

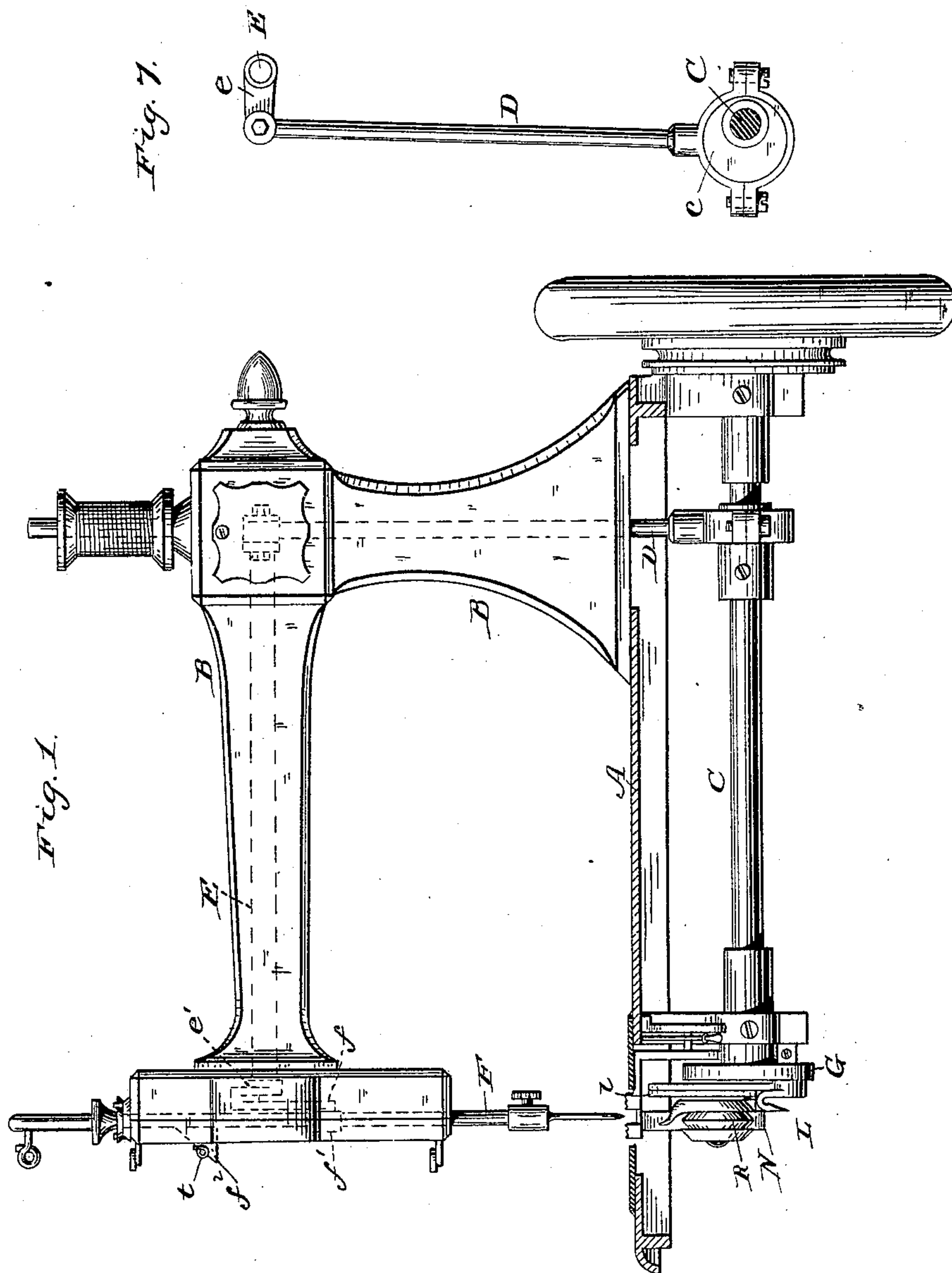
(No Model.)

2 Sheets—Sheet 1.

J. W. POST.
SEWING MACHINE.

No. 292,045.

Patented Jan. 15, 1884.



Witnesses:
H. N. Low
Robert Everett,

Inventor:
John W. Post

(No Model.)

2 Sheets—Sheet 2.

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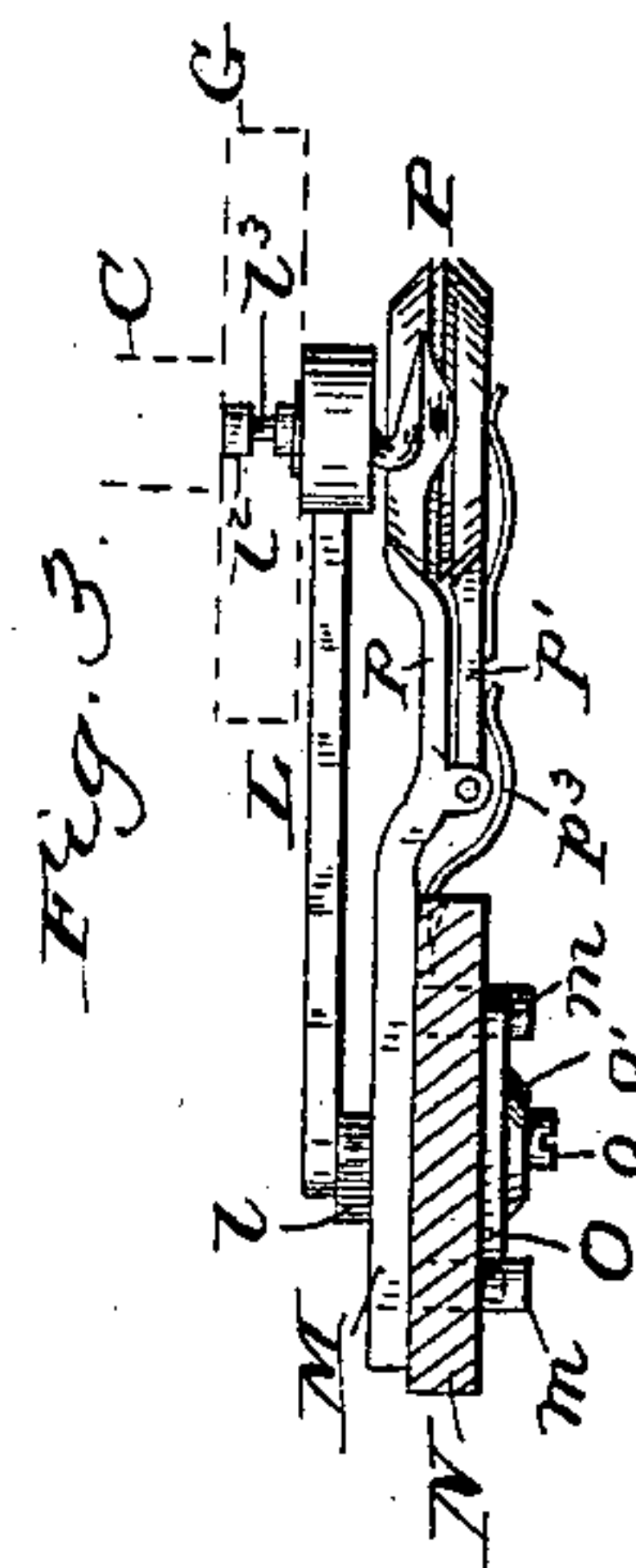
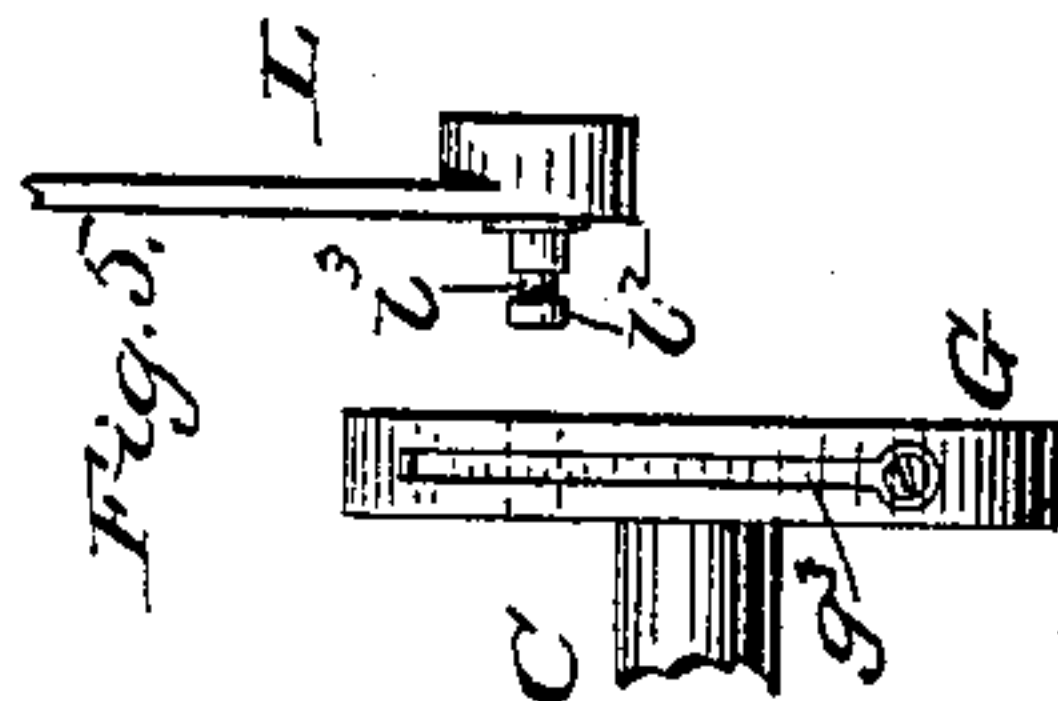
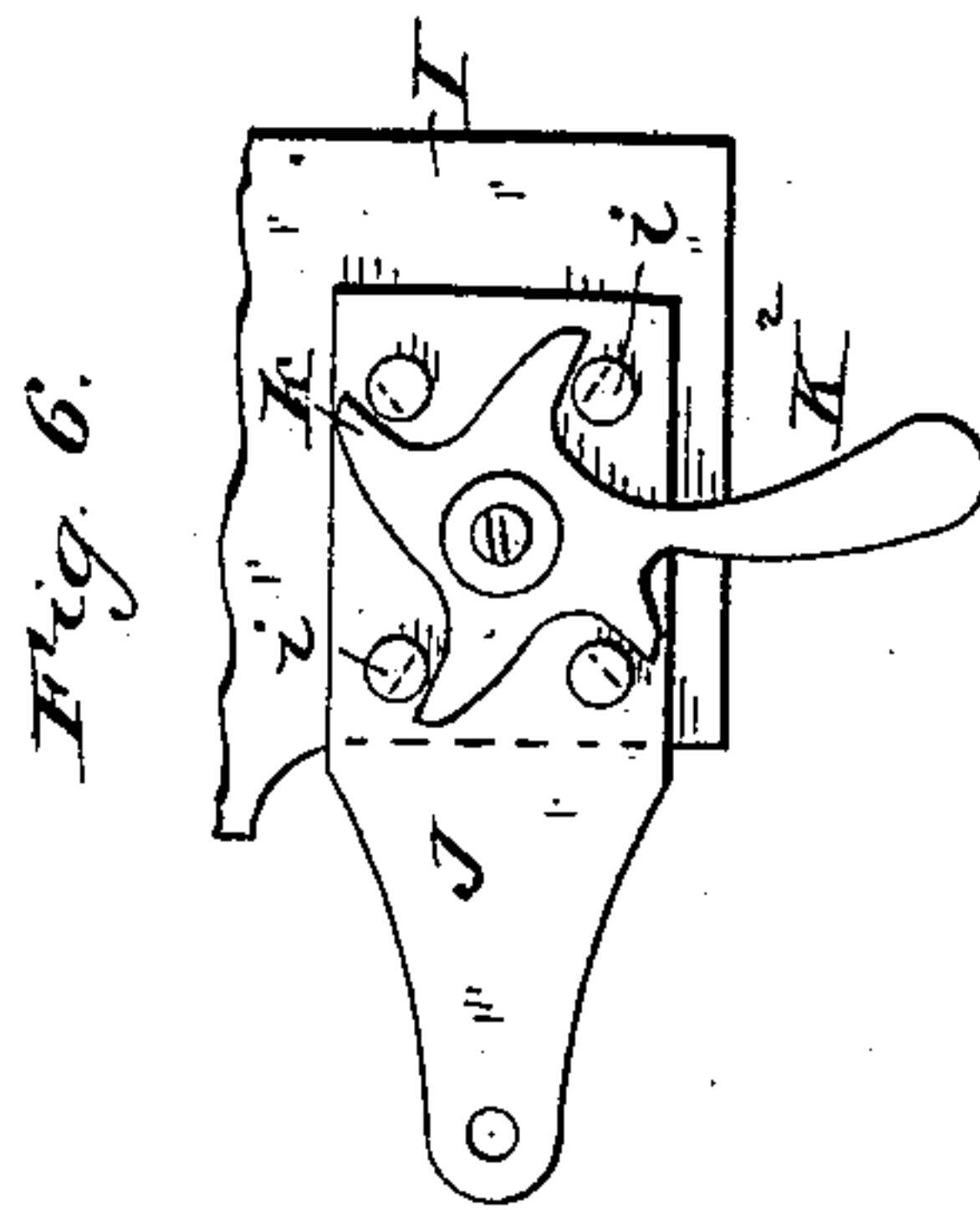
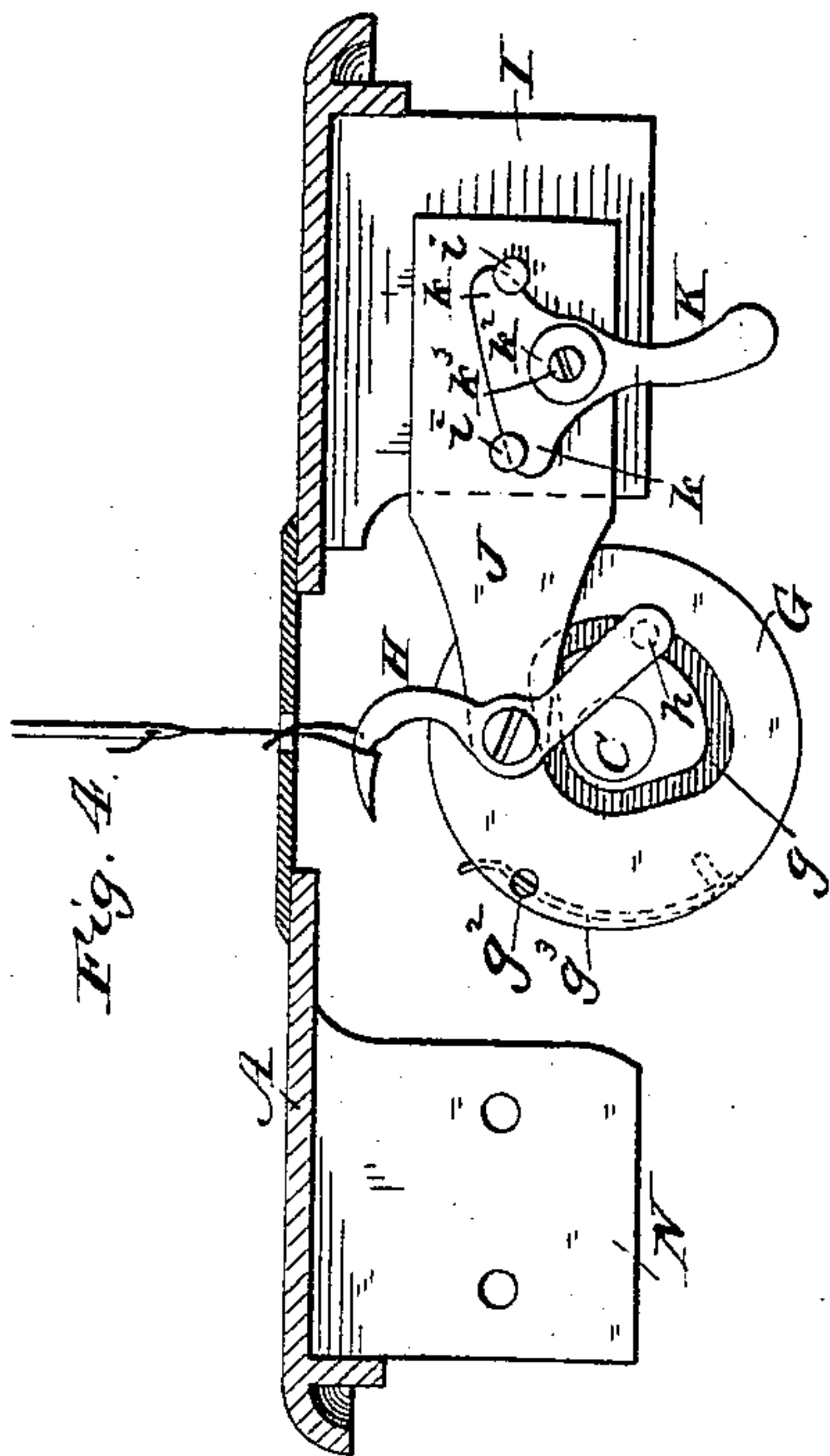
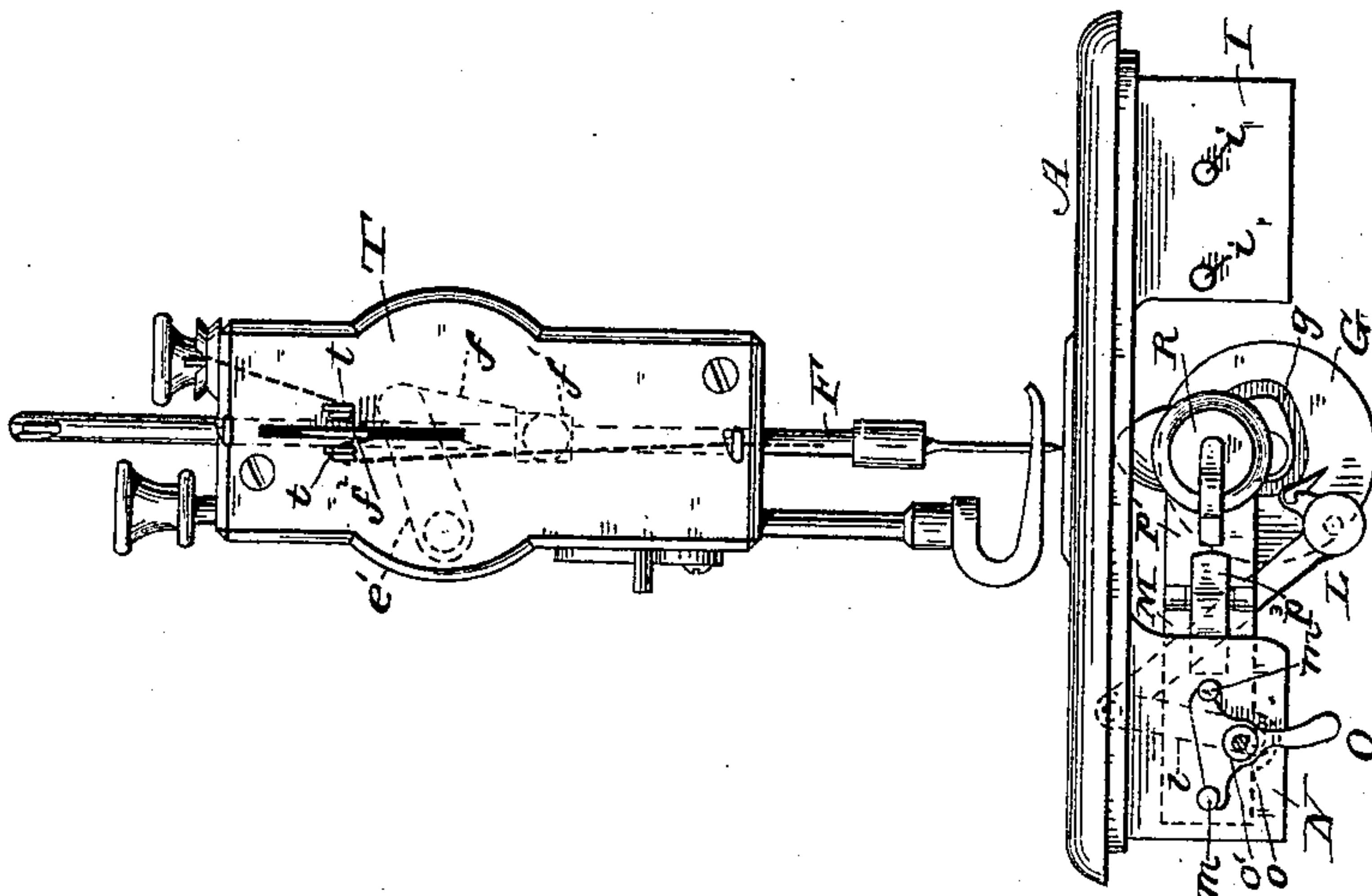


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. POST, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 292,045, dated January 15, 1884.

Application filed November 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. POST, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of sewing-machines capable, by means of interchangeable parts, of forming different kinds of stitches at the pleasure of the operator, the more particular object of the present invention being to improve the machine shown by my Patent No. 287,576 by rendering the interchangeable parts for forming different stitches quickly and easily attachable to and removable from the machine in making the change from one form of stitch to another.

In the drawings, Figure 1 is a sectional side elevation of a machine embodying my invention. Fig. 2 is a front view of the same with the lock-stitch mechanism in position. Fig. 3 is a detail view of the bobbin-supporter and adjacent parts. Fig. 4 is a partial front view, showing the chain-stitch mechanism. Fig. 5 is a detail view, showing means for removably securing the lock-stitch-looper pin to the crank-disk. Fig. 6 is a detail view of a modification, and Fig. 7 shows the connecting mechanism for the two shafts of the machine.

A is the bed-plate of the machine, sustaining the bracket-arm B, and C is the main or driving shaft journaled in lugs or brackets depending from the bed-plate. To the main shaft is secured an eccentric, *e*, connected by a pitman, D, to the rear arm *e* of a rock-shaft, E, journaled in the horizontal portion of the bracket-arm. An arm, *e'*, on the forward end of the shaft E, is connected by a link, *f*, with a collar, *f'*, secured to the needle-bar F.

From the foregoing it will be apparent that the main shaft, when rotated, will impart a vertical reciprocating movement to the needle-bar through the mechanism just described.

Excepting the needle-operating mechanism above referred to and the details hereinafter

indicated, the lock and chain stitch mechanisms of the present machine are essentially the same in their construction and operation as in the patent hereinbefore mentioned, and a full description of these mechanisms will therefore not now be necessary. The driving-shaft C carries at its forward end a disk, G, having a cam-groove, *g*, for actuating the chain-stitch looper H.

To render the chain-stitch mechanism quickly and easily attachable to and removable from the machine, I provide the fixed bracket I with pins *i i* of sufficient length to project through holes in the bracket J, to which the looper H is pivoted. The projecting ends of the pins *i i* are provided with small grooves or recesses adapted to receive the arms *k* of a latch, K, pivoted to the bracket J. As the pins *i i* are on opposite sides of the pivotal point of the latch K, their recesses are arranged to face in opposite directions, so that both of the arms of said latch, when the latter is turned on its pivot, may be simultaneously engaged with or disengaged from said pins. The latch K has a handle, by which it may be conveniently operated, and to prevent said latch from becoming accidentally misplaced a friction device, herein shown as a spring-washer, *k²*, is placed between the head of the pivot-screw *k³* and the latch. A pin, *h*, formed integral with or secured to the looper H, engages the cam-groove *g* of the disk G, and as the latter rotates the said looper will receive a properly-timed vibratory motion.

The lock-stitch looper L is connected by a link, *l*, to a detachable bracket, M, having grooved or recessed pins *m*. Said pins are of proper length to project through holes in the fixed bracket N, their recessed projecting ends being engaged by a latch, O, of the same form as the latch K, pivoted to the bracket N by a screw, *o*, beneath the head of which is a friction-washer, *o'*, to assist in holding the latch O in any position to which it may be adjusted. When the bracket M is placed in position, it may be securely fastened by turning the arms of the latch O into the grooves or recesses of the pins *m*, and said bracket may be quickly

rendered detachable by disengaging the arms of said latch from said pins, as will be readily understood.

Instead of using only two recessed pins for securing the removable brackets in position, a larger number of such pins, affording greater steadiness and security to the brackets, may be used by providing the securing-latches with a larger number of arms.

In Fig. 6 I have shown a latch, K^2 , having four arms, adapted to engage four recessed pins.

The crank-disk G is provided with a hole, g^2 , in which fits a pin, l^2 , on the looper L . Said pin l^2 is provided with an annular recess, l^3 , which is engaged by a spring-catch, g^3 , arranged in a recess in the periphery of the disk G . The end of the spring-catch g^3 projects slightly beyond the periphery of the disk G , so that when the lock-stitch mechanism is to be attached to or removed from the machine said spring-catch may be raised or moved outward by inserting the finger-nail of the operator beneath the projecting end thereof, thus allowing the pin l^2 to be placed in or removed from its hole in the disk G .

The bobbin-supporter P of the lock-stitch mechanism consists of two arms, p and p' , the arm p being rigidly secured to or formed integral with the removable bracket M . The arm p' is hinged to the arm p , so that it may be swung outward, to permit of the insertion or removal of the bobbin-case R .

To hold the hinged arm p' yieldingly against the bobbin-case, a light spring will be employed—such, for example, as the spring p^3 , which, in the present instance, I have shown as being attached to the bracket M , so that it will be removed with said bracket, a recess in the fixed bracket N affording room for said spring.

As the lock-stitch looper and bobbin-supporter with their attached parts are all connected with the removable bracket M , it will be obvious that these devices may all be removed from the machine with said bracket. Thus from the foregoing it will be clear that the interchangeable devices, co-operating with the needle in the formation of lock and chain stitches, may be quickly and easily attached to or removed from the machine without turning thumb-screws into or out of the fixed supporting-brackets, or screwing crank-pins into or out of the disk on the driving-shaft, as in my former patent hereinbefore referred to.

In forming lock-stitches in the machine described in my former patent each stitch is tightened or completed by the drawing of the needle-thread in expanding a loop thereof during the formation of the next succeeding stitch.

In order to shorten or tighten the loop dropped by the lock-stitch looper L before the expansion of the next loop, and thus obviate any danger of drawing the needle-thread from

the tension device instead of from the untightened loop, I prefer to employ a take-up mechanism consisting of a projection, f^2 , carried by the needle-bar F , and extending outward through a slot in the face-plate T , and two thread guides or eyes, $t t$, secured to said face-plate on opposite sides of said slot, or, in other words, on the opposite sides of the vertical path of movement of the said projection. The thread will pass from the tension device V through the thread-guides $t t$, and thence to the needle. As the thread will thus be drawn across the vertical path of the projection f^2 , the latter, on its downward movement with the needle-bar, will engage the thread and draw up more or less of the last loop according to the position of the said projection on the needle-bar. On the upward movement of the needle-bar the projection will be disengaged from the thread, leaving the loop of slack-thread which has been drawn up free to pass downward as the loop for the succeeding stitch is expanded by the looper.

Having now described my invention, I claim—

1. In a sewing-machine, the combination of a bed-plate, a fixed bracket, a removable bracket, a plurality of recessed pins, and a single pivoted latch adapted to engage said pins, and thereby secure the removable bracket to the fixed bracket, substantially as described.

2. In a sewing-machine, the combination of a bed-plate, a fixed bracket provided with recessed pins, a removable bracket having holes for the passage of said pins, and a single pivoted latch adapted to engage said pins, and thus secure said brackets together, substantially as described.

3. In a sewing-machine, the combination of a bed-plate, a fixed bracket, a removable bracket, a plurality of recessed pins, a single pivoted latch adapted to engage said pins, and a friction device for holding said latch in any position to which it may be adjusted, substantially as set forth.

4. In a sewing-machine, the combination of a bed-plate, a fixed bracket, a removable bracket, a plurality of recessed pins, a single pivoted latch adapted to engage said pins, and a looper carried by said removable bracket, substantially as described.

5. In a sewing-machine, the combination, with a bracket adapted to be removably secured to a bracket on the bed-plate thereof, of a bobbin-supporter and a looper, both carried by the removable bracket, and thus adapted to be simultaneously attached to or removed from the machine, substantially as described.

6. The combination, with a looper having a recessed pin fixed thereto, of a crank-disk having a hole in which said pin fits, and a spring-catch for removably securing said pin in said hole, substantially as described.

7. The combination, with a bracket adapted to be removably attached to the bed-plate

of a sewing-machine, of a bobbin-supporter consisting of two arms, one of said arms being fixed with relation to said bracket, and the other arm hinged to the fixed arm, substantially as described.

5 8. The combination of the bed-plate A, fixed bracket N, and removable bracket M, with the bobbin-supporter P, consisting of the fixed arm p , hinged arm p' , and the spring

p^2 , for holding said hinged arm in its operative position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. POST.

Witnesses:

E. A. DICK,

A. C. RAWLINGS.