

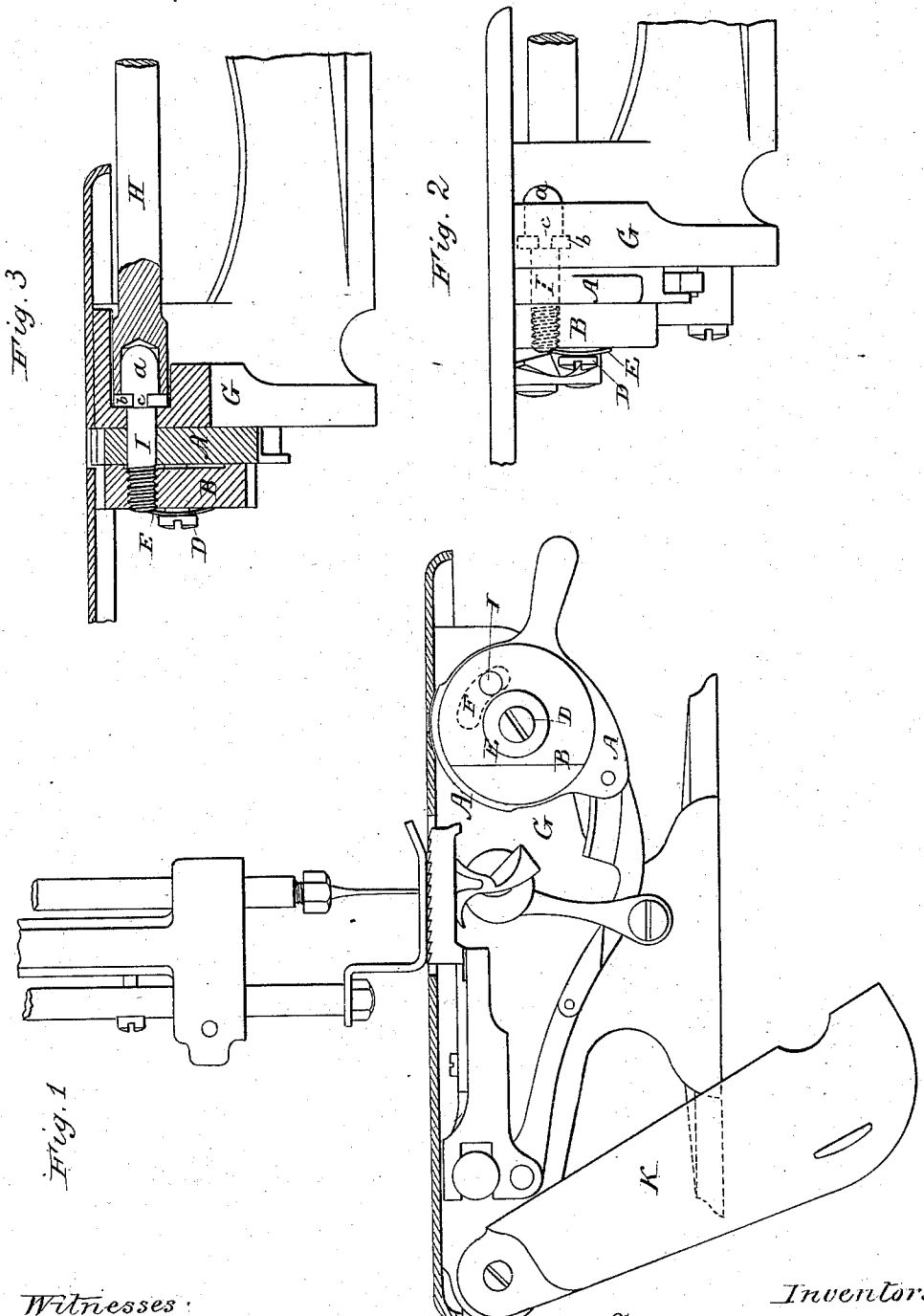
(Model.)

S. BORTON & C. H. WILLCOX.

FEED MECHANISM FOR SEWING MACHINES.

No. 255,577

Patented Mar. 28, 1882.



Witnesses:
 E. E. Masson
 C. J. Hedrick

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UNITED STATES PATENT OFFICE.

STOCKTON BORTON, OF PHILADELPHIA, PENNSYLVANIA, AND CHARLES H. WILLCOX, OF NEW YORK, N. Y., ASSIGNORS TO THE WILLCOX & GIBBS SEWING MACHINE COMPANY, OF NEW YORK, N. Y.

FEED MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 255,577, dated March 28, 1882.

Application filed December 28, 1881. (Model.)

To all whom it may concern:

Be it known that we, STOCKTON BORTON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, and CHARLES H. WILLCOX, of New York city, in the county and State of New York, have invented a new and useful Improvement in Feed Mechanisms for Sewing-Machines, which improvement is fully set forth in the following specification.

This invention has reference more particularly to machines for sewing knit goods; and it has for its object to enable a manufacturer to control the size of stitches in the work made by his operatives.

In the manufacture of this class of goods it was for a long time customary to use a very long stitch, and the tendency on the part of the operatives is to continue the use of the long stitch, partly from habit and partly in order to get over the work more rapidly. It has, however, been found advantageous to materially reduce the length of stitch, the best work being done when the length of stitch equals the gage of the fabric—that is, the distance between the centers of adjacent loops or half the distance between the needles on which the fabric has been knit. It is therefore very desirable to provide a means whereby the stitch made by machines in the hands of the operatives can be controlled.

To this end the present invention consists in combining with the cam or other device whereby the movement of the feed-bar, and consequently the length of stitch, is regulated, a locking device, so that when the said feed-regulating cam has been set to give the proper length of stitch it cannot be altered, except by the foreman or person having the machine under control.

The accompanying drawings, which form a part of this specification, illustrate an apparatus constructed in accordance with the invention, Figure 1 being a side elevation; Fig. 2, an end view; and Fig. 3, a vertical section, partly in elevation.

A is the feed-regulating cam, B a clamping-plate, and C a locking screw-bolt. The feed

mechanism shown, the movement of which is regulated by the cam A, is that in common use on the Willcox & Gibbs chain-stitch machine, and needs no description.

The clamping-plate B is supported on the same pin, D, with the feed-regulating cam A.

A spring-washer, E, is preferably placed between the head of the pin D and the clamping-plate, so as to press the latter against the feed-cam. The feed-cam is provided with a curved slot, F. The locking screw-bolt I fits in a hole in the machine-frame G, passes through the slot F in the feed-cam, and is tapped into the clamping-plate. The head of this bolt is so formed as to require a special key for turning. As shown, it has a projection or extension, *a*, in the center, and at the base thereof an annular collar, *b*, in which are notches *c*; and the special key H, Fig. 3, is formed with a hollow in its end to receive the said extension or projection *a* and prongs to fit in the notches *c*. When the locking-bolt is released the feed-cam A can be turned to make the desired length of stitch, the slot F allowing the requisite movement to be made. When properly adjusted the locking-bolt is turned by the special key, and the feed-cam is securely held between the machine-frame and clamping-plate until again released by turning the locking-bolt I.

The hinged shield K (shown in Fig. 1) is adapted to cover the looper and feed mechanism during the operation of the machine, and to be swung down to expose these parts when this is desired for any reason.

Although the means described are deemed the best for the purpose, the invention is not limited thereto, as it is obvious that modifications may be made without altering the general principle of the device.

The invention is applicable to all kinds of sewing-machines, to those using a top feed as well as to those in which the feed is beneath the cloth-plate, and to those using other feed-regulating devices as well as to those employing a feed-cam.

The locking-feed mechanism, instead of being applied to the feed-regulator directly, could

be otherwise applied, so as to protect the feed movement from alteration, except by means of the special key or device for that purpose.

We claim—

- 5 1. The combination, with the feed-regulator of a sewing-machine, of a locking device for preventing alteration of the feed by the operator, substantially as described.
- 10 2. The combination of a feed-regulator, clamping-plate, and locking-bolt, substantially as described.
3. A locking screw-bolt, in combination with a slotted feed-regulating cam and clamping-plate, substantially as described.
- 15 4. The combination of the slotted feed-regulating cam, its supporting-pin, the clamping-

plate, the spring-washer, and the locking-bolt, substantially as described.

5. The combination, with the adjustable feed of a sewing-machine, of locking mechanism for 20 preventing alteration in the feed-movement, except by a special key or device for that purpose, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing 25 witnesses.

STOCKTON BORTON.
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Witnesses:

JOHN C. PURKIS,
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