

J. F. CHAMBERLAIN.
 Take-Up Mechanism for Sewing-Machines.
 No. 197,996. Patented Dec. 11, 1877.

Fig. 1.

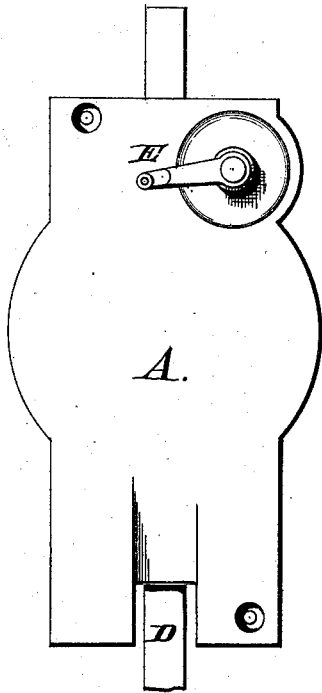


Fig. 2.

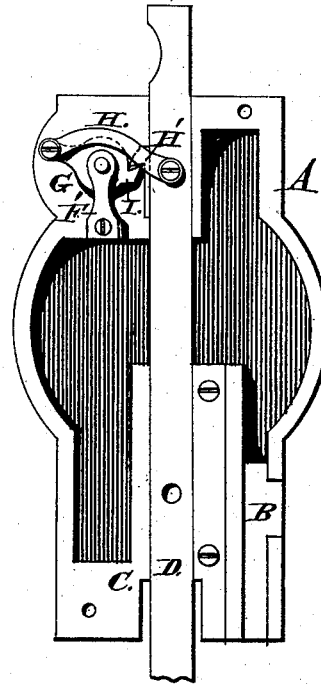


Fig. 3.

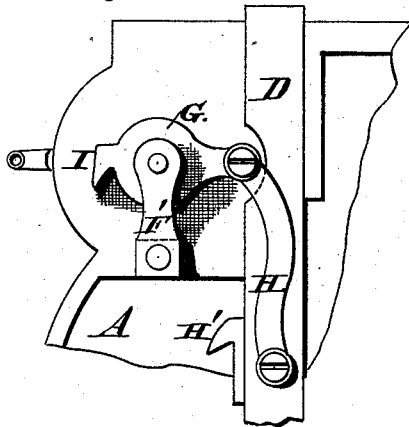
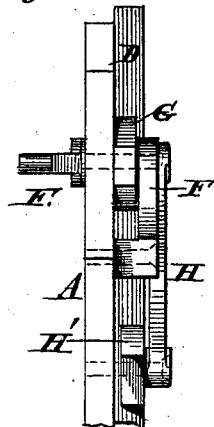


Fig. 4.



Attest:
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UNITED STATES PATENT OFFICE.

JAMES F. CHAMBERLAIN, OF HAMILTON, ONTARIO, CANADA, ASSIGNOR TO
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IMPROVEMENT IN TAKE-UP MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **197,996**, dated December 11, 1877; application filed
October 23, 1877.

To all whom it may concern:

Be it known that I, JAMES FRANKLIN CHAMBERLAIN, of Hamilton, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification:

This invention relates to certain improvements in sewing-machines, its object being to provide the same with a simple and effective take-up mechanism which will require but a limited working space, and which will give an accurate and positive movement to the take-up.

To this end my invention consists in the combination, with the take-up lever, and the lever by which it is operated, of a link attached to one arm of said last-mentioned lever and to the needle-bar, and a stud or projection having an inclined or beveled face, adapted to work in contact with a similar face formed upon the end of the lever which actuates the take-up, the said lug on the needle-bar serving to give the initial movement to the take-up while the link is out of working position, the link serving to give the final movement to the take-up as the downward movement of the needle-bar continues, and the entire movement to the take-up during the upward movement of the needle-bar, as more fully hereinafter set forth.

In the drawings, Figure 1 represents a front view of the plate attached to the forward end of the upper standard of the machine, and carrying the needle-bar shaft and take-up. Fig. 2 is a rear view of said plate detached, with the works exposed. Fig. 3 is an enlarged view, showing the take-up mechanism; and Fig. 4, a detail view of the same.

The letter A represents the front plate of the standard which supports the upper works of the machine, and B C the ways therein, in which the presser-foot and needle-bar are secured. The letter D represents the needle-bar, which is of the ordinary construction, and adapted to reciprocate vertically in the ways C. The letter E represents the take-up lever, which is secured to a shaft, F, passing

through a bearing in the plate A, and journaled at its rear end in a bridge, F', secured to the rear face of the plate A. The letter G represents the lever which actuates the take-up lever, said lever being secured to the shaft F between its two bearings. H represents a curved link, pivoted at one end to one end of the lever G, the other end of said link being pivoted to the needle-bar, in such position that when said needle-bar is at its full upward stroke said link will be in a horizontal position, or a position approximating thereto.

The needle-bar is provided with a stud or projection, H', the lower face of which is inclined or beveled. The free end of the lever G is formed with a similarly-inclined or beveled face, I.

The stud or projection H' is so located on the needle-bar that its inclined face, when said needle-bar is at its full upward stroke, will engage the inclined face I on the lever G, for the purpose more fully hereinafter explained.

The operation of my invention is as follows: The needle-bar being at its full upward stroke, as shown in Figs. 1 and 2, the link, owing to its horizontal position, will exert very little or no power upon the lever G; hence it is necessary to provide for the initial movement of said lever G upon the downward movement of the needle-bar. This is effected by the stud H, which, engaging the end of the lever G, moves it until the link falls into a working position and commences to operate the take-up.

It has heretofore been found impracticable to employ a link for operating the take-up, owing to the fact that it is absolutely necessary to prevent the link from assuming a horizontal position, thus requiring too long a throw of the needle-bar, and considerable space for the link to operate in, which are objectionable features in a sewing-machine, and which my invention entirely obviates.

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

In a sewing-machine, the combination, with the lever which actuates the take-up lever,

the needle-bar, and the connecting-link, of a stud or projection on the needle-bar, adapted to operate in conjunction with the free end of the take-up-actuating lever, whereby the initial movement to the take-up is effected, substantially as set forth.

In testimony that I claim the foregoing I

have hereunto set my hand in the presence of the subscribing witnesses.

JAMES FRANKLIN CHAMBERLAIN.

Witnesses:

WM. BRUCE,

JAMES WIDGERY.