

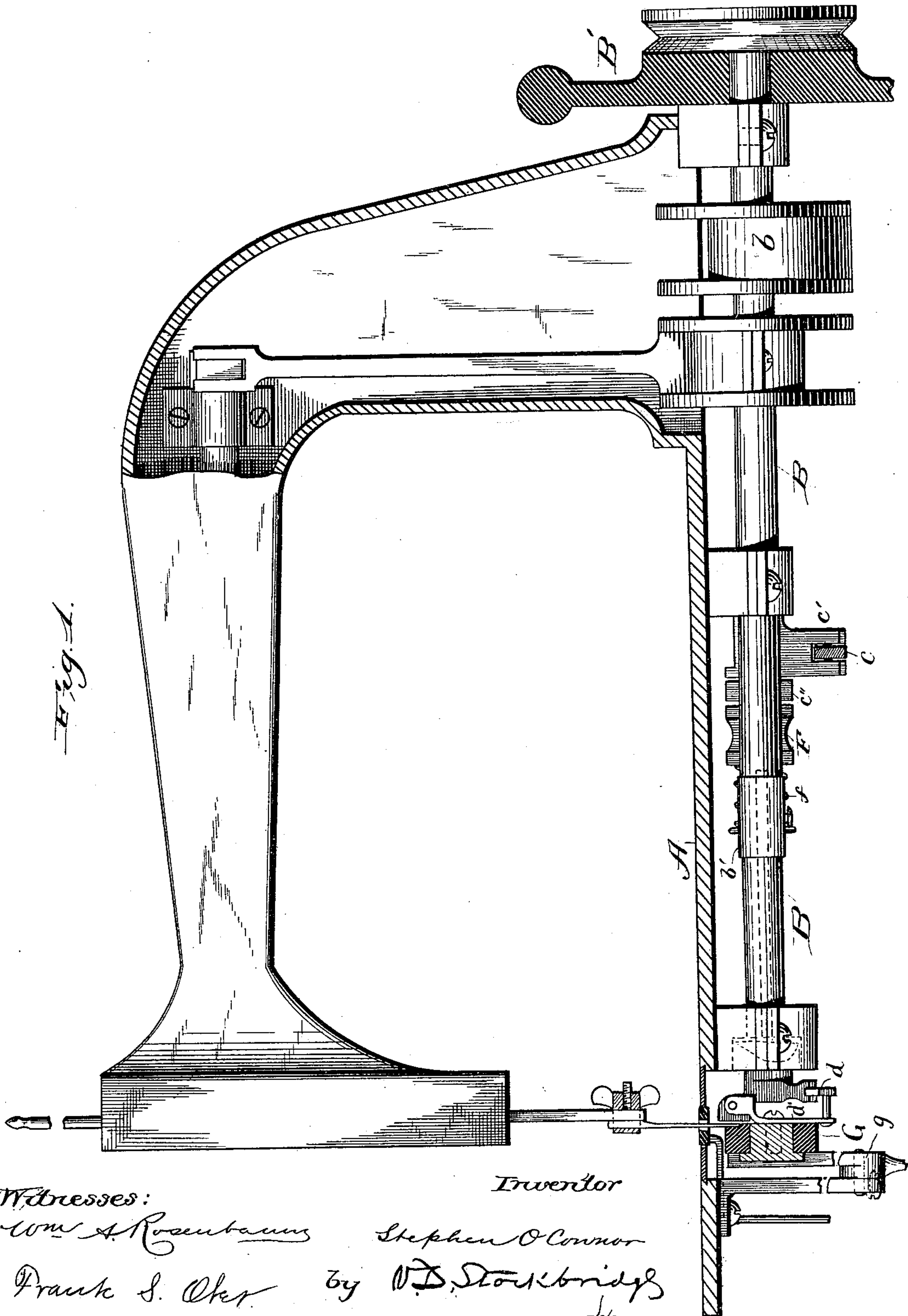
(No Model.)

3 Sheets—Sheet 1.

S. O'CONNOR.  
SEWING MACHINE.

No. 331,997.

Patented Dec. 8, 1885.



Witnesses:

*Wm. A. Rosenbaum*

*Stephen O'Connor*

*Frank S. Oker*

by *W.D. Stockbridge*  
*Atty.*

Inventor

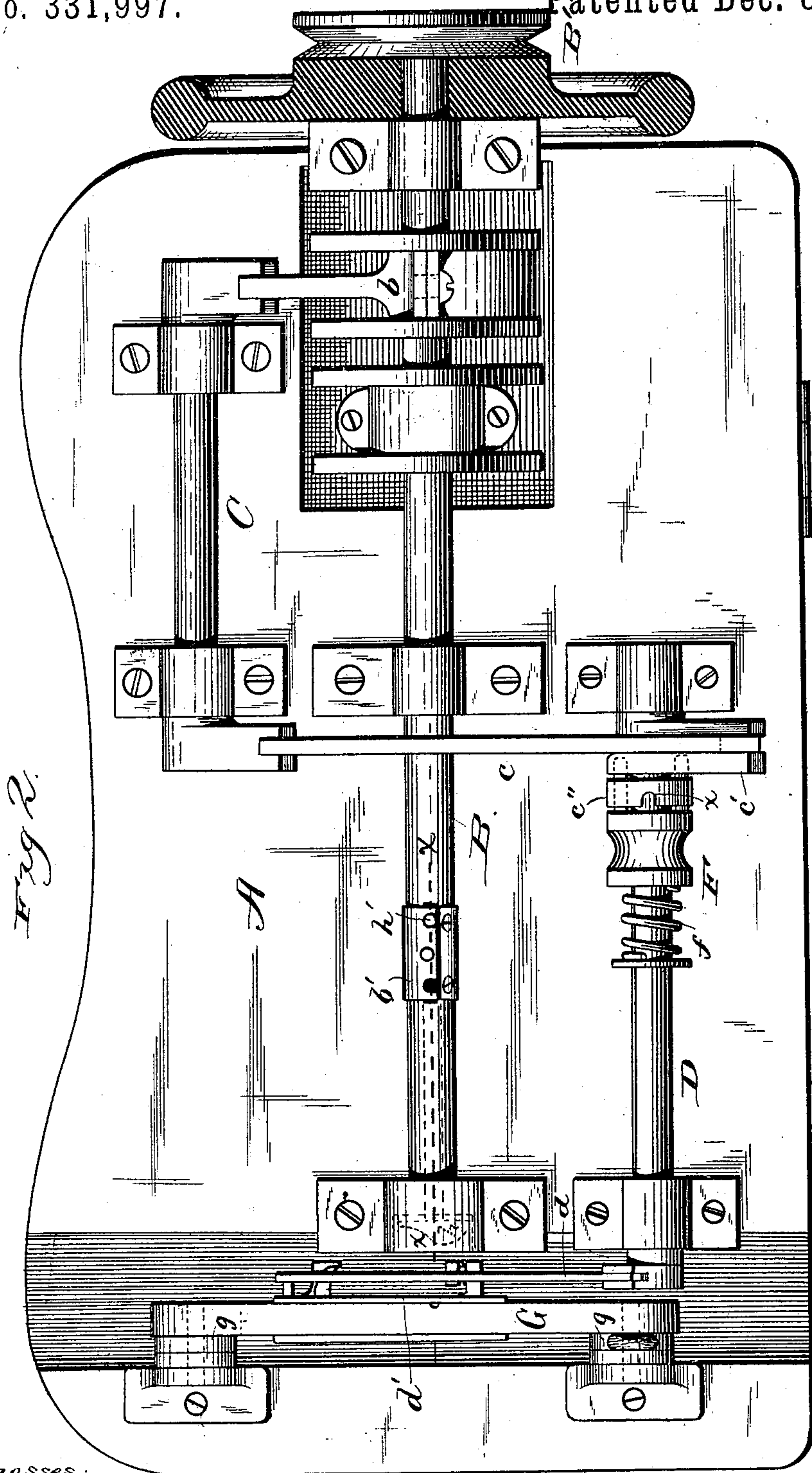
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Witnesses:

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*Frank S. Orr*

Inventor

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(No Model.)

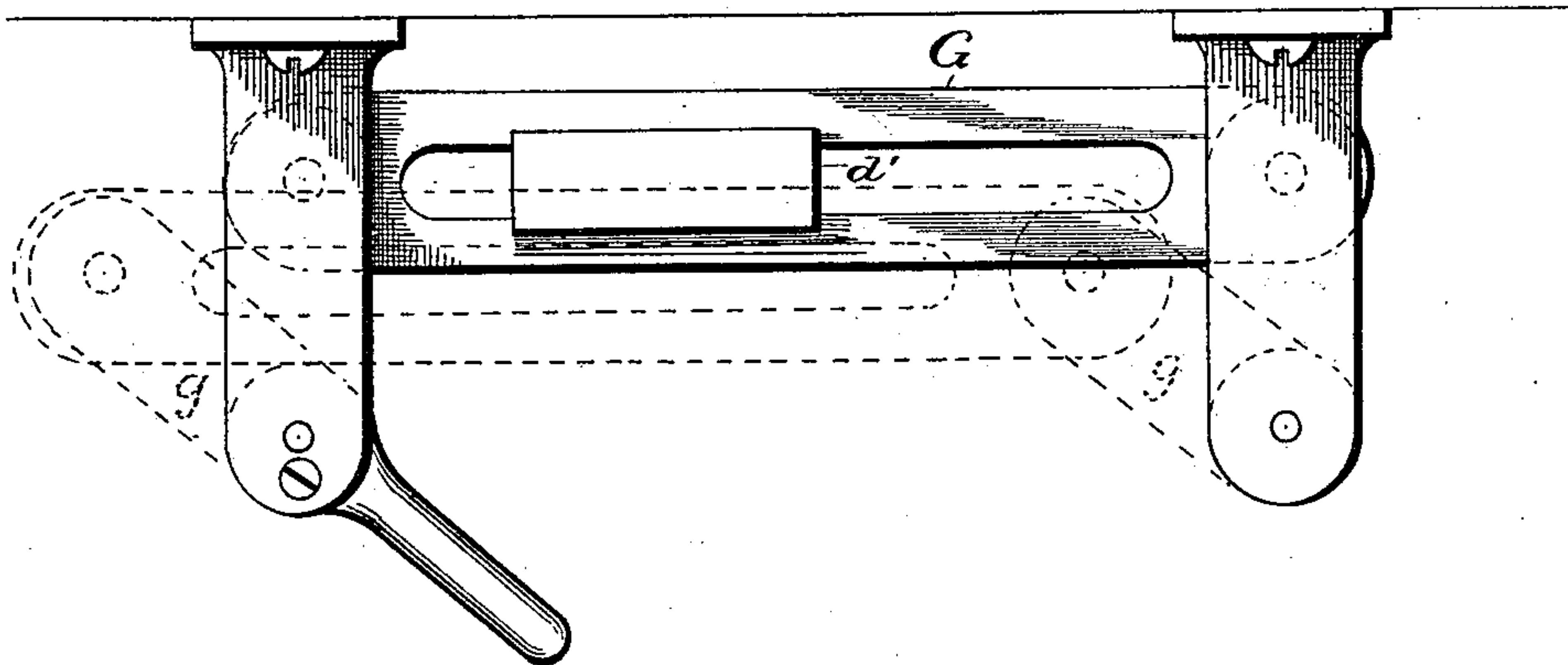
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SEWING MACHINE.

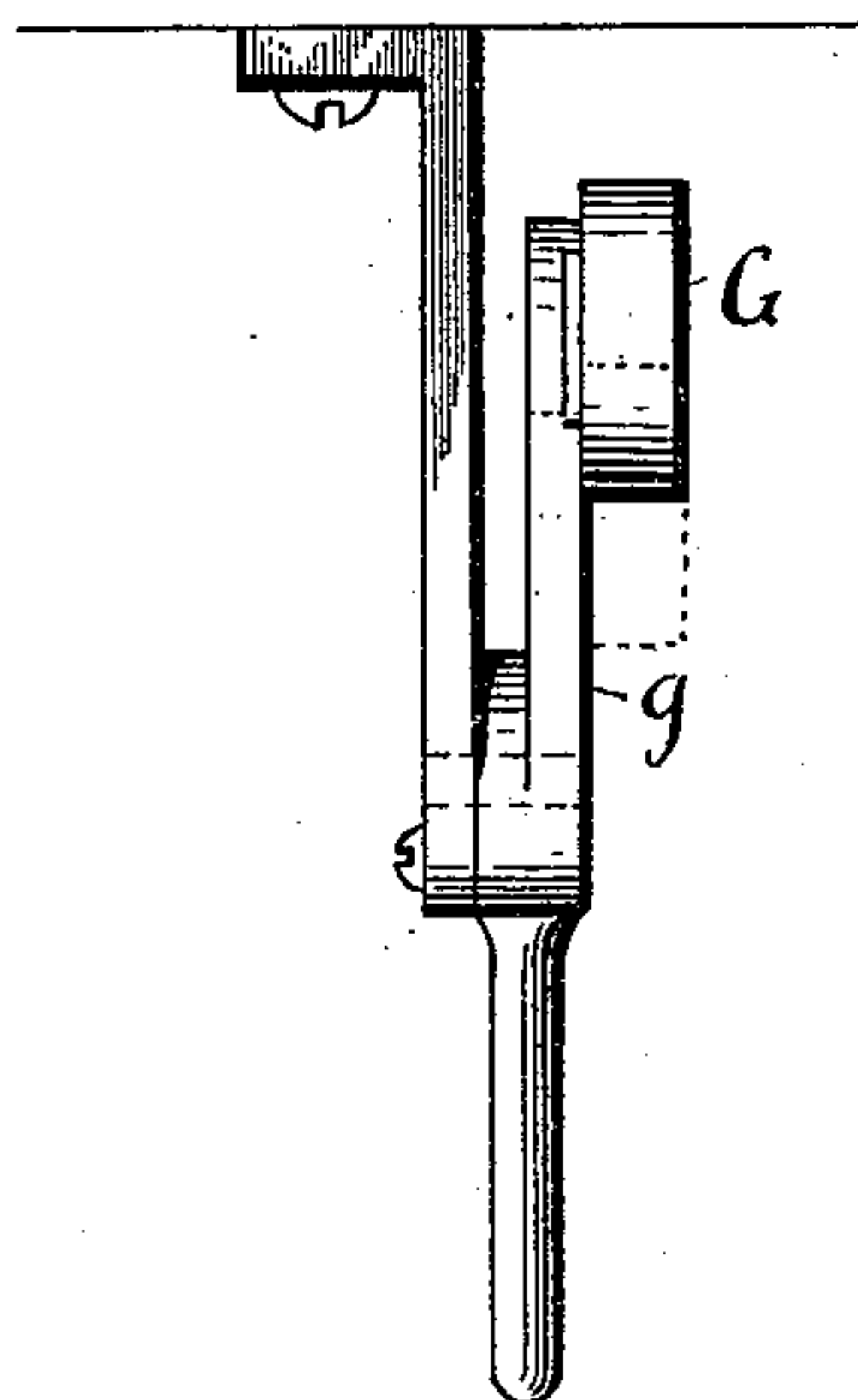
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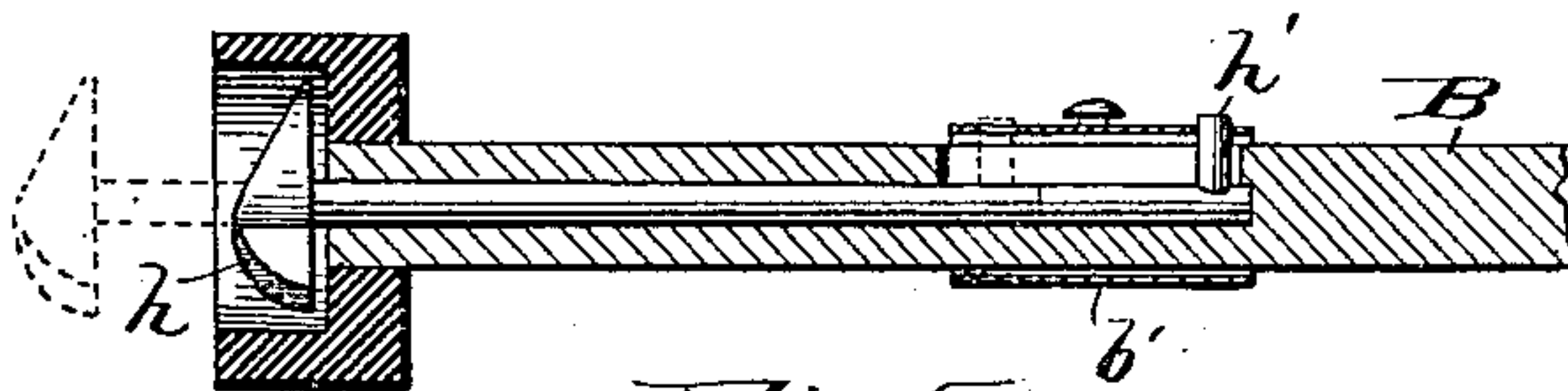
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

STEPHEN O'CONNOR, OF BRIDGEPORT, CONNECTICUT.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 331,997, dated December 8, 1885.

Application filed February 7, 1885. Serial No. 155,231. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN O'CONNOR, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in 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 appertains to make and use the same.

My invention relates to sewing-machines adapted to form different kinds of stitches, at the will of the operator, the object being the production of such a machine which is simple in construction, efficient in operation, and readily changed so as to make the desired stitch. This object is attained by the machine illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation showing the machine in an upright position, ready for use. Fig. 2 is a view of the machinery as attached to the plate of frame upon which it is mounted, and is seen when the machine is turned up. Figs. 3 and 4 are details showing means for raising and lowering the shuttle-race into and out of operative position. Fig. 5 is a section of shaft B and its inner journal on line *xx* of Fig. 2.

A is the bed or cloth plate, which constitutes the frame or base upon which the machinery is mounted. Mounted in suitable brackets depending from the bed A is the main driving-shaft B of the machine. This shaft is driven by a driving-pulley, B', and drives the needle-shaft in the usual way.

At *b* is an eccentric, through the medium of which rock-shaft C is driven. This rock-shaft, through the medium of pitman *c*, drives another rock-shaft, D, which in turn, through pitman *d*, reciprocates the shuttle through its carrier *d'*.

In order to provide for throwing the lock-stitch mechanism out of operation the shuttle-carrier is mounted in a shuttle-race, which may be thrown down or out of position and there secured at the will of the operator. A loose crank-and-clutch mechanism is also mounted on rock-shaft D, in order that it may

be conveniently thrown out of and into operative condition.

*c'* is a crank or arm loosely mounted on the shaft D, which shaft is provided with a collar, *c''*, as shown.

F is a clutch device, held to its work by spring *f*. This clutch is provided with projecting pins, which pass through the collar and into the crank to lock it to the shaft. When it is desired to release this crank and leave it to move freely without operating the rock-shaft, the clutch is withdrawn and given a quarter-turn, so that the projecting pins will rest in the notches *xx* of the collar.

G is the shuttle-race, and is mounted on arms *g g*, pivoted to suitable brackets depending from the bed or plate, as shown. One of these pivoted arms may be provided with a handle or projection, whereby the shuttle-race may be conveniently thrown down out of and up into working position. Any suitable stop—such as a set-screw or spring-catch—may be used to hold the shuttle-race firm in either of its positions. It is obvious that any other device for raising and lowering the race may be adopted. The shaft B is bored out or made hollow at its inner extremity to receive and sustain the spindle of a looping-hook, *h*, and has leading from this hollow part a slot, as particularly shown in Fig. 5, in which works a stud or pin, *h'*, connected with the spindle of the looper-head. There is also attached to the shaft a spring-catch, *b'*, provided with perforations or slots, as shown, for catching the stud or pin *h'*, and by or through which the looper-head may be adjusted longitudinally with relation to the shaft, so as to throw it out of or into operative position. The end of the shaft should be supported in suitable bearings, and the bolster or bearing should be recessed or counterbored to inclose and form a housing for the looper-head when it is not in use.

When the machine is to be used as a double-head or lock-stitch machine, the mechanism will be adjusted as shown in Fig. 2 of the drawings.

To change and adjust the machine for making a chain-stitch, clutch F will be disengaged from crank and shuttle-race G will be dropped,

as shown in dotted lines, Fig. 3, when the catch may be lifted, and by means of the pin and stud the spindle and looping-head may be moved outward to its proper position to catch the loop from the needle.

I claim as my invention—

1. In a convertible lock-and-chain stitch sewing-machine, the combination, with a needle, of lock-stitch mechanism consisting of the main drive-shaft, a pitman, loose arm or crank, a clutch, a counter-shaft, and a shuttle-driver, and chain-stitch mechanism consisting of a main shaft, looper-head telescopically connected therewith, and a locking device therefor, substantially as described.

2. In a sewing-machine, the combination of a main driving-shaft, a counter-shaft, a pitman, and means for connecting the pitman with the shaft, a loose arm or crank, a clutch, and a shuttle-carrier, whereby the counter-

shaft may be conveniently thrown into and out of operation.

3. In combination with the bed-plate of a sewing-machine, a shuttle-race, links or swinging arms for supporting said shuttle-race, and means for locking the shuttle-race, whereby said race may be thrown out of or secured in its operative position.

4. In a sewing-machine, the combination of a needle, a main drive-shaft, a looping-head telescopically connected with said shaft, and a catch or lock for holding the looper in its working or its idle position, substantially as described.

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

STEPHEN O'CONNOR.

Witnesses:

E. D. BARROWS,

MELVIN MOREHOUSE.