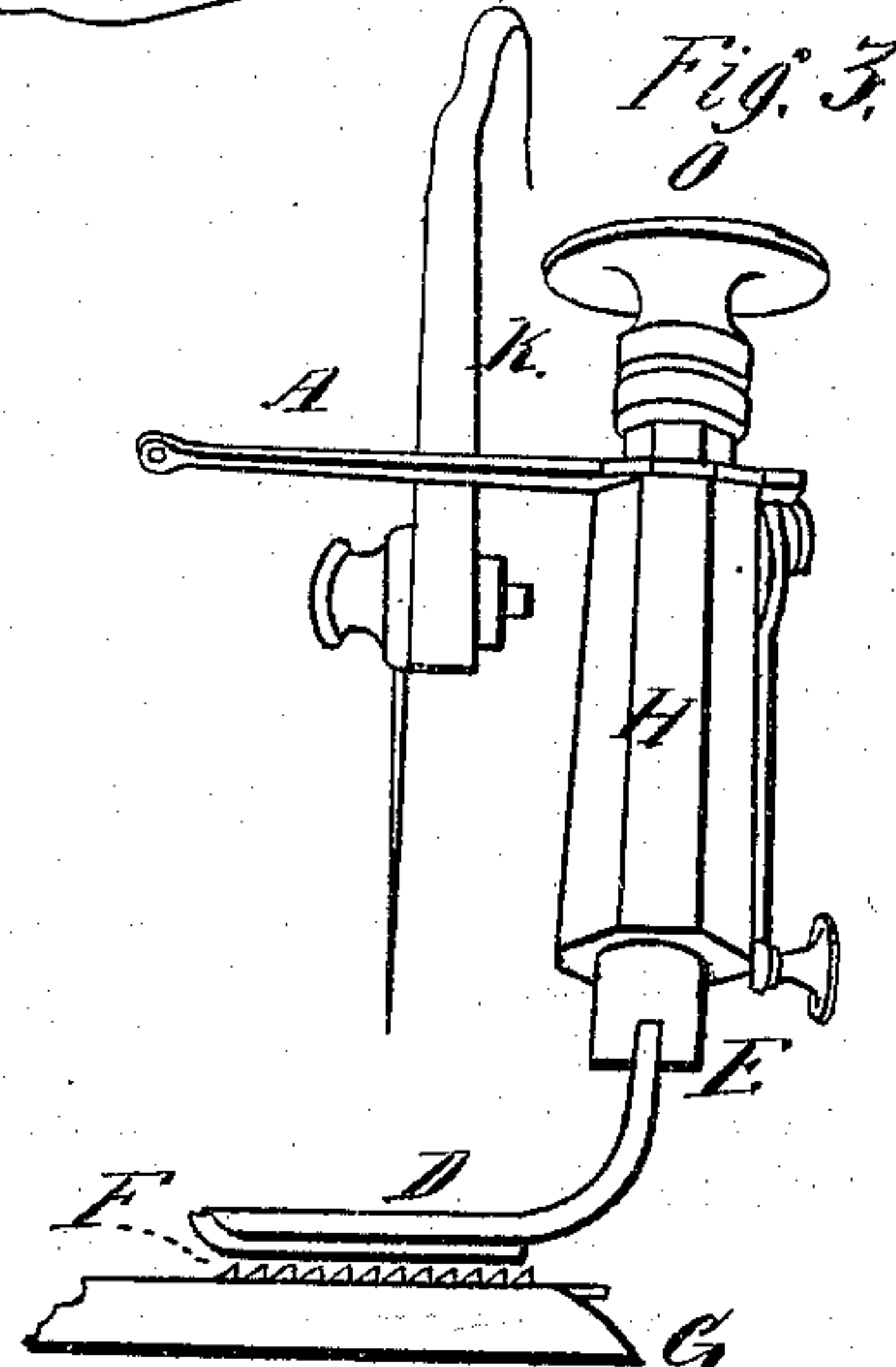
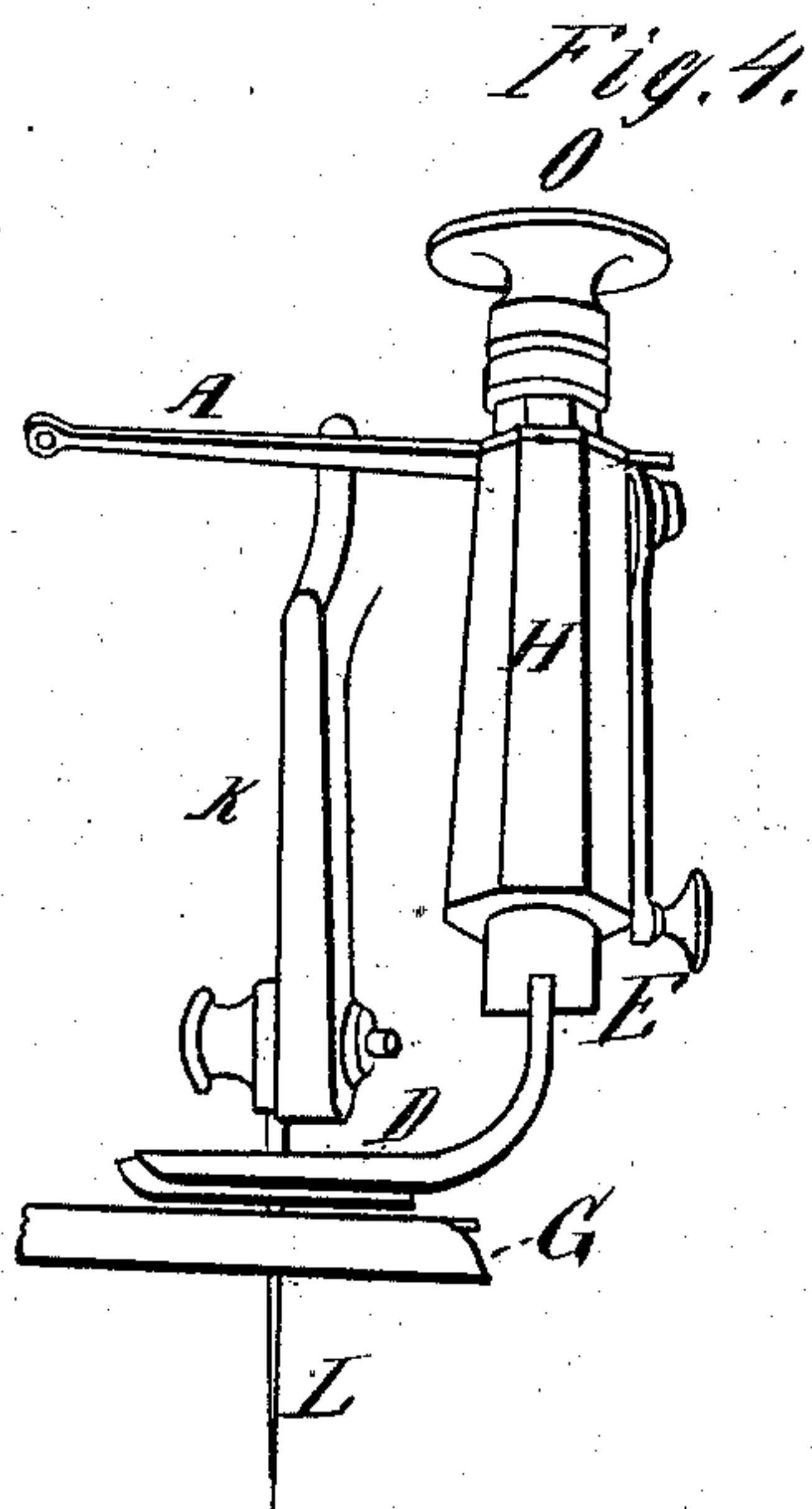
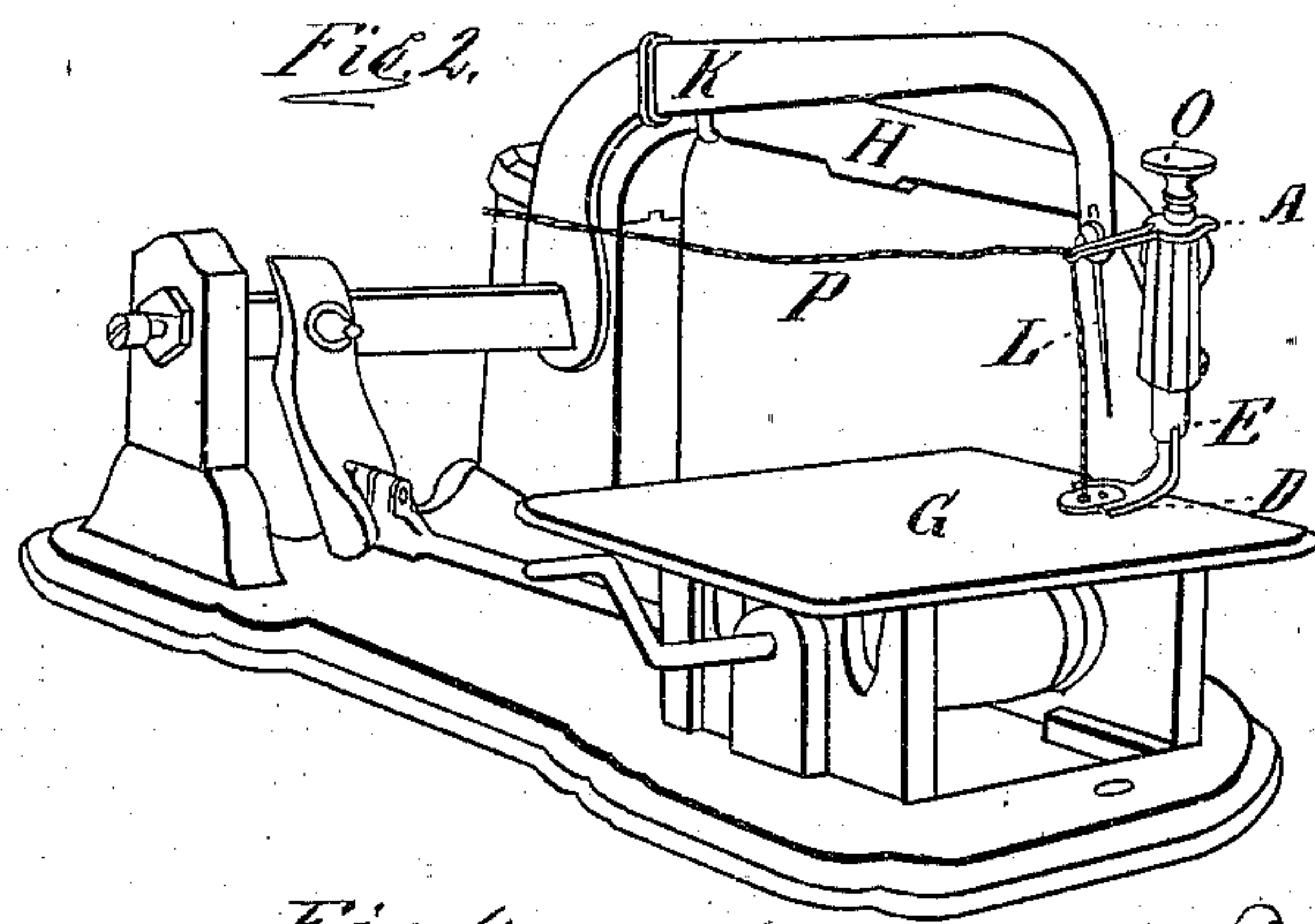


Fig. 1.

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AURELIUS STEWARD, OF DUBUQUE, IOWA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 125,498, dated April 9, 1872.

Specification describing certain Improvements in Sewing-Machines, invented by AURELIUS STEWARD, of the city and county of Dubuque and State of Iowa.

My invention consists in a device to assist in the operation of braiding, as hereinafter described.

For the convenient adaptation of this principle to the machine, known as the Wheeler and Wilson, I construct a device of any suitable metal of the size and shape shown in Figure 1 of the annexed drawing, which forms a part of this specification, which for convenience I will call a braid-holder. Fig. 2 shows the sewing-machine in perspective, with the braid-holder attached in proper position for working. Fig. 3 is a front view of the same, showing only parts, the operation of which is influenced by this invention. Fig. 4 shows same parts, except the feed, in different positions.

Parts lettered as follows: A, braid-holder; B B, prongs of same; D, presser-foot; E, presser-piston; F, feed-points; G, cloth-plate; H, fixed arm; K, needle-arm; L, needle; O, thumb-screw; P, the braid. To connect the braid-holder A with the machine the thumb-screw O is removed from the top of the presser-piston E, which extends some distance above the head of the fixed arm H, and the hole in the braid-holder is passed over the top of the presser-piston with the prongs B B astride the fixed arm H, and the arm of the braid-holder extending to the left, as shown in Fig. 2—the object of the prongs B B being merely to keep the braid-holder in proper position. The thread of the screw on the top of the presser-piston E is cut down some distance from the end. It will, therefore, be seen that, if the braid-holder A is of sufficient thickness to extend above this screw, the thumb-screw O, if screwed down until it comes in contact with the braid-holder A, being prevented from going further down, the presser-piston E will be raised, thereby raising the presser-foot D. By this means the presser-foot D may be suspended above the cloth-plate G, as shown in Fig. 4, and adjusted with accuracy to any height which occasion may require. In the operation of braiding, a pattern is usually marked or stamped upon the fabric, and the braid is guided under the needle by passing through an extra hole in the presser-foot, and the fabric is so guided under

the needle that the braid is laid and stitched upon it according to the pattern or design. The difficulty experienced in this operation with machines now in use is in turning the fabric, and following the pattern with accuracy, without distorting the fabric, and causing it to have a puckered appearance when finished. This difficulty arises from the fabric being held continually by the cloth-presser, either against the cloth-plate or the feed-points. The means employed heretofore to render the turning of the fabric more easy has been to construct the under side of the presser-foot, which is used in braiding, in oval-shape, with but a small flat or even surface near the needle-hole, that it may press upon a smaller portion of the fabric than the presser-foot, which is used for ordinary sewing, and thus serve, to some extent, as a pivot on which the fabric may be turned. While such a form of the presser-foot in a measure accomplishes the object sought for it also presents so small an amount of surface to the feed-points as to detract greatly from the effectiveness of the feeding apparatus. To overcome these objections I construct the under side of the presser-foot used in braiding in the same shape as for ordinary sewing, presenting merely its whole lower surface to the feed-points, thereby utilizing the whole power of the feed; but I adjust the presser-foot D by means of the thumb-screw O, as heretofore described, so that it does not press upon the cloth-plate G, but is suspended above it, as shown in Fig. 4. The presser-foot D is thus adjusted according to the thickness of the fabric, high enough to allow the fabric to pass freely between it and the cloth-plate G, and yet not so high as to allow the fabric to be lifted up by the withdrawing of the needle, or so high but that the feed-points when elevated and ready for operation, as shown in Fig. 3, may press the fabric against the presser-foot D as firmly and move it forward as positively as if the presser-foot was not thus elevated. It is well known that in the operation of sewing-machines which use what is known as the "drop or four-motion feed," the feed-points rise above the cloth-plate, and carry the fabric forward while the needle is raised above the cloth-presser, as shown in Fig. 3, and dropping below the surface of the cloth-plate, and no longer in contact with the fabric, they

return while the needle is down, as shown in Fig. 4. Now, in this class of machines, as heretofore constructed, when the feed-points drop down, as described, the presser-foot is forced down also by a spring, (in the machine shown in the drawing, by means of a coiled spring around the presser-piston E within the head of the fixed arm H,) and the presser-foot is thus caused to exert a continuous pressure upon the fabric, preventing it from being turned, except with difficulty; but, in my invention the presser-foot D is prevented from pressing upon the fabric when the feed is down. The fabric is thus released, and, at the same time, the needle being down, forms the best possible pivot upon which it may be turned. The fabric being thus released and held upon the needle at each stitch, which occurs in such rapid succession, is turned, apparently, with as much ease as if not held by the feed at all, and when finished is not distorted by the operation. In stitching upon intricate patterns the arm of the braid-holder is not necessary, but in braiding the

braid is passed through the eyelet in the end of the arm, and thence into the presser-foot D, as shown in Fig. 2, by which means the braid is held out of the way of the hands of the operator while turning the work. If desirable the arm of the braid-holder may be so formed as to hold a spool, upon which the braid may be wound and delivered from the spool to the machine as used. For ordinary sewing the braid-holder A is removed, and the presser-foot presses upon the fabric continually, as usual.

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

The braid-holder A, constructed substantially as described, in combination with the presser-foot E, operating as and for the purposes specified.

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Witnesses:

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