(No Model.)

G. W. BAKER.

SEWING MACHINE TAKE-UP.

No. 403,723. Patented May 21 1889.

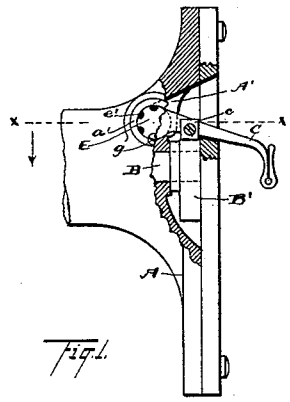


Fig. 1.

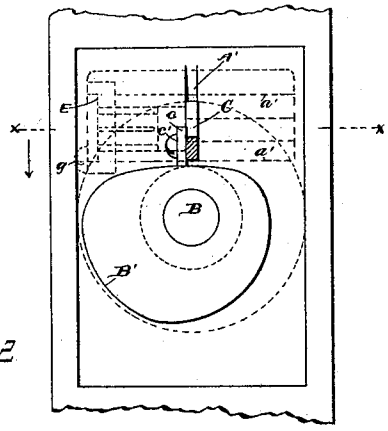


Fig. 2.

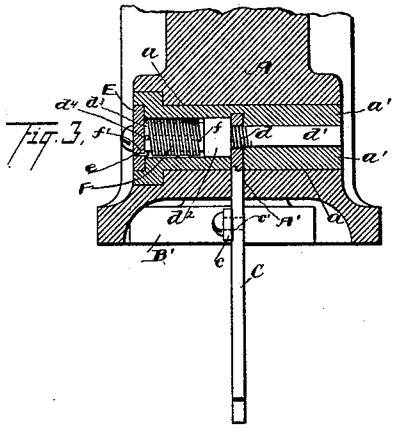


Fig. 3.

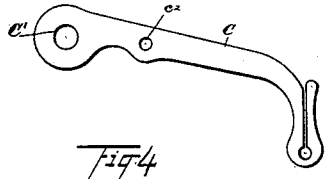


Fig. 4.

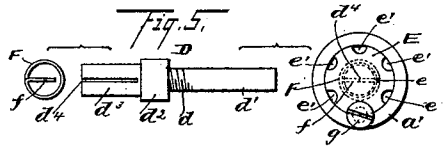


Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF CLEVELAND, OHIO.

SEWING-MACHINE TAKE-UP.

SPECIFICATION forming part of Letters Patent No. 403,723, dated May 21, 1889.

Application filed September 10, 1888. Serial No. 285,019. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BAKER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Take-Up Mechanism for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in take-up mechanism for sewing-machines; and it consists in certain features of construction and in combination of parts, hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a reduced side elevation, partly in section. Fig. 2 is a front elevation. Fig. 3 is a plan in section on lines $x\,x$ of Figs. 1 and 2. Fig. 4 is an elevation of the take-up lever. Fig. 5 shows details in elevation, hereinafter described.

A represents a portion of the sewing-machine head, and B the shaft that operates the needle mechanism. (Not shown.) On the forward end of this shaft is mounted cam B′ for operating the take-up lever C, a suitable form of this lever being shown more clearly in Fig. 4. The head A is provided with a slot, A′, for accommodating lever C, and the head has also a lateral bore, a, for accommodating the fulcrum of the lever. Bore a is preferably made large enough to accommodate a bushing, a', for receiving the wear caused by the oscillation of pivotal pin or fulcrum D in operating the take-up lever. Pin D is substantially of the form shown in Fig. 5, having a threaded section, d, for engaging the threaded hole C′ of lever C, and having reduced and enlarged sections, respectively, d' and d^2, that serve as journal-bearings in the bushing, section d^2 presenting a square end or shoulder against lever C when the parts are screwed together. Pin D has a section, d^3, somewhat less in diameter than section d^2, with slot d^4 for receiving the inner end, f, of spring F, this portion of the spring being bent inward, as shown in Fig. 5. This spring is coiled around section d^3, and the outer end thereof, f', enters a hole, e, of cap E. (See Fig. 3.) Cap E is seated in a counterbore, either of bushing a' or head A, whichever may be preferred, and the cap, at the periphery thereof, is provided with a series of notches, e', for engaging screw g. By removing the screw the cap may be turned on its axis to adjust the tension of the spring F, after which adjustment screw g is returned to its place and screwed tight to hold the cap from turning, and thereby holding the adjustment of spring F. A friction-block, c, is pivoted on stud c', the latter being screwed into a threaded lateral hole, c^2, of lever C, the block being located in position to engage the peripheral face of cam B′. As lever C is tilted by the action of the cam on block c, the latter oscillates on its pivotal bearing and always fits squarely on the face of the cam. The hole in block c, through which the stud passes, is preferably located centrally in the block, and the latter, when worn, may be turned on its axis to bring another face of the block in contact with the cam, and this may be done by elevating lever C and without removing the stud c'. The lead of the screw-threads on section d of pin D, that engages lever C, is such that the lever, when elevated by the action of the cam, screws against section d^2, and thereby tightens the lever on the pin, and the tension of spring F also tends to screw these parts together, by reason of which no other fastening is required to hold the pin and lever always in firm contact, so that the lever and its pivotal pin turn together. The pin having a long bearing in the bushing, the parts are rendered durable, and the pin or bushing, or both, could be renewed at a trifling cost.

In assembling the parts lever C is placed in position in slot A′, after which pin D is inserted and screwed home to its place in the lever. Next the spring is placed on the pin, the end f of the spring entering slot d^4 of the pin. The cap is placed in position with the end f' of the spring entering hole e of the cap. The cap is then turned in the direction to give the necessary tension to the spring, after which screw g is placed in position and engages a notch, e', of the cap, thereby holding the latter from turning. The head of the screw overlaps the cap and holds the latter to its place in its seat.

What I claim is—

1. The combination, with the take-up lever

and cam, of an angular friction-block having a series of bearing-faces and a pivot-pin passing through the block and secured to the take-up lever, the said friction-block adapted to be turned on its pivot to present a new face to the cam, substantially as set forth.

2. The combination, with take-up lever, revolving cam for elevating the lever, and pivotal pin screwed into a lateral threaded hole of the lever, substantially as indicated, of spring for depressing the lever, said spring being coiled around the said axial pin, the arrangement of parts being substantially as described, whereby the action of the spring and cam, respectively, tend to tighten the screw-joint of the lever and pin, substantially as set forth.

3. The combination, with take-up lever, revolving cam for elevating the lever, and pivotal pin screwed into a lateral threaded hole in the lever, of an adjustable cap, and a spring coiled around the pivotal pin and secured at one end to said pin and at its other end to the adjustable cap, the arrangement of parts being substantially as described, whereby the action of the spring and cam, respectively, tend to tighten the screw-joint of the lever and pin, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 21st day of April, 1888.

GEORGE W. BAKER.

Witnesses:
CHAS. H. DORER,
ALBERT E. LYNCH.