

No. 869,237.

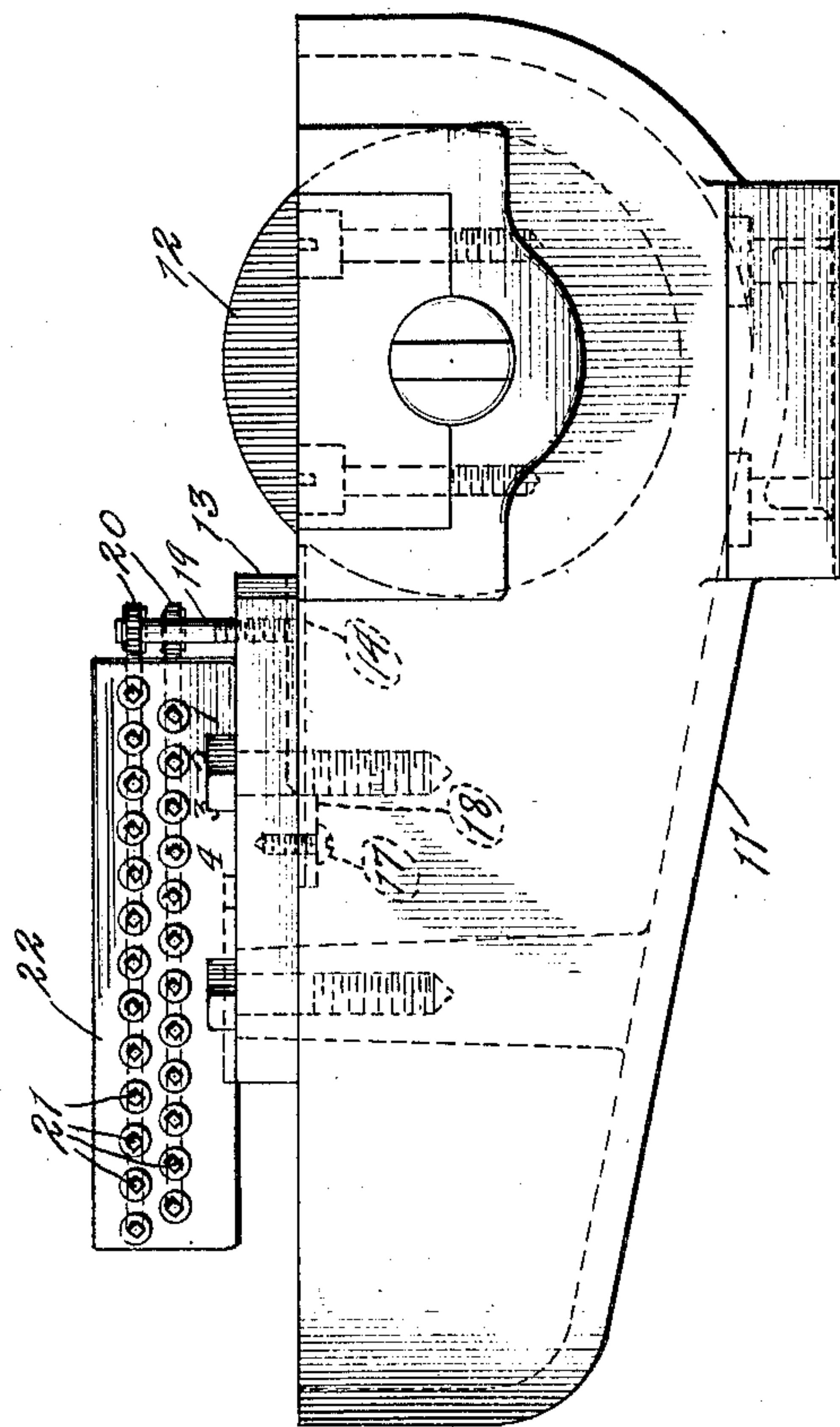
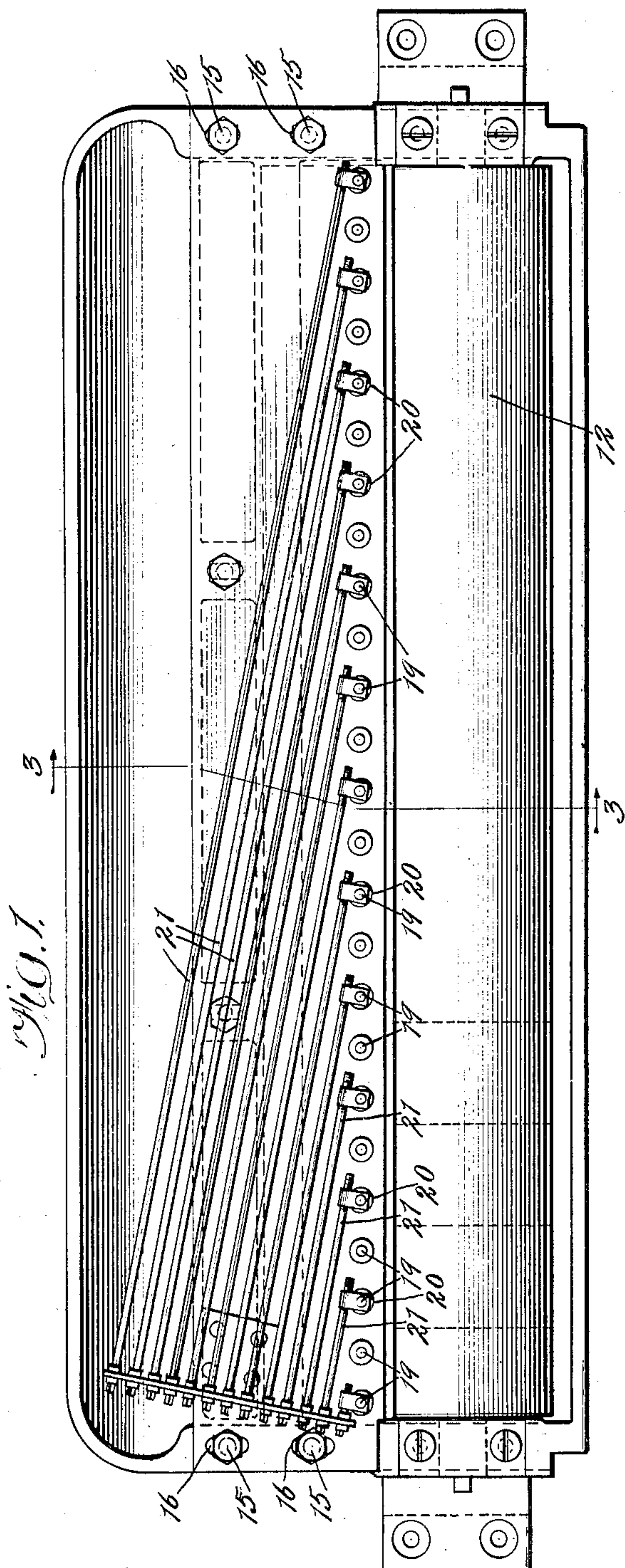
PATENTED OCT. 29, 1907.

S. G. GOSS.

INKING FOUNTAIN FOR PRINTING PRESSES.

APPLICATION FILED FEB. 2, 1907.

3 SHEETS—SHEET 1.



Witnesses:
Edw. Perry
G. V. Domarus.

Inventor:
Samuel G. Goss,
by Bond Adams Pilsbury & Johnson,
his Attys.

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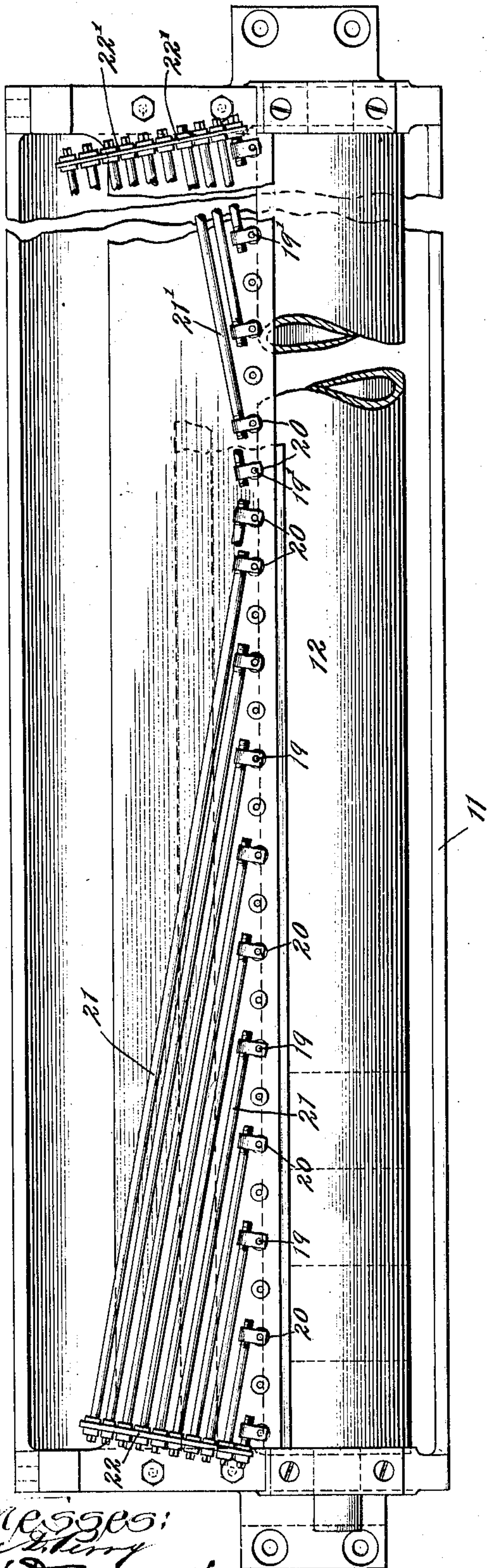
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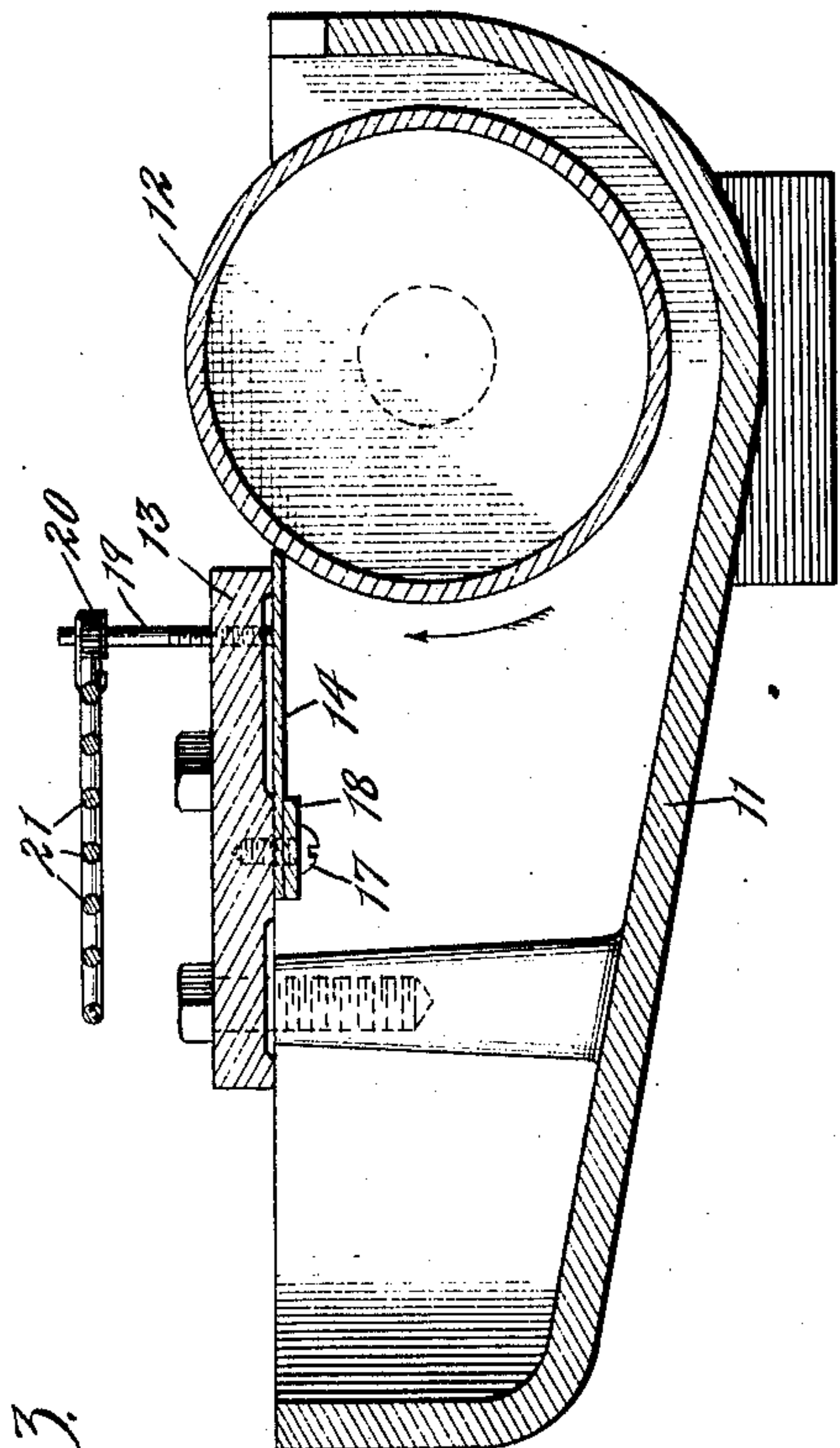
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Fig. 4.



Witnesses:
J. L. Cherry
L. V. Donarum.

Fig. 3.



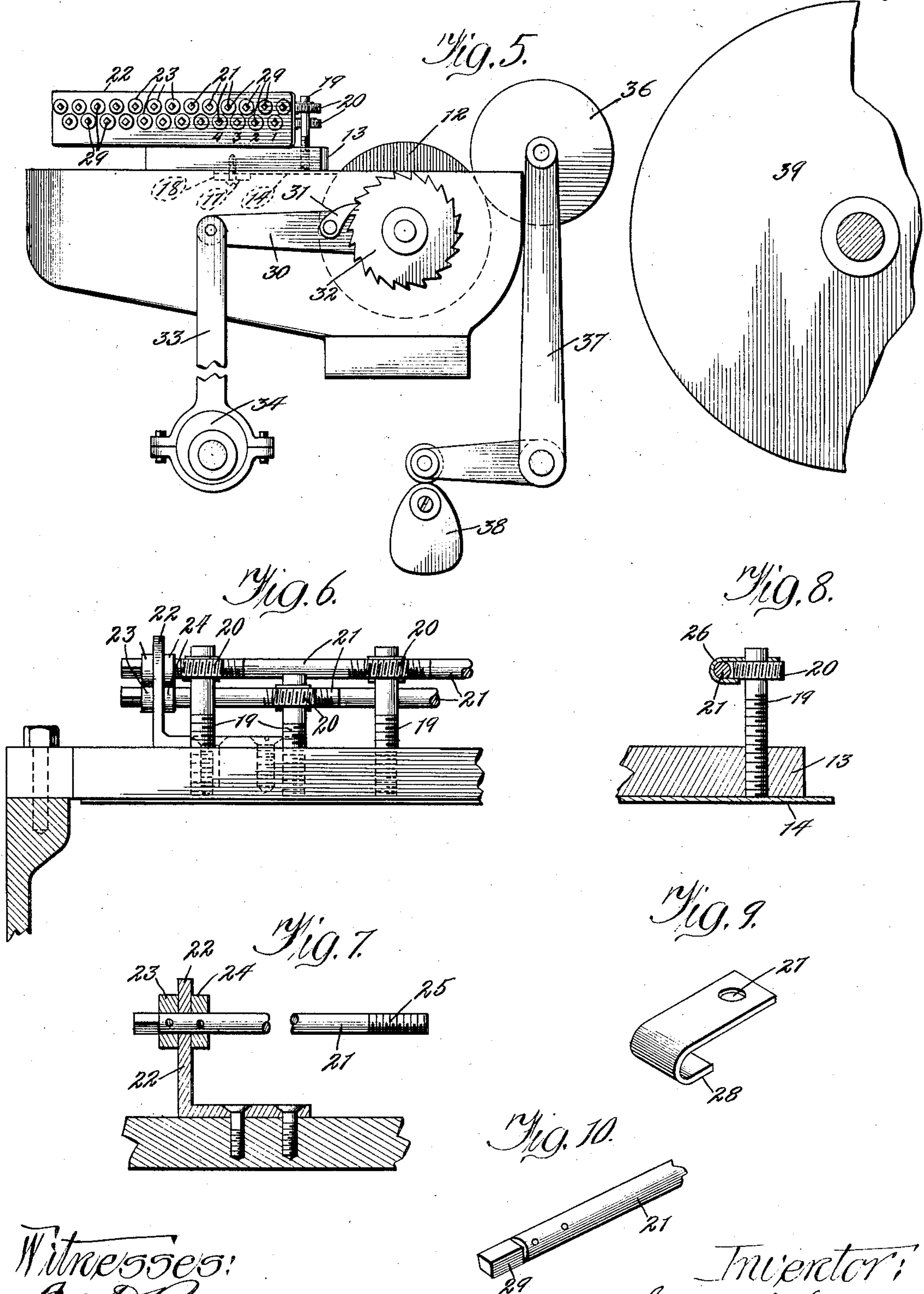
Inventor:
Samuel G. Goss,
by Donald James Kirkland Johnson,
his Atty.

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INKING FOUNTAIN FOR PRINTING PRESSES.
APPLICATION FILED FEB. 2, 1907.

3 SHEETS—SHEET 3.



Witnesses:
D. D. Perry
L. V. Dumas.

Inventor:
Samuel G. Goss,
by Bond Adams, Richard Jackson,
his Attys.

UNITED STATES PATENT OFFICE.

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

INKING-FOUNTAIN FOR PRINTING-PRESSES.

No. 869,237.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed February 2, 1907. Serial No. 355,511.

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 and State of Illinois, have invented certain new and useful Improvements in Inking-Fountains for Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to printing machinery, and has for its object to provide improved means for regulating the supply of ink fed to the form cylinders, or other printing means. I accomplish this object as illustrated in the accompanying drawings and as hereinafter described.

What I regard as new is set forth in the claims.

In the accompanying drawings,—Figure 1 is a plan view, illustrating my invention, some parts, however, being omitted; Fig. 2 is an end view of the parts shown in Fig. 1, looking to the right; Fig. 3 is a cross-section on line 3—3 of Fig. 1; Fig. 4 is a plan view, some parts being broken away, showing a modification; Fig. 5 is an end view, illustrating the mechanism for transferring the ink from the fountain roller to one of the ink cylinders; Fig. 6 is a detail, being an elevation of some of the adjusting-rods and screws; Fig. 7 is a sectional view, illustrating the manner in which the different adjusting-rods are mounted; Fig. 8 is a sectional view, illustrating one of the adjusting-screws and adjacent parts; Fig. 9 is a perspective view of one of the brackets which connect each adjusting-rod with its screw; and Fig. 10 is a perspective view of one of the adjusting-rods.

As is well known in the art, ink fountains of printing presses, and particularly perfecting presses, are provided with a roller which revolves in the fountain and in the mass of ink contained therein,—a portion of the ink being carried up on the surface of the roller by the rotation thereof and being transferred by means of a swinging intermediate roller, or equivalent means, to the adjacent ink cylinders. In such fountains, in order to regulate the supply of ink delivered by the ink roller in the fountain, a flexible knife or blade is provided which is suitably supported with one of its edges adjacent to and adapted to engage the surface of the ink roller so as to scrape the surplus ink off of it, thereby causing it to deliver a uniform quantity of ink to the intermediate roller. Obviously, the quantity of ink so delivered may be regulated by regulating the pressure of the knife-edge upon the ink roller in the fountain. My present invention consists in providing means by which the pressure of the knife-edge upon the ink roller may be accurately adjusted, and in the provision of means by which the adjustment of the pressure of dif-

ferent portions of the knife-edge may be made from one end of the fountain. Where the press is of double width, the adjustment of one-half of the knife may be effected from one end of the fountain and the adjustment of the other half from the other end, but generically my invention consists in providing means by which the knife may be adjusted at a plurality of points from a central point of adjustment, such as one end of the fountain.

Referring to the drawings for a detailed description of the embodiment of my invention therein illustrated,—11 (Fig. 3) indicates the fountain; 12 the ink roller therein contained; 13 the fountain-plate or support which carries the knife; and 14 the knife. In the construction shown the fountain-plate 13 extends longitudinally over the fountain, being secured at the ends thereof by screws 15, as shown in Fig. 1. Said screws pass through slots 16 in said plate so that a certain amount of adjustment thereof is permitted, to move the knife 14 toward or from the roller 12.

As best shown in Fig. 3, the knife 14 is secured at the under side of the fountain-plate 13, its rear edge being held in position by screws 17, which pass upward through its rear margin and into the plate 13,—a strip 18 underlying the rear edge of the knife, as shown, to hold it more securely in position. The knife 14 has sufficient elasticity so that by tightly securing its rear margin to the fountain-plate 13 its free margin is held tightly against the corresponding edge of the fountain-plate 13 but may be sprung downward to vary its pressure upon the roller 12. As also shown in said figure, the free edge of the blade 14 overlies the upper portion of the roller 12, against which it bears with greater or less pressure, as may be controlled by the adjusting devices hereinafter described, and consequently it acts to regulate the amount of ink carried up by said roller as it rotates in the direction indicated by the arrow shown in Fig. 3.

19 indicates a series of adjusting-screws which are provided at short intervals along the fountain-plate 13 near the forward margin thereof, *i. e.* the margin adjacent to the roller 12, as shown in Figs. 1 and 3. Said screws are vertically disposed and are fitted in suitable threaded bearings in the fountain-plate 13, passing through said plate and bearing upon the upper surface of the knife 14 near its free edge, as shown in Fig. 3. Each of said screws is provided near its upper end with a worm-wheel 20, as best shown in Fig. 8. By rotating this worm-wheel 20, any given screw may be rotated to adjust it vertically, and consequently cause it to press the blade 14 downward to a greater or less extent.

21 indicates a series of adjusting-rods for rotating the several worm-wheels 20,—said rods being best shown in Fig. 1. In Figs. 1 and 4 I have, for the sake of clearness, omitted every alternate rod, but it will be understood that each worm-wheel is provided with an adjusting-rod 21 by means of which it may be rotated. As best shown in Figs. 1 and 2, the several adjusting-rods are arranged in two banks and extend from one end of the fountain to their respective adjusting-screws 19. At their outer ends the adjusting-rods 21 are fitted in suitable bearings in a vertically-disposed plate 22, best shown in Fig. 7, being held in place by collars 23—24 suitably secured thereto. The inner ends of said rods are screw-threaded to mesh with the worm-wheels 20, as shown at 25 in Fig. 7, and are held in engagement with such worm-wheels by brackets 26, best shown in Figs. 8 and 9. Each of said brackets consists of a plate having an eye 27 which fits over the upper end of the screw 19 and having a hook, or bent-over portion, 28 which embraces the rod 21 and extends under the adjacent portion of the worm-wheel 20. By this construction each of the rods 21 is securely held in position and in engagement with its respective worm-wheel. As shown in Fig. 10, each of said rods is provided with a squared outer end 29 adapted to receive a key for rotating it. It will thus be seen that by rotating the corresponding adjusting-rod any desired adjusting-screw may be rotated to elevate or depress to a greater or less extent any desired portion of the knife, and consequently regulate the quantity of ink fed by any given portion of the ink roller; and any of such adjustments may be made from one end of the fountain.

In cases where the fountain is of double width, or where its width is such that it is not desirable to extend all the adjusting-rods to one end of the fountain, the adjusting-rods may be arranged so that some of them extend to one end of the fountain and others to the other end, as shown in Fig. 4, in which 21' indicates the adjusting-rods at the right-hand end of the fountain and 22' the corresponding plate which supports the outer ends thereof.

The fountain ink roller 12 may be rotated in any suitable way, but I prefer the usual devices, comprising a rocking arm 30 having a pawl 31, which engages a ratchet-wheel 32,—the arm 30 being operated by means of a rod 33 actuated by an eccentric 34, as shown in Fig. 5. 36 indicates the feed-roller, which is carried by a rocking support 37 actuated by a cam 38, or in any other suitable way. 39 indicates one of the ink cylinders.

For newspaper work, in order that the pressman may know at once which of the several adjusting-rods to operate, the several adjusting-screws 19 are arranged so that they register with certain columns. For instance, as shown in Fig. 1, there are two adjusting-screws for each column of the newspaper, and the supporting plate 22 which carries the outer ends of the several adjusting-screws is provided with appropriate numbers, or other indicia, which correspond with the columns to which the adjusting-rods severally relate. For instance, as the first adjusting-rod of each bank, counting from the right, extends to the first column of the paper the number "1" is placed below the ends of such rods on the plate 22, as shown in Fig. 5. The number "2" below

the next two rods, and so on. Thus, if the pressman notes that column 3, for example, of the paper is inked too heavily, he applies his key to the rods above the number "3" on the plate 22 and makes the necessary adjustment. The work of regulating the ink supply is, therefore, very much simplified and expedited.

It will be understood that instead of arranging the adjusting-screws in banks, as shown, they may be otherwise disposed, although the arrangement shown is the most efficient at present known to me. It will be obvious also that my invention is not restricted to using the style of ink fountain shown in the drawings, or to the arrangement of the knife so as to engage the upper side of the fountain roller as therein shown, as my invention is applicable to various other styles of fountains and to knives, or equivalent devices arranged in various other ways, as, for instance, in the type of fountain known as the "undershot", in which the knife engages the under surface of the ink roller.

That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. An inking fountain having a roller for delivering ink therefrom, means for regulating the amount of ink delivered by said roller at different points in the length thereof, and means adapted to be actuated from the end of the fountain for adjusting said regulating means.

2. An inking fountain having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, means for adjusting the pressure of said knife at different points upon said roller, and means adapted to be actuated from the end of the fountain for adjusting the pressure of said knife at different points upon said roller.

3. An inking fountain having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, a plurality of regulating screws, means for adjusting said screws, and means adapted to be actuated from the end of the fountain for actuating said adjusting means.

4. An inking fountain having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, a plurality of regulating screws, a plurality of rods extending from the end of the fountain to the different screws, and means for rotating said screws by the rotation of said rods.

5. An inking fountain having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, a plurality of regulating screws, a plurality of rods extending from the end of the fountain to the different screws, worm-wheels carried by said screws, and means for rotating said worm-wheels.

6. An inking fountain having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, a plurality of regulating screws, a plurality of rods extending from the end of the fountain to the different screws, worm-wheels carried by said screws, means for rotating said worm-wheels, and brackets connecting said regulating screws and rods.

7. An inking fountain having a roller for delivering ink therefrom, means for regulating the amount of ink delivered by said roller at different points in the length thereof, and means at the opposite ends of said fountain adapted to be actuated for adjusting said regulating means.

8. An inking fountain having a roller for delivering ink therefrom, means coacting with said roller for regulating the amount of ink delivered thereby, adjusting devices for said regulating means, and mechanism extending to the end portions of the fountain for operating said adjusting devices.

9. An inking fountain having a roller for delivering ink therefrom, means for regulating the amount of ink delivered by said roller at different points in the length thereof,

5 a plurality of devices extending to the end of the inking fountain and adapted to be actuated for adjusting said regulating means, said actuating devices being numbered to correspond with the regulating devices respectively controlled by them.

10. An inking fountain for newspaper presses having a roller for delivering ink therefrom, a knife adapted to bear upon said roller for regulating the ink delivered thereby, a plurality of regulating screws arranged at intervals along said knife for regulating the pressure thereof upon said roller at points to correspond with the different col-

umns of the newspaper, means for adjusting said screws, and means adapted to be actuated from the end of the fountain for adjusting said screws, said adjusting means being numbered to correspond with the newspaper columns 15 opposite which their respective adjusting screws are located.

SAMUEL G. GOSS.

Witnesses:

JOHN L. JACKSON,
MINNIE A. HUNTER.