

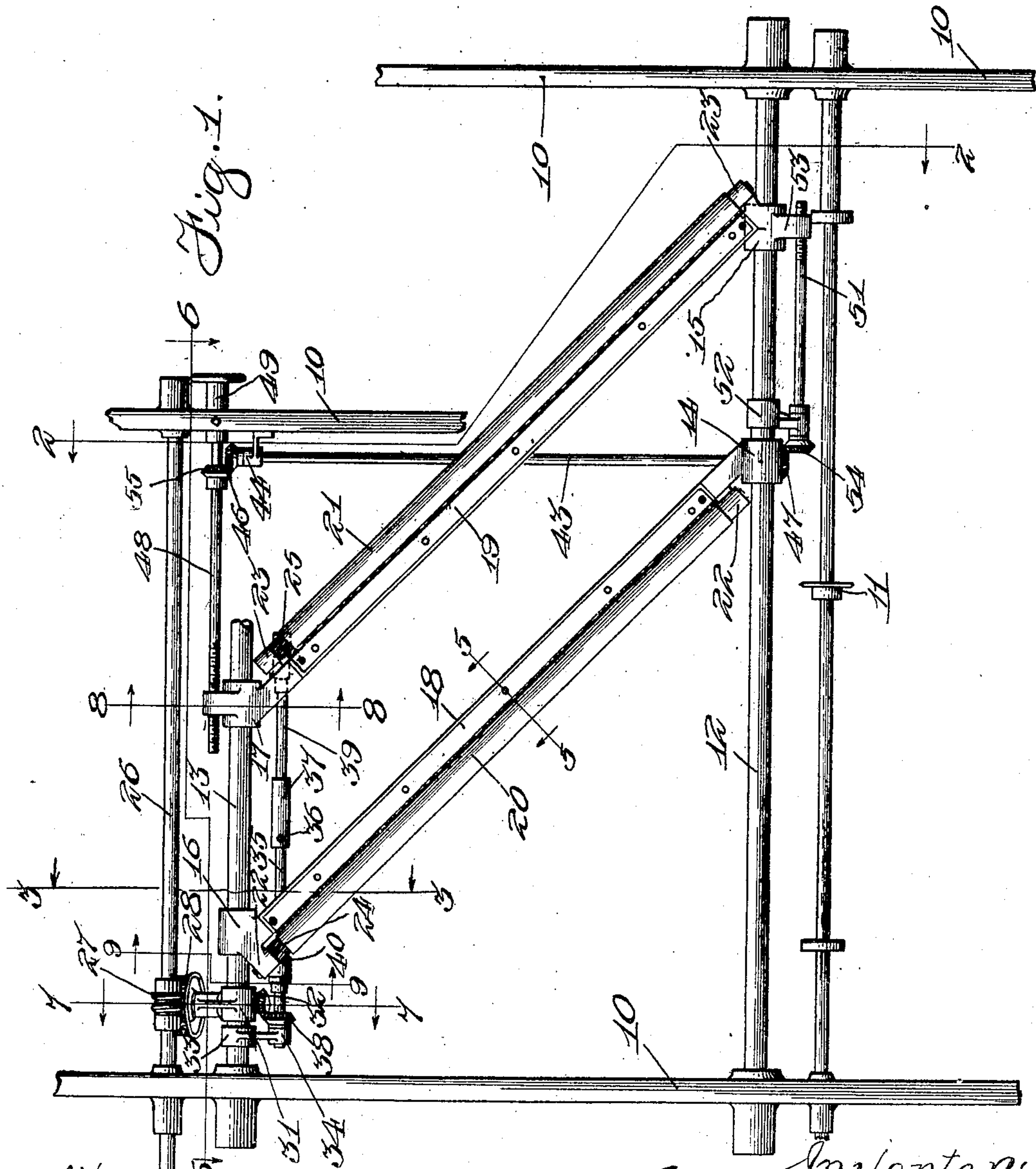
No. 836,749.

PATENTED NOV. 27, 1906.

S. G. GOSS.  
PRINTING PRESS.

APPLICATION FILED JUNE 30, 1906.

3 SHEETS—SHEET 1.



Witnesses:

J. B. Weir  
Chas. D. Perry

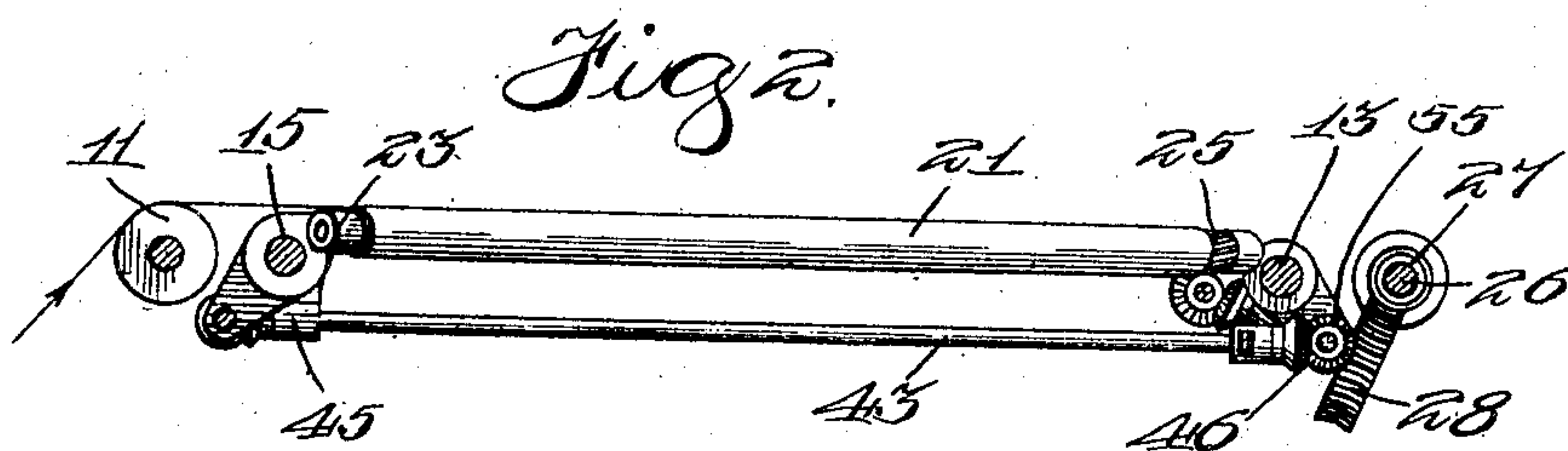
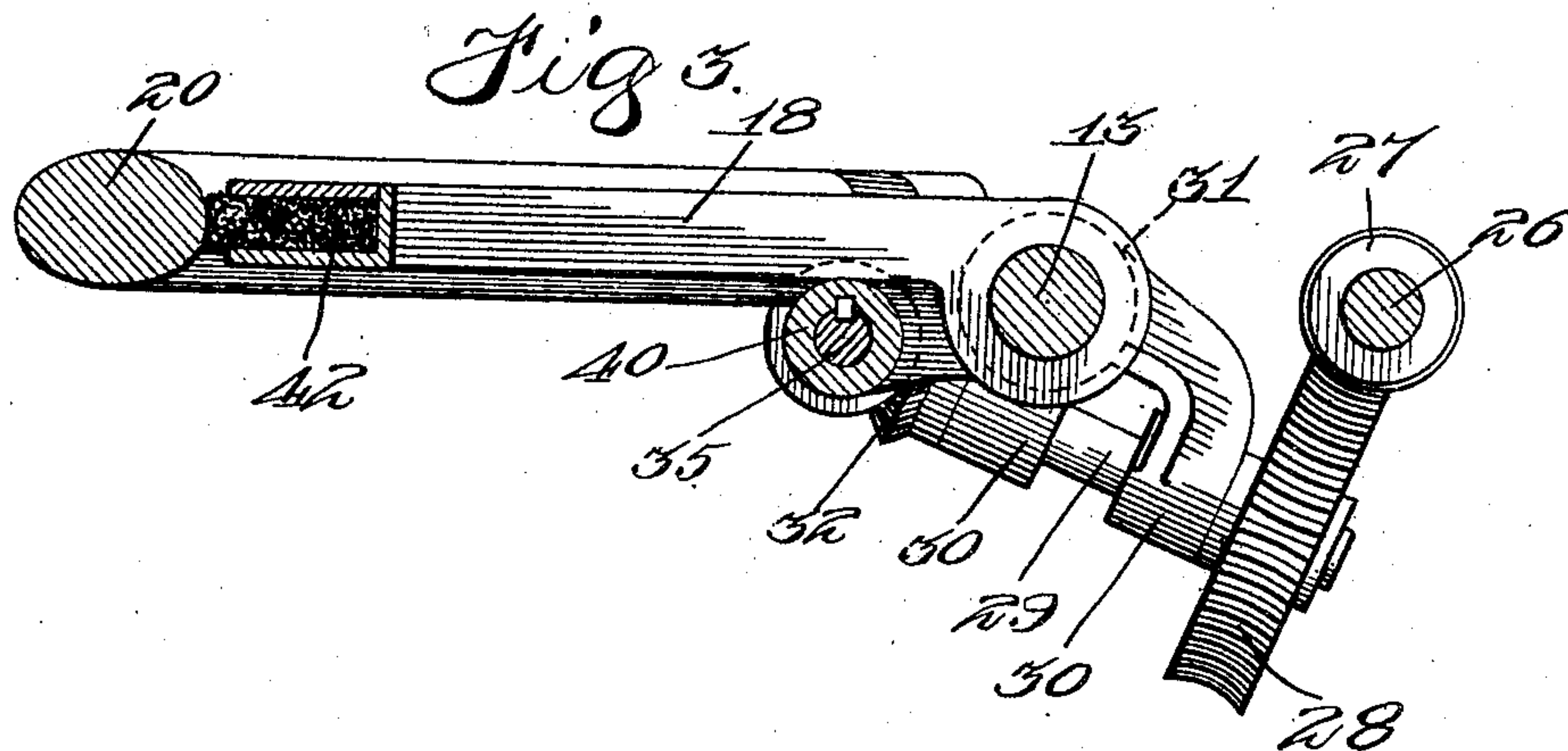
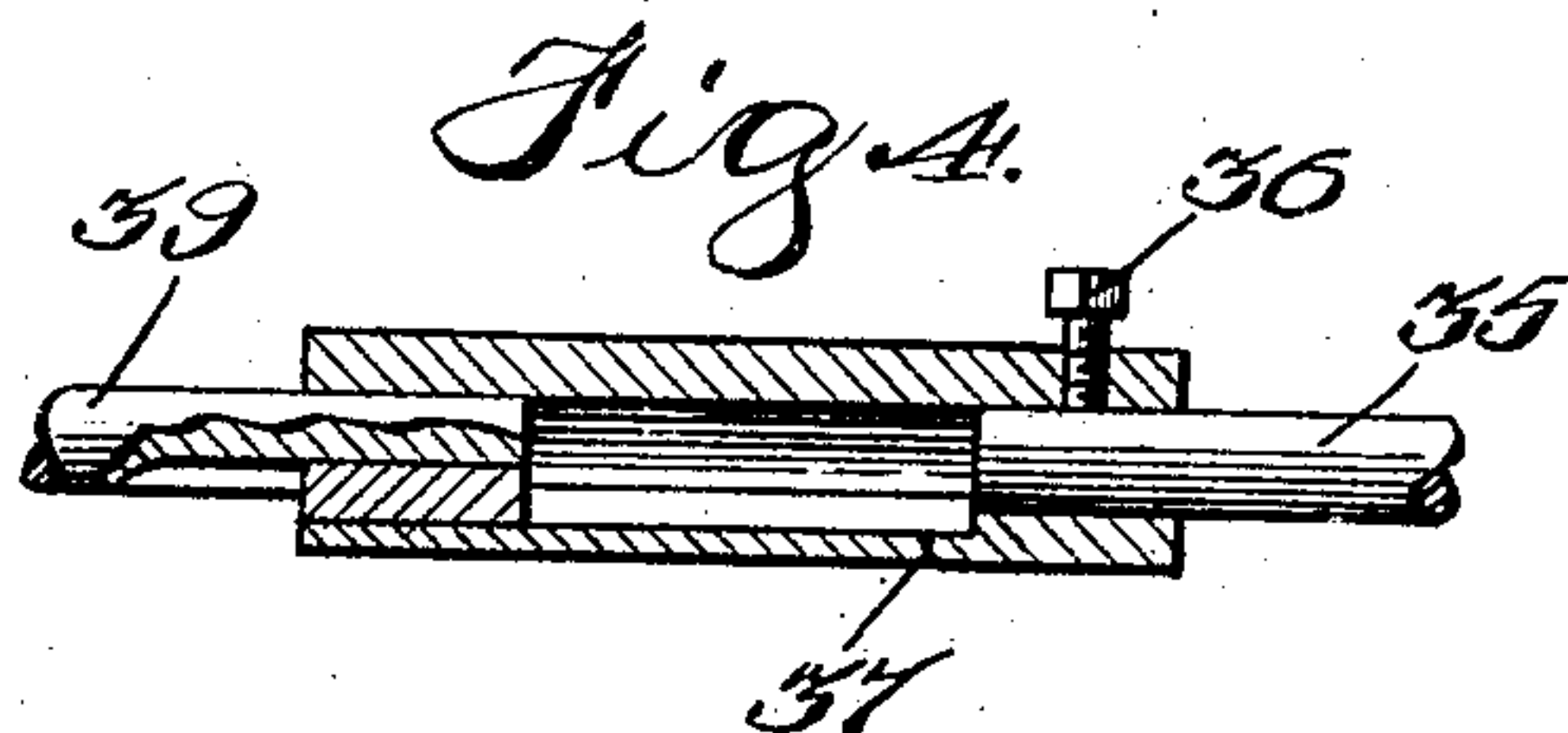
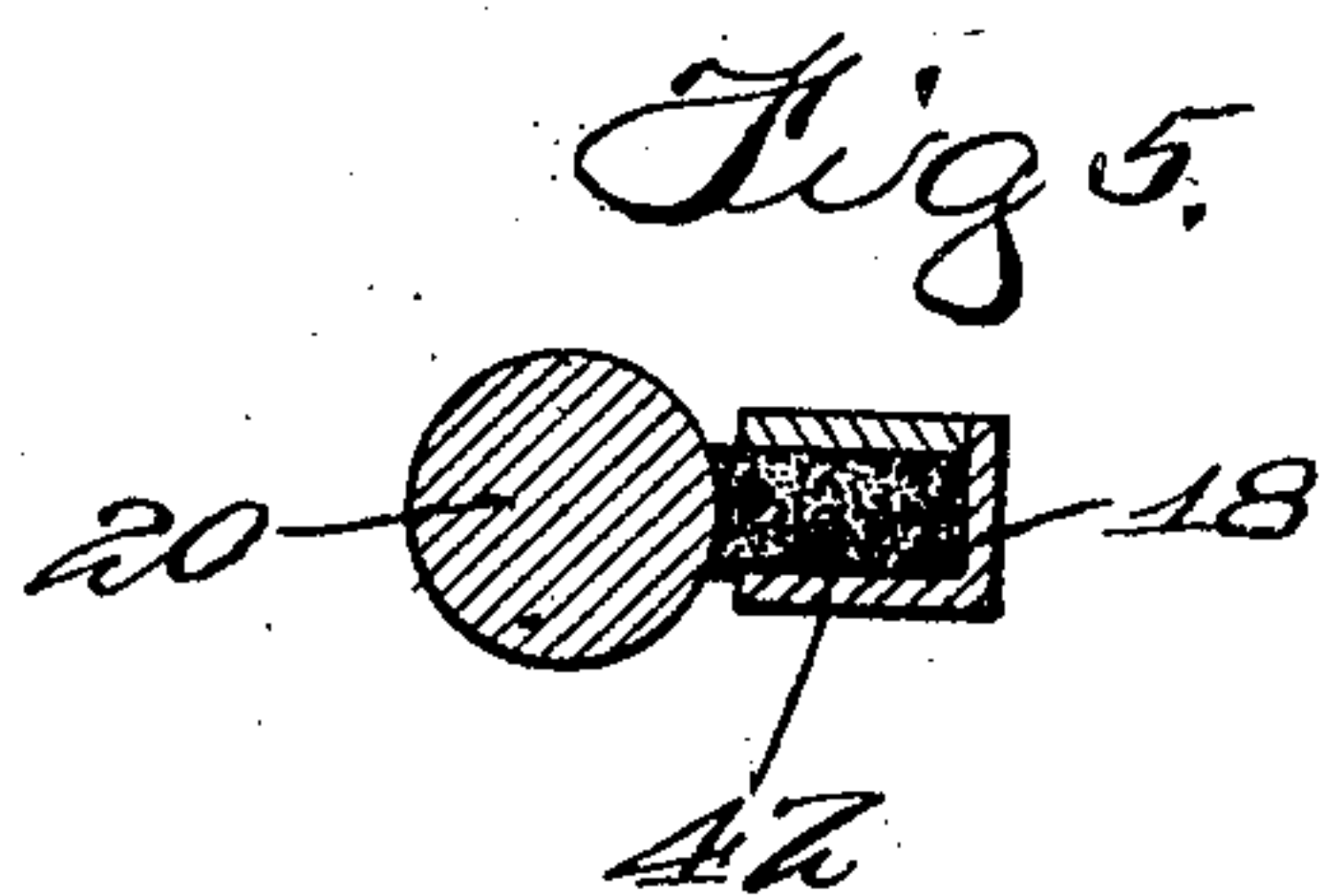
Inventor:  
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3 SHEETS—SHEET 2



Witnesses:

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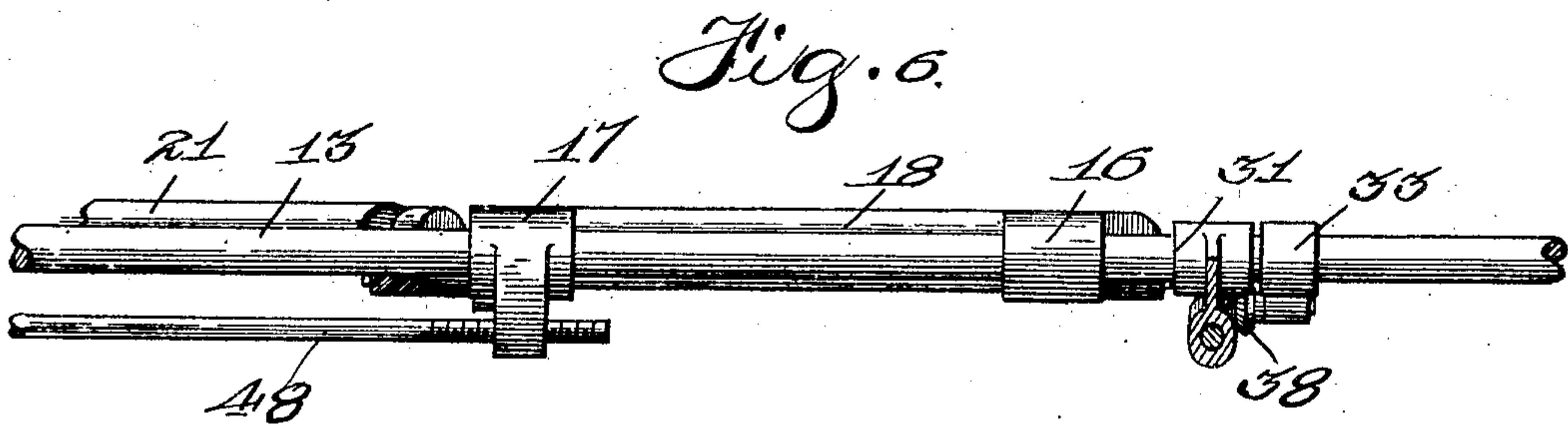
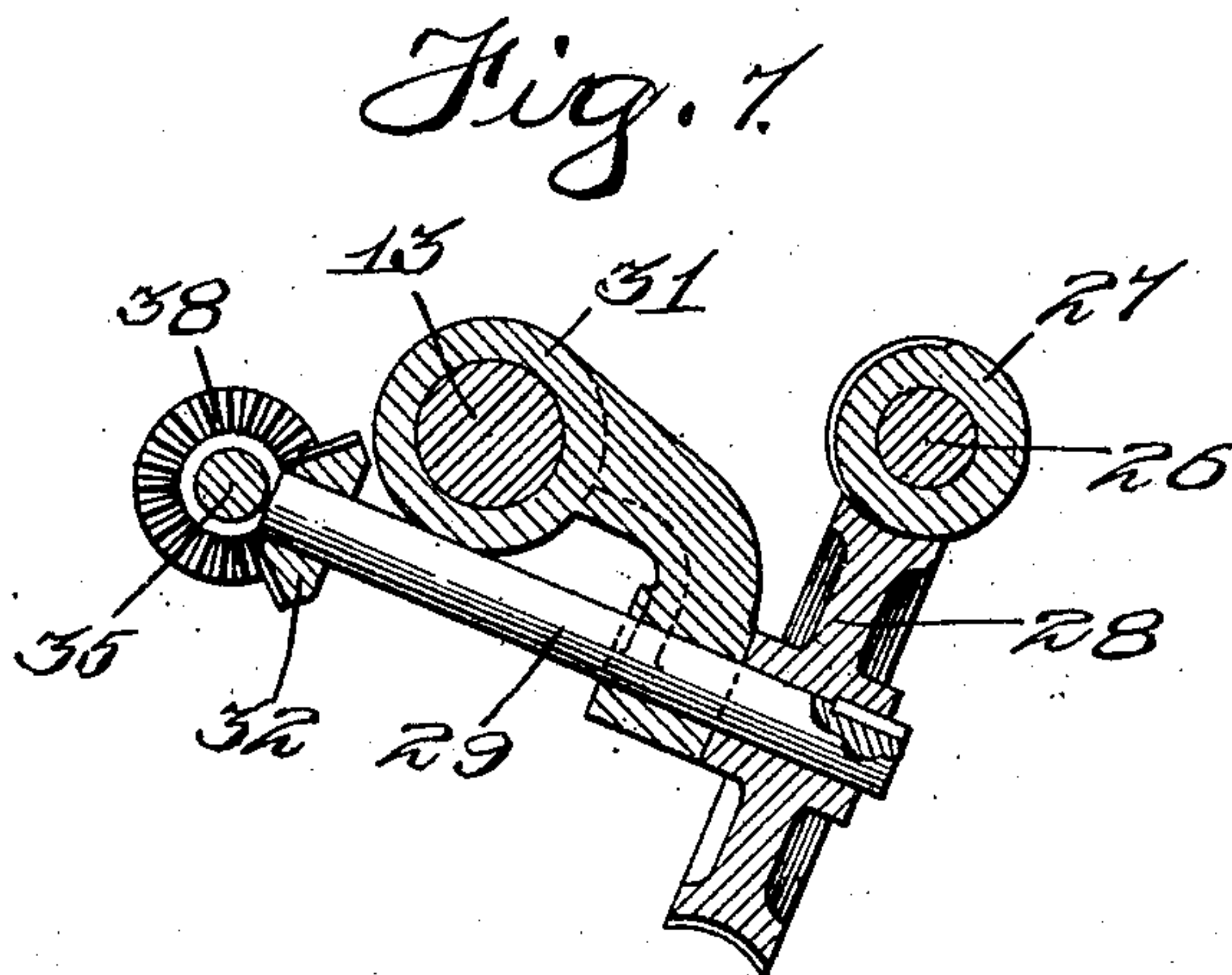
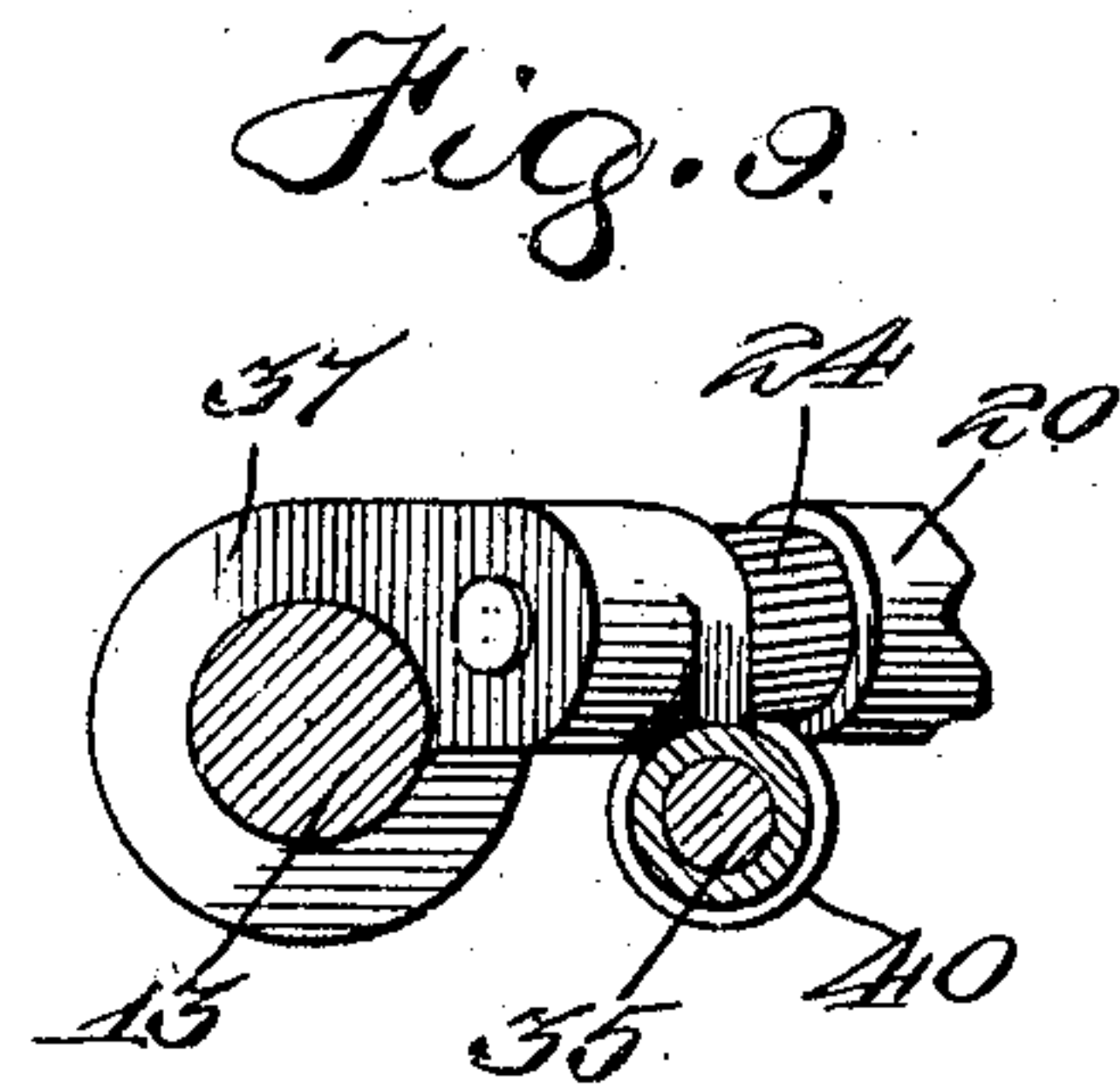
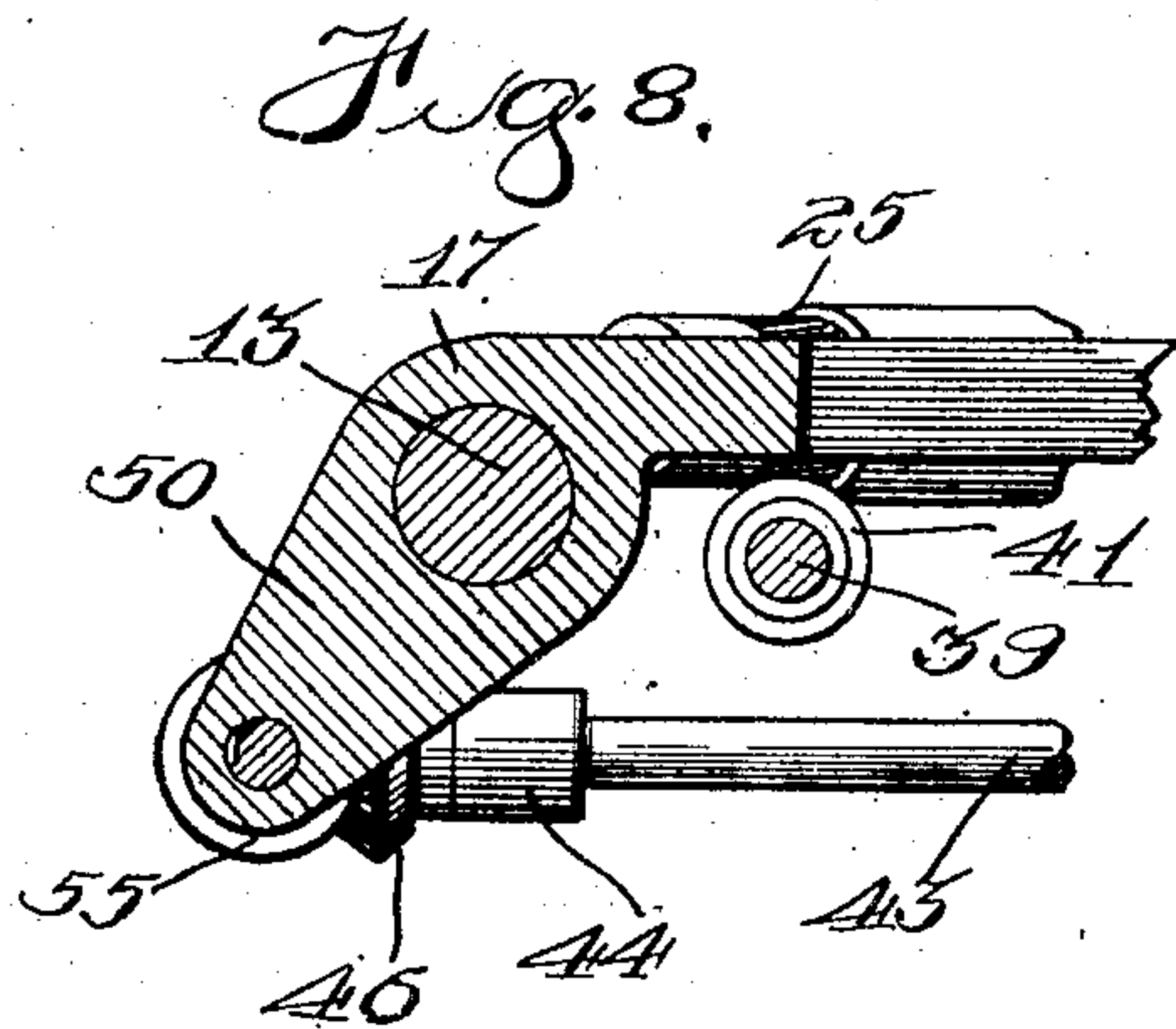


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S. G. GOSS.  
PRINTING PRESS.  
APPLICATION FILED JUNE 30, 1905.

3 SHEETS—SHEET 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

SAMUEL G. GOSS, OF CHICAGO, ILLINOIS, ASSIGNOR TO GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## PRINTING-PRESS.

836,749.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed June 30, 1905. Serial No. 267,810.

*To all whom it may concern:*

Be it known that I, SAMUEL G. GOSS, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have  
5 invented certain new and useful Improvements in Printing-Presses, of which the following is a full and complete specification, reference being had to the accompanying drawings.

10 My invention relates to printing-presses; and its principal object is to provide new and improved means by means of which the ink on the printed paper may be prevented from smutting or offsetting as the printed  
15 web passes over angle-bars.

Heretofore, so far as I know, angle-bars which, as is well known, are used for the purpose of deflecting a web or one portion of a split web from its path and transferring it into  
20 the plane of another web or the other part of the split web have been fixed in the press. As the freshly-printed web passes over and partly around these bars, running at a very rapid speed, the printing is more or less  
25 blurred, and the ink transferred from the freshly-printed surface to the angle-bars is retransferred from the angle-bars back again to the paper, thus smutting the paper and producing "offsetting," as it is termed.

30 It is the object of my invention to prevent this; and, considered broadly, my invention consists in so mounting the angle-bars that they may be rotated slowly as the paper passes over them and supplying them as they  
35 rotate with a small supply of a suitable oil which, distributed over the angle-bars, will prevent the smutting and the offsetting of the printed matter as the web passes over and partly around the bars.

40 My invention also relates to new and improved mechanism by which these rotatable angle-bars may be shifted laterally of the press in order to accommodate them to the somewhat different widths of paper-rolls.

45 I accomplish these results by means of the mechanism hereinafter described.

What I consider as new will be set forth in the claims.

50 In the drawings, Figure 1 is a top or plan view of my improved mechanism. Fig. 2 is a detail, being a vertical section on line 2 2 of Fig. 1. Fig. 3 is an enlarged detail, being a vertical section on line 3 3 of Fig. 1. Fig. 4 is an enlarged detail of one of the slide-boxes

in which the shaft which rotates the angle- 55 bars is mounted. Fig. 5 is an enlarged detail, being a vertical section on line 5 5 of Fig. 1. Fig. 6 is an enlarged detail, being a vertical section on line 6 6 of Fig. 1. Fig. 7 is an enlarged detail, being a vertical section on 60 line 7 7 of Fig. 1. Fig. 8 is an enlarged detail, being a vertical section on line 8 8 of Fig. 1. Fig. 9 is an enlarged detail, being a vertical section on line 9 9 of Fig. 1.

Referring to the drawings, 10 indicates a 65 part of the framework of the press, which may be of any well-known form of construction. The rest of the press is therefore not shown, as it will be easily understood and may be of any kind that is adapted to print 70 a web of paper.

11 indicates the usual slit by which the webs may be longitudinally slit after being printed. The run of the web, passing over the slit and over one of the angle-bars here- 75 inafter described, is conventionally illustrated in Fig. 2.

12 13 indicate bars which are mounted in the framework of the press, the bar 13 being broken away at its right-hand end in order 80 not to obscure part of the mechanism hereinafter described.

14 15 indicate bearings which are slidingly mounted upon the bar 12, and 16 17 indicate bearings which are slidingly mounted upon 85 the bar 13.

18 19 indicate boxes, hereinafter more fully described, which are rigidly connected, respectively, with bearings 14 16 and bearings 15 17 and are placed at the usual angle- 90 bar angle of forty-five degrees with the longitudinal line of the press or with the bars 12 13. 20 21 indicate rotatable angle-bars which are journaled in suitable bearing-boxes 22 22 23 23, supported, respectively, upon 95 the slide-bearings 14 16 and 15 17. The angle-bars 20 21 are of course circular in section and smooth to permit the free passage of the paper over them. These angle-bars are also set at the usual angle-bar angle of forty-five 100 degrees with the longitudinal line of the press, and it will be readily understood that the right-hand half of a web slit by the slit 11 will pass over, partly around, and under the angle-bar 21, thence to the angle-bar 20, 105 under, partially around, and over it and there be associated in the same vertical plane with the other half of the slit web.



24 indicates a worm-gear upon the forward end of the angle-bar 20, and 25 a corresponding worm upon the forward end of the angle-bar 21.

5 26 indicates a shaft which is journaled in the framework 10 and driven in any appropriate manner with the press, means for driving being well understood, and therefore not shown.

10 27 indicates a worm-gear which is secured to the shaft 26.

Referring to Fig. 3, where it is best shown, 28 indicates a worm-gear which is mounted upon a stub-shaft 29 and meshes with the 15 worm-gear 27. The stub-shaft 29 is journaled in suitable bearings 30, which are secured upon the bar 13 by means of a sleeve 31 and are preferably formed integral with said sleeve. 32 indicates a bevel-gear 20 which is secured to the other end of the stub-shaft 29.

Referring again to Fig. 1, 33 indicates a sleeve mounted upon the bar 13 and carrying a journal-bearing 34. 35 indicates a shaft 25 which is journaled at one end in the bearing 34 and at the other end is secured by the set-screw 36 in a sleeve 37. 38 indicates a bevel-gear which is secured on the shaft 35 and meshes with the bevel-gear 32, whereby 30 when the shaft 26 is driven the rotation will be communicated through the worms 27 28 and bevel-gears 32 38 to the shaft 35. 39 indicates a shaft which is journaled at one end in a suitable bearing below the slide-bearing 17 and at the other end is feathered 35 into the sleeve 37, as is best shown in Fig. 4. Immediately below the worm 24 on the angle-bar 20 is a corresponding worm 40 on the shaft 35, engaging with the worm 24. Near 40 the end of the shaft 39 (see Fig. 8) is a worm 41, which engages with the worm 25 on the angle-bar 21.

It will be seen from the above description that when the shaft 26 is driven the rotation, 45 as is plainly set forth above, will be communicated by the worm-gears 27 28 and bevel-gears 32 34 to the shafts 35 39, and by the engagement of the worm-gears 40 41 with the worm-gears 24 25 the angle-bars 20 21 will be 50 slowly rotated.

Referring particularly to Fig. 3, where their construction is best shown, the boxes 18 19 are opened at the side next to the angle-bars and are adapted to contain an oil-absorbent material, preferably a thick strip 55 of felt 42, whose free edge bears against the adjacent angle-bar. As is best shown in Figs. 1 and 5, the tops of these boxes 18 19 are removable in order that a supply of suitable oil may be given to the oil-absorbent material 42, so that the same, becoming saturated, will give a slight coating of oil to the adjacent angle-bar as the said angle-bar is 60 rotated. By this means the smutting and 65 offsetting of the web of paper as it passes

over and around the angle-bars will be prevented.

Referring particularly to Fig. 1, 43 indicates a shaft which is journaled at one end in a suitable bearing 44, secured to the frame- 70 work 10 and at its other end in a suitable bearing 45 on the lower side of the sliding-bearing 14. (See Fig. 2.) 46 47 indicate bevel-gears secured to each end of the shaft 43. 48 indicates a shaft which is journaled 75 at one end in the framework 10 and carries on its outer end the hand-wheel 49, keyed or otherwise secured thereto. The inner end of the shaft 48 is screw-threaded, as is shown in Fig. 1, and passes through a suitable screw- 80 threaded opening in a support 50, formed on the slide-bearing 17. (See Fig. 8.) 55 indicates a bevel-gear, which is secured to the shaft 48 and meshes with the bevel-gear 46. 51 indicates a shaft one end of which is jour- 85 naled in a suitable support 52, secured to the cross-bar 12, and the other end is screw-threaded into a suitable screw-threaded opening in a lug 53 on the slide-bearing 15. 54 indicates a bevel-gear on the inner end of 90 the shaft 51 and meshes with the bevel-gear 47. The bevel-gears 46 55 and 47 54 are all of the same number of teeth, so that when the shaft 48 is rotated the other shafts will be correspondingly rotated. When the hand- 95 wheel 49 is turned in one direction or the other, the shaft 48 is rotated, and by means of its screw-threaded end the bearing 17 is moved to the right or left, as the case may be. The rotation of the shaft 48 being com- 100 municated through the several bevel-gears to the shaft 51, which rotates at the same speed, the screw-threaded end of the shaft 51 will cause the slide-bearing 15 to be moved in the same direction and the same amount. The 105 angle-bar 21 is thus carried to the right or left and its position with respect to the other bar adjusted without changing in any way its angle in the press.

I have spoken of the material contained in 110 the boxes 18 19 as being an oil-absorbent material and have spoken of them being supplied with oil. Any kind of oil suitable for the purpose, such as paraffin-oil or a suitable mixture of paraffin-oil and kerosene, or ma- 115 chine oil, may be used. It will be understood, however, that I do not confine myself to the use of what may be strictly or chemically called an "oil," as any other material capable of being supplied to the angle-bar by 120 the same or equivalent means and capable of thus preventing the offsetting and smutting may be used. I use the word "oil," therefore, not in a strict but in a generic sense, and for convenience of description, intending 125 to be understood thereby as meaning not only an oil, strictly speaking, but any suitable material capable of being applied to the angle-bars in an equivalent way and capable of preventing the smutting and offsetting. 130



What I claim as new, and desire to secure by Letters Patent, is—

5 1. In a printing-press, the combination with an angle-bar and means for rotating the same at a surface speed very slow relative to that of the paper passing over it, of means for supplying oil to said angle-bar as it rotates.

10 2. In a printing-press, the combination with an angle-bar and means for rotating the same at a surface speed very slow relative to that of the paper passing over it, of a receptacle adjacent to said angle-bar adapted to contain an oil-absorbent material and an oil-supplied material contained in said receptacle and bearing on said angle-bar as it rotates.

15 3. In a printing-press, the combination with an angle-bar and mechanism for rotating the same at a surface speed slow as compared with that of the paper through the press, of a receptacle adjacent to said angle-

bar adapted to contain an oil-absorbent material and an oil-supplied material contained in said receptacle and bearing on said angle-bar as it rotates.

25 4. In a printing-press, the combination with suitable supports, slide-bearings mounted on said supports and means adapted to simultaneously moving said supports an equal distance laterally, of an angle-bar journaled on said slide-bearings, means for rotating said angle-bar, a box supported by said slide-bearings adjacent to said angle-bar and adapted to contain an oil-absorbent material, and an oil-supplied oil-absorbent material supported in said box and bearing on said angle-bar as it rotates.

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Witnesses:

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