

(No Model.)

L. L. MILLER.

TUBE SUPPORT FOR BOX LOOP SEWING MACHINES.

No. 433,690.

Patented Aug. 5, 1890.

Fig. 1.

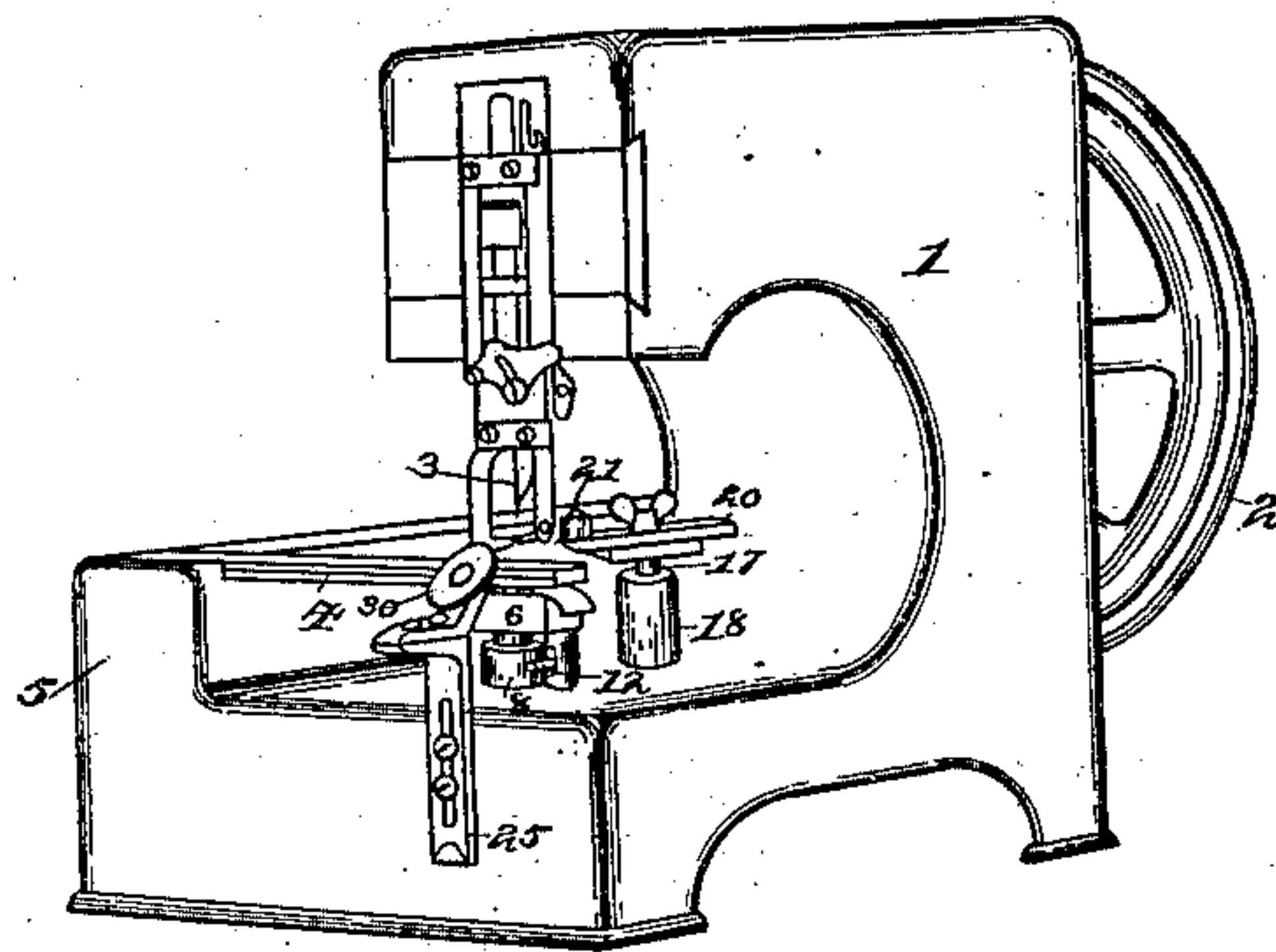


Fig. 2.

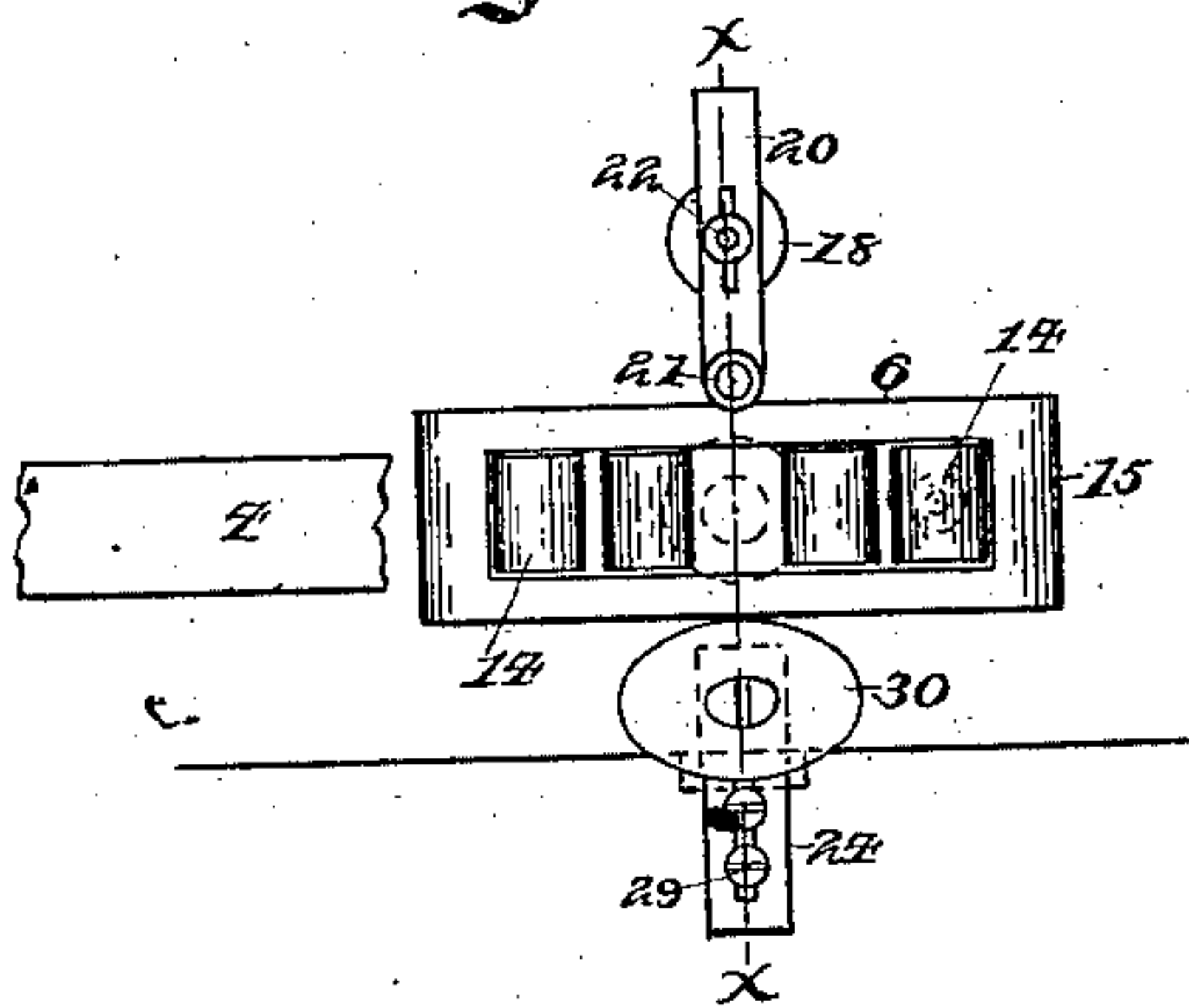


Fig. 3.

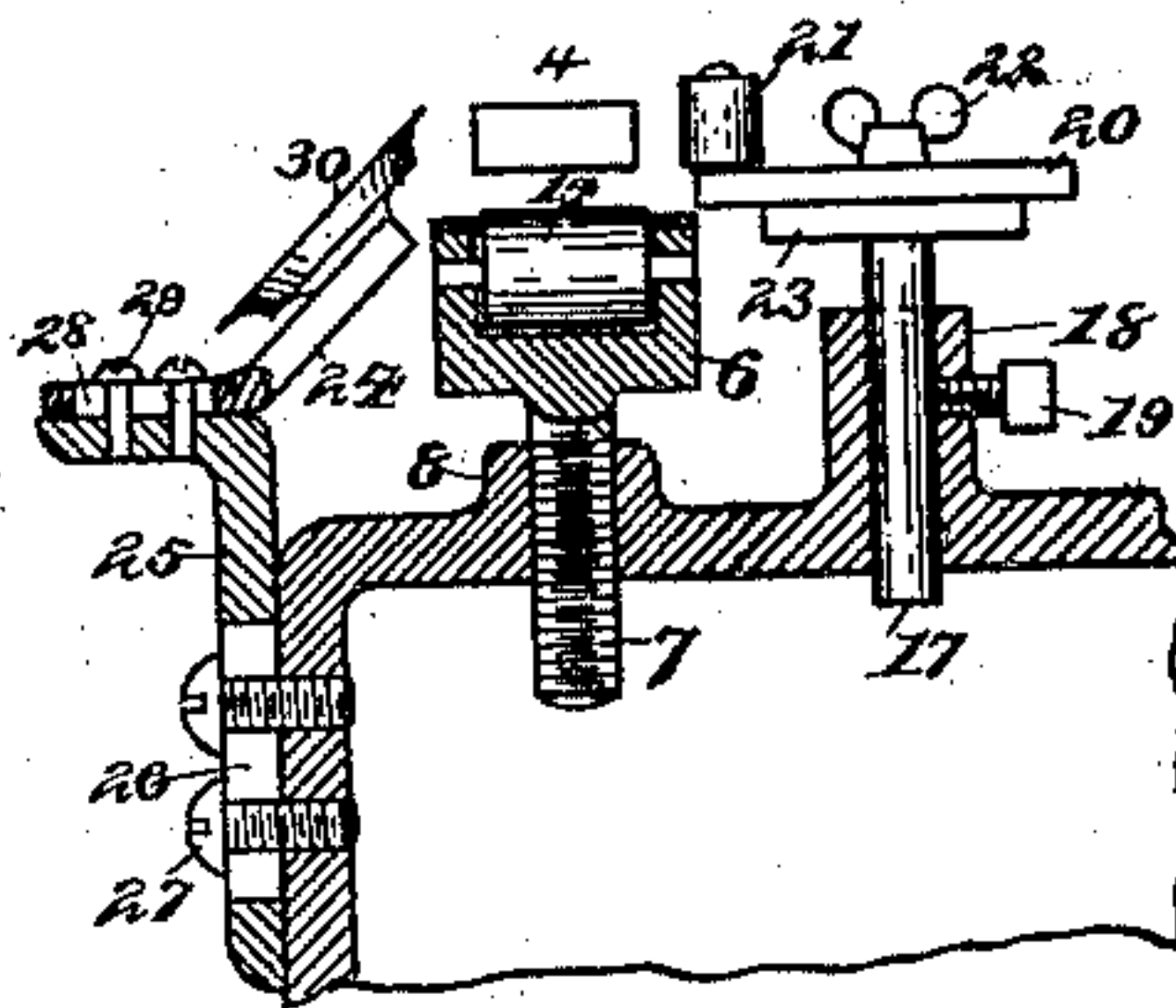
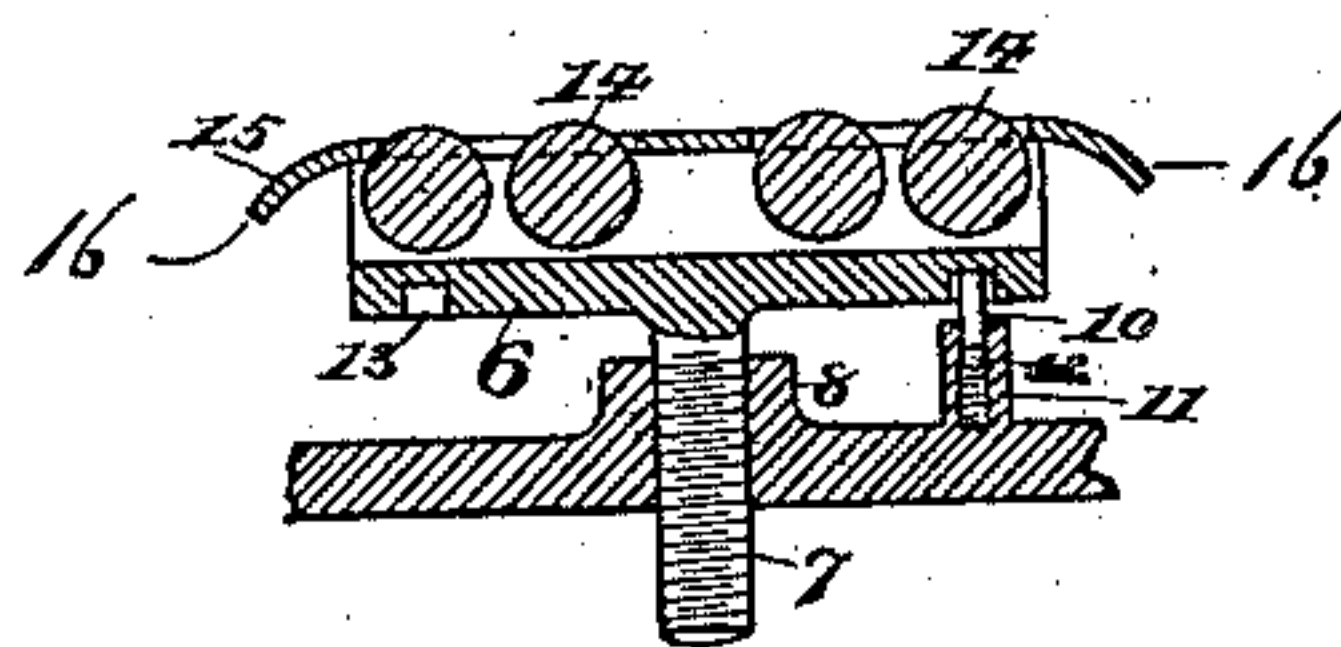


Fig. 4.



Witnesses

J. Watson Sims
W. F. Ross

Inventor

Louis L. Miller

By his Attorney

Wood & Boyd

UNITED STATES PATENT OFFICE.

LOUIS L. MILLER, OF NEWPORT, ASSIGNOR OF ONE-HALF TO FRANK H. PERKINS, OF COVINGTON, KENTUCKY.

TUBE-SUPPORT FOR BOX-LOOP SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 433,690, dated August 5, 1890.
Application filed September 21, 1889. Serial No. 324,617. (No model.)

To all whom it may concern:

Be it known that I, LOUIS L. MILLER, a citizen of the United States, and a resident of Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Tube-Supports for Sewing-Machines, of which the following is a specification.

My invention relates to an improvement upon the box-loop sewing-machine for which Letters Patent No. 384,059, dated June 5, 1888, were granted Louis L. Miller, inventor, and Frank H. Perkins, assignee.

The object of my said former invention was to provide efficient mechanism for sewing in a box-loop.

The object of this invention is to provide an improved support for the tube-supporting bar. In the operation of the box-loop sewing-machine of the class above referred to the loop is sewed upon a horizontal projecting bar and the needle working through or into the bar with the stitching along the top surface.

The object of the present invention is to provide an efficient support underneath the loop-supporting bar upon which the loop rests, allowing it to feed along easily and at the same time preventing the bar from springing under the vibrations of the machine. The support is obtained by means of an adjustable bracket or stand, and the ease of feeding the loop is obtained by friction-rollers inserted in said stand or bracket, which project through the top surface thereof a sufficient distance to come in contact with the bottom of the loop.

Another object of this invention is to provide one or more side guides composed of rollers bearing against the sides of the loop to assist in holding the loop in place.

Another object of my invention is to provide a peculiar shaped roller which serves as a side guide for sewing box-loops over angle-pieces, such as upon the cheek of a blinker of a bridle.

Figure 1 is a perspective view of my improvement attached to a box-loop machine. Fig. 2 is a top plan view of the same. Fig. 3 is a cross-section on line *x x*, Fig. 2. Fig. 4 is a central cross-section of the support.

1 represents the frame of the box-loop machine, 2 a driving-wheel, 3 the needle, and 4 the tube-supporting bar. These parts are made substantially as shown in my said former patent, except the shape of the machine is different.

In order to apply my adjustable bracket or stand support, I provide an offset 5 in the top plate of the machine, upon the ledge or higher portion of which the tube-supporting bar is mounted, and to which the stitch-looping mechanism is connected.

Upon the lower portion of the frame is mounted a bracket or stand 6.

7 represents a screw-threaded stud projecting downward therefrom and engaging with the screw-threads of boss 8. Stand 6 is held in position laterally by a spring-keeper pin 10.

11 represents a sleeve in which said pin is supported and moves.

12 represents a stud projecting out from keeper-pin 10. This keeper 10 is supported upon a coil-spring 9, and when pressure is applied to the spring will force it down and the end of the keeper will be drawn out of the recess in the bottom of the bracket 6, thereby allowing the bracket to revolve on its spindle and be raised or lowered for adjustment. I preferably employ upon the opposite end of the bracket a secondary recess 13, into which the keeper-pin 10 projects when said bracket has turned a half-revolution, thereby making the adjustment less than could be otherwise obtained with a full revolution by the same pitch of thread. In order to allow the loop to slide along freely the bracket is made in U or channel shape in cross-section, in which is mounted upon proper axes a series of rollers 14. The top of these friction-rollers forms the rest or support for the box-loop mounted upon bar 4, as shown in Fig. 1. In order to house in these rollers plate 15 is provided, which is pierced with slots which pass over the periphery of rollers 14. In order to prevent the loop from catching on the ends of plate 15, they are extended and the ends 16 are bent over, as shown in Fig. 4.

In sewing small loops I provide one or more side guides.

17 represents the stem of the bracket supported in boss 18, and held in position by the adjusting-screw 19.

20 represents an arm adjustably connected to the bracket-stem 17, on the inner end of which is mounted a friction-roller 21.

22 represents an adjusting-screw, which is turned to compress the arm 20 down upon the plate 23, by which means the roller 21 is adjusted up to the side of the bar, as shown in Fig. 3. Upon the front side of this bar I provide side bracket 24, which is adjustably connected to the post 25, which post is vertically adjustable on the frame of the machine by means of the slot 26 and set-screws 27. The angle-arm 24 is adjusted horizontally by means of slot 28 and set-screws 29.

30 represents a beveled edge friction-roller mounted upon the angle-arm 24. This shape is varied to suit the kind of work, so that it may be projected into the corner of an angle-piece, such as the blinker on a bridle-cheek. In ordinary plain work the side guides, however, are not required, but are a very useful auxiliary in sewing loops on irregular-shaped pieces.

I have shown the support 6 as longitudinal and provided with four friction-rollers, as that is the best form of using it; but it is obvious that a single roller on the adjustable support would take off the spring of the bar as readily as the device herein shown, but would not be so satisfactory a feeding auxiliary. So, also, the roller might be omitted in case of heavy work where the needle is suffi-

ciently strong to do the feeding, or where the loop is sufficiently large to slip readily on the loop-supporting bar 4.

Having described my invention, what I claim is—

1. In a box-loop sewing-machine, the combination, with the tube-supporting arm 4, of the vertically-adjustable bracket or stand 6, and a series of rollers 14, journaled in said bracket beneath the tube-supporting bar to facilitate the feed of the loop, substantially as described.

2. In a box-loop sewing-machine, the combination, with the tube-supporting bar 4, of the adjustable bracket or stand 6, provided on its under side with a screw-threaded stud 7 and recesses 13, the frame provided with the boss 8, to engage said stud, and with the keeper-pin 10, to engage said recesses, and a series of rollers 14, journaled in said bracket beneath the supporting-bar, substantially as described.

3. In a box-loop sewing-machine, the combination, with the tube-supporting bar 4, of the adjustable stand or bracket 6, provided with a series of rollers 14, located beneath said bar, the adjustable side bracket 24, and the angle-supporting roller 30, journaled on said side bracket, substantially as described.

In testimony whereof I have hereunto set my hand.

LOUIS L. MILLER.

Witnesses:

HAYWARD D. GATCH,
T. SIMMONS.