

(No. Model.)

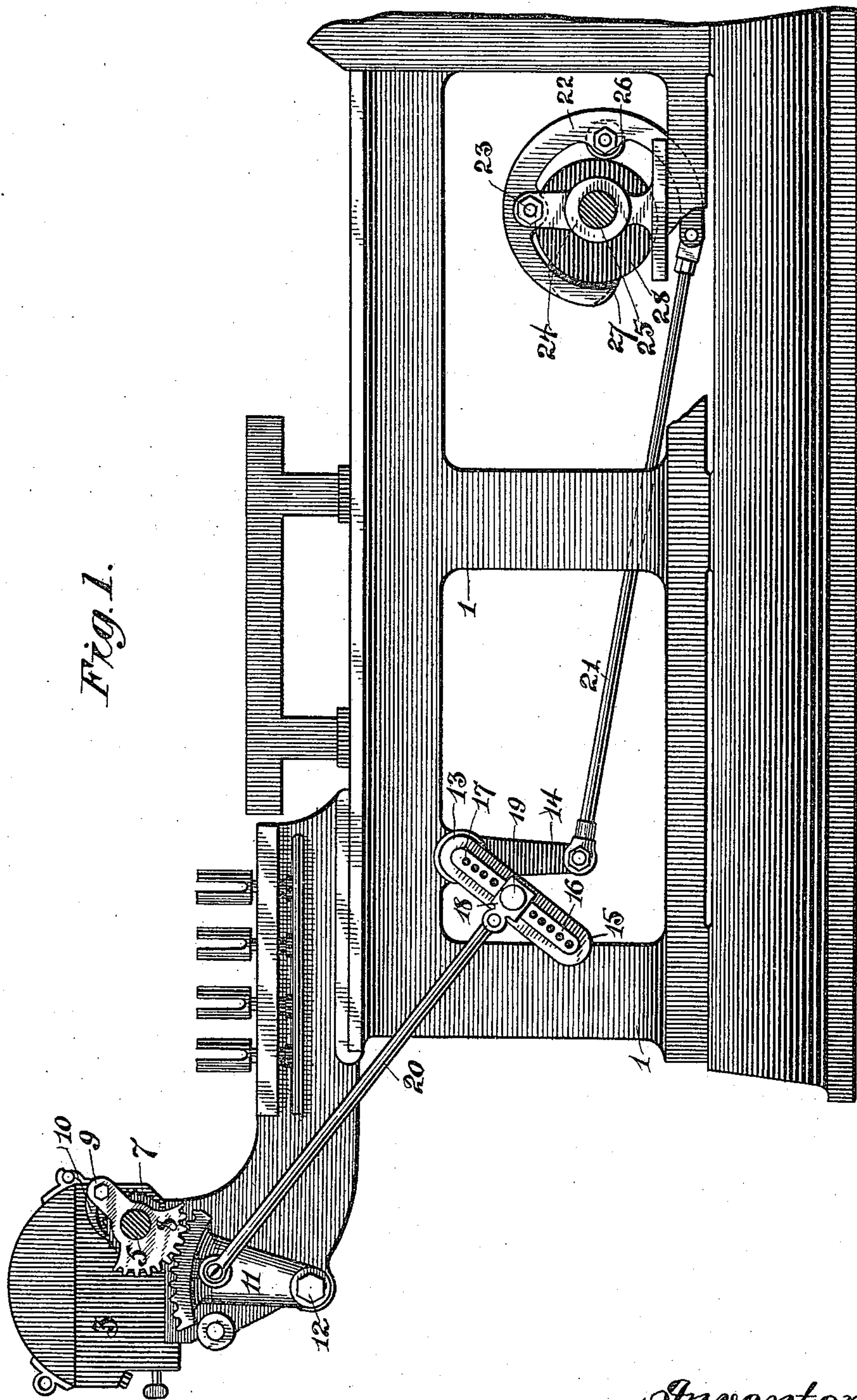
2 Sheets—Sheet 1.

S. WHITLOCK.

INK FOUNT ROLLER MECHANISM FOR PRINTING MACHINES.

No. 441,270.

Patented Nov. 25, 1890.



Witnesses
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A. J. Panner.

Inventor
Sturges Whitlock,
by his attorney
J. W. Hubbard

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

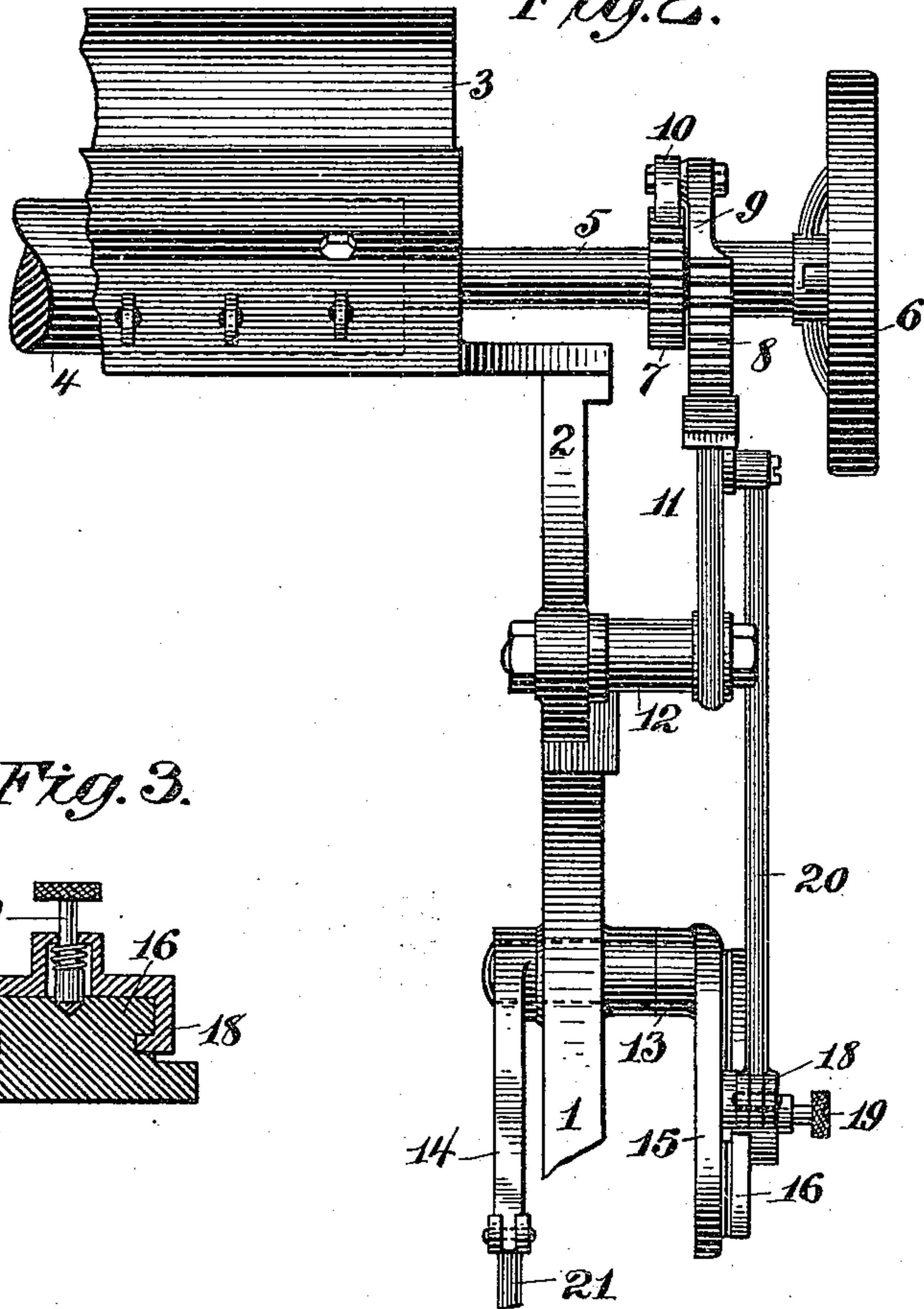


Fig. 3.

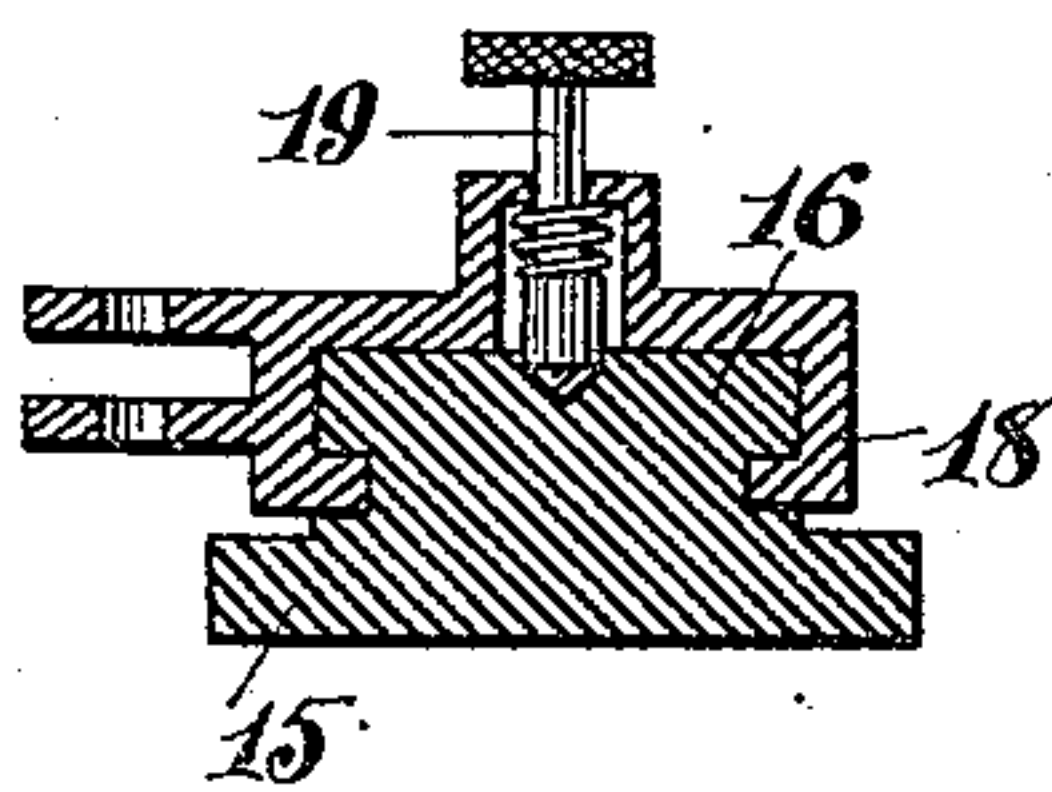
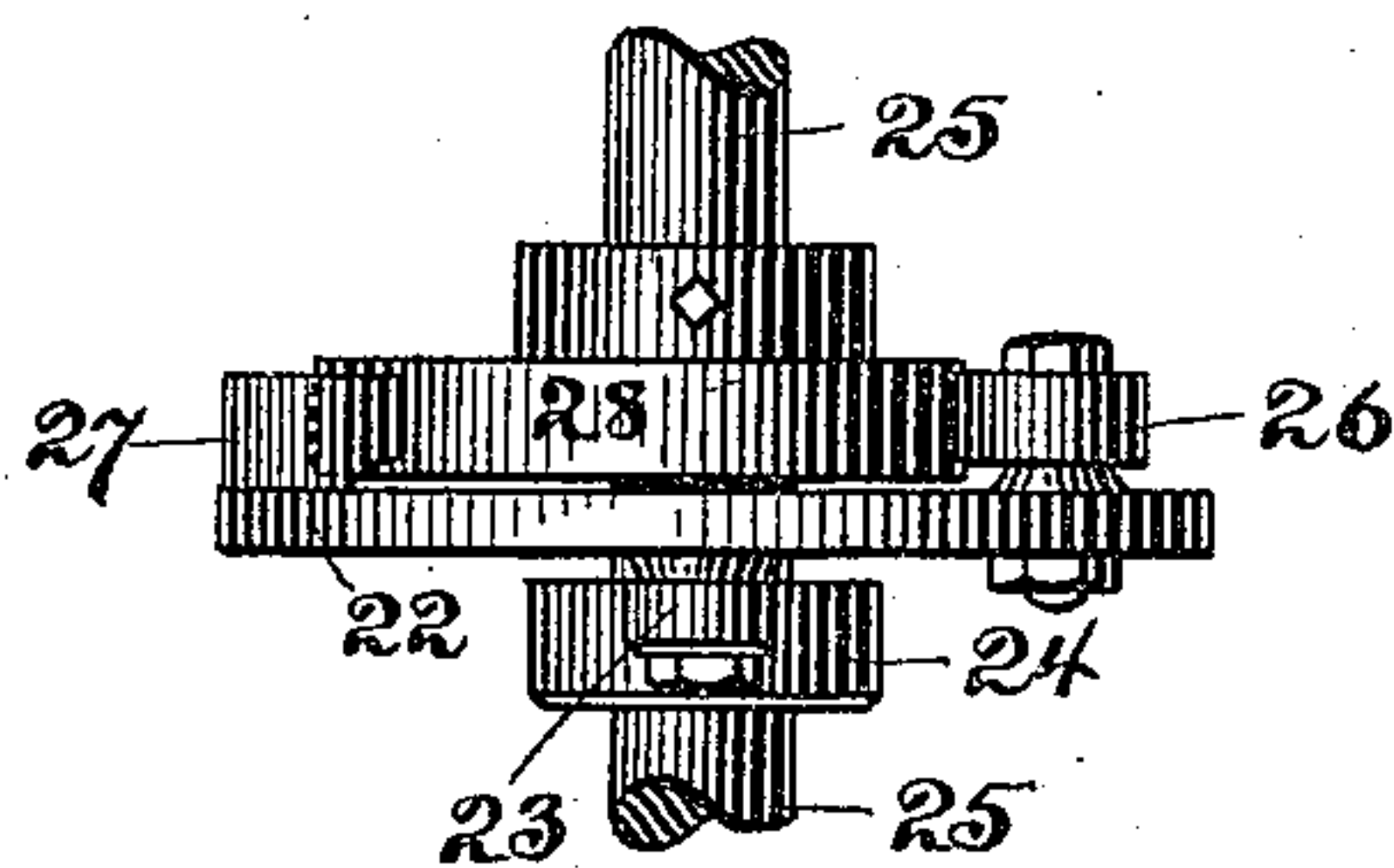


Fig. 4.



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UNITED STATES PATENT OFFICE.

STURGES WHITLOCK, OF SHELTON, CONNECTICUT, ASSIGNOR TO THE
WHITLOCK MACHINE COMPANY, OF SAME PLACE.

INK-FOUNT-ROLLER MECHANISM FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 441,270, dated November 25, 1890.

Application filed November 25, 1889. Serial No. 331,512. (No model.)

To all whom it may concern:

Be it known that I, STURGES WHITLOCK, a citizen of the United States, residing at Shelton, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Ink-Fount-Roller Mechanism for Printing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel and useful improvements in ink-feeding mechanism for printing-machines, but more particularly is it the object of my invention to furnish mechanism which shall be simple and positive in its operation, whereby the intermittent rotation of the fount-roller may be controlled and varied, so that according to the requirements of the work to be performed the movement of the roller at each operation may be a greater or less number of degrees about its axis, and thereby a greater or less quantity of ink removed by said roll from the fount and imparted to the inking apparatus.

With the ends heretofore set forth my invention consists in the construction and combination of elements hereinafter fully set forth, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and mode of operation, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my device in operative position upon a printing-machine; Fig. 2, an elevation from the end of the machine; Fig. 3, a detail section illustrating the adjustable connection, whereby variable movement is imparted to the roll; Fig. 4, a detail plan view of the operating-eccentric and its connections.

Like numerals denote the same parts in all the figures.

1 represents the frame of the machine, and 2 are extensions whereon the ink-fount 3 and its connected mechanism are mounted. Within the ink-fount, as is usual in printing-

machines, is the roll 4, which rotates in close proximity to a suitable scraper-blade, (not shown,) and thereby removes the ink from the fount a little at a time. The roll just referred to is carried upon a shaft 5, journaled in the ends of the fount and provided with a hand-wheel 6 at one end thereof.

7 is a ratchet-wheel fast upon the shaft 5, and alongside this ratchet a toothed segment 8 is journaled upon the shaft.

9 is a radial projection on the segment, and 10 is a pawl pivoted to one side of said projection and engaging the ratchet-wheel above referred to. This construction is clearly apparent by reference to Figs. 1 and 2.

11 is a geared segment journaled upon a hub or short shaft 12, projecting from one of the frame-extensions, said segment meshing with and adapted to operate the segment 8, heretofore referred to. Journaled in the frame of the machine is a short rock-shaft 13, having upon the inner end thereof a crank-arm 14 and upon the outer end thereof another arm 15. The arm 15 is grooved longitudinally at its edges, so as to form a projection 16 from its face, T-shaped in cross-section. (See detail, Fig. 3.) The top of said projection is provided with holes 17, and a slide-block 18, having a stop pin or screw 19 arranged therein and adapted to take into the holes, travels upon the projection.

20 is a connecting-rod extended between the slide-block and the geared segment 11, to each of which members it is pivotally secured.

21 is a connecting-rod pivoted at one end to the extremity of the crank-arm 14 and at the other end to a frame 22, now to be described. Said frame is preferably in form of a portion of a circle, and is pivoted, as at 23, to a bracket 24, secured on the frame, in which latter a transverse shaft 25 is journaled.

Projecting inward from opposite sides of the frame 22 is a roll 26 and a shoe 27, which bear upon the periphery of an eccentric-disk 28 on the transverse shaft above referred to. I have shown a shoe and a roll; but, if desired, two rolls may be used or two shoes.

In the operation of the machine above described the revolution of the eccentric-disk between the shoe and roll on the frame will

cause the latter to vibrate upon its pivotal connection to the bracket. This movement of the frame through the connecting-rod secured thereto and the crank-arm 14 will cause
5 a regular vibration of the rock-shaft in its bearings and a corresponding vibration to the arm 15. The movement of this arm is transmitted to the segment 11, and the movement of said segment may be varied at pleasure by
10 shifting the block along the arm, so that it will be nearer to or farther from the rock-shaft. As the segment 8 partakes of the movement of segment 11, the movement of the pawl on the ratchet-wheel will vary with the position
15 of the sliding block, and will therefore when said block is nearer the outer end of the arm pass over a greater number of teeth of the ratchet in its backward movement, and will operate on said ratchet to turn the shaft a
20 greater number of degrees in its forward movement than when said block is nearer the rock-shaft, to which the arm is secured. In this way by movement of the block the feed of ink from the fount may be regulated.

25 In this my invention I do not wish to be confined to the details of construction which I have herein shown and described, since many minor changes may be made therein without departing from the spirit and aim of my invention.
30

I claim—

1. In a machine of the character described,

the combination, with the ink-fount, the feeding-roller, and means for primarily actuating said roller, of the connection 20, the slide- 35 block carried by said connection and provided with an engaging pin, the crank-arm 15, having a T-shaped projection engaged by said block and provided with perforations for the accommodation of the pin, the rock-shaft upon 40 which said crank-arm is mounted, and means, as described, for operating said rock-shaft, substantially as described.

2. In a machine of the character described, the combination, with the ink-fount and its 45 feeding-roller and means, as described, for imparting the appropriate step-by-step rotation thereto, of the rock-shaft 13, the arm 15, having the block 18, adapted to be moved in the direction of the length of said arm, and means 50 for securing said block, the arm 14, the connecting-arm 21, connected thereto, the frame 22, pivoted at its top and adapted to swing upon said pivot, the roll 26, and the shoe 24, each connected to said frame, and the eccentric 55 against whose periphery said shoe and roll impinge, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

STURGES WHITLOCK.

Witnesses:

S. H. HUBBARD,

M. C. HINCHCLIFFE.