

No. 612,881.

Patented Oct. 25, 1898.

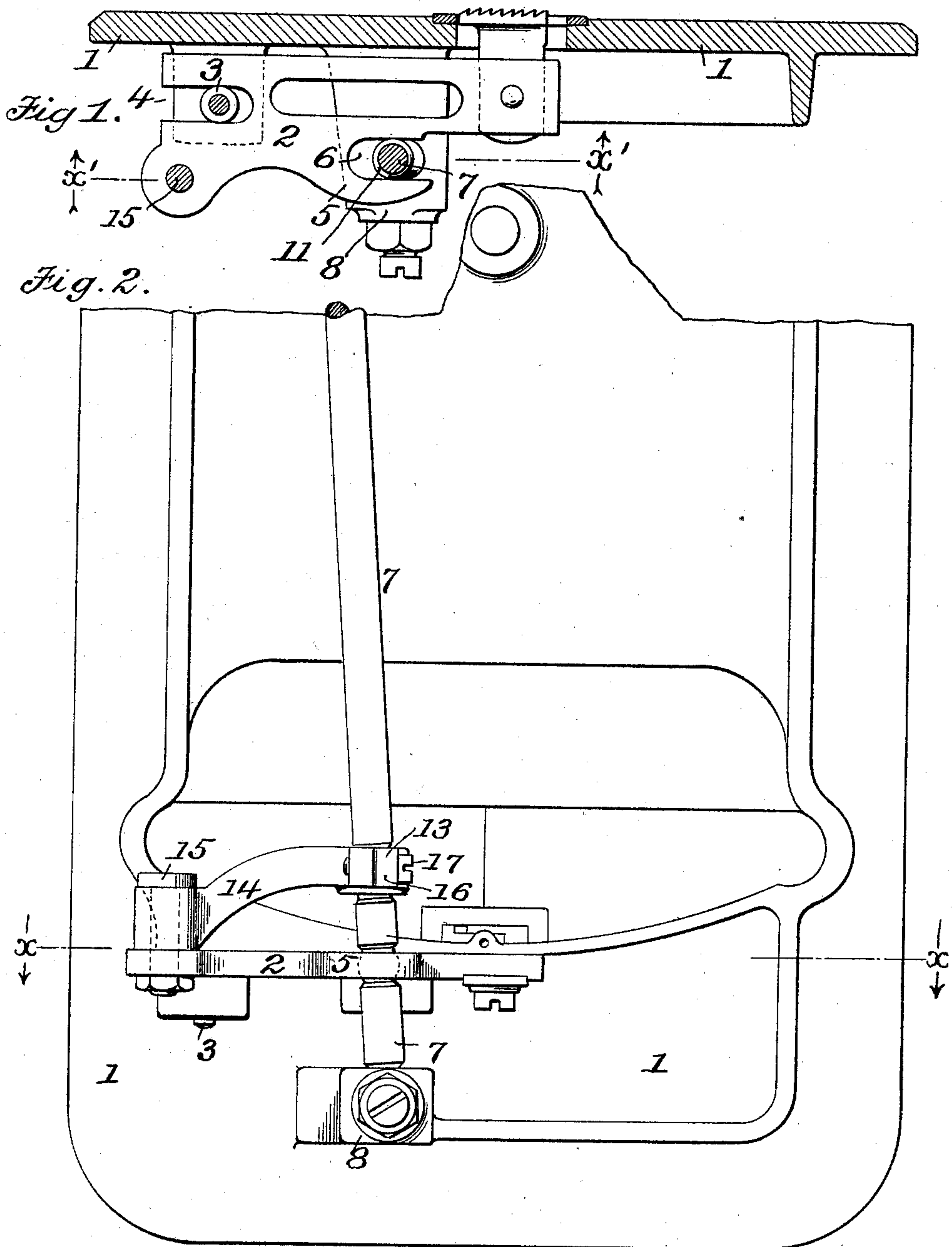
J. TRIPP.

FEEDING MECHANISM FOR SEWING MACHINES.

(Application filed Nov. 27, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 3.

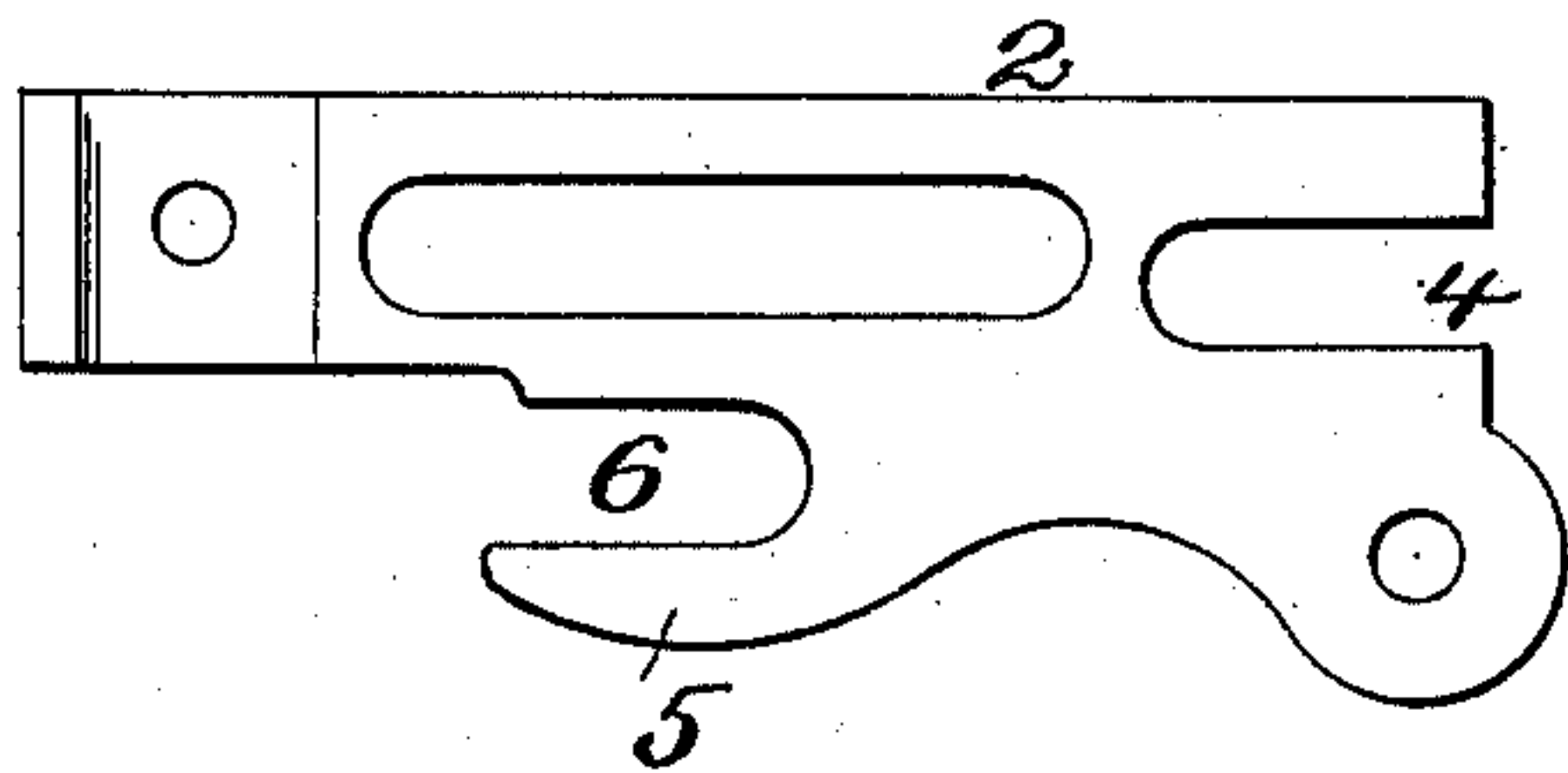


Fig. 6.

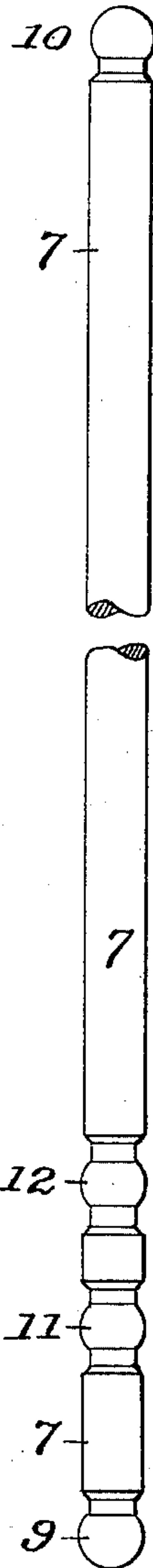


Fig. 5.

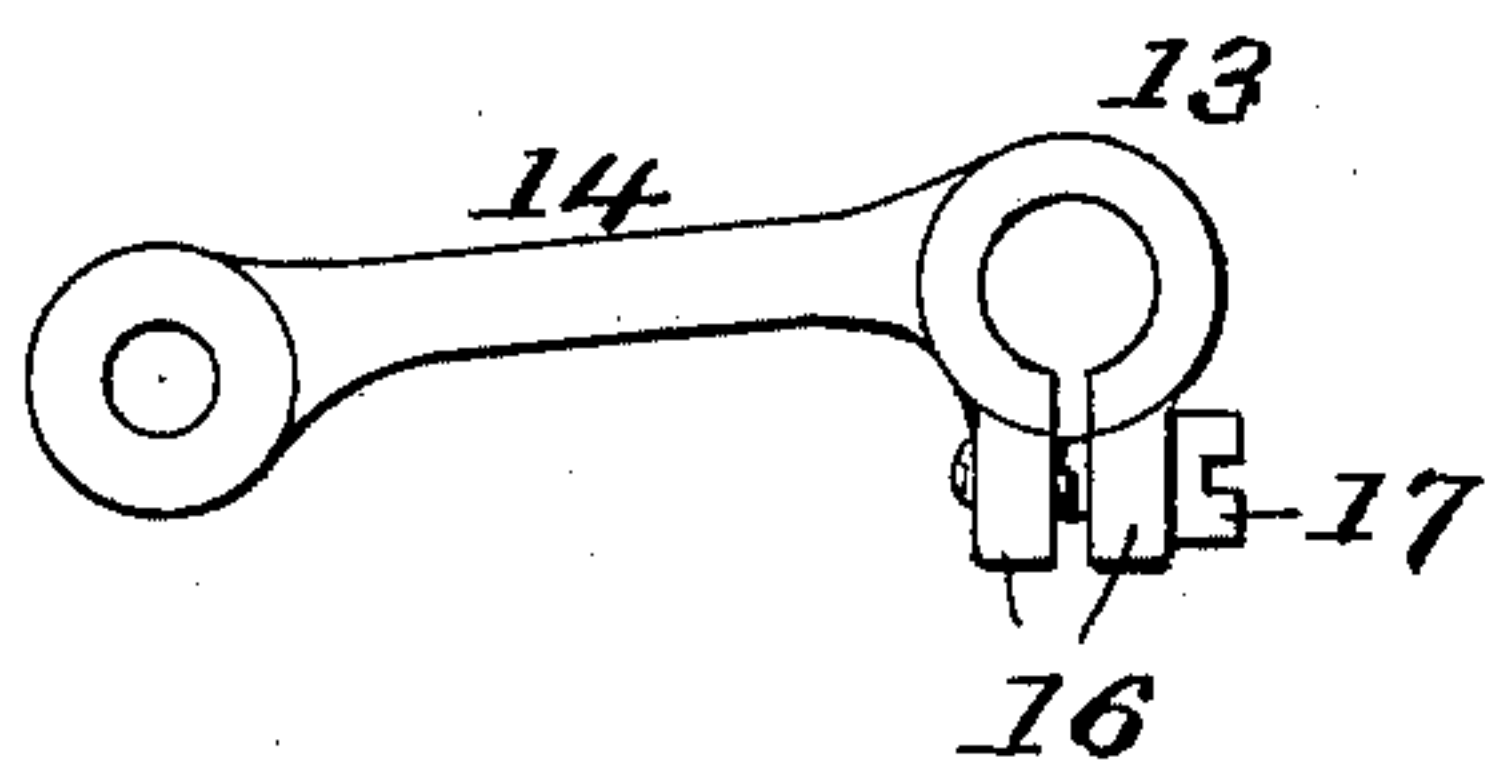
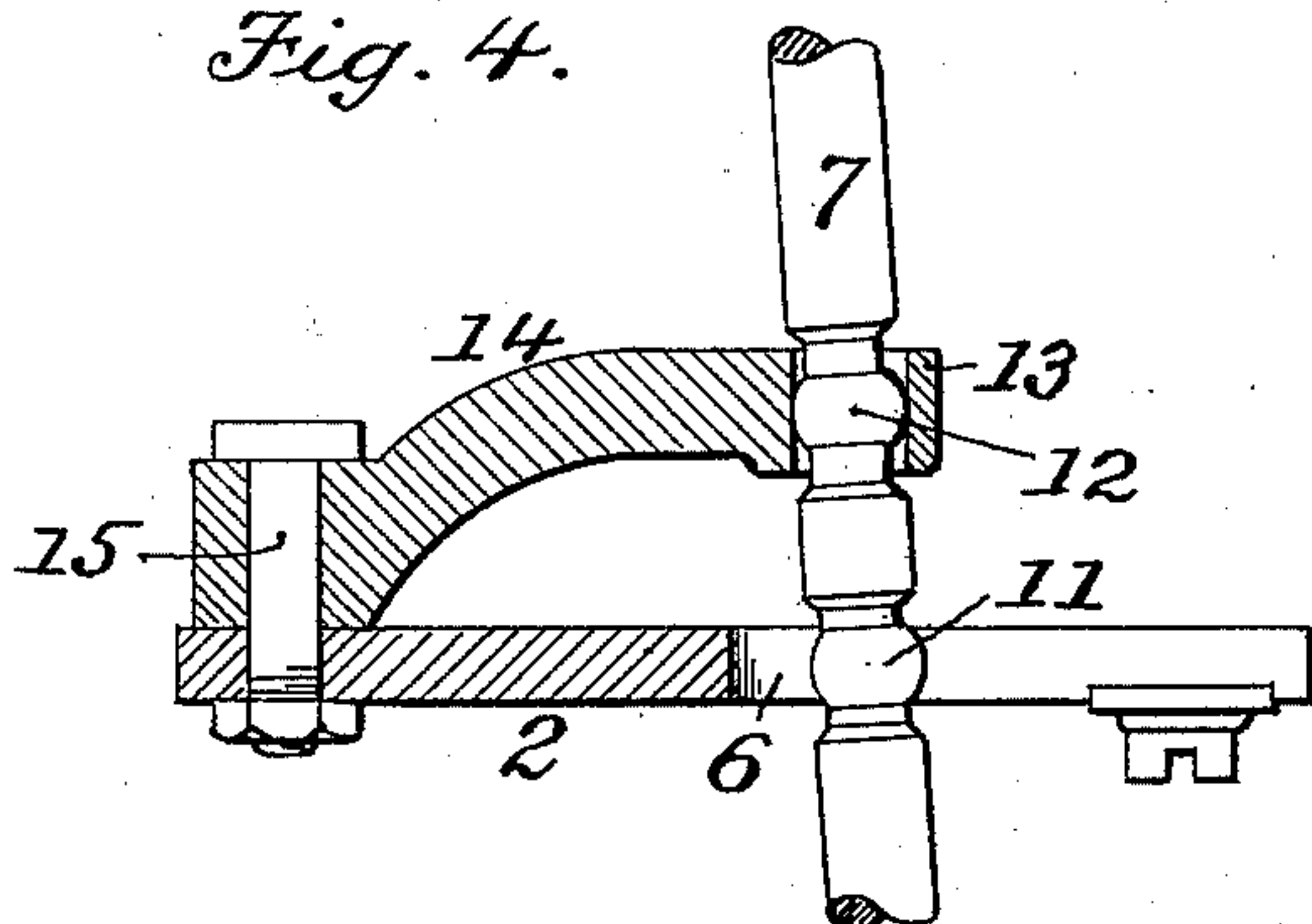


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES TRIPP, OF NEW YORK, N. Y., ASSIGNOR TO THE CHICAGO SEWING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 612,881, dated October 25, 1898.

Application filed November 27, 1897. Serial No. 659,972. (No model.)

To all whom it may concern:

Be it known that I, JAMES TRIPP, 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 Feeding Mechanisms for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to that type of cloth-feeding mechanisms for sewing-machines in which the four-motion feed-bar has its up and down movements imparted to it in a direct manner by a gyrating shaft arranged beneath the bed of the machine, while the forward-and-backward movement of said feed-bar is effected in an indirect manner by means of intermediate connections between the feed-bar and the gyratory shaft, which are adapted to impart a proportionately greater horizontal motion to the feed-bar than is attained in a vertical direction by the direct engagement of the gyratory shaft with the feed-bar, as heretofore mentioned.

The objects of the present improvements are to provide a simple, accurate, and substantial construction and arrangement of parts in which the motions of the feed-bar are at all times positive in their nature and with which the wear of the parts due to constant use is reduced to a minimum, all as will hereinafter more fully appear, and be more particularly pointed out in the claim.

I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a detail transverse section, at line $x x$, Fig. 2, of a feeding mechanism for sewing-machines embodying the present invention; Fig. 2, a detail bottom view of the same; Fig. 3, a side elevation of the feed-bar in a detached condition; Fig. 4, a detail inverted horizontal section at line $x' x'$, Fig. 1; Fig. 5, a detail side elevation of the connecting-link between the feed-bar and the gyrating shaft; Fig. 6, an elevation of the gyratory shaft in a detached condition.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 represents the bed or cloth plate of the sewing-machine head, of any usual construction and formed with the usual guide grooves and lugs by which the feed-bar 2 is guided in its movements.

The feed-bar 2 is of the usual flat type, pivoted at one end by means of a pin or friction-roller 3 on one of the guide-lugs of the bed-plate, and which roller fits within an elongated slot 4 in the feed-bar in such a manner as to permit the requisite end motion of the feed-bar. In the present improvement the feed-bar is formed with a horizontal member or extension 5, projecting some distance below the lower edge of the feed-bar, so as to form a longitudinal slot 6, in which the gyratory shaft 7, hereinafter described, engages to impart, in a direct and positive manner, the necessary up and down movements to the feed-bar and by this means dispense with the spring or other like means heretofore employed to impart a down movement to the feed-bar, and which rendered such movement uncertain at times in the operation of the machine.

The gyratory shaft 7 will have the usual arrangement heretofore employed in the present type of feed mechanisms, its forward end being pivoted at a point forward of the feed-bar in a pivot-stud 8 on the bed-plate of the machine, as shown. It is, however, within the province of the present invention to pivot the gyrating shaft 7 at a point intermediate of its length and at the rear of the feed-bar, as usual in the present type of feed mechanisms, in which case the other parts of the present invention will be correspondingly changed in their location.

The gyratory shaft will be formed with the usual globular ends 9 and 10, by which said shaft has journal connection with the pivot-stud 8, and with the usual operating-link extending from the cam on the operating-shaft of the machine, and in the present improvement in addition thereto will be formed with intermediate globular portions 11 and 12, that have bearing, respectively, in the longitudinal slot 6 in the feed-bar and in the yoke end or eye 13 of the connecting-link 14, that extends from the gyratory shaft 7 to the feed-bar 2. With such improved construction an accurate

fit can be readily attained regardless of the gyrating movement of the shaft 7, and in consequence thereof all lost motion is avoided and the wear reduced to a minimum.

5 The connecting-link 14 is pivoted to the feed-bar 2, near one end of the same, by means of a pivot-bolt 15, and its body portion is curved or projected away from the feed-bar, as shown, so that its eye or yoke portion 13 will
10 be some distance away from the feed-bar. As so arranged, the horizontal movements imparted to said feed-bar through the instrumentality of said link 14 will be in an indirect manner and much greater than the vertical motion that is imparted in a direct manner
15 to the feed-bar by said shaft 7.

In order to maintain the proper fit of the yoke or eye 13 of the connecting-link 14 upon the globular portion 12 of the gyratory shaft,
20 said eye or yoke will be slotted radially and provided with ears 16 16, through which passes a clamping-bolt 17 to effect the proper adjustment of the parts.

In the modified construction of the present
25 invention, as heretofore mentioned, and in which the gyratory shaft is pivoted interme-

diate of its length, the connecting-link 14 will be arranged on the opposite side of the feed-bar to that shown in the drawings.

Having thus fully described my said invention, 30 what I claim as new, and desire to secure by Letters Patent, is—

In a sewing-machine feeding mechanism of the type herein described, the combination
35 of a gyratory operating-shaft, a feed-bar engaging directly with the gyratory shaft so as to receive vertical movement from the same in a direct manner, and a connecting-link pivoted at one end to the feed-bar by a pivot-
40 bolt, the other end of said link being projected away from the feed-bar and provided with an eye or yoke engaging the gyratory shaft, and adapted to impart horizontal movement to the feed-bar in an indirect manner,
45 essentially as herein described.

In testimony whereof witness my hand this
22d day of November, 1897.

JAMES TRIPP.

In presence of—

CHAS. F. DANE,
E. STEVENS.