

No. 671,995.

Patented Apr. 16, 1901.

E. J. FRANCK.  
KNITTING MACHINE.

(Application filed Jan. 4, 1901.)

(No Model.)

3 Sheets—Sheet 1.

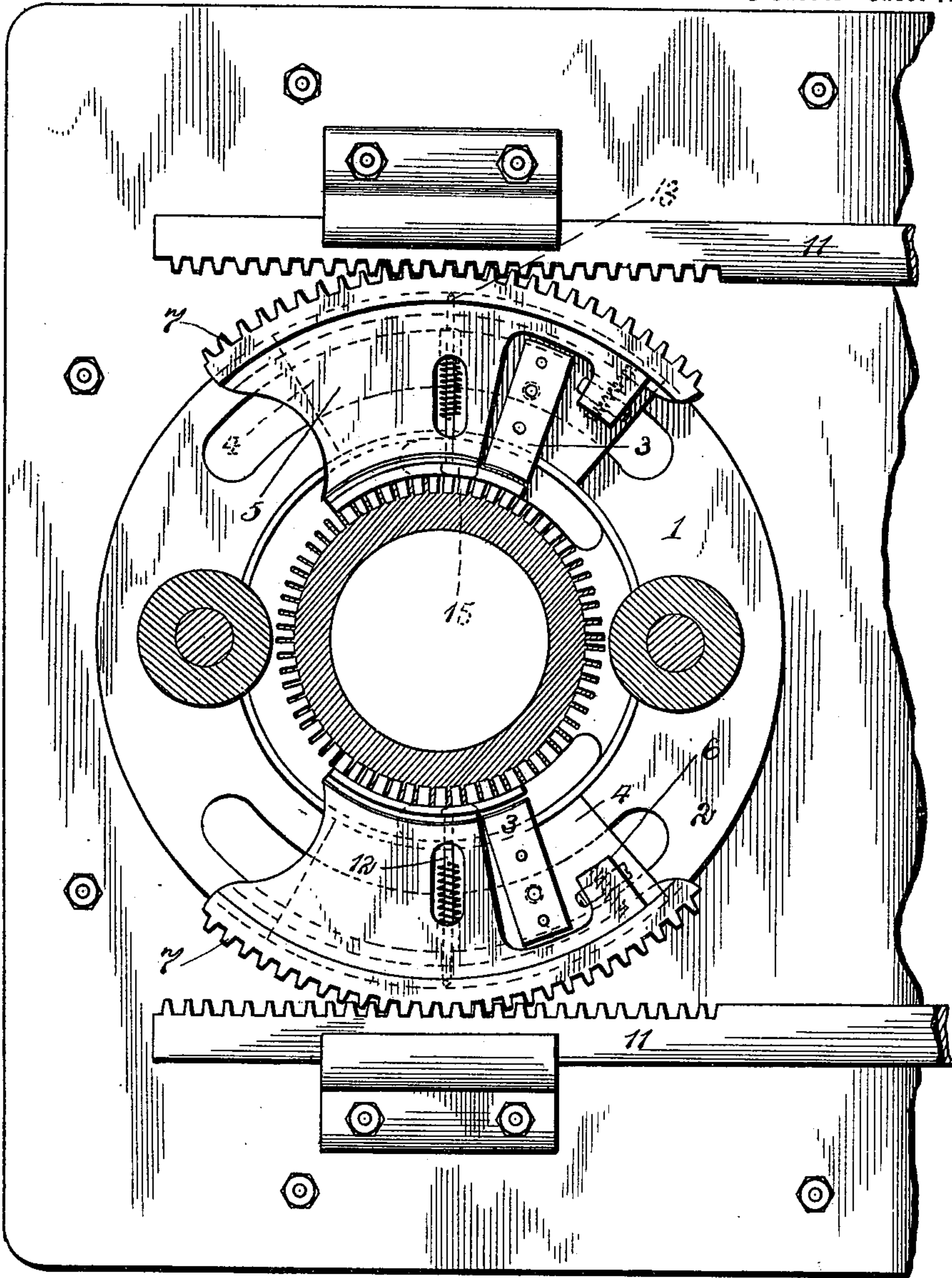


Fig. 1.

Witnesses:

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Inventor:

*Emil J. Franck*

By

*Augustus D. Stoughton*  
Attorney

No. 671,995.

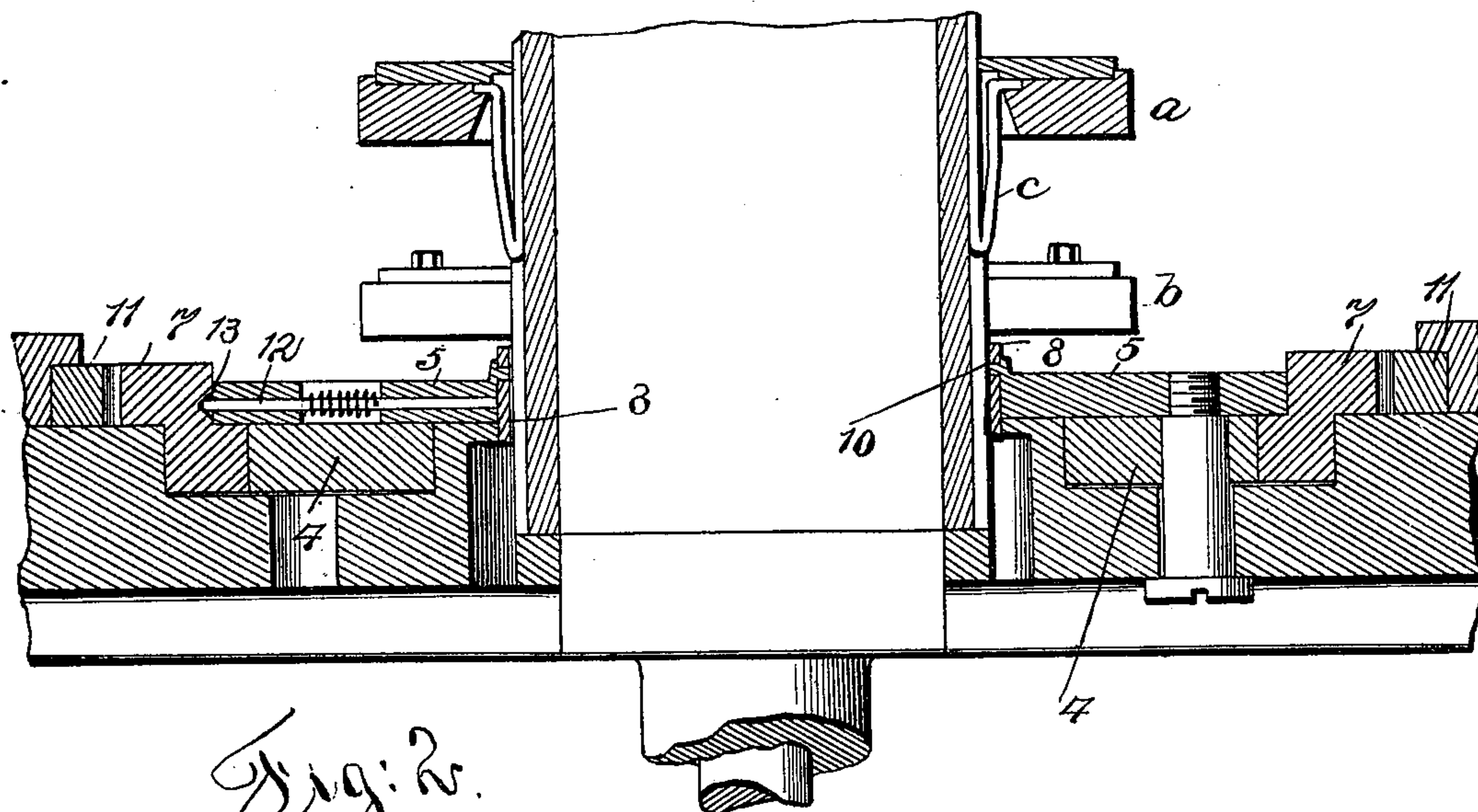
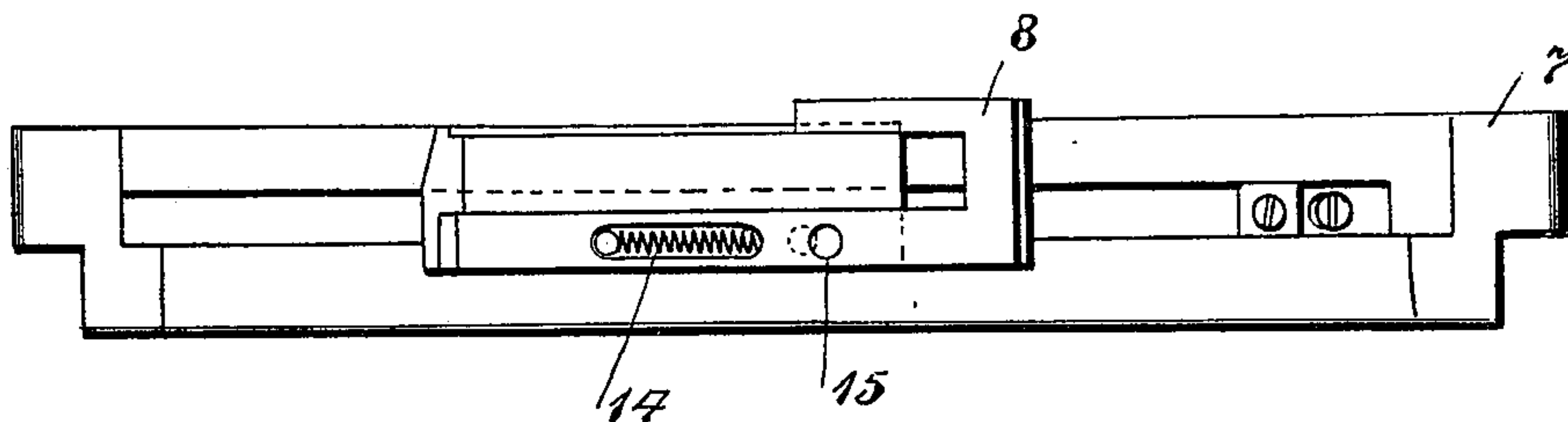
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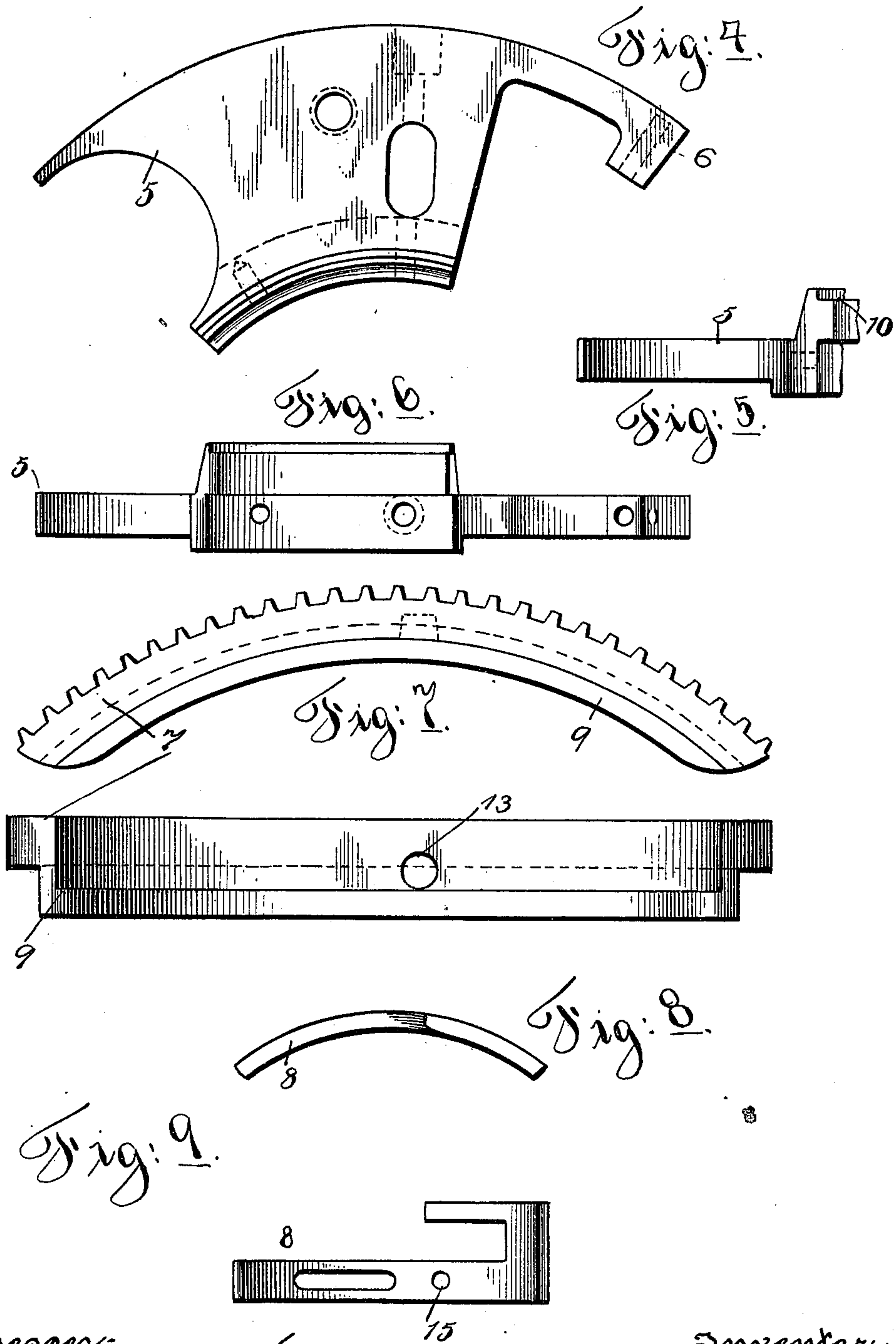
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3 Sheets- Sheet 3.



Witnesses:  
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Fig. 10.

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# UNITED STATES PATENT OFFICE.

EMIL J. FRANCK, OF COLLINGDALE, PENNSYLVANIA.

## KNITTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 671,995, dated April 16, 1901.

Application filed January 4, 1901. Serial No. 42,056. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL J. FRANCK, a citizen of the United States, residing at Collingdale, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Knitting-Machines, of which the following is a specification.

The present invention relates to an improvement which is applicable to the machine shown and described in my Patent No. 656,538, dated August 21, 1900, and in which machine certain parts, which may be called "strippers," operate upon the needle-bits so as to cause them to engage and disengage the reciprocating carriers and to thereby fashion the work.

The object of the present invention is to prevent accidents and consequent injuries which might arise by reason of jamming or sticking in the operation of the strippers in respect to the needle-bits and the various accessory parts and provisions.

To this end the invention, stated in general terms, comprises the provision of sectional needle-strippers, of which the parts are normally connected together, but are automatically released from the driving power whenever jamming occurs in such a way that they can be readily reset.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a top or plan view illustrating strippers embodying features of my invention and showing portions of the knitting-machine. Fig. 2 is a sectional view illustrating the same. Fig. 3 is a view of one of the strippers as seen from the center of the head. Figs. 4 and 5 are respectively a plan and a view of the right-hand end of one of the carriages or slides. Fig. 6 is a view of one of the slides looking outward from the center of the head. Fig. 7 is a top or plan view of one of the racks. Fig. 8 is a view of the rack looking at its inner curved surface, and Figs. 9 and 10 are respectively a top view and a view looking outward from the center of the head of the stripper.

In the drawings, 1 and 2 are the slotted ways in which the sectional parts which operate as strippers travel. As shown in the

drawings, the machine is illustrated as provided with a tucker 3, carried by a plate 4, which also travels in these ways. The tucker and its plate are described in my patent above referred to, and they are not an essential part of the present invention.

5 is a carriage or slide, which is provided with means, as 6, for coöperation with the tucker when present. This slide or carriage is movably fitted to the rack 7, and it has movably fitted upon it the stripper 8. As shown, the rack is flanged, as at 9, for the slide or carriage, and the slide or carriage is provided with a seat, as 10, for the stripper. The slide, the rack, and the stripper are all fitted to move backward and forward in the ways 1 and 2, and the rack-bars 11 serve to propel them.

12 is a bolt mounted in a suitable keeper or opening formed in the carriage or slide, and it is controlled by a spring out of engagement with a notch or opening 13 in the rack. However, under normal conditions the body of the stripper 8 overlies the end of the bolt and by opposing the tendency of its spring keeps the bolt in position for locking the rack and slide together.

14 is a spring interposed between the stripper and the slide, and it serves to hold the stripper up to its normal work and also to keep the hole 15 in it out of alinement with the inner end of the bolt.

The needle-carriers *a* and *b* normally move up and down and carry the needles *c* with them. As in the machine described in the patent and at proper times the strippers engage the needle-bits. The rack-bars 11 shift the strippers for this purpose. In the present invention the operation is much the same. Under normal conditions the portion of the stripper shown at the right-hand side of Fig. 10 operates upon the needle-bits, because the stripper is carried along by the spring 14 with the carriage 5, which in turn is bolted to the rack 7. Should the stripper 8 jam, the spring 14 is overpowered and the stripper 8 lags behind the slide or carriage 5. The result of this is that the opening 15 in the stripper comes in line with the bolt 12, so that the latter enters the opening under the influence of its spring and is thus withdrawn from the notch 13. The rack 7 is thus released from



the slide 5 and can move on by itself without endangering the safety of any of the parts of the machine. Obviously the parts may be readily reset by shifting them in the opposite directions.

It will be obvious to those skilled in the art to which my invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth, and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a knitting-machine of the class described a sectional stripper consisting of a rack, a carriage or slide and stripper proper, and means controlled by the stripper proper and operating to connect and disconnect the rack and carriage, substantially as described.

2. In a knitting-machine of the type recited

a carriage or slide provided with a spring-controlled bolt, a rack equipped for engagement and disengagement with the bolt, and a stripper having spring connection with the carriage or slide and provided with an opening arranged to cooperate with the bolt, substantially as described.

3. The combination in a machine of the type recited of a rack provided with ways, a carriage or slide fitted to said ways and itself provided with a seat, a stripper fitted to said seat, a spring-controlled device for locking the carriage and rack, a spring interposed between the carriage and slide, and means on the slide for releasing the locking device, substantially as described.

In testimony whereof I have hereunto signed my name.

EMIL J. FRANCK.

Witnesses:

W. J. JACKSON,  
K. M. GILLIGAN.