

No. 785,453.

PATENTED MAR. 21, 1905.

E. A. TRUSSELL.
TEMPORARY BINDER.
APPLICATION FILED MAY 31, 1904.

Fig. I.

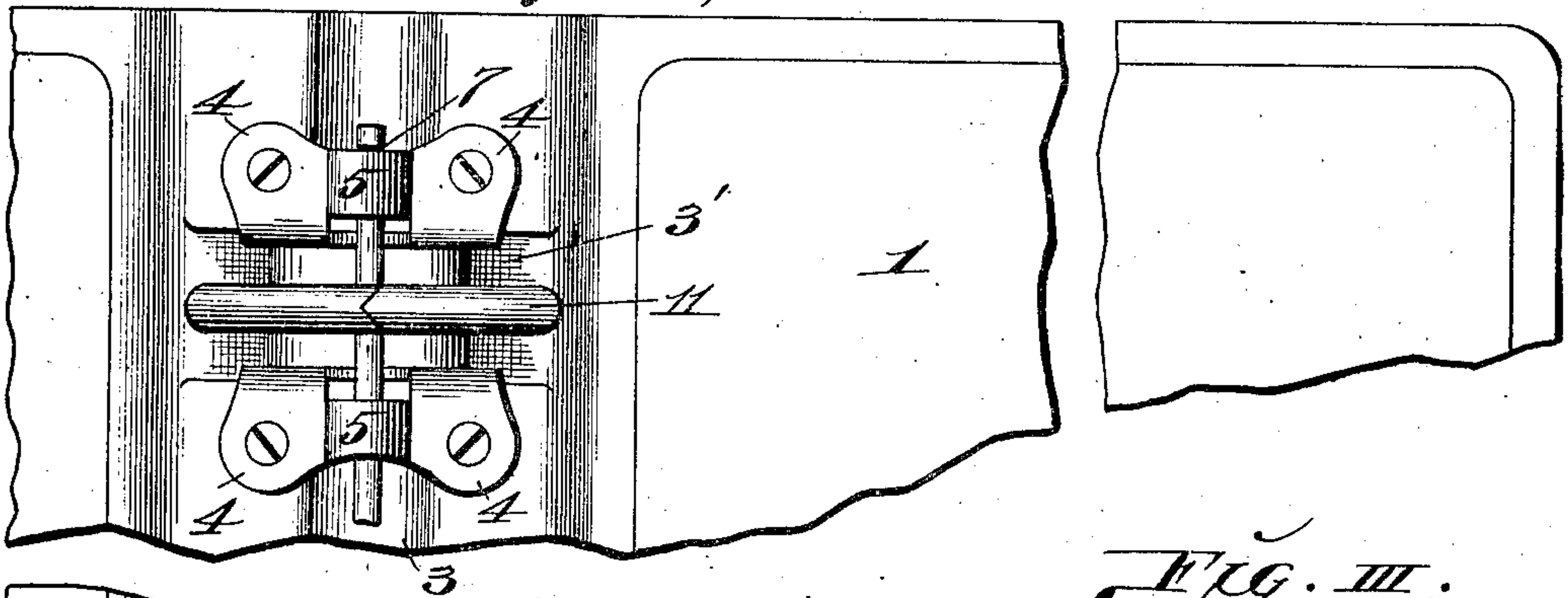


Fig. III.

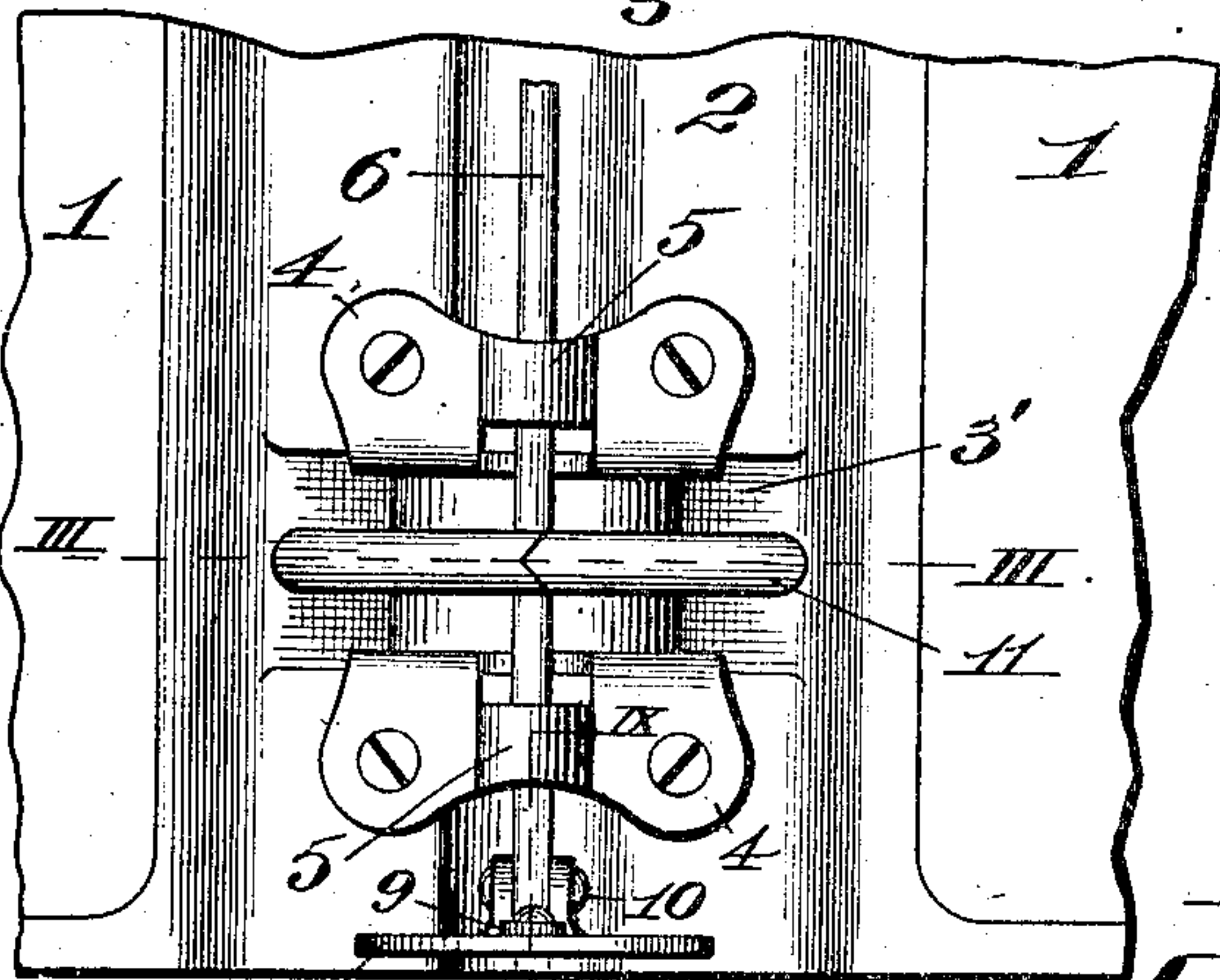
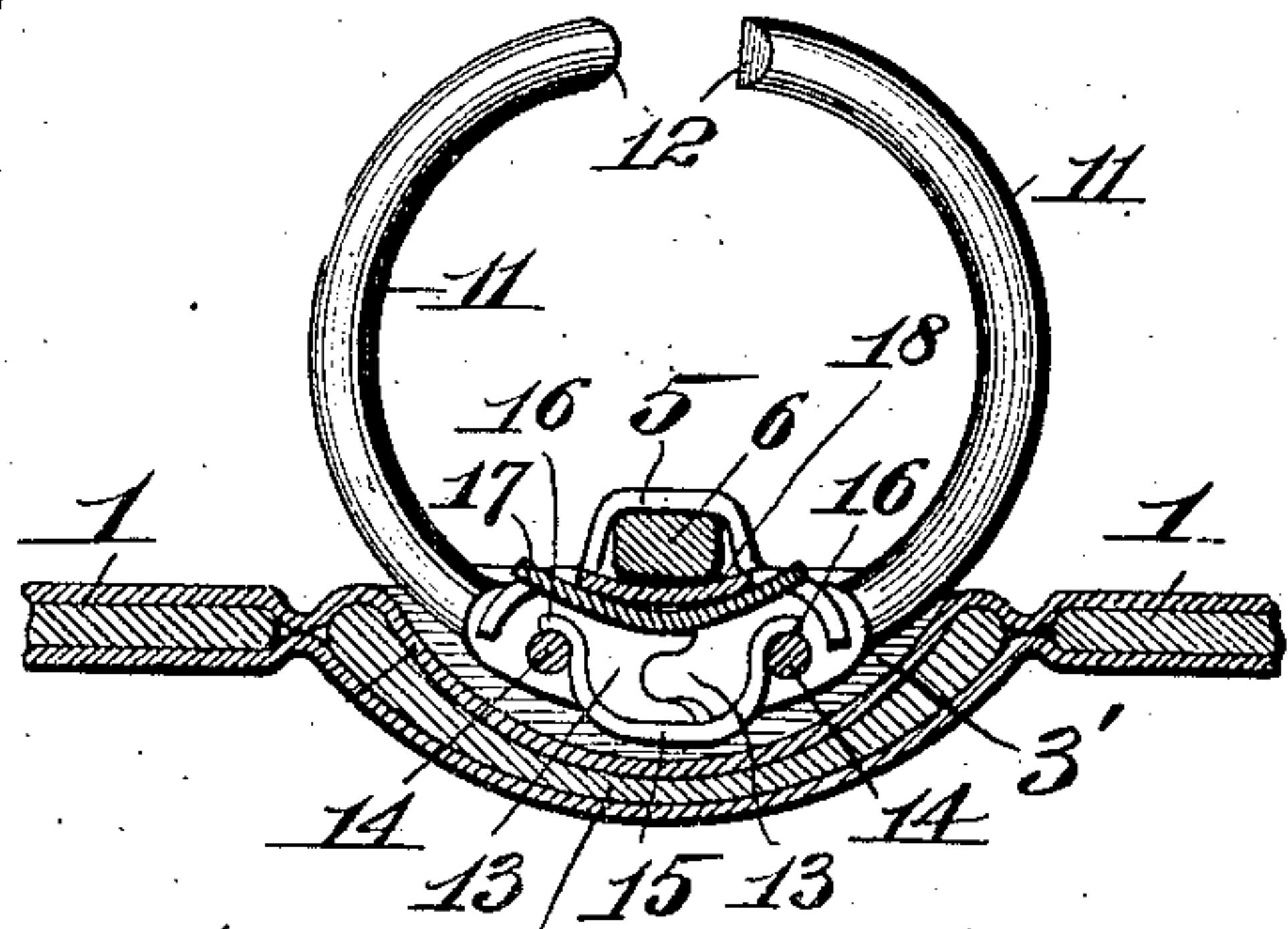


Fig. IV. 2 Fig. V.

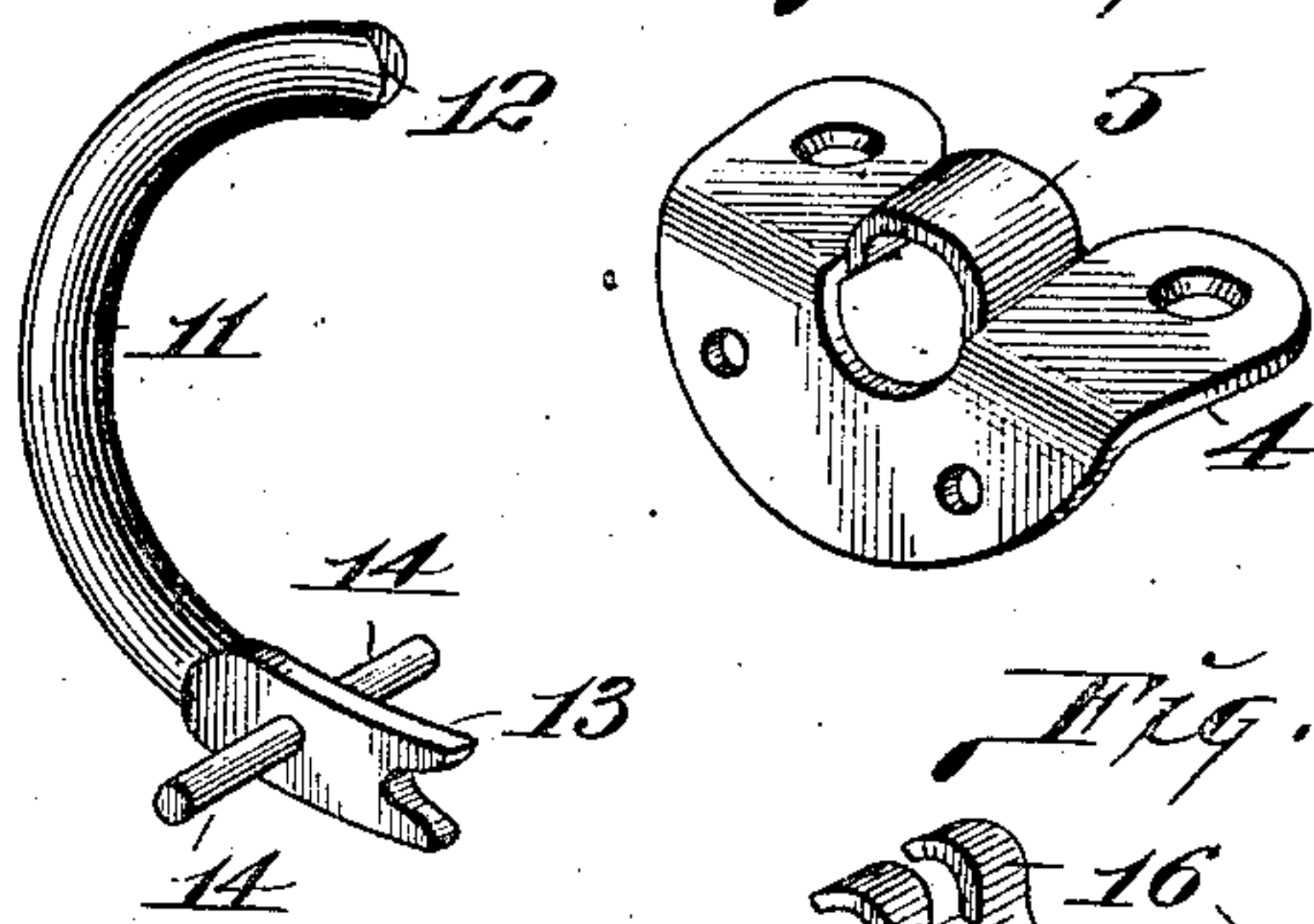


Fig. II.

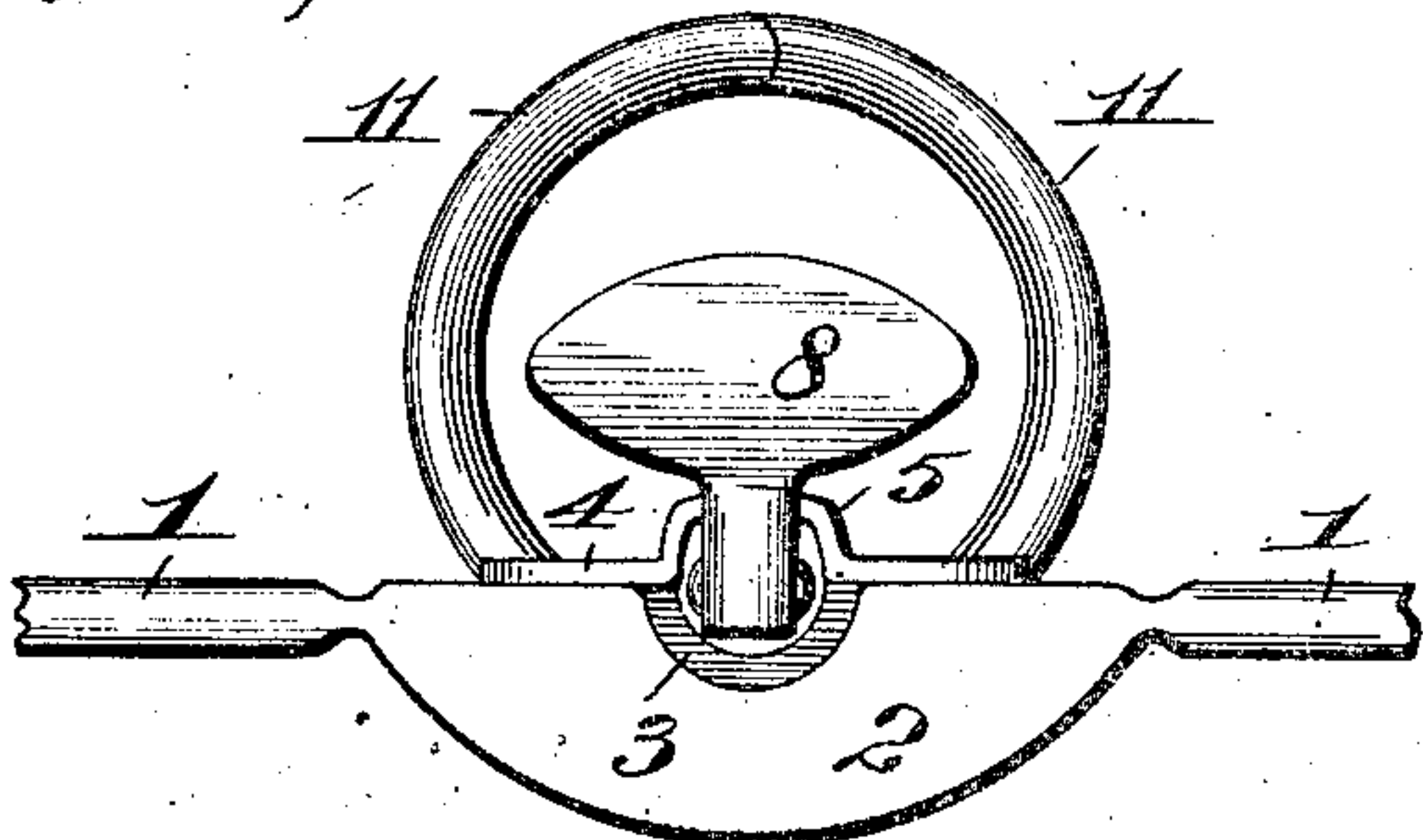


Fig. VI.

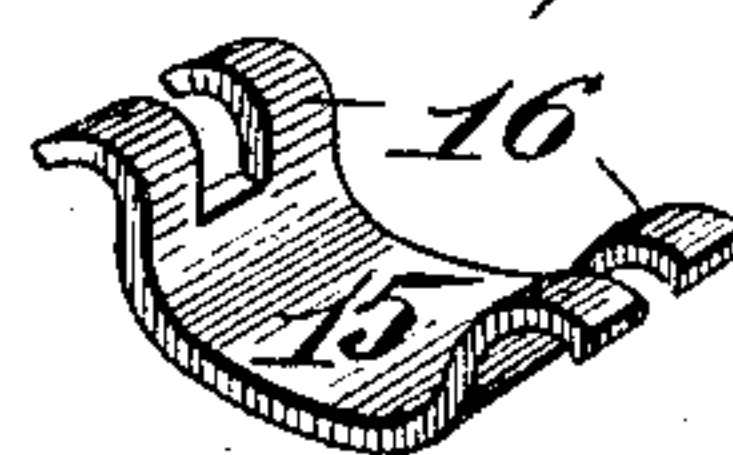


Fig. VII.

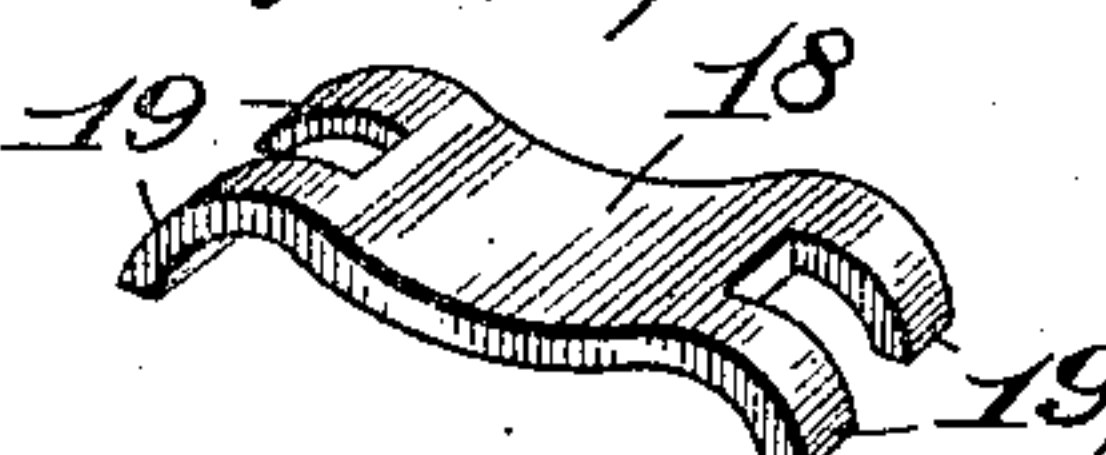
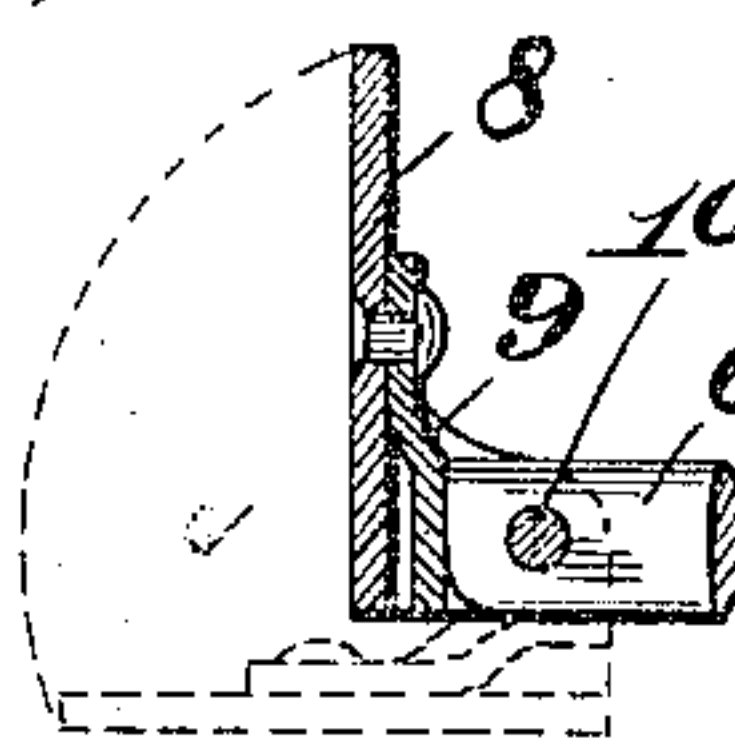


Fig. VIII.



attest: —
M. Smith
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Fig. IX.



Inventor: —
E. A. Trussell.

By Knight Bros. attys.

UNITED STATES PATENT OFFICE.

EMORY A. TRUSSELL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO SIEBER & TRUSSELL MANUFACTURING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 785,453, dated March 21, 1905.

Application filed May 31, 1904. Serial No. 210,357.

To all whom it may concern:

Be it known that I, EMORY A. TRUSSELL, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Temporary Binders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in temporary binders; and, briefly stated, it comprises spring-controlled arch-prongs mounted upon suitable pivots and a rock-bar for moving said arch-prongs into meeting positions at their free ends and adapted also for movement to permit the separation of the free ends of the prongs.

Figure I is an inside face view, partly broken out, of a temporary binder constructed in accordance with my improvement. Fig. II is an end view of the binder, looking at the rock-bar handle. Fig. III is an enlarged cross-section taken on line III III, Fig. I. Fig. IV is a perspective view of one of the arch-prongs. Fig. V is a perspective view of one of the arch-prong pivot-ears. Fig. VI is a perspective view of one of the inner prong-controlling springs. Fig. VII is a perspective view of one of the outer pressure-plates. Fig. VIII is a perspective view of one of the outer prong-controlling springs. Fig. IX is an enlarged longitudinal section taken on line IX IX, Fig. I.

1 designates the cover-boards of a temporary binder united by the usual back 2. The binder-back is recessed longitudinally at 3 and transversely at 3', (see Figs. I and III,) there being preferably three of the transverse recesses, although but two are illustrated, due to the central portion of the binder being illustrated as broken out as seen in Fig. I.

4 designates angle-ears secured to the inside face of the binder-back and arranged in pairs, each ear having one of its arms extending inwardly into a recess 3', at which it is located. Extending longitudinally of the facing-arms of each ear is an eye 5.

6 designates a non-circular rock-bar that

extends longitudinally of the binder-back 2, 50 and passes through the eyes 5 of the series of ears 4 in a manner to be rotatably positioned therein. This rock-bar is held from escape from the ear-eyes due to its free end being notched at 7 (see Fig. I) to receive a lip extending rearwardly from the edge of the far ear-eye 5. The near end of the rock-bar has a handle 8 swingingly connected thereto by an ear 9, secured to the handle and united to the rock-bar by a pivot-pin 10. This means of 60 connection of the handle permits of the handle being folded into a position at right angles to the axis of the rock-bar, so that the handle would be inclosed within the binder, as seen in Figs. I and II, when it is not desired to actuate the rock-bar, and so that the handle may be moved into the position seen in dotted lines, Fig. I, exterior of the binder when the rock-bar is to be actuated.

11 designates a series of arch-prongs having free outer ends 12 to meet and be separated from each other and the interlocking inner heel ends 13. Each arch-prong is provided with a pair of pivot-studs 14, extending transversely of its inner end and seated in the pair of ears 4, between which the prong is positioned, so that the inner ends of the mating and interlocking prongs will occupy a transverse recess 3' of the binder-back.

15 represents inner leaf-springs positioned beneath the inner heel ends of the pairs of arch-prongs to rest against said heel ends; each spring being provided with outwardly-extending arms 16, that fit against the prong pivot-studs 14. (See Fig. III.)

17 designates outer leaf-springs that rest upon the inner heel ends of the prongs in opposition to the inner leaf-springs.

18 represents pressure-plates fitting over the outer springs 17 and provided at their ends with tongues 19, arranged in pairs and straddling the ends of the outer springs 17. These pressure-plates 18 receive the direct bearing of the rock-bar 6.

The operation of my binder is as follows: 95 When the prongs are in closed condition and it is desired to separate their free ends for the assembling of or removal of sheets of pa-

per, the rock-bar 6 is rotated through the medium of the handle, so that the greatest width of said bar extends in a plane corresponding to the planes of the pressure-plates and outer springs, and as a consequence the pressure-plates are relieved of pressure by said bar, as are also the outer springs 17, against which said pressure-plates bear, and the inner springs 15 flex outwardly and force the inner heel ends 13 of the prongs outwardly to separate the free ends of the prongs. When the arch-prongs are to be closed, the rock-bar 6 is rotated reversely from its previous rotation, thereby placing the bar in a position that causes its greatest width to extend at a right angle to the planes of the pressure-plates and outer springs, with the result of pressing said pressure-plates and outer springs inwardly, so that the said springs will act against the outer faces of the prong-heel ends to throw the prongs into meeting or closed position.

I claim as my invention—

1. In a temporary binder, the combination of mating arch-prongs swingingly mounted, two series of springs having bearing engagement with said prongs for moving their free ends into separated and meeting positions respectively, and a rock-bar arranged to exert pressure against one series of said springs, substantially as set forth.

2. In a temporary binder, the combination of mating arch-prongs swingingly mounted, springs having engagement with said prongs and arranged to oscillate them and separate their free ends, springs bearing against opposite sides of said prongs from that against which the first-named springs bear, and a rock-bar adapted to exert pressure against said second-named springs, substantially as set forth.

3. In a temporary binder, the combination of pairs of swingingly-mounted arch-prongs, heels on said prongs projecting inwardly from their pivots, springs bearing against the rear sides of the inner ends of said arch-prongs, springs bearing against the outer sides of the inner ends of said arch-prongs, pressure-plates bearing against said last-named springs, and a rock-bar bearing against said pressure-plates, substantially as set forth.

4. In a temporary binder, the combination of pairs of arch-prongs having interlocking heel ends, pivot-studs projecting from said arch-prongs and mounted in suitable bear-

ings, springs bearing against the rear sides of said prong heel ends, and fitted to said pivot-studs, springs seated against the outer sides of said prong heel ends, pressure-plates fitted to said last-named springs, and a non-circular rock-bar bearing against said last-named springs, substantially as set forth.

5. In a temporary binder, the combination with a binder-back, of ears fixed to said back and provided with eyes, arch-prongs arranged in pairs and pivoted to said ears, inner springs bearing against the rear sides of the inner ends of said prongs, outer springs bearing against the outer sides of said ends, pressure-plates fitted to said last-named springs, and a non-circular rock-bar positioned in said ears, eyes, and bearing against said pressure-plates, substantially as set forth.

6. In a temporary binder, the combination of swingingly-mounted spring-controlled mating arch-prongs, a rock-bar for controlling the springs by which said prongs are governed, and a handle swingingly connected to one end of said rock-bar, substantially as set forth.

7. In a temporary binder, the combination of swingingly-mounted spring-controlled mating arch-prongs, and a rock-bar for exerting pressure against said prongs against the action of the springs by which they are controlled, substantially as set forth.

8. In a temporary binder, the combination of a pair of swingingly-mounted mating prongs, a spring for moving the free ends of said prongs into separated positions, and means for exerting pressure against the prongs at the opposite sides from those against which the springs bear to actuate them against the action of said springs, substantially as set forth.

9. In a temporary binder, the combination of mating arch-prongs swingingly mounted, two series of springs having bearing engagement with said prongs for moving their free ends into separated and meeting positions respectively, and means arranged to exert pressure against one series of said springs, substantially as set forth.

In testimony whereof I have hereunto set my hand, at the city of St. Louis, on this 25th day of May, 1904.

EMORY A. TRUSSELL.

In presence of—

E. S. KNIGHT,
NELLIE V. ALEXANDER.