

(No Model.)

2 Sheets—Sheet 1.

J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 488,900.

Patented Dec. 27, 1892.

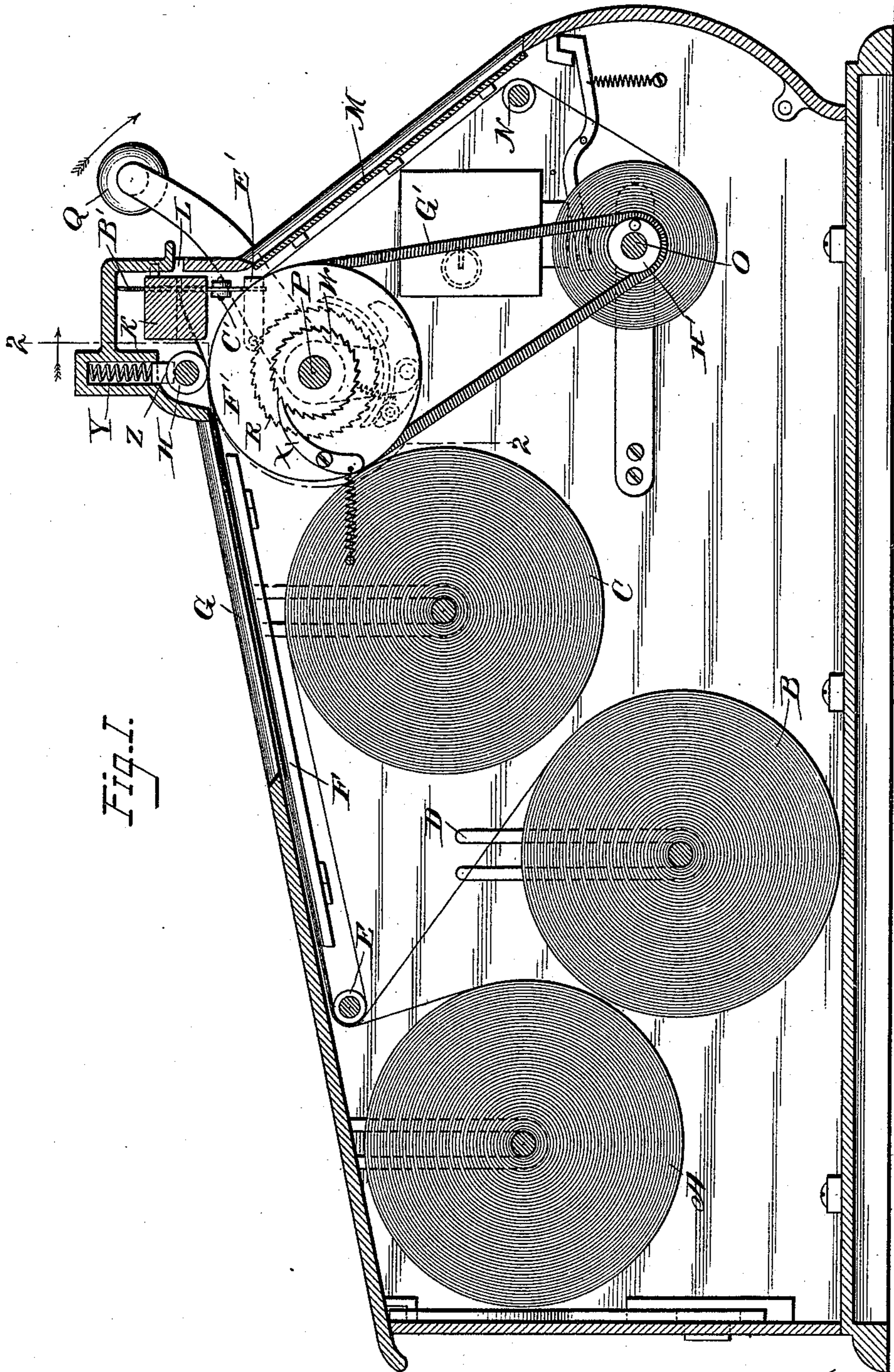


Fig. 1.

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John L. Gunnison

Inventor.
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by Edward Rector
his attorney

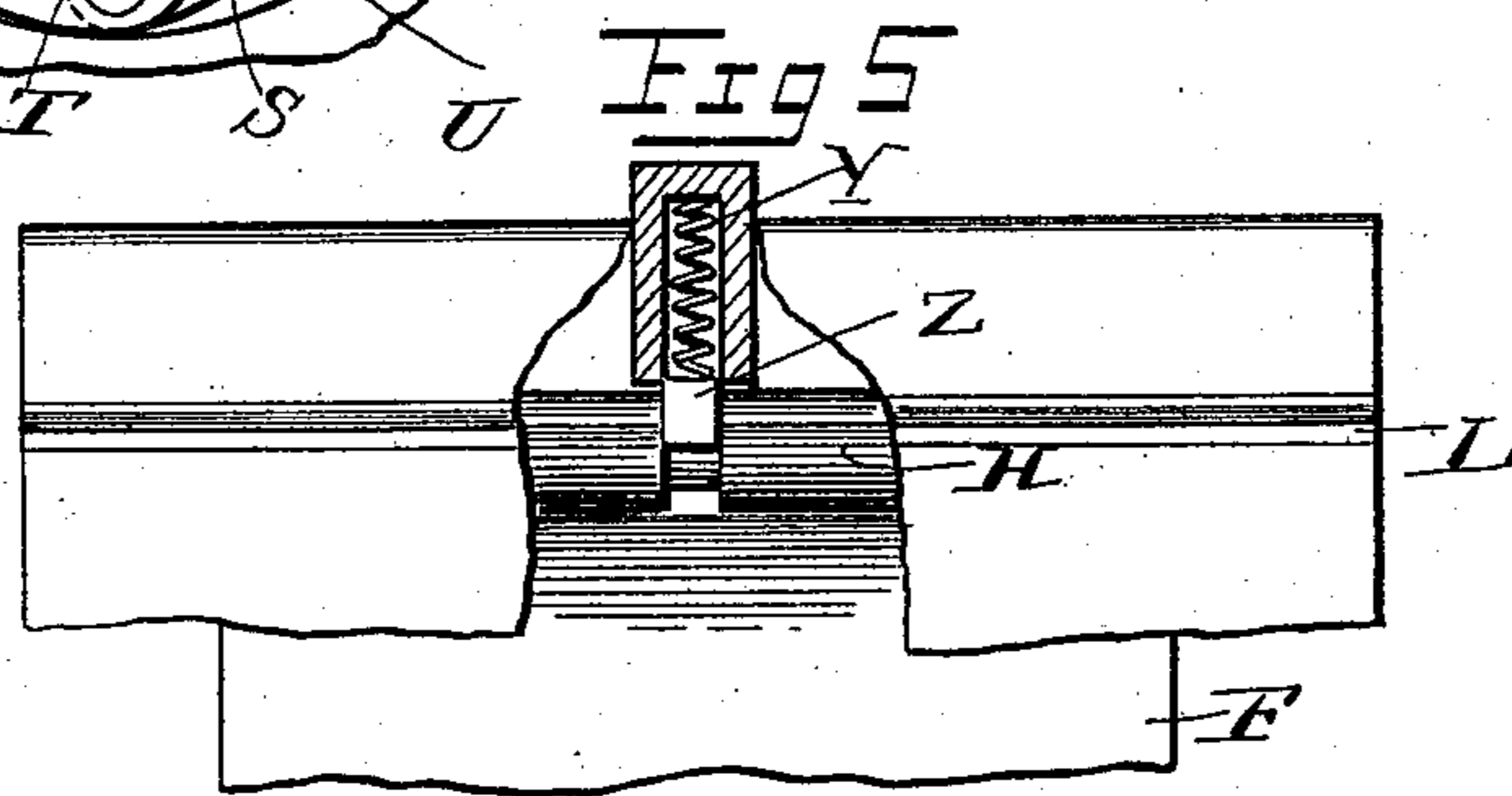
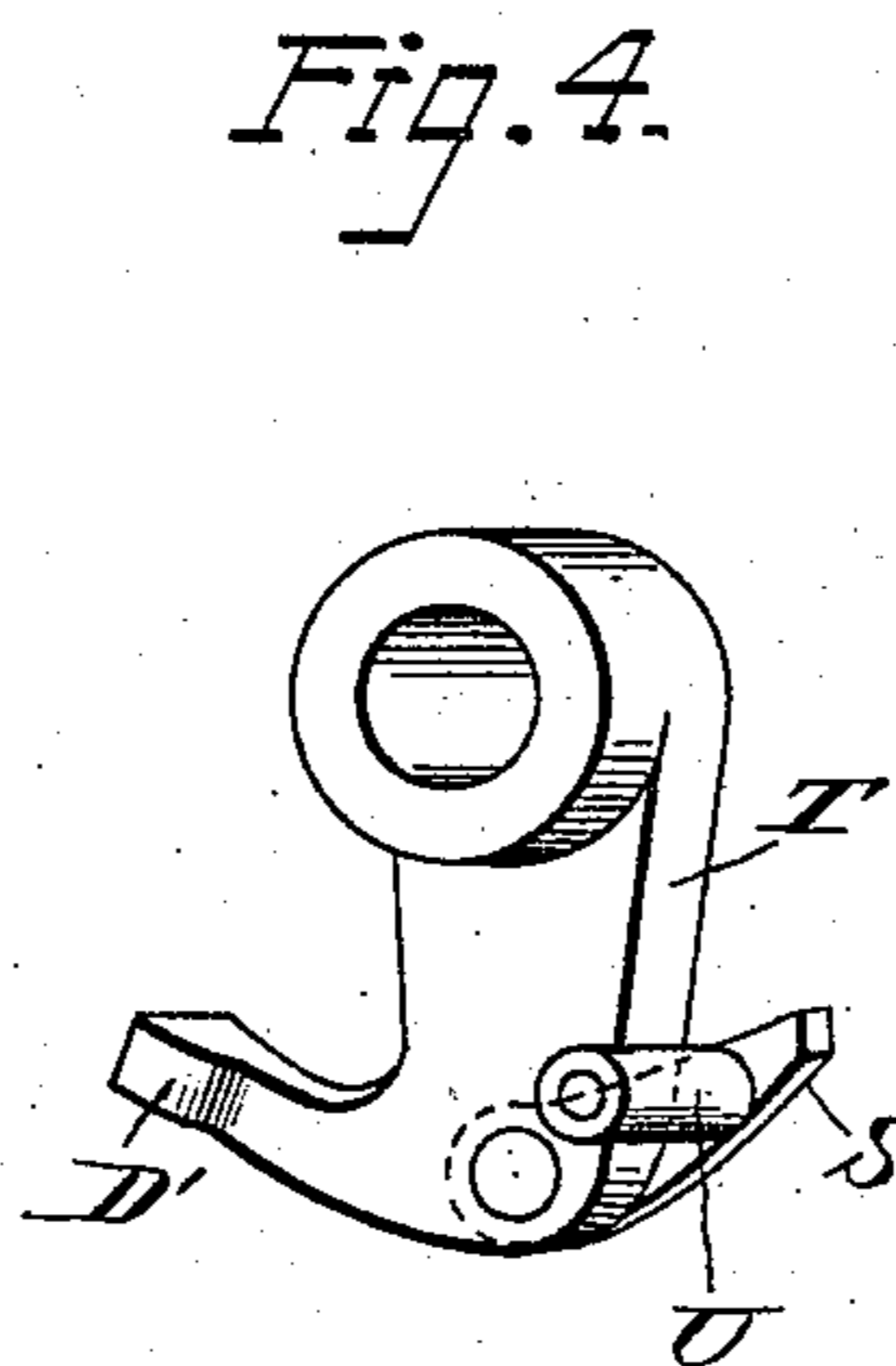
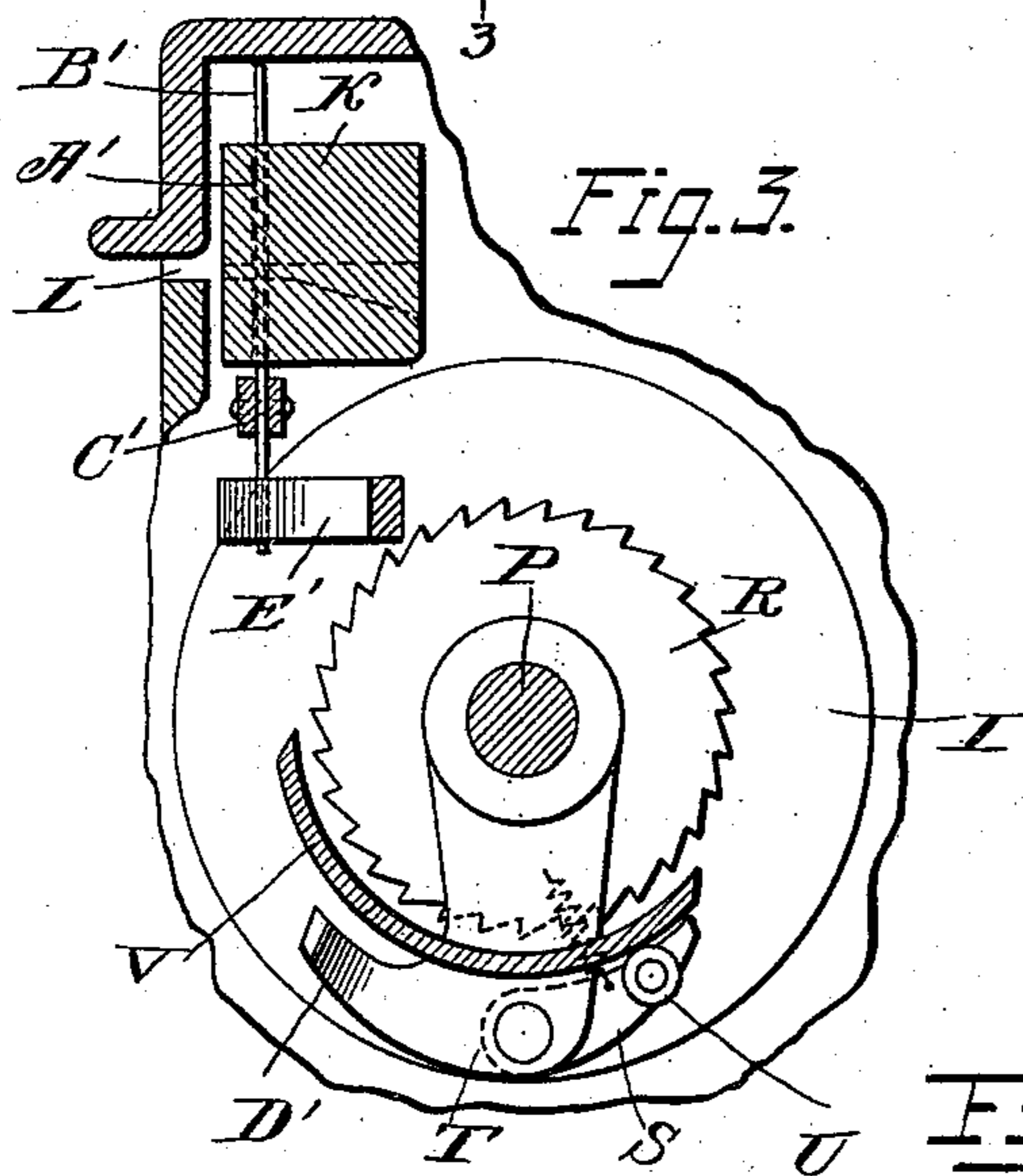
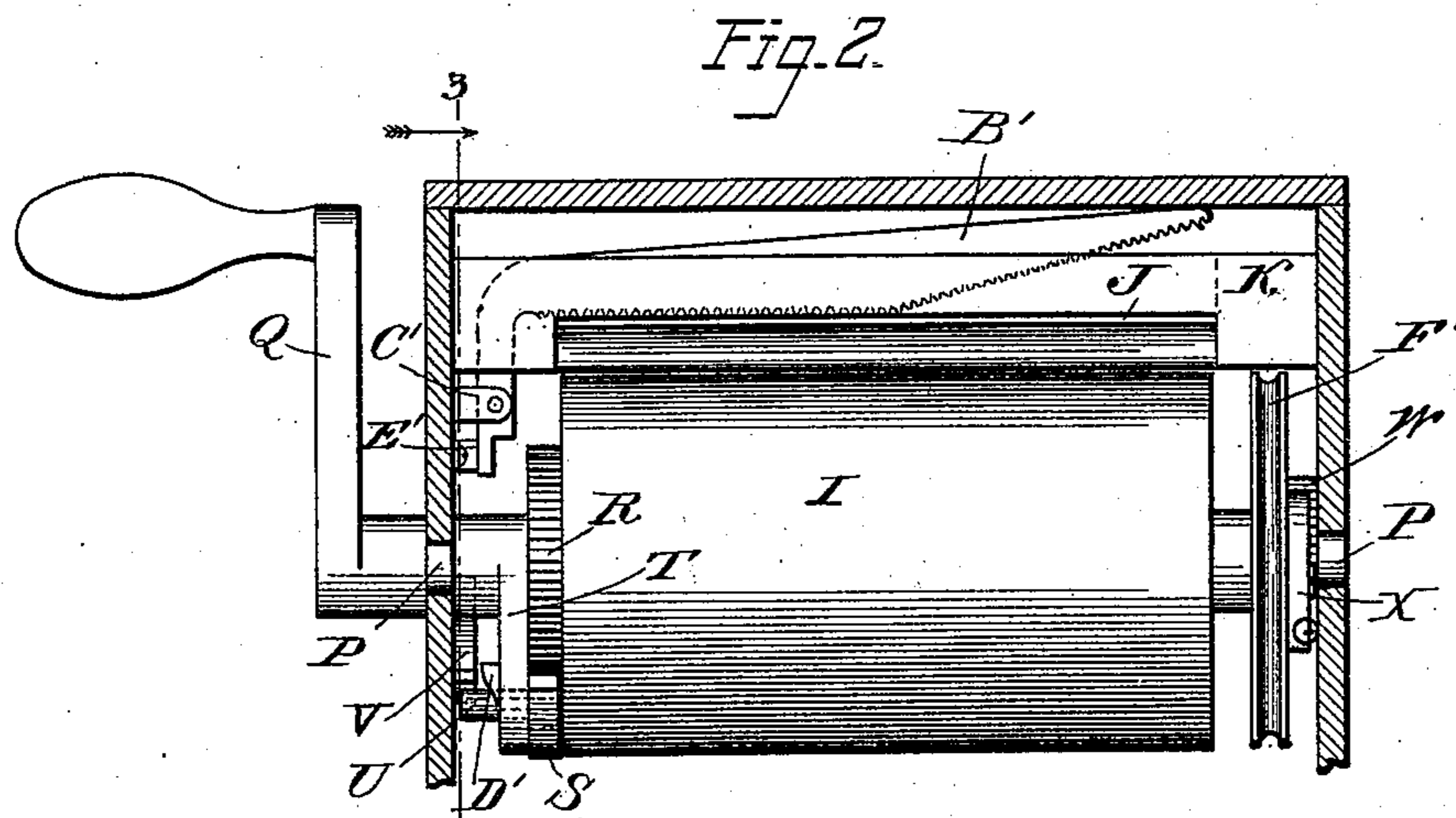
(No Model.)

2 Sheets—Sheet 2.

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Patented Dec. 27, 1892.



Witnesses
Martian H. Olsen.
John L. Tunison.

Inventor
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UNITED STATES PATENT OFFICE.

JOHN PFEIFER, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 488,900, dated December 27, 1892.

Application filed August 16, 1892. Serial No. 443,262. (No model.)

To all whom it may concern:

Be it known that I, JOHN PFEIFER, a citizen of the United States; residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Autographic Registers, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

Heretofore it has been common in some machines of this class to wind the record strip upon a storage reel after it has been led over the writing tablet, and to tear the check strips off into slips against a knife or tearing edge; while in others it has been common to cut all of the strips into slips by means of a suitable knife or cutter, the check slips being directed out of the machine and the record slips being filed upon a pin or otherwise stored within the machine. In no machine, so far as I am aware, have the check strips been cut into slips (instead of being torn off by hand) and the record strip wound upon a storage reel. In my improved machine the check strips and the record strip are led over the writing tablet and between a pair of feed rollers, the check strips are directed out of the machine and severed into slips by the action of a cutter, and the record strip is led back into the machine and wound upon a storage reel, and all of the mechanisms,—the feed rollers, the cutter and the storage reel,—is actuated by a single operating handle or driving device.

The novelty of my invention consists in this new mode of operation in such machines, as well as in the constructions, combinations and arrangements of the various parts, all as will be hereinafter set forth and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of the machine just within the near side of the casing; Fig. 2, a sectional detail on the line 2—2 of Fig. 1, showing the main feed roller, cutter and other co-operating parts; Fig. 3, an enlarged sectional detail on the line 3—3 of Fig. 2; Fig. 4, a perspective view of the pawl arm, cam and pawl; and Fig. 5, is a detail view of the feed rollers.

The same letters of reference are used to indicate identical parts in all the figures.

The three paper strips are carried in three supply rolls A, B, and C, whose supporting spindles rest in guides D upon the inner sides of the casing. From these rolls the strips are led over a guide roller E, thence forward over the writing tablet F, located beneath the usual opening G in the top of the casing, where sheets of manifolding material are interposed between the respective strips to cause the entries on the upper strip to be duplicated upon the lower ones. From the writing tablet F the strips are led between a pair of feed rollers H I, whence the two check strips pass through a horizontal slot J, Fig. 2, in a cross bar K, and thence out of the casing through an opening at L, while the record strip C is led downward and forward beneath a glass window M in the casing, over a guide roller N and wound around a storage reel O. The lower feed roller I is the driving roller of the pair and is of such size that a partial revolution of it will advance the three strips the desired length of a check. It is loosely mounted upon a shaft P journaled in the casing and projecting through the left side thereof, where it has secured upon it an operating handle Q. Upon the left hand end of the roller, Fig. 2 and dotted lines Fig. 1, is fastened a ratchet R with which co-operates a pawl S pivoted to and carried by an arm T fast upon the shaft P and spring-pressed toward the ratchet. This pawl has projecting from its side near its free end a stud upon which is mounted a friction collar or roller U, adapted to ride over a curved plate V upon the inner face of the casing and hold the pawl out of engagement with the ratchet during a portion of the revolution of the operating handle and shaft. With the parts in the positions shown in the drawings the roller U will ride over the end of the plate V at the beginning of the forward movement of the operating handle and the pawl will engage the ratchet. The latter and the feed roller I will then be turned with the handle until the roller U strikes the opposite end of the plate V, whereupon it will ride up over the latter and the pawl will be lifted and held out of engagement with the ratchet. The purpose of this disengagement of the pawl from the ratchet during a portion of the revolution of the operating handle will be pres-

ently explained. A ratchet W fastened upon the right hand end of the hub or spindle of the roller I, and a co-operating pawl X, prevents backward movement of the feed rollers.

5 The spindle of the upper feed roller H has slight vertical play in its bearings and is maintained in operative contact with the roller I by the pressure of a spring Y, confined in a housing in the casing and bearing at its
10 lower end against a plug or block Z which fits in a circumferential groove or cut-away space at the middle of the roller and rests upon the spindle of the latter. The application of this spring pressure to the roller at its
15 middle, instead of at its ends as usual, causes the roller to bear with equal pressure upon the lower one throughout its length and thereby produce a straight and even feeding of the paper strips.

20 The cross bar K is provided, in addition to the horizontal slot J before referred to, with a longitudinal vertical slot A' intersecting the slot K and having fitted in it a vertically swinging cutter B', whose vertically depend-
25 ing left hand end is pivoted between lugs C' upon the side of the casing, Fig. 2. The depending end of the cutter projects below the lugs C' into position to be engaged by a cam D' formed upon an extension of the pawl arm
30 T, Figs. 2, 3 and 4. When the operating handle is given a revolution from the normal position shown in the drawings the cam D' will engage the depending end of the cutter just after the roller U on the pawl has ridden
35 up over the front end of the curved plate V and lifted the pawl out of engagement with the ratchet. As the cam D' rides over the depending end of the cutter it will force it to the left, against the pressure of a flat spring
40 E' secured to the side of the casing, and throw the serrated blade of the cutter down through the slot A' to sever the two check strips passed through the slot J. When the cam D' clears the end of the cutter the spring E' will throw
45 it back to normal position, with its blade above the slot J as seen in Fig. 2. In this manner at each complete revolution of the operating handle the proper length of the two check strips will be first fed forward through the
50 slot J and out the opening L, then the pawl will be disengaged from the ratchet and the feeding operation will stop, and then the cam D' will force the cutter blade down through the slot A' and cut off the two check strips.

55 The roller I has fastened upon the right hand end of its hub or spindle a grooved pulley F' around which passes a yielding band G', in this instance a fine coiled spring, which extends to and around a grooved pulley H' fast upon the spindle of the storage reel.
60 These pulleys and yielding band constitute a frictional connection between the feed roller I and storage reel, by which the latter is driven from the former. When the reel has wound up the length of record strip advanced to it by the feed rollers, (taken up the slack in the strip) the band G' will slip upon the

pulley H' and the storage reel will remain stationary, and in this manner an equal length of the record strip is wound upon the storage reel at each operation, regardless of the size of the roll upon the latter. 70

From the foregoing description it will be understood that in operating the machine all that the clerk has to do is to enter the desired memoranda upon the outer check-strip, through the opening G and then give the handle Q one complete revolution. This will cause the two check strips to be fed forward until the matter written upon them is carried in front of the cutter, and the latter will then be actuated to cut off the checks, while a corresponding length of the record strip will be advanced to the feed rollers and wound upon the storage reel. 80 85

Instead of applying power to the feed rollers, either directly or by a driving connection with the storage reel, the three strips might be passed between a pair of idle rollers and be fed forward simply by the winding of the record strip upon the storage reel, as is common in machines of this class. 90

As before stated, I believe I am the first in the art to produce an organized machine of this character in which the check strips are fed forward and automatically cut into detached checks, and the record strip wound upon a storage reel, by means of a single operating handle or driving mechanism of any description. Such being the case my invention in its broader scope is not restricted to any details of construction or arrangement, but contemplates the combinations expressed in my claims as broadly as the terms of the latter imply. 100 105

In another application filed simultaneously with this and bearing Serial No. 443,263, I have illustrated another embodiment of my invention, in which the driving mechanism is actuated by a lever and rock shaft instead of a crank and revoluble shaft, but both arrangements are intended to come within the scope of the broader claims of the present application. 110

Having thus fully described my invention, I claim: 115

1. In an autographic register employing one or more check strips and a record strip led over a writing tablet and having manifolding material interposed between them, the combination of feed rollers for advancing the strips, a storage reel for winding up the record strip, a cutter for severing the check strip or strips, and a single operating handle or driving mechanism actuating said parts to advance all of the strips, cut off the check strips, and wind up the record strip. 120 125

2. In an autographic register, the combination of a pair of rollers for advancing the paper strips, a storage reel for winding up the record strip, a cutter for severing the check strips, and a single operating handle or driving mechanism actuating both the storage reel and cutter. 130

3. In an autographic register, the combination of feed rollers for advancing the paper strips, a storage reel for winding up the record strip, a driving connection between one of the feed rollers and storage reel, a cutter for severing the check strips, and a single operating handle or driving mechanism for actuating the feed rollers to advance the strips and the cutter to sever the check strips.

4. In an autographic register, the combination of feed rollers for advancing the paper strips, a storage reel for winding up the record strip, a frictional driving connection between one of the feed rollers and storage reel, adapted to yield when the storage reel has wound up the length of record strip advanced to it by the feed rollers, a cutter for severing the check strip, and a single operating handle or driving mechanism for actuating the feed rollers to advance all of the strips and the cutter to sever the check strips.

5. In an autographic register, the combination of rollers for advancing the paper strips, a storage reel for winding up the record strip, a cutter for severing the check strips, a single revoluble driving shaft, and connections between said shaft and the storage reel and cutter for winding up the record strip and cutting off the check strips.

6. In an autographic register, the combination of a revoluble driving shaft, feed rollers for advancing the paper strips, one of said rollers being mounted upon said shaft, a storage reel for winding up the record strip, a driving connection between the feed rollers and storage reel and a cutter for severing the check strips, actuated by the revolution of the driving shaft.

7. In an autographic register, the combination of a revoluble driving shaft, feed rollers for advancing the paper strips, one of said rollers being loosely mounted upon said driving shaft and provided with a ratchet, an actuating pawl for the ratchet carried by and revolving with the driving shaft, means for disengaging the pawl from the ratchet and maintaining it out of engagement therewith during a portion of the revolution of the driving shaft, a storage reel for winding up the record strip, a driving connection between said reel and one of the feed rollers, a cutter for sev-

ering the check strips, and an actuating cam therefor revolving with the driving shaft, substantially as described.

8. In an autographic register, the combination of feed rollers for advancing the paper strips, a storage reel for winding up the record strip, a cutter for severing the check strips, located above said strips, and a single operating handle or driving mechanism for actuating the feed rollers, storage reel and cutter, substantially as described.

9. In an autographic register, the combination of a pair of feed rollers, bearing against each other throughout their length one capable of slight play in its bearings toward and from the other, and a spring applied to the latter roller near its middle whereby the pressure of said roller against the other is equalized throughout its length and a regular and straight feed of the paper strips obtained.

10. In an autographic register, the combination of a pair of feed rollers, one capable of slight play in its bearings toward and from the other and provided at its middle with a circumferential groove or cut-away space, and a bearing block fitting in said groove and spring-pressed against the spindle of the roller, substantially as and for the purpose described.

11. In an autographic register, the combination of the revoluble shaft P, the handle Q applied thereto, the feed rollers H I, the latter loosely mounted upon the shaft P and provided with the ratchet R, the arm T fast on the shaft P and provided with the cam D', the pawl S carried by the arm T and spring-pressed toward the ratchet R, the curved plate V upon the casing co-operating with a projection, as U, upon the pawl S, the grooved pulley F' fast upon the feed roller I, the storage reel O, the grooved pulley H' fast thereon, the yielding band G' passed around the pulleys F' H', the slotted cross bar K, the cutter B' hinged therein and co-operating with the cam D' upon the arm T, and the re-setting spring E' applied to the cutter, substantially as described.

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Witnesses:

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