

No. 751,163.

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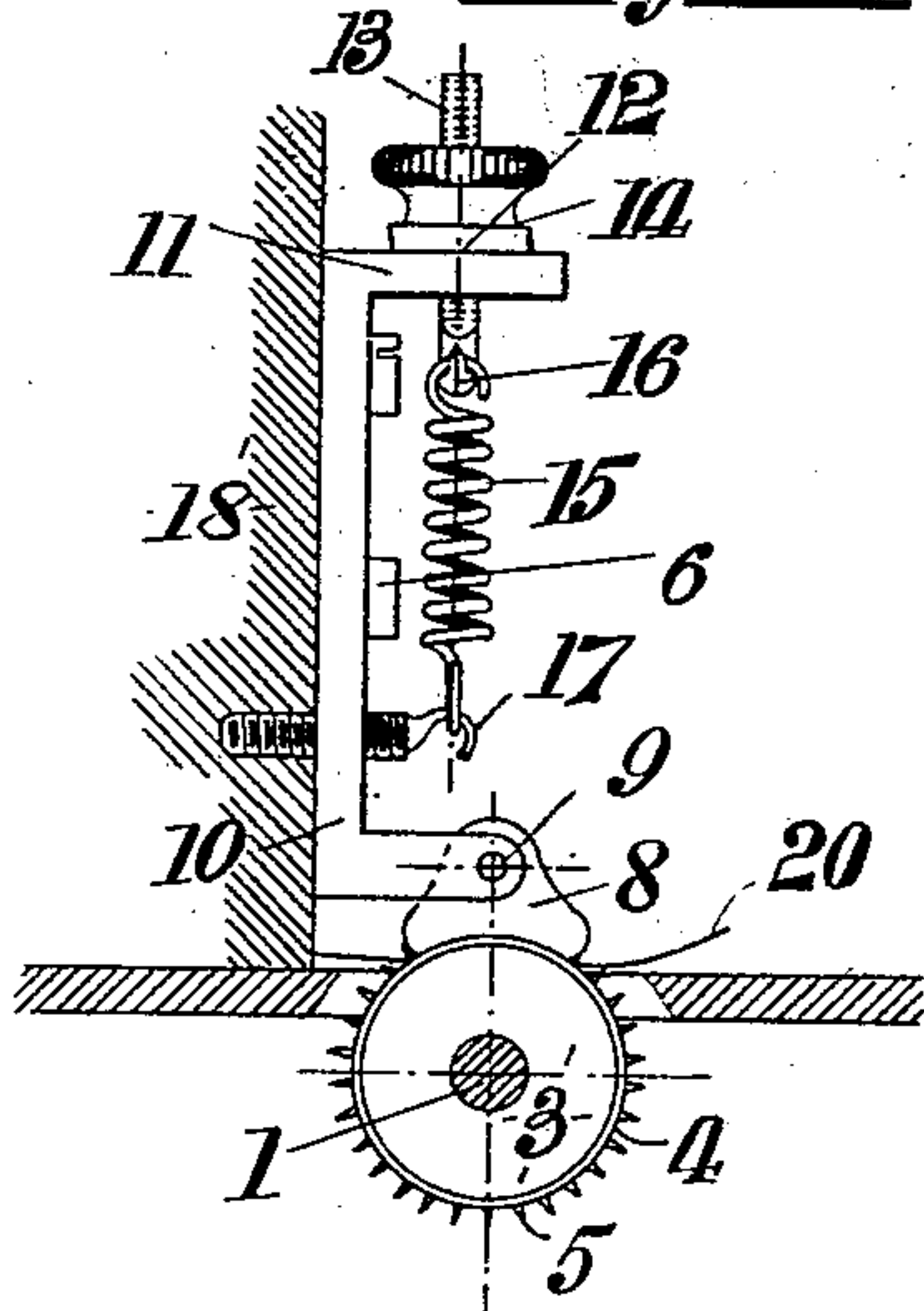
J. GELL.

FEED WHEEL FOR AUTOMATIC TELEGRAPHIC PERFORATORS  
AND TRANSMITTERS.

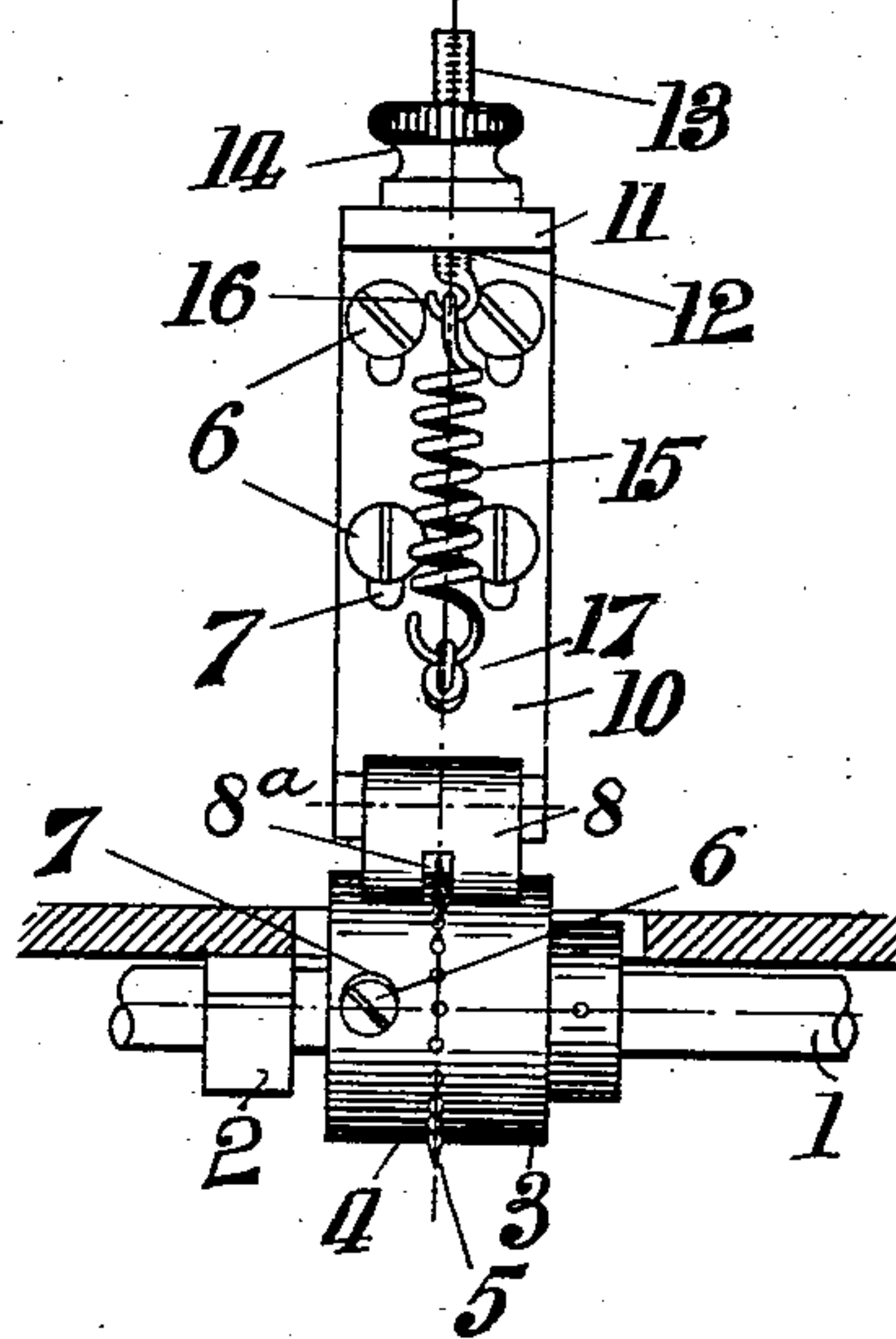
APPLICATION FILED MAR. 17, 1903.

NO MODEL.

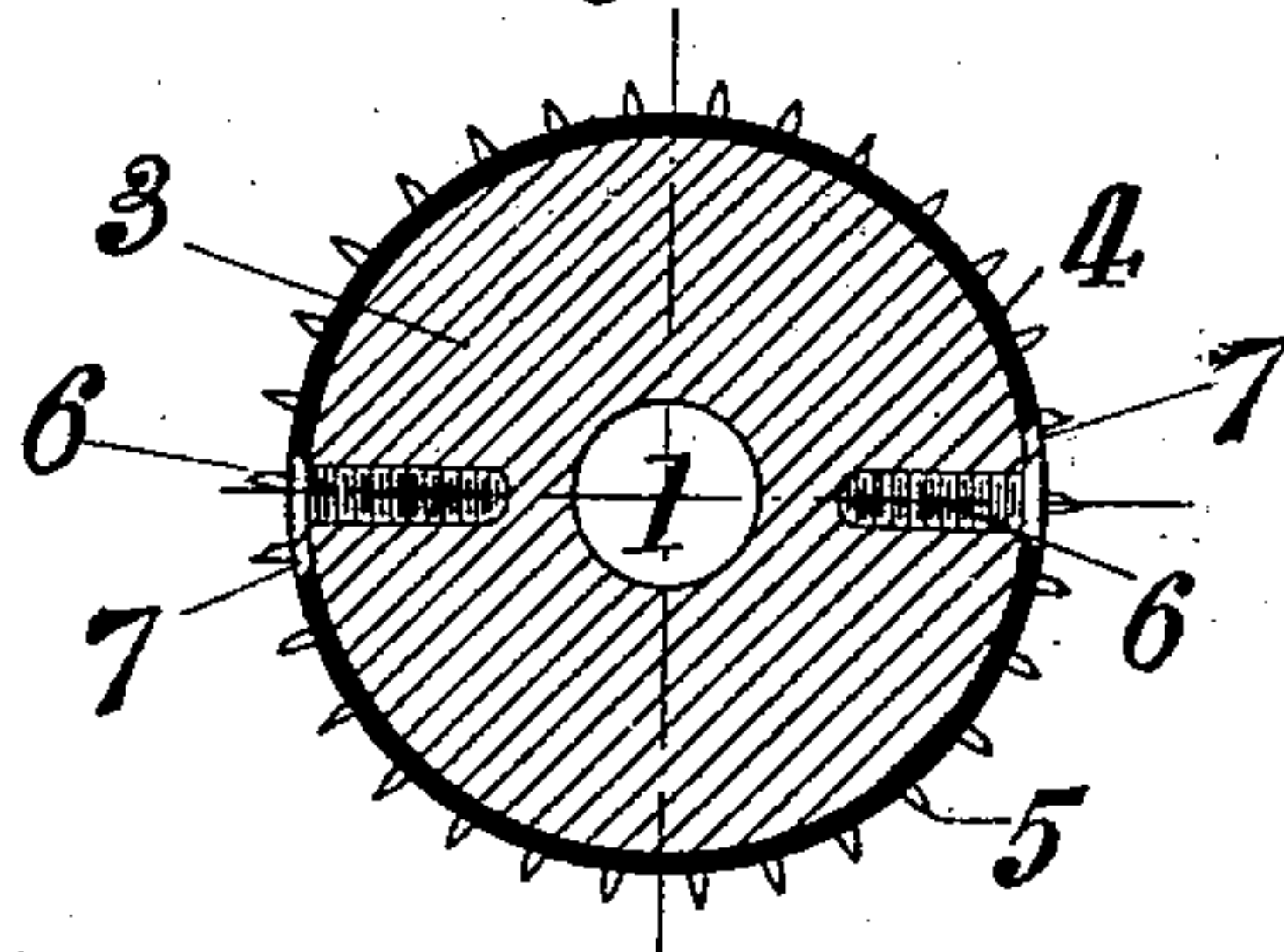
*Fig 1*



*Fig 2.*



*Fig 3.*



Witnesses:

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Inventor

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# UNITED STATES PATENT OFFICE.

JOHN GELL, OF LONDON, ENGLAND.

FEED-WHEEL FOR AUTOMATIC TELEGRAPHIC PERFORATORS AND TRANSMITTERS.

SPECIFICATION forming part of Letters Patent No. 751,163, dated February 2, 1904.

Application filed March 17, 1903. Serial No. 148,232. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GELL, electrical engineer, a subject of the King of Great Britain, residing at No. 48 Highbury Hill, London, N., in the county of Middlesex, England, have invented new and useful Improvements in and Connected with Feed-Wheels for Automatic Telegraphic Perforators and Transmitters, of which the following is a specification.

My invention consists of a special form of adjustable star feed-wheel applicable to automatic telegraph and cable perforators, transmitters, receivers, chronographs, and the like instruments and in apparatus where a tape is required to be fed or moved, by means of which I am able to adjust the teeth or pins engaging with the perforated paper or strip for the purpose of drawing the same along as to insure absolute register therewith.

The construction and operation will be readily understood by reference to the drawings, in which similar figures of reference indicate similar parts in all the views.

Figure 1 is a side elevation. Fig. 2 is a front view; Fig. 3, an enlarged detail of the star-wheel.

In the drawings, 1 is the shaft, which, it will be understood, may be driven by any suitable continuous or intermittent motion and is mounted in suitable bearings 2. A solid center piece, disk, or drum 3, depending upon the character of the instrument to which my invention is applied, is driven tightly onto the shaft or spindle 1, or it may be screwed, pinned, or keyed thereto. Upon this center piece is mounted a ring or sleeve 4, in the periphery of which are inserted by driving, screwing, or the like the star-pegs 5. The sleeve is secured to the center disk or the like by means of one or more countersunk screws 6, which pass through a slightly-elongated hole or holes 7 in the sleeve if more than one screw is employed. As is well known, a difficulty exists in maintaining exact register between the pins of the star feed-wheel and the perforations independently made in the strip, tape, or ribbon 20, the pins, unless accurately adjusted to enter the feed-holes in tape, feeding either too little or too much. My improvements entirely overcome such difficulty, as an exact

engagement between the pins and perforations can be at once obtained by slacking back the screws 6, putting the pins into register with the perforation, and then retightening the screw or screws. By this means I am able readily to adjust the relative distance between the sprocketed pins and the perforating-needles, and thus obtain great accuracy of feed. To insure the engagement of the pins 5 in the star-wheel with more than one of the perforations formed independently in the paper tape or the like, and thus assist in the more perfect register, diminish the risk of its being torn, and secure its positive movement, I employ a shoe 8, grooved, as at 8<sup>a</sup>, and pivoted at 9 to a bracket 10. The upper end 11 of this bracket is bent over and has by preference a hole 12 formed in it, through which passes a threaded pin 13, fitted with a nut 14, having a milled edge. A spring 15 is threaded through on a hook 16, formed in the pin, its opposite end being fastened to a hook 17, threaded into the block, support, or punch 18, to which the bracket 10 is secured by screws 6, said screws and hook passing through elongated holes 7, as shown. By this means the spring 15 tends to force the bracket downwardly, thus causing the shoe 8 to press the tape upon the star-wheel.

I claim—

1. The combination with a star sprocketed wheel comprising a center fastened to and turning with the shaft, an independent sleeve carrying the pins for drawing along the tape, and means for adjusting the sleeve circumferentially whereby the pins may be made to register accurately with the perforations in the tape; and a shaft on which the center is fastened.

2. The combination in a star sprocketed wheel of a center fastened to and turning with the shaft, an independent sleeve carrying the pins or pegs for drawing along the tape or ribbon, one or more elongated holes therein through each of which passes a set-screw threaded into said center, said parts cooperating for adjusting and fixing the pins in register with the tape, substantially as described.

3. The combination with the star sprocket-wheel having its teeth or pins adapted to en-

ter the perforations in a tape, of a pivoted shoe having a slotted portion corresponding to the pins of the sprocket-wheel and means for causing said shoe to press upon said tape as it  
5 passes over the star-wheel whereby the pins are caused to enter the perforations in the tape, substantially as described.

4. In combination with a star feed-wheel, a shoe having a bearing-face of segmental form  
10 to overlie a segment of the periphery of the feed-wheel and having a groove in said segmental face and means for pivotally supporting the said shoe, substantially as described.

5. In combination, a shaft, a star feed-  
15 wheel thereon having an adjustment by which

the points may be set in different positions in relation to the shaft, substantially as described.

6. In combination with the star feed-wheel, a shoe, a bracket having slots, a support for the bracket, screws passing through slots in the bracket to secure it adjustably to the support, a hook passing through one of the slots in the bracket and into the support and a spring connecting the bracket with the hook, substantially as described.

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Witnesses:

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