

No. 717,143.

Patented Dec. 30, 1902.

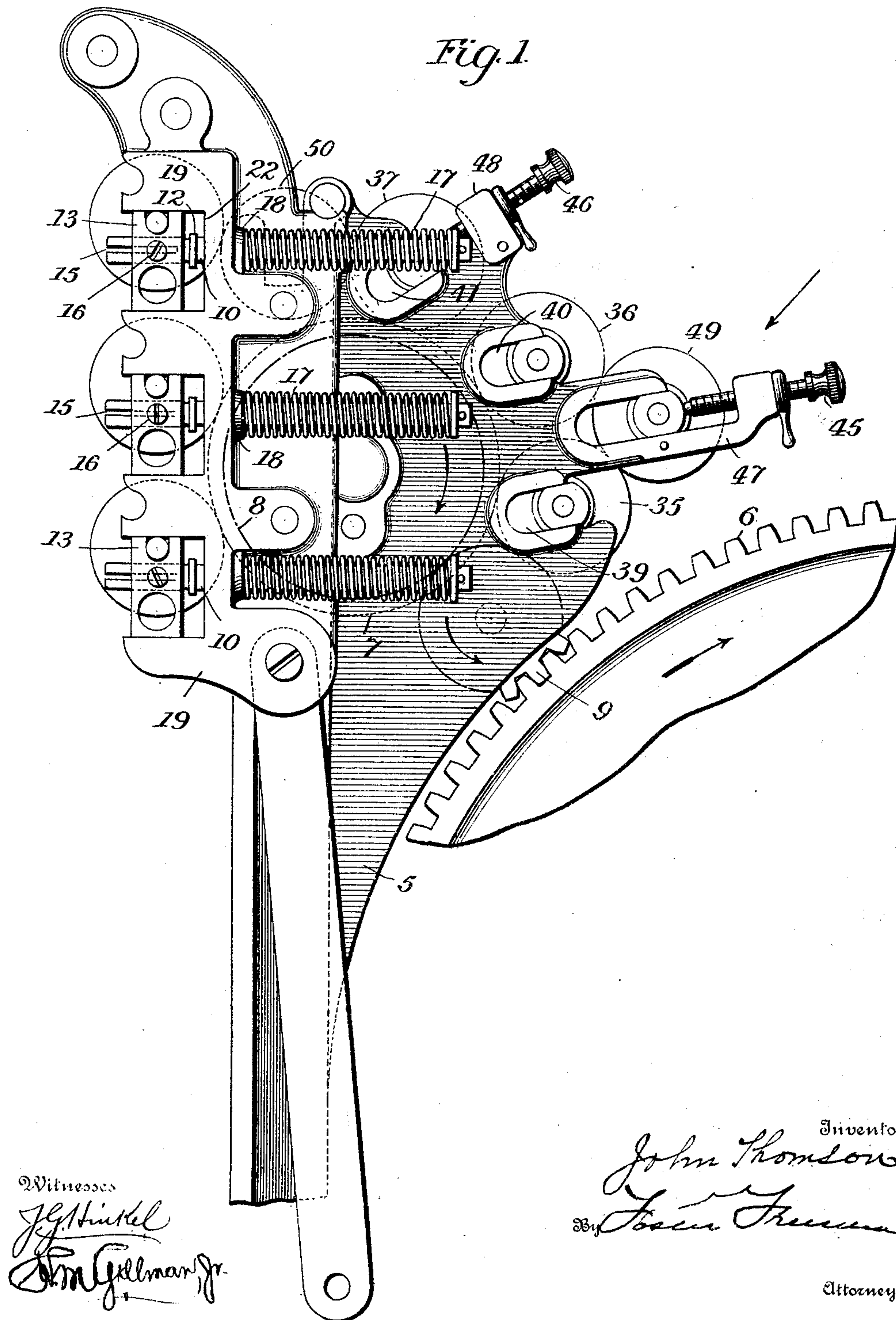
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INKING MECHANISM FOR PLATEN PRESSES.

(Application filed Sept. 27, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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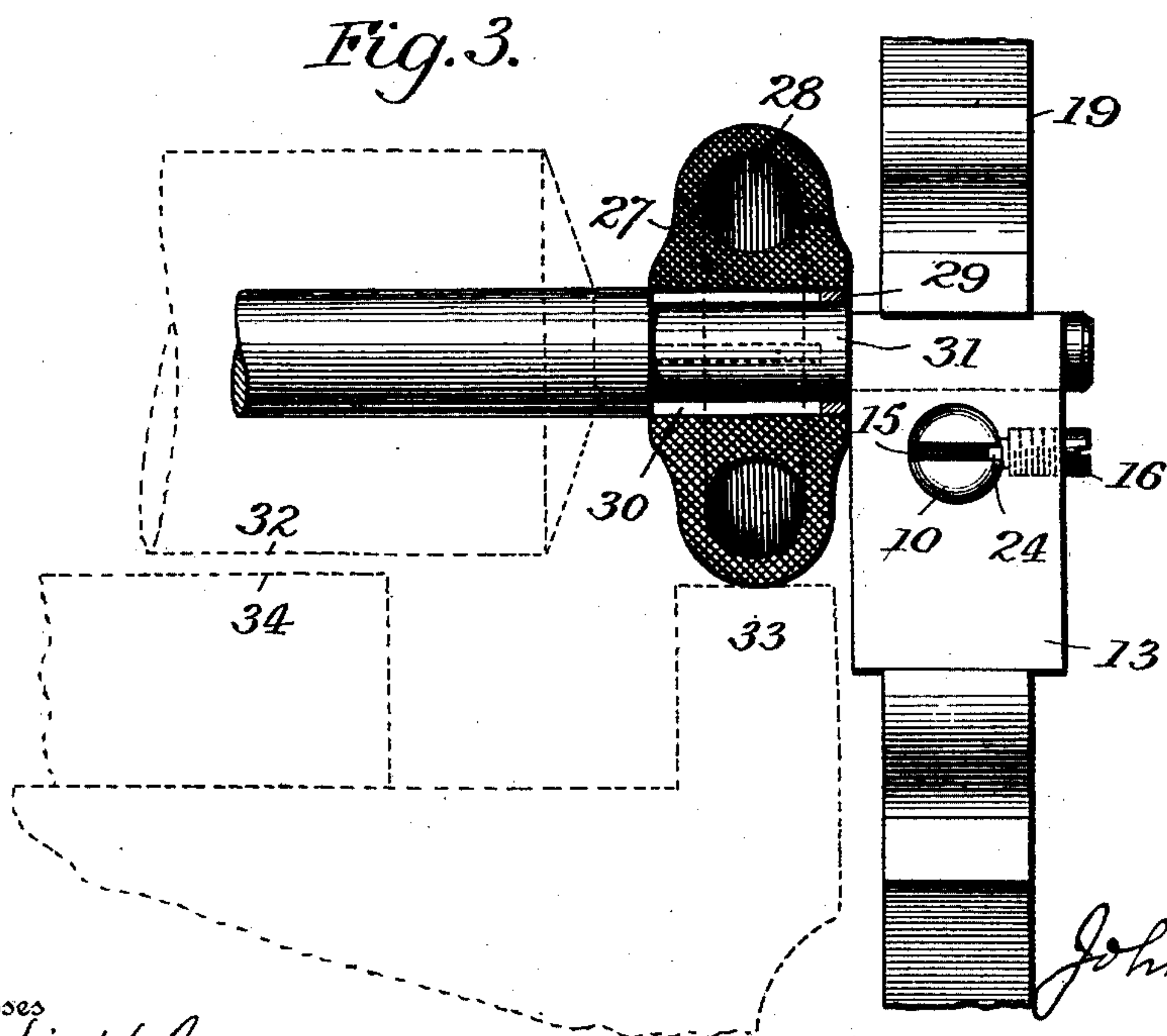
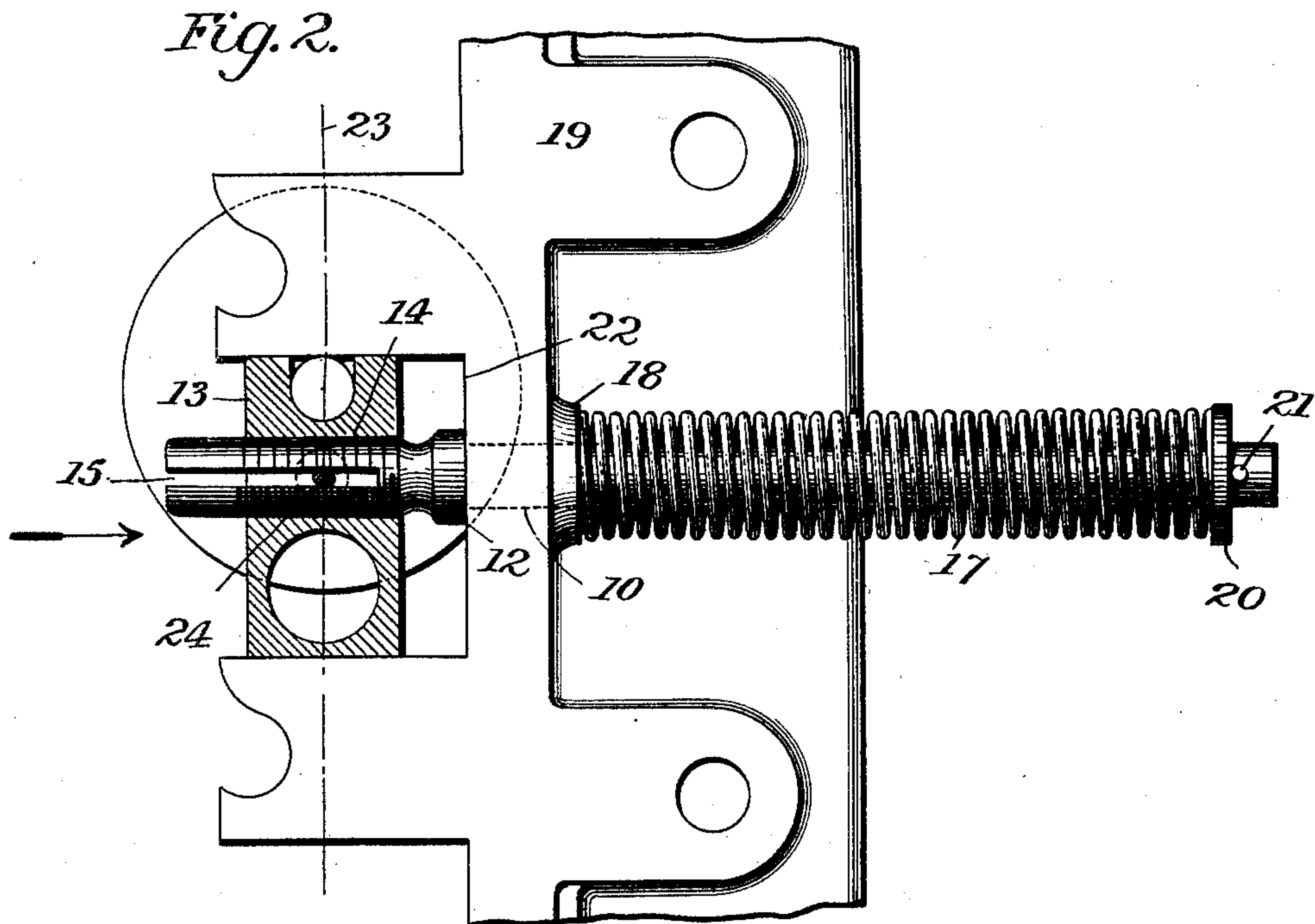
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INKING MECHANISM FOR PLATEN PRESSES.

(Application filed Sept. 27, 1902.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## INKING MECHANISM FOR PLATEN-PRESSES.

SPECIFICATION forming part of Letters Patent No. 717,143, dated December 30, 1902.

Application filed September 27, 1902. Serial No. 125,078. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN THOMSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Inking Mechanism for Platen Printing-Presses, of which the following is a specification.

The relation of this invention is to the inking apparatus for platen printing-presses.

The object thereof is to provide means for causing the form-inking rollers of a platen printing-press to pass over the form to be printed with any desired degree of pressure and with exact rolling contact; also, to provide simple and effective means for securing the adjustment of the distributing-rollers.

In the accompanying drawings, Figure 1 is a part side elevation of a portion of a platen printing-press with the invention applied thereto. Fig. 2 is an enlarged detail and sectional view of one of the form-inking carriage journal-boxes and a portion of the carriage-frame; and Fig. 3 is a detached detail view frontwise, showing the form-roller wheel or "truck" in transverse section and other relative parts in dotted outlines.

Referring to the said drawings, 5 represents one of the carriage-ways; 6, a section of the main driving-gear; 7, the main ink-distributing cylinder with its gear 8, driven by the pinion 9, actuated by the main gear. All of the remaining rollers and cylinders shown in the drawings are revolved by frictional contact and adhesion of the ink.

The first improvement consists in providing the journal-box rod 10 with a stop-shoulder 12, then in securing the rod into the journal-box 13 by screw-threads 14, forming a transverse slot 15 in the end of the rod, extending nearly or quite to the shoulder, and in mounting a locking-screw 16 in the outer side face of the box. The spring 17, mounted upon the rod, pressing against the seat 18 of the carriage-frame 19, reacts against the washer 20, secured by the pin 21. Hence the spring acts to pull the box inwardly. When the carriage is up and the rollers are upon the cylinder, the relation of the parts is to be such that the boxes will be drawn outwardly or beyond the

position they will occupy when passing over the form, as illustrated in Fig. 1; but when the carriage leaves the cylinder the springs react and pull the boxes inwardly until the stop-shoulder impinges upon the surface 22, as shown in Fig. 2. The slot 15 furnishes a convenient means for turning the rod against the tension of the spring, as by means of a screw-driver, thereby changing the position of the box carrying the center, as line 23, to or from the surface 22, and it also provides a definite seat for the point 24 of the lock-screw, so that when this is turned down snugly the two portions of the rod will be sprung outwardly, thus effecting a very secure lock between the rod and the box. This is very important in practice, as the parts are subject to an excessive degree of jar and vibration. By this utilization of the rod separate adjusting screws or nuts are obviated, the thrust from the spring is resisted in a direct line, avoiding the tendency to cramp the box and the rod in their bearings, and any desired adjustment may quickly be made and be indefinitely secured against automatic shifting.

It is too well known to call for more than the briefest reference that composition rollers are subject to considerable variation in their diameters, the extent of shrinkage or expansion depending upon the ingredients, the treatment, the temperature, and the atmospheric conditions. It is, moreover, an axiom with pressmen that the best results as to the deposition of ink upon the face of the form will be derived when the roller or rollers impinge lightly upon the form and make true rolling contact with the minimum of "drag" or work, and yet, again, there are variable conditions to be met in the height of the form, the kind of form, as whether of types or half-tone plates, and the viscosity of the ink. Consequently it is not sufficient to meet these conditions that the form-rollers alone may be adjustable to and fro. Hence I have provided the flexible form-roller wheel or truck 27, Fig. 3. This may preferably be made of gum-rubber, having a hollow space 28 near its outer circumference analogous to that of a bicycle-tire. In the flexible portion there is fixedly secured a metallic tube or



bushing 29, having transverse slots, as 30. This tube forms the bearing for the form-roller stock 31, and by springing the slotted portions of the tube inwardly the roller-wheel 5 will be frictionally clamped to the stock. The outside diameter of the roller-wheel may be somewhat greater in diameter than the composition form-roller 32. The form-roller wheel rides upon a track or "way," as denoted by 33, the form being indicated by 34. 10 It will now be seen that by properly turning the rod the flexible roller-wheel will be caused to deform where it impinges upon the way until the desired degree of contact is secured 15 between the composition roller and the form. The frictional clamp between the form-roller and the stock is to be sufficient to insure a proper revolution of the composition roller during periods of its action when it may not 20 be in contact with the form, but at all other periods of its movement if the revolution between the roller and the wheel is differential then the roller, because of its ink adhesion, will be the controlling factor, and the stock 25 will be caused to slip within the slotted bearing of the wheel. In this wise it becomes possible to ink the most delicate half-tone plates or sharp-faced rules at high speed with the utmost perfection and without cutting or 30 roughening the delicate surface of the composition.

The cooperating distributing-rollers 35, 36, and 37 are shown as mounted in slots 39, 40, and 41 of the carriage-way, the slots being 35 shown as oblique with reference to the horizontal. The screws 45 46 in bearing-pieces 47 48 are respectively for adjusting the changer

49 and the roller 37 with relation to the cylinder 50.

I claim—

1. In a platen printing-press, the combination with the form-inking carriage, form-rollers, form-roller journal-boxes and journal-box springs, of journal-box rods adjustably 40 secured to the boxes and having stop-shoulders adapted to be drawn by the springs to a predetermined surface on the carriage, substantially as described. 45

2. In a platen printing-press, the combination with the form-inking carriage, form-rollers, form-roller journal-boxes and journal-box springs, of journal-box rods having stop-shoulders secured by screw-threads in the boxes, and having locking-slots to be engaged 50 by screws mounted in the journal-boxes, substantially as described. 55

3. The combination with a form-inking carriage, a form-roller stock, a definitely-adjustable journal-box and a track or "way" of a flexible form-roller wheel mounted upon the 60 said stock, substantially as described.

4. The combination with a form-inking carriage, a form-roller stock, a definitely-adjustable journal-box and a track or "way" of a flexible form-roller wheel secured to the said 65 stock by friction, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN THOMSON.

Witnesses:

L. S. FOLGER,  
WM. THOMSON.