

(No Model.)

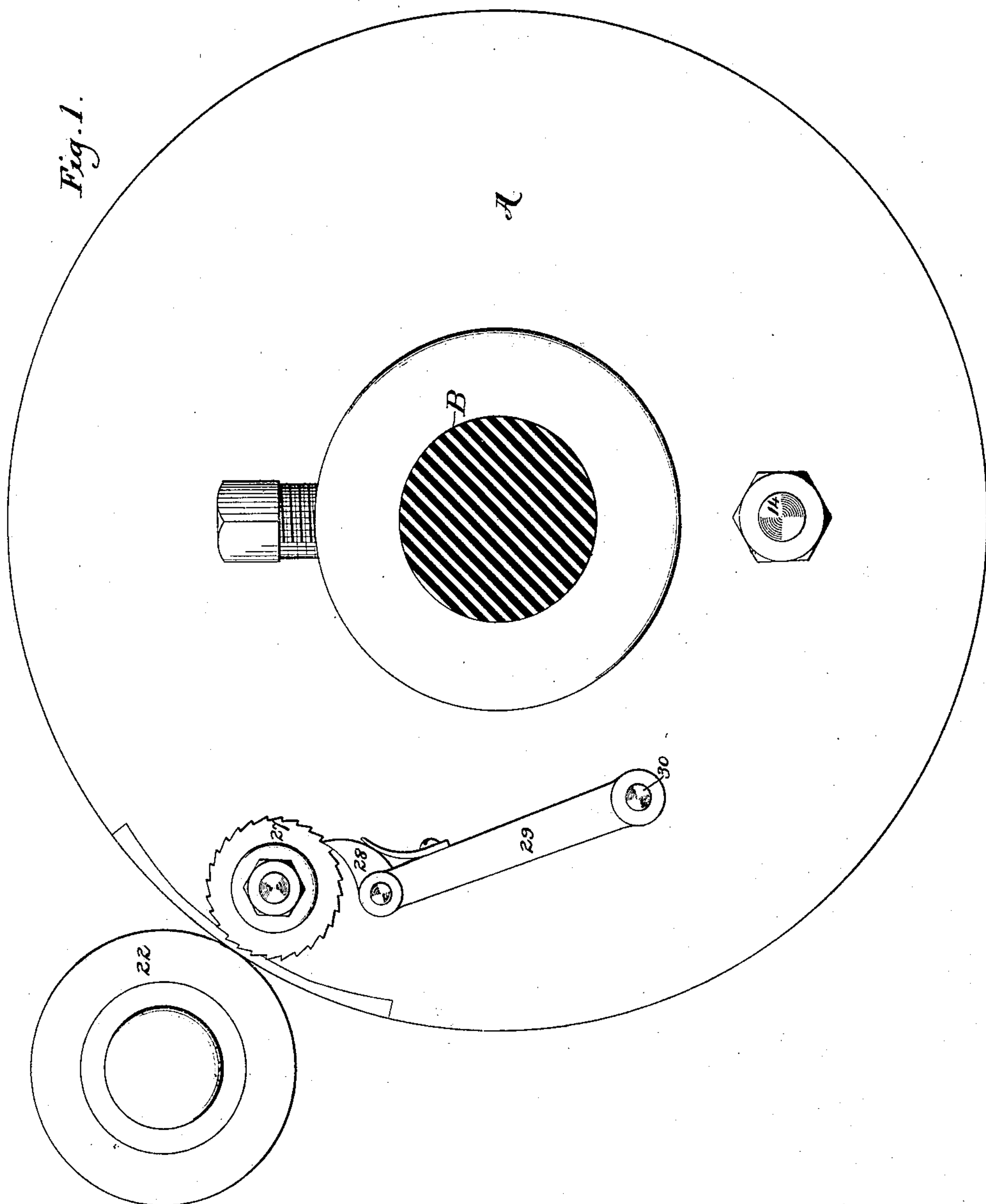
5 Sheets—Sheet 1.

L. C. CROWELL.

MECHANISM FOR PRINTING MARKS ON THE MARGINS OF SHEETS.

No. 316,121.

Patented Apr. 21, 1885.



Witnesses.

E. C. Perkins.
A. N. Jasbera.

Inventor.

Luther C. Crowell,
by *Munson & Philipp*
Attys.

(No Model.)

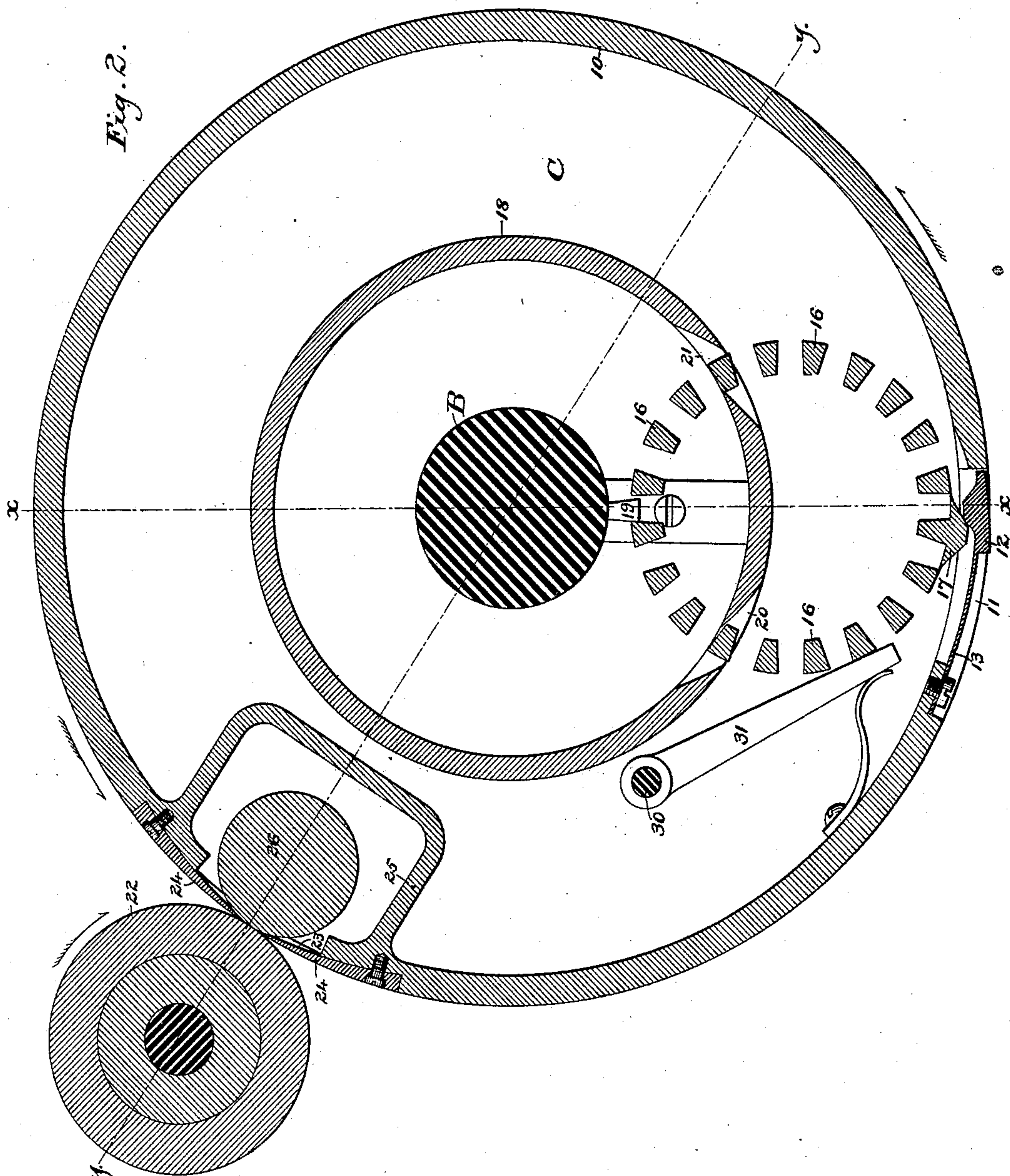
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Attys.

(No Model.)

5 Sheets—Sheet 3.

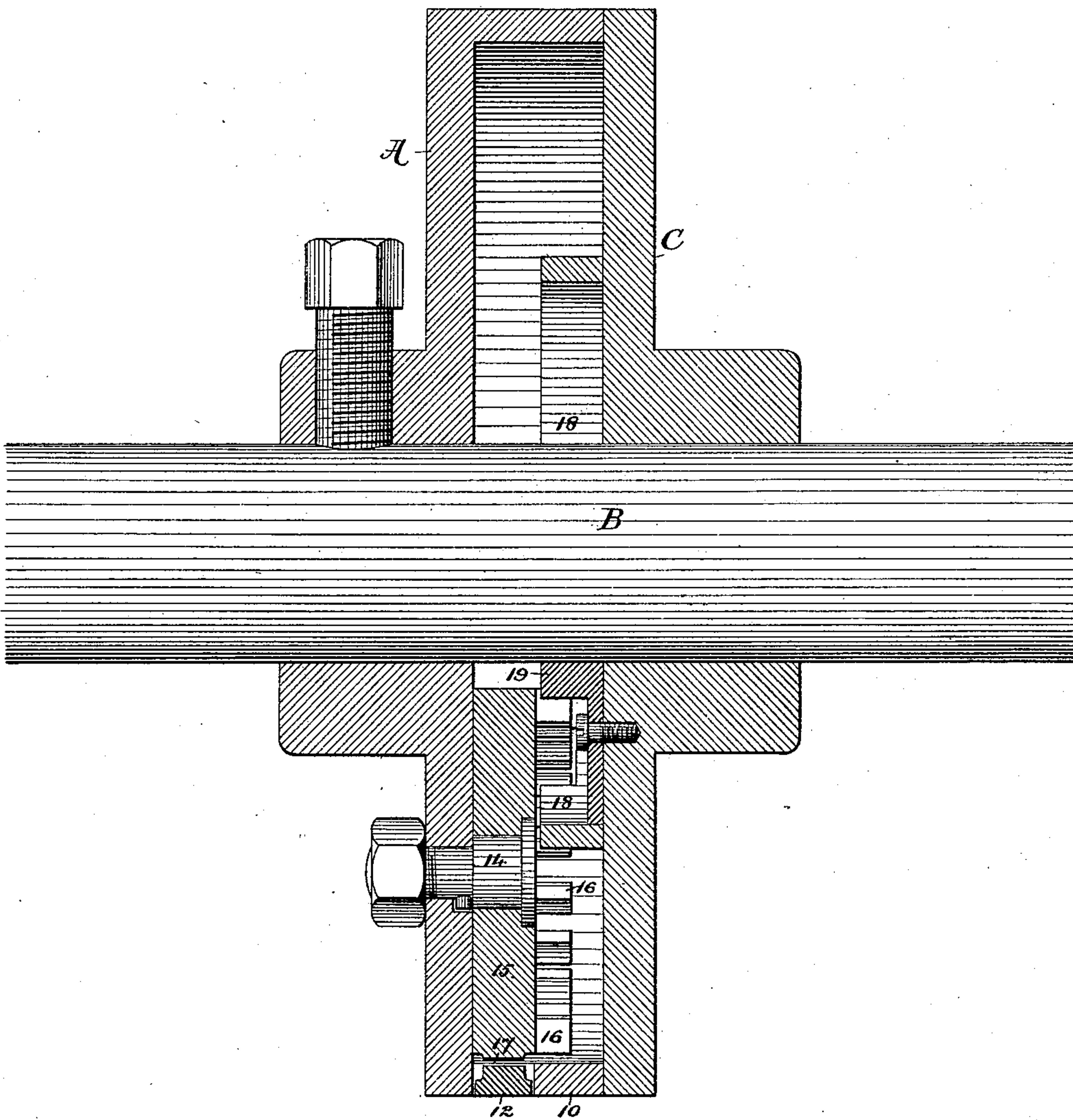
L. C. CROWELL.

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Fig. 3.



Witnesses.

C. C. Perkins.
A. J. Jasbera.

Inventor.

Luther C. Crowell,
by *Munson & Philipp*
Attys.

(No Model.)

5 Sheets—Sheet 4.

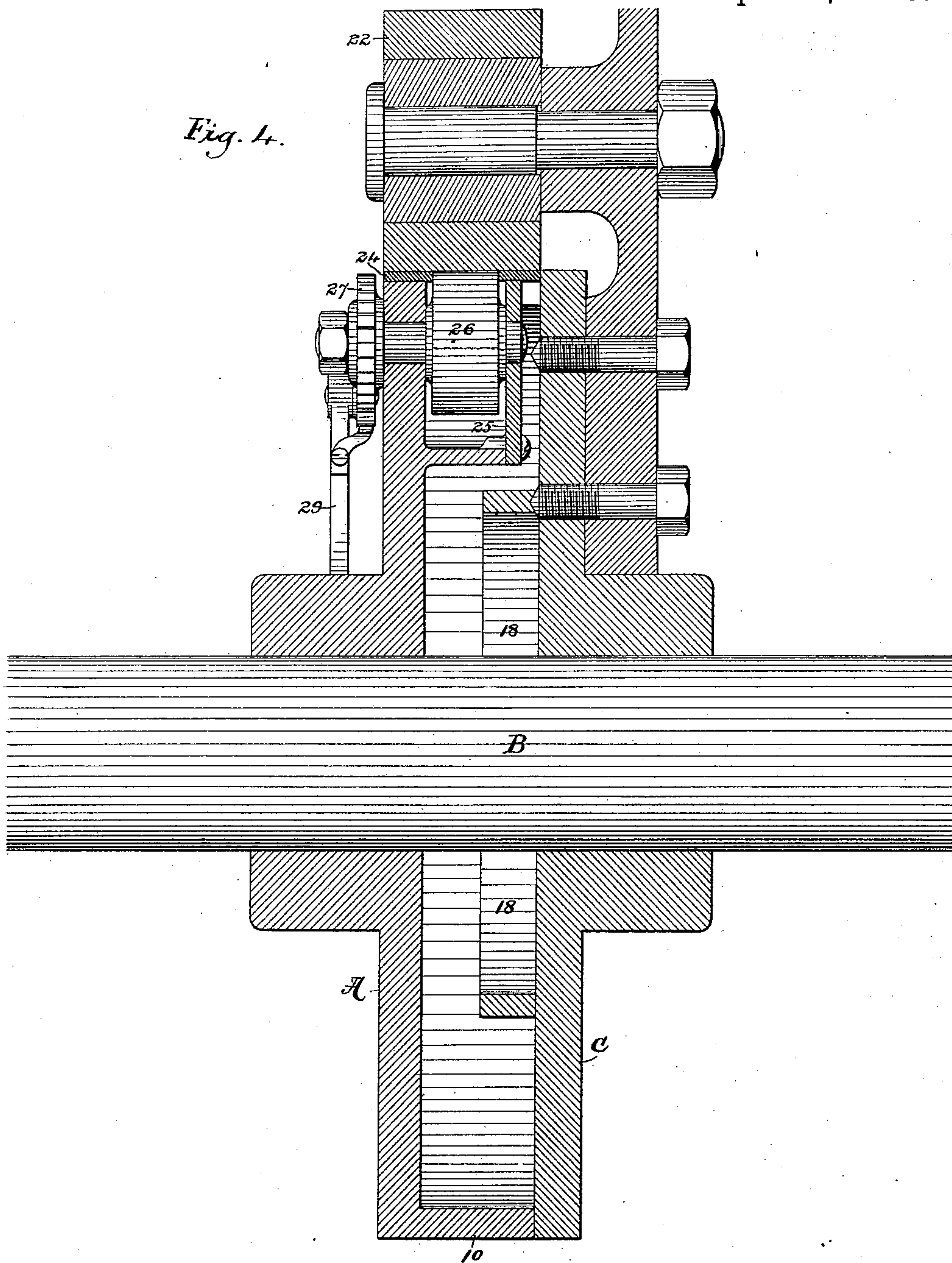
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Fig. 4.



Witnesses.

C. C. Perkins.
A. H. Jasbera.

Inventor.

Luther C. Crowell,
by Munson & Philipp
Attys.

L. C. CROWELL.

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Fig. 5.

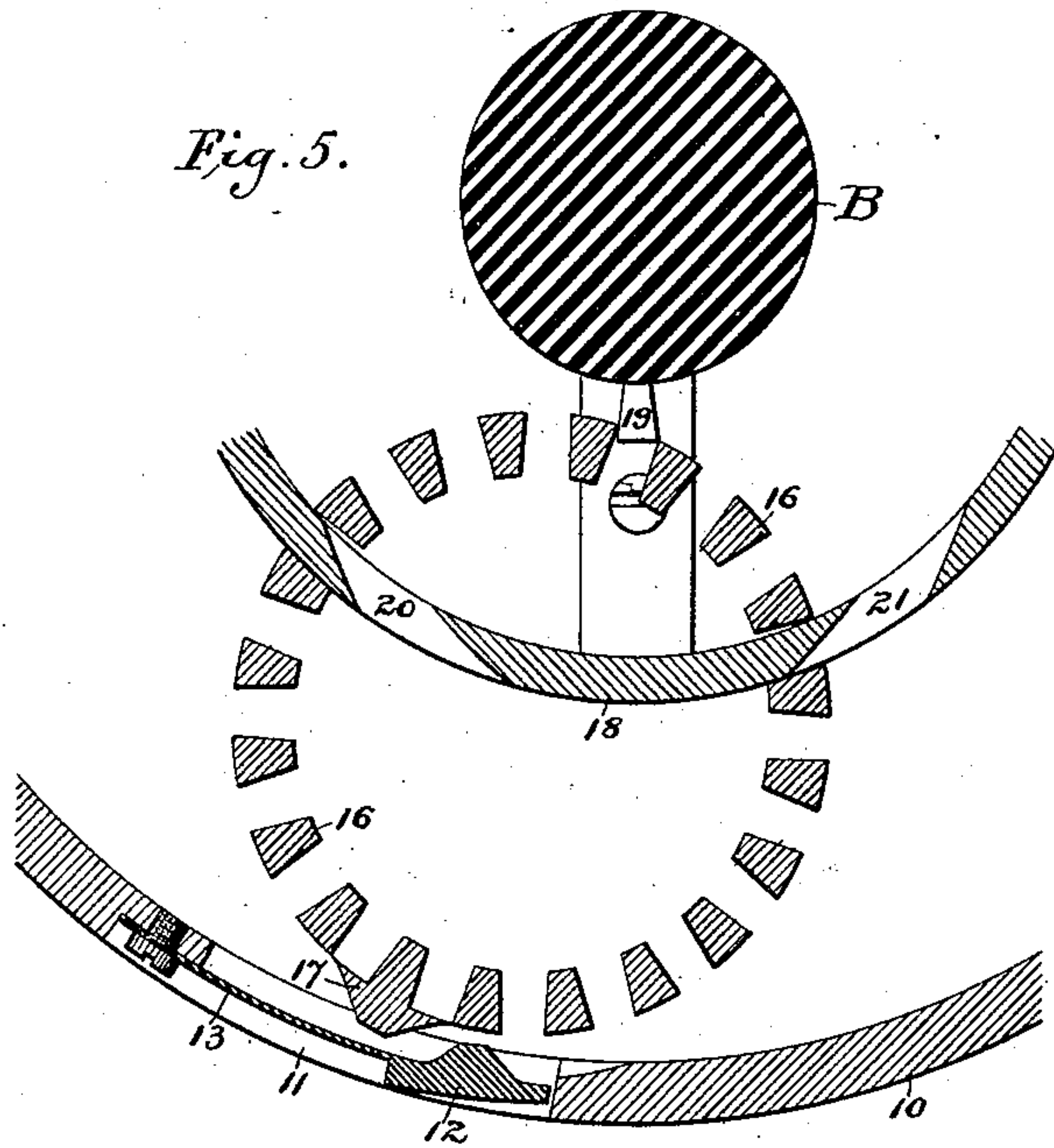


Fig. 6.

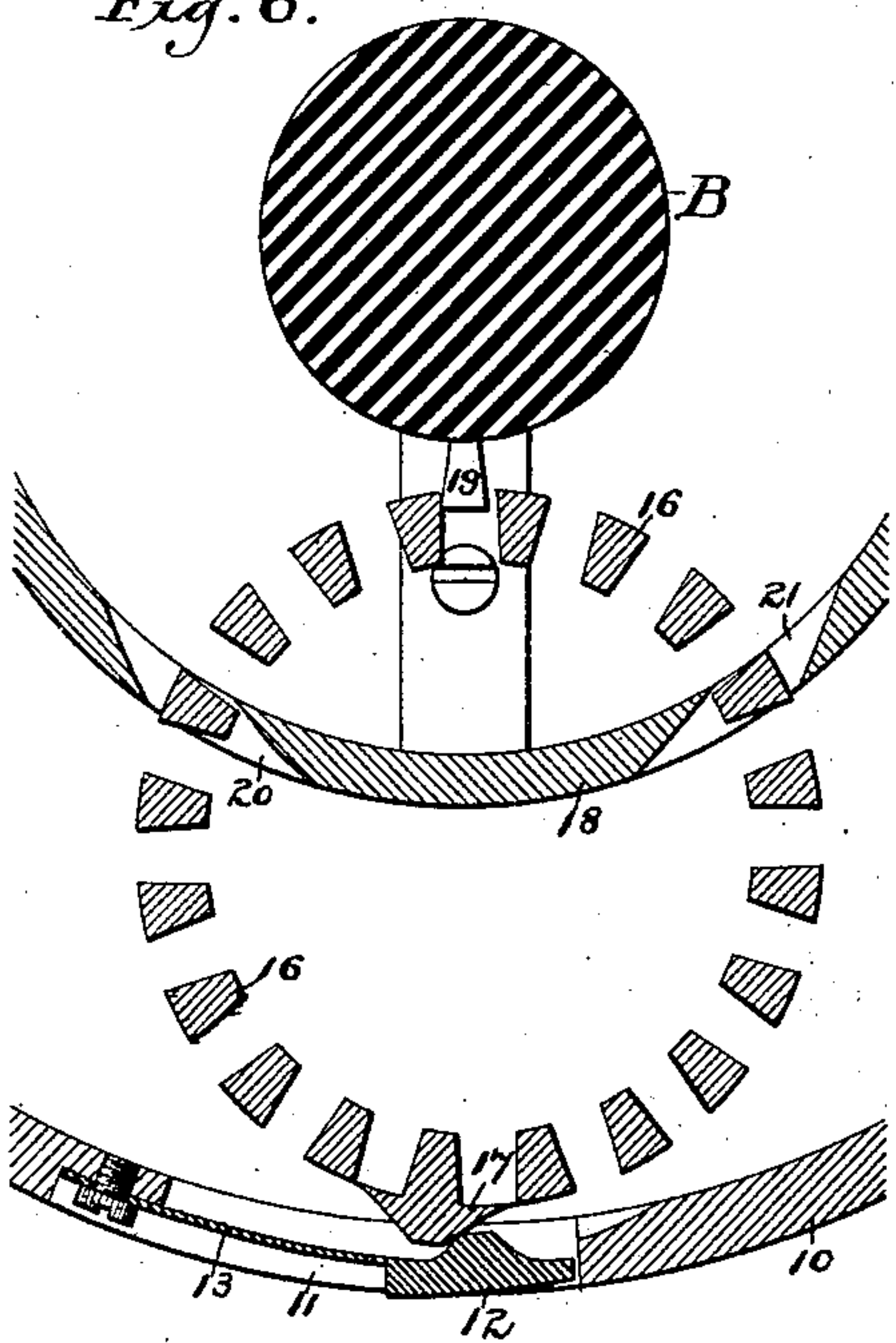
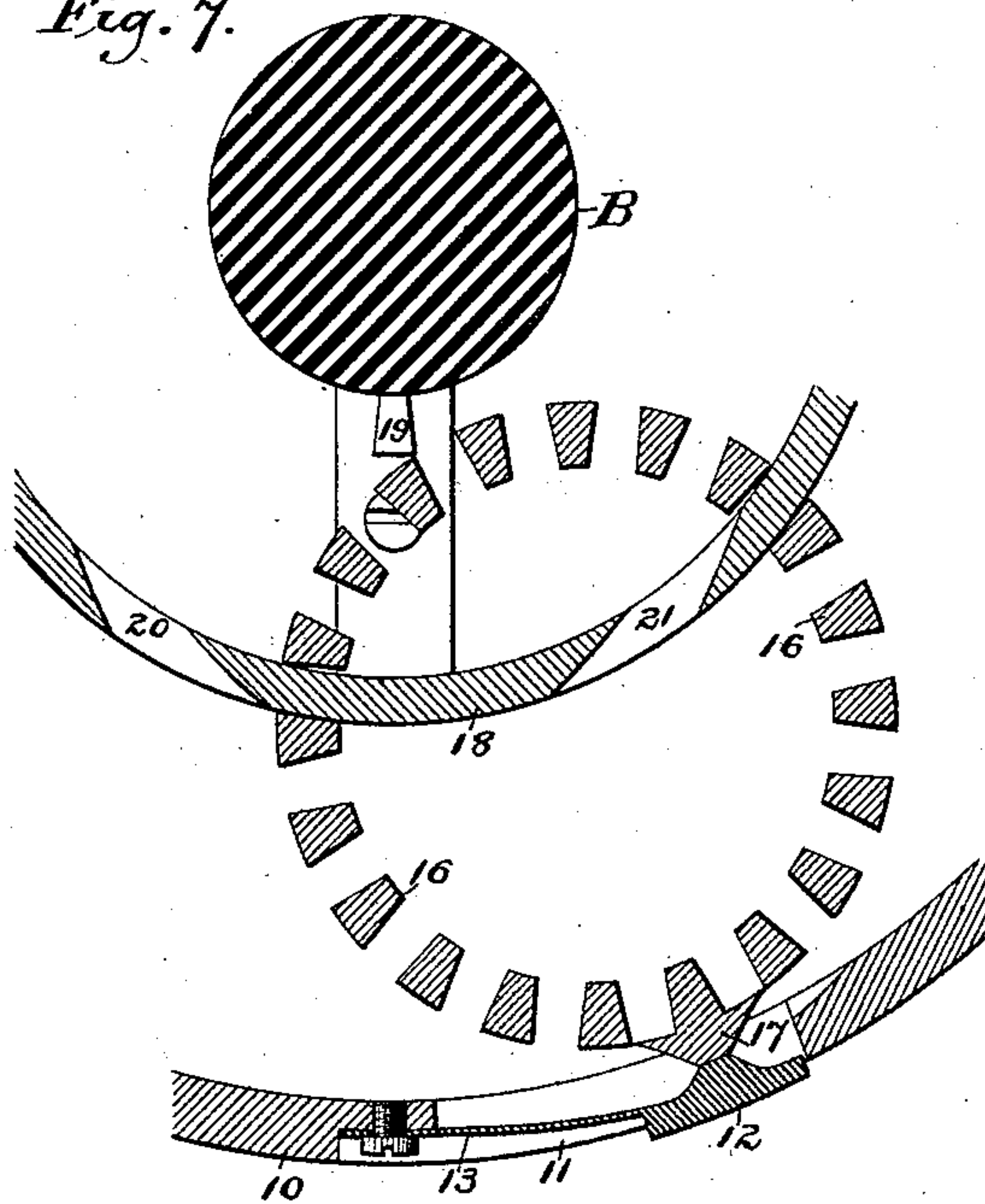


Fig. 7.



Witnesses,

C. C. Perkins.
A. H. Jasbera.

Inventor,

Luther C. Crowell,
by Munson & Philipp
Attys.

UNITED STATES PATENT OFFICE.

LUTHER C. CROWELL, OF BROOKLYN, ASSIGNOR TO R. HOE & CO., OF
NEW YORK, N. Y.

MECHANISM FOR PRINTING MARKS ON THE MARGINS OF SHEETS.

SPECIFICATION forming part of Letters Patent No. 316,121, dated April 21, 1885.

Application filed February 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, LUTHER C. CROWELL, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Mechanism for Printing Marks on the Margins of Sheets, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

In United States Letters Patent No. 269,019 I have described a method of and also a mechanism for marking regular divisions in the pile of sheets delivered from a printing mechanism, which consists in printing an indicating-mark upon the blank margins of certain of the successive sheets in such position that it can be seen, so as to make such sheets readily distinguishable from the others in the pile. The present invention relates to a different mechanism for carrying into operation the method therein described.

In the accompanying drawings, Figure 1 is a side elevation of the mechanism embodying the invention; Fig. 2, a longitudinal vertical section of the same; Fig. 3, a cross-section upon the line *x x* of Fig. 2; Fig. 4, a like view upon the line *y y* of the same figure; and Figs. 5, 6, and 7, sectional details showing the printing devices in different positions.

In carrying into operation the method described in my former Letters Patent, the indicating-mark may be printed upon the sheets at any time during their passage through the printing or delivery mechanisms, either before or after they are printed, or before or after they are severed from the web, or it may even be printed after they have passed from the delivery mechanism.

The mechanism now to be described may therefore be located at any convenient point where it is desired to act upon the sheets. This mechanism consists of a disk or carrier, A, secured to a shaft, B, which is mounted in suitable supports, and so driven as to give to said disk a peripheral speed equal to the travel of the sheets upon which the printing devices are to act. The disk A is provided with a flange, 10, having a recess, 11, in which is located a block, 12, bearing upon its outer surface the design which is to constitute the

indicating-mark. The block 12 is supported upon a spring-arm, 13, so arranged as to normally hold the block in a position about flush with or just inside of the outside of the flange 10, as shown in Fig. 5. The disk or carrier A is also provided upon its interior with a stud, 14, upon which is mounted a disk, 15, from the inner face of which project a series of studs, 16, and having its periphery provided with a projection, 17, which as the disk is revolved, as will be hereinafter explained, engages with the inclined back of the block 12, so as to project said block beyond the outside of the flange 10. The shaft B is provided with a second disk, C, which is loosely mounted upon the shaft and rigidly secured to some portion of the frame-work. The face of this disk is provided with an annular flange, 18, which extends inward so as to lie between two pairs of the studs 16, and prevent the disk 15 from turning on its stud, except at one point in the revolution of the disk or carrier A. The disk C is also provided with a lug, 19, which, at each revolution of the disk A, engages with one of the studs 16 and revolves the disk 15 one step, the flange 18 being provided at the same point with two recesses, 20 21, through which the studs 16 can pass as the disk is moved.

The flange 10, which serves as an ink-distributing table, is provided with a second recess, 23, the edges of which are provided with spring doctor-plates 24, beneath which are located a small ink-fountain, 25, and fountain-roll 26. The shaft of the fountain-roll extends through the disk A, and is provided with a ratchet, 27, which is engaged by a pawl, 28, pivoted to the end of a rock-arm, 29, the shaft 30 of which extends through the disk A, and is provided upon the opposite side of said disk with an arm, 31, which is periodically engaged by the projection 17 of the disk 15, thereby giving a slight movement to the fountain-roll 26, and carrying a small quantity of ink out onto the distributing-table. The flange 10, as the disk or carrier A revolves, runs in contact with a distributing-roll, 22, which not only distributes the ink upon the surface of the flange, but applies it to the face of the block 12.

The printing mechanism just described will

be provided with a companion roll or disk to act as an impression-roll, or will be so located as to act in conjunction with some one of the rolls or cylinders with which the printing or delivery mechanism is usually provided.

The operation of the mechanism is as follows: The mechanism being so adjusted in position that the line of sheets upon certain ones of which the indicating-mark is to be printed will pass in close proximity to but not in contact with the flange 10, the shaft B will be set in motion. As the studs 16 pass the lug 19 said lug will engage with one of the studs, as shown in Fig. 5, thereby revolving the disk 15 one step, and carrying one of the studs 16 outward through the recess 20, and the opposite one inward through the recess 21, as shown in Fig. 6. As the studs 16 leave the lug 19 the solid portion of the flange 18 will enter between two pairs of said studs, so as to hold the disk 15 in the same position for the remainder of the revolution of the disk or carrier A, as shown in Fig. 7. This operation will continue to be repeated for a number of revolutions, the disk 15 being advanced one step at each revolution until the projection 17 comes into contact with the arm 31, when said arm will be rocked slightly, thereby revolving the fountain-roll 26 a short distance, and carrying a small amount of ink outward onto the flange 10, where, as the flange revolves, it will be distributed by the roll 22. At the end of the twentieth revolution the projection 17 will have arrived at the position shown in Fig. 7, so as to force the block 12 outward beyond the periphery of the flange 10 and cause it, as the flange continues its revolution, to take ink from the roll 22, and at the proper time make an impression upon the passing sheet. At the end of this revolution the disk will be moved forward another step, so as to carry the projection 17 off the block 12 and allow it to resume its normal position, and so the operation will continue to be repeated, the block 12 being projected so as to make an impression at every twentieth revolution of the disk or carrier A.

The parts will be so positioned, proportioned, and timed with relation to the size of the sheets and their travel that the indicating-marks will fall upon the blank margins of the sheets, and in such position that they can be readily seen while the sheets are in the pile, so as to make the marked sheets readily dis-

tinguishable from the others. It will of course be seen that the number of studs upon the disk 15 may be varied to any desired extent, so that the block 12 may be projected more or less frequently, as may be desired.

Although for the sake of compactness and simplicity of construction it is preferable that the devices for supplying ink to the design upon the block 12 should be arranged as shown, yet the arrangement of these devices may be varied considerably from that shown without departing wholly from the invention.

The fountain and fountain-roll may be mounted independently of the disk A, and the ink may be distributed elsewhere than upon the flange 10. The printing-block 12 and its operating devices may also, instead of being mounted upon a disk or carrier provided especially for that purpose, be mounted upon one of the feeding or other rolls with which the printing or delivery apparatus is usually provided.

What I claim is—

1. The combination, with the printing-block 12, mounted upon a rotating carrier, of the stationary flange 18, provided with recesses 20 21, the disk 15, provided with studs 16 and projection 17, and means for rotating said disk 15 with a step-by-step movement, all substantially as described.

2. The combination, with the rotating disk or carrier A, provided with the flange 10, and carrying the movable printing-block 12, and ink-fountain and fountain-roll 25 26, of the inking-roll 22, and means for causing said printing-block to be periodically projected beyond the periphery of said flange, all substantially as described.

3. The combination, with the disk A, provided with the flange 10, movable printing-block 12, and ink-fountain and fountain-roll 25 26, of the inking-roll 22, stationary flange 18, having recesses 20 21, the disk 15, having studs 16 and projection 17, and means for advancing said disk 15 with a step-by-step movement, all substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUTHER C. CROWELL.

Witnesses:

J. A. HOVEY,

T. H. PALMER.