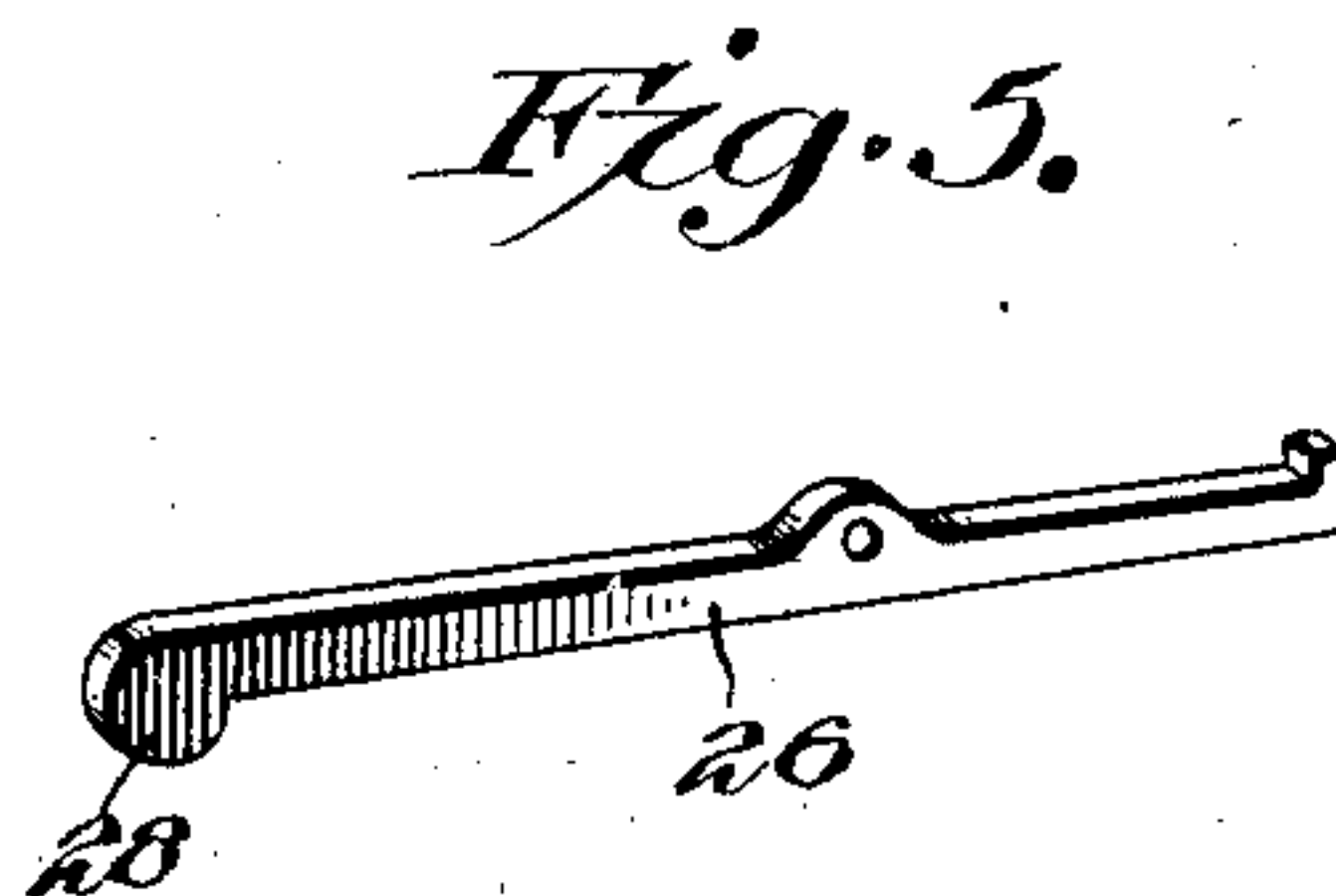
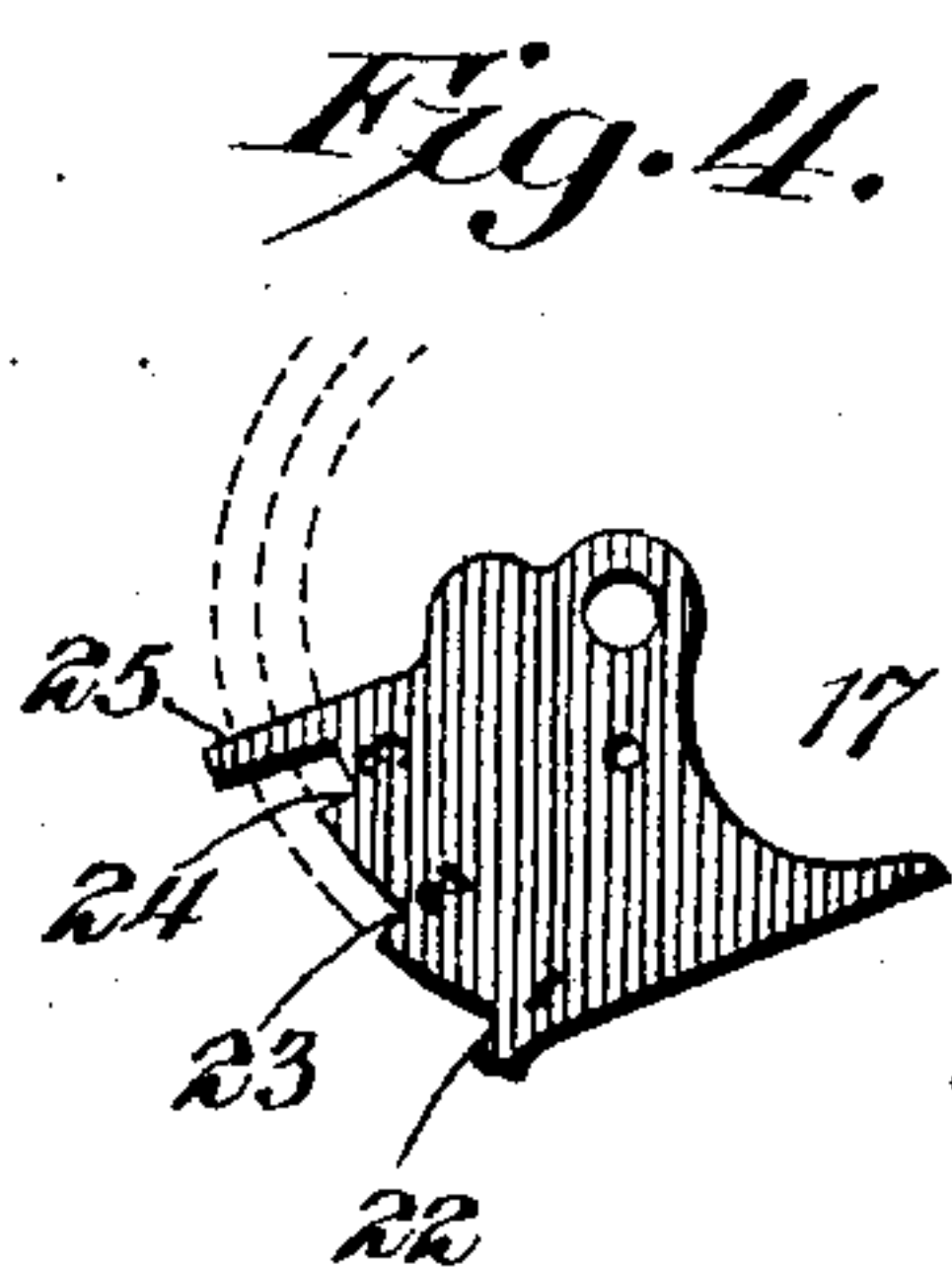
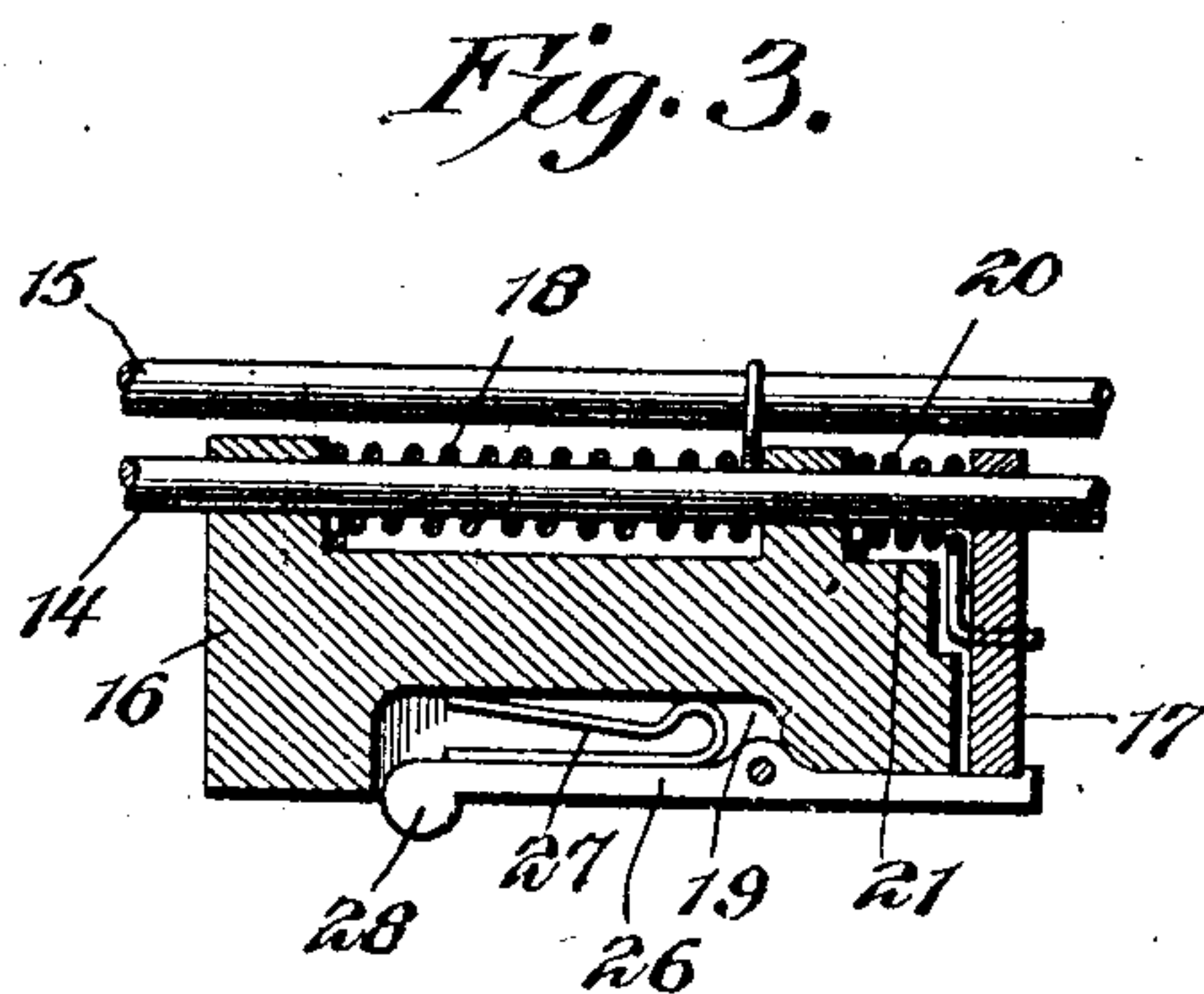
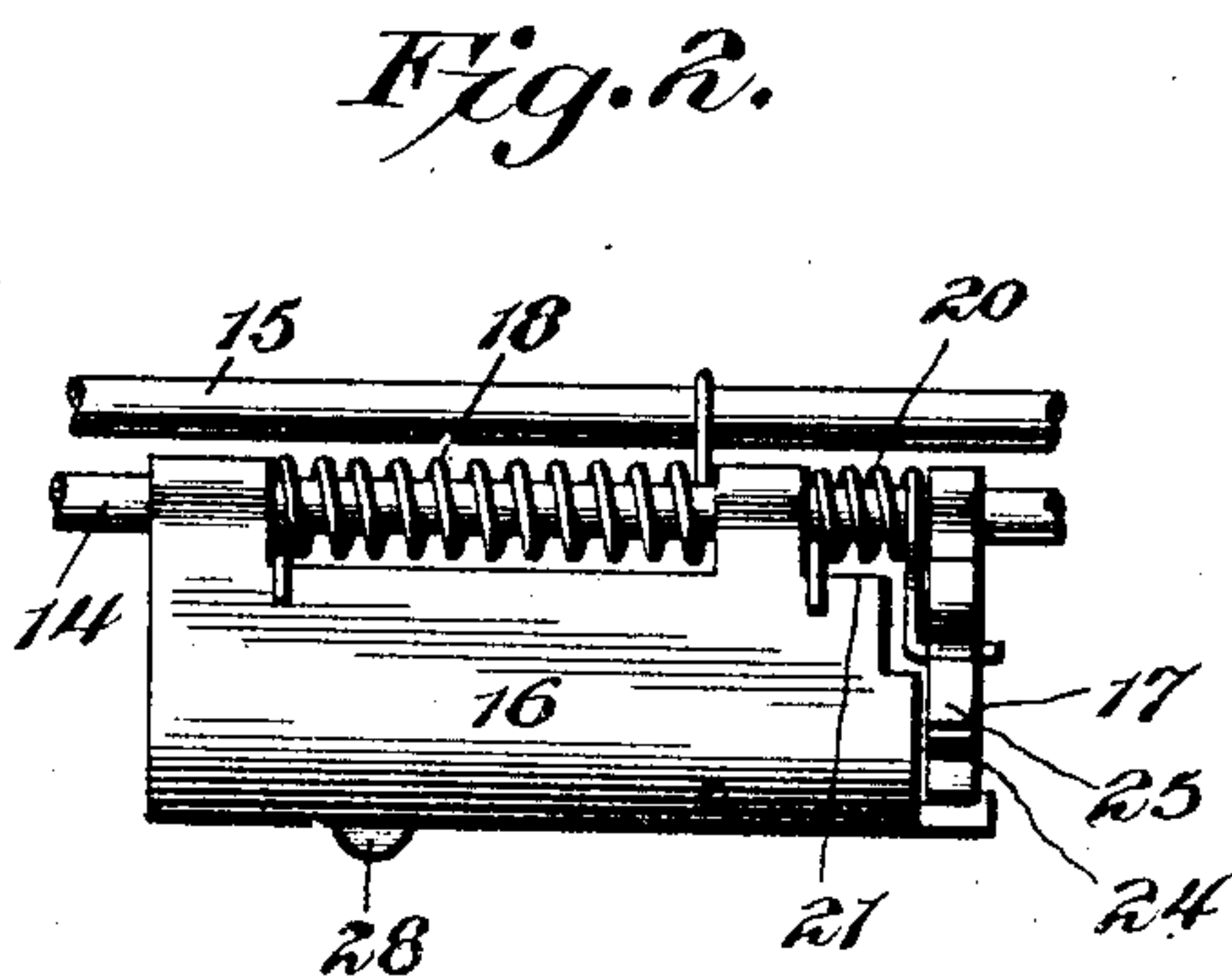
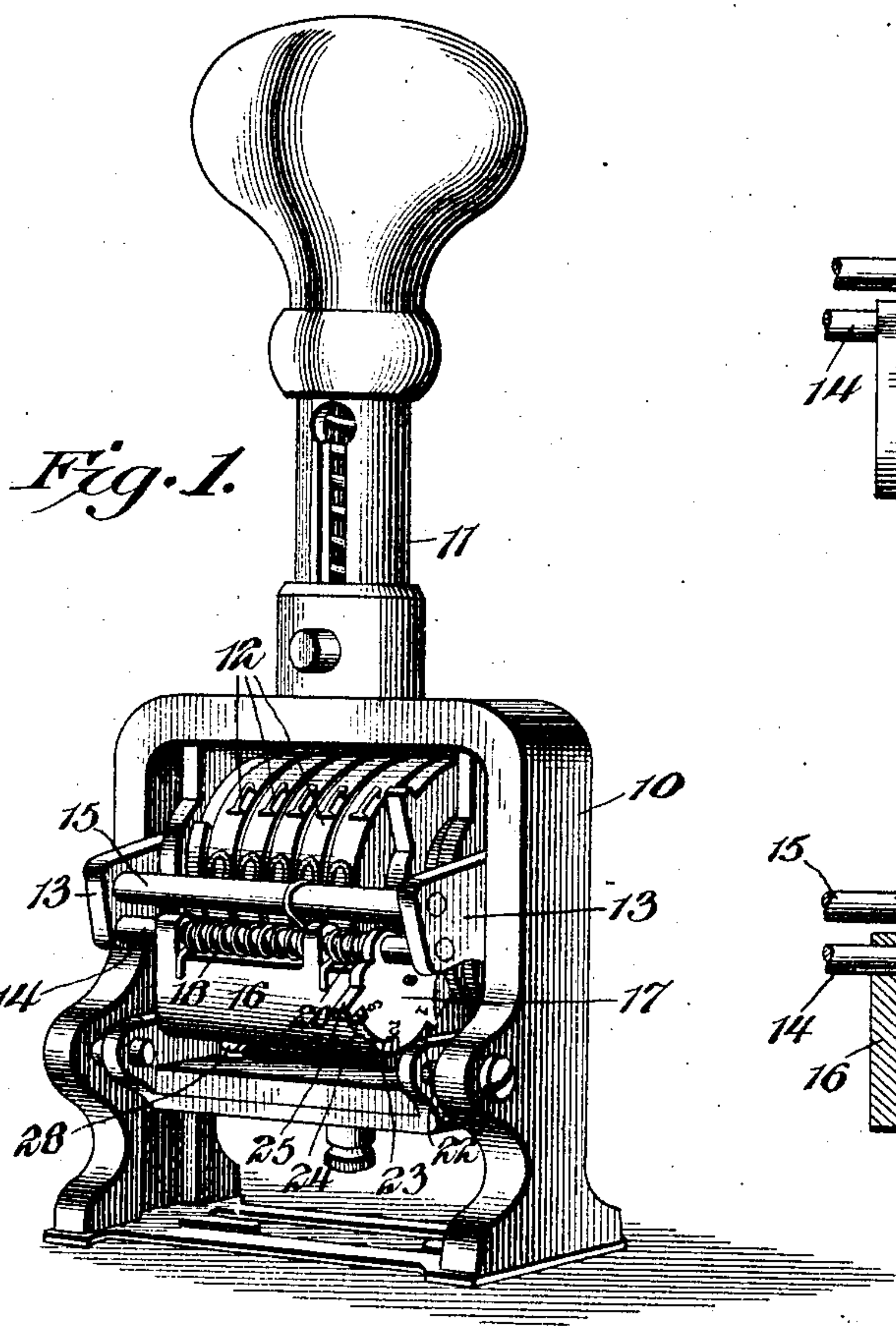


No. 785,964.

PATENTED MAR. 28, 1905.

F. J. MARTIN.
NUMBERING MACHINE.
APPLICATION FILED JULY 15, 1903.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6.

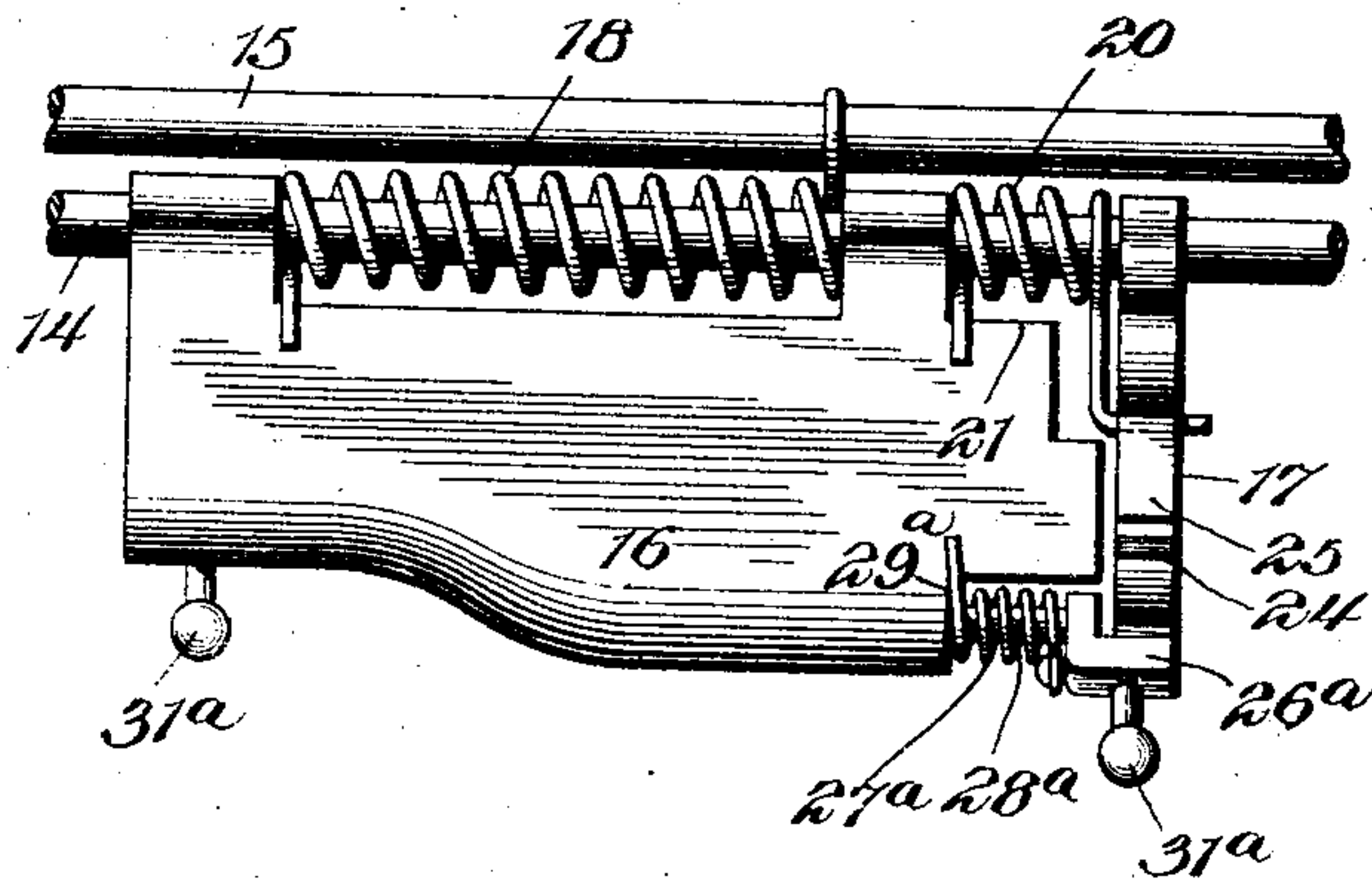


Fig. 7.

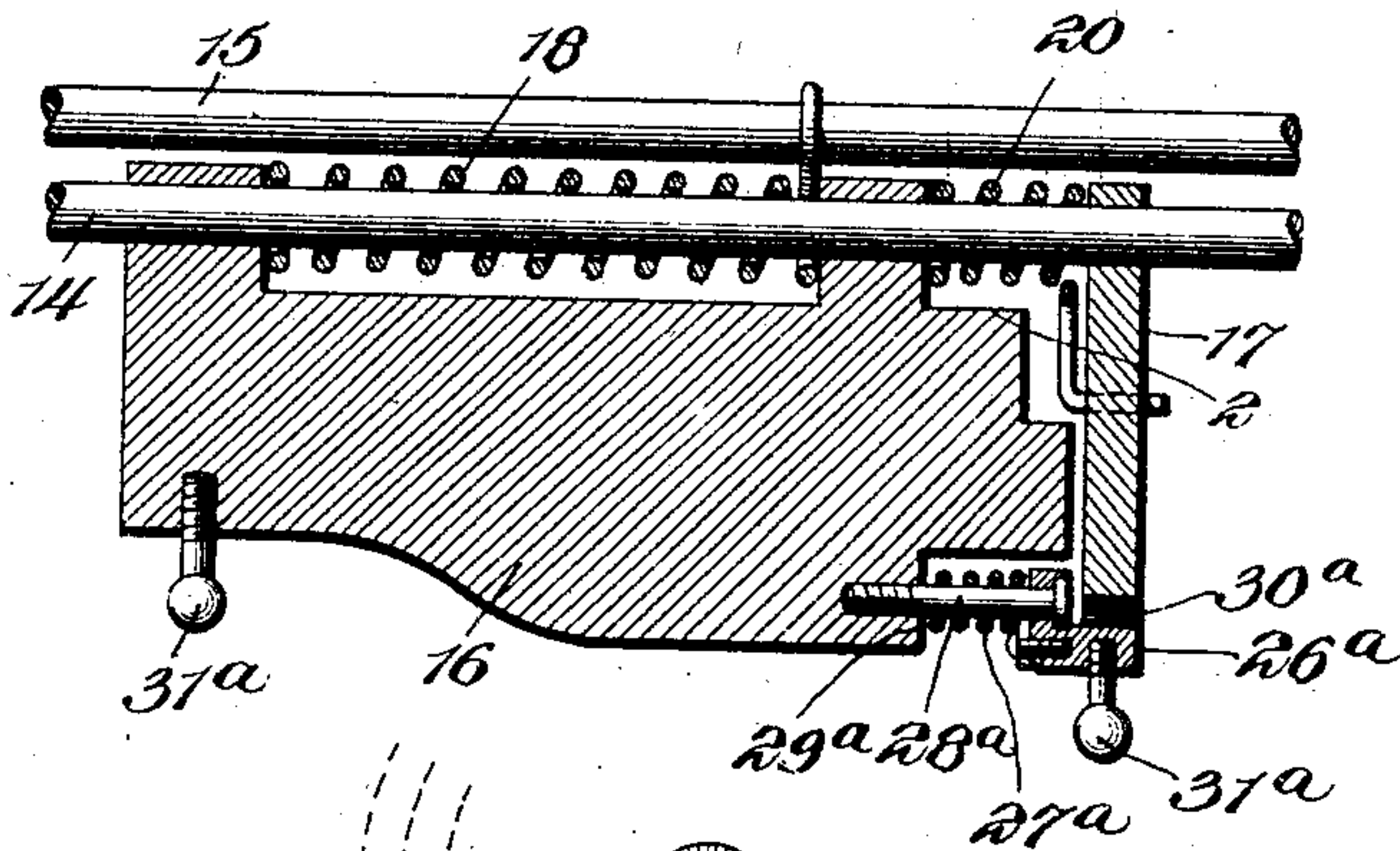
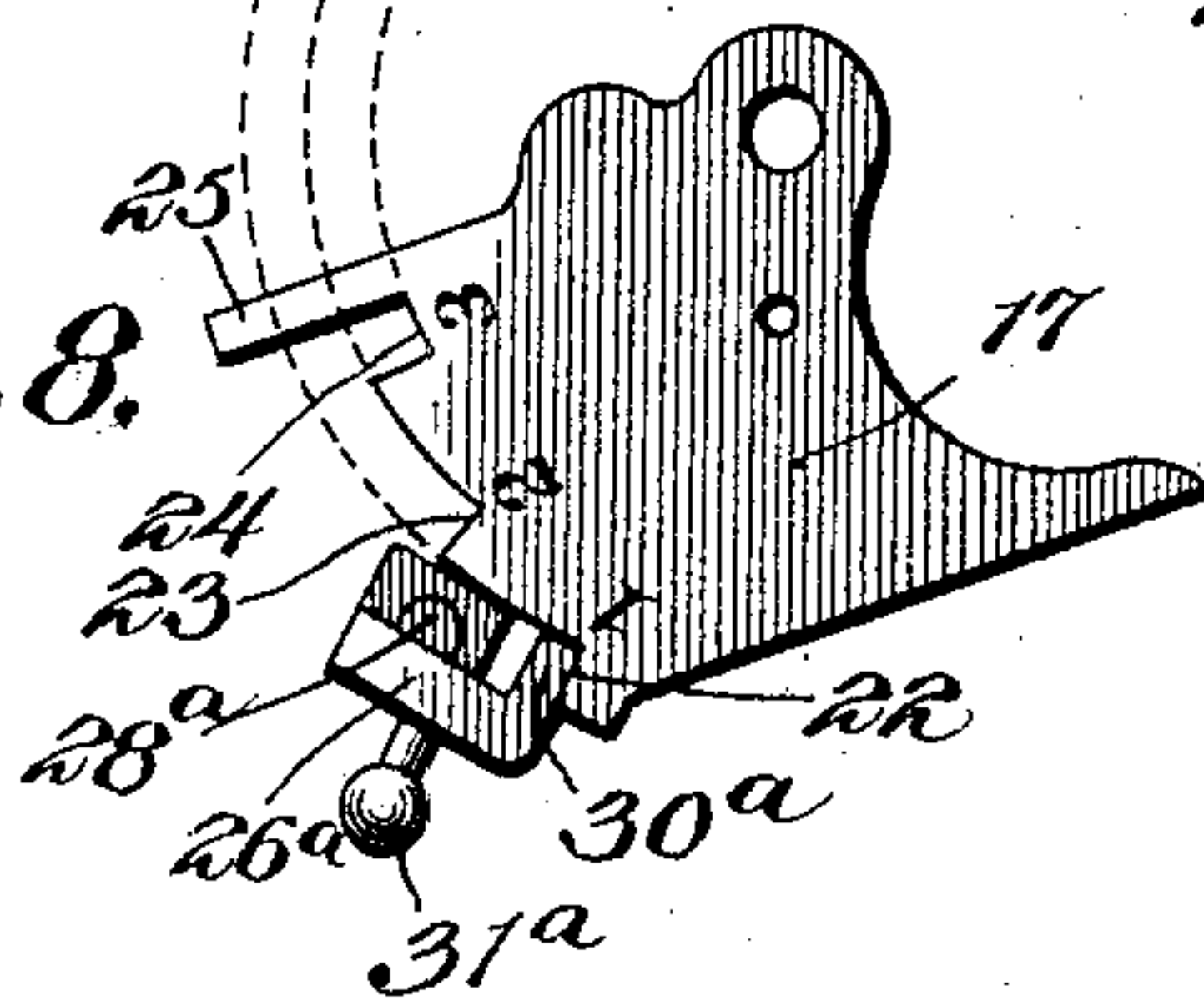


Fig. 8.



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FLORIAN J. MARTIN, OF MILWAUKEE, WISCONSIN.

NUMBERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 785,964, dated March 28, 1905.

Application filed July 15, 1903. Serial No. 165,654.

To all whom it may concern:

Be it known that I, FLORIAN J. MARTIN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Numbering-Machine, of which the following is a specification.

The present invention relates particularly to improvements in that class of consecutive-numbering machines which can be changed so that they will either duplicate or repeat a number indefinitely.

The object of the invention is to improve the changing mechanism so that the changes can be quickly and accurately made, said mechanism not involving any modification in the parts of the printing means, and therefore applicable to many of the machines now in general use. Furthermore, it is extremely simple and compact, being constructed of a few simple parts that will not readily become deranged.

Two embodiments of the invention are illustrated in the accompanying drawings and are described in the following specification. It is to be observed, however, that the claims are broad enough to cover various other changes and modifications which may be made.

In the drawings, Figure 1 is a perspective view of a well-known form of numbering-machine, showing the improvements applied thereto. Fig. 2 is a view in elevation of the improved changing mechanism. Fig. 3 is a longitudinal sectional view through the same. Fig. 4 is a view in elevation of the independent pawl. Fig. 5 is a detail perspective view of the connecting-dog preferably employed. Fig. 6 is a view in elevation of a slightly-modified form of construction. Fig. 7 is a longitudinal sectional view through the same, and Fig. 8 is an end elevation thereof.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

In order to clearly show the application of the invention, a numbering-machine is illustrated in Fig. 1, of which the supporting-yoke is designated 10, the handle 11, and the numbering-wheels 12. Projecting from the

yoke are spaced ears 13, connected by a supporting-rod 14 and a stop-rod 15. These parts are well known to those skilled in the art and in themselves form no part of the present invention, which relates to the changing mechanism, that is constructed as follows: Relatively movable pawl members 16 and 17 are journaled upon the rod 14, the member 16 being in the form of a block carrying the usual series of teeth or pawls that coact with the numbering-wheels 12. The member 17 is an independent pawl that is acted upon by a ratchet or star wheel movable with the printing mechanism, all of which will be readily understood. The block 16 is urged toward the numbering-wheels by a coiled spring 18, arranged upon the supporting-rod 14 and having its opposite ends bearing, respectively, against the block and the stop-rod. This block, furthermore, is provided in its outer face with a longitudinally-disposed seat 19, the inner portion of which is preferably deeper than the outer end. The pawl 17 is movable independently of the block, being located at one end thereof, and a coiled spring 20, arranged upon the supporting-rod 14, has its ends bearing in opposite directions against the block and the pawl, so as to tend to move said pawl away from the numbering mechanism. The spring 20 is preferably arranged in a cut-out portion 21, formed in the adjacent end of the block 16, as clearly shown in Figs. 2 and 3. The outer edge of the pawl 17 is provided with a plurality of sockets, forming shoulders 22, 23, and 24, which shoulders, as will be clear by reference to Fig. 4, are arranged at different distances from the rod, or, in other words, from the axis of movement of the pawl, a stop-finger 25 being located at the outer end of said series of shoulders. Pivoted intermediate its ends in the seat 19 of the pawl-block 16 is a connecting-dog 26, the outer end of this dog projecting over the pawl 17 and being arranged to coact with the shoulders thereof, being normally held in said co-acting relation by a spring 27, arranged in the deeper portion of the seat 19 and bearing against the inner arm of the dog, which arm is preferably provided with a thumb projec-

tion 28, that extends above the face of the block. It will of course be understood that when the outer end of the dog is engaged against the shoulder 22 the machine will number consecutively, when bearing against the shoulder 23 it will duplicate, and when in engagement in the outer notch or against the shoulder 24 it will repeat a number indefinitely. Assuming, therefore, the parts in relation to number consecutively, it is only necessary in order to have the machine duplicate to move the block 16 outwardly until the holding-dog drops behind the shoulder 23, this being readily accomplished, as the pawl 17 will be stopped by the rod 15. If it is desired to repeat a number, upon a further movement of the block the dog will engage the shoulder 24, and the elements will be held in this relation because of the coiled spring 20, which is urging the pawl outwardly. From its last-mentioned position the pawl may be readily changed to its intermediate station by pressing lightly upon the inner end of the connecting-dog 26, bringing the outer end into the plane of the second shoulder, (designated 23,) whereupon the spring 20 will quickly force the pawl outwardly until stopped by the engagement of said shoulder with the dog. A further depression will raise the outer end of the dog above the plane of the intermediate shoulder and the pawl will reassume its original relation with respect to the block 16. Thus it will be seen that an extremely-simple combination of elements is provided for quickly changing the mechanism to obtain the several results desired, and as the elements are simple and compact there is little chance of derangement.

While the pawl 17 has been shown on the lower right-hand side of the numbering-machine, it will be apparent to those skilled in the art that it may be readily changed to the various places at which this pawl is usually located.

The particular form of connection between the pawl members is a comparatively unimportant feature of the invention, and as an illustration of how the structure can be changed in this respect attention is invited to the modification shown in Figs. 6, 7, and 8. The same pawl members 16 and 17 are still employed, as are also the coiled springs 18 and 20. In lieu of the dog 26, that is in the form of a lever and is arranged within the longitudinal seat, there is employed in this particular construction a dog 26^a, journaled upon a pin 28^a, that is attached to the block 16 and projects into a cut-out portion 29^a, formed in one of the outer corners of the block. The dog 26^a is provided with an in-turned lip 30^a, which coacts with the shoulders 22, 23, and 24 in the same manner as the outer end of the lever-dog 26, above described. This dog 26^a is held in its coacting relation with respect to the shoulders by

means of a coiled spring 27^a, arranged upon the pin 28^a, one end of the spring being attached to the dog, the other end bearing against the block 16. Suitable handle-knobs 31^a may be fastened to the dog and block for the purpose of actuating the same. It will be apparent that the operation of this modification is exactly the same as that above described, and in some respects it is considered the preferable one.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a numbering-machine, the combination with a numbering-wheel, of relatively movable pawl elements mounted independently of each other, means connecting the elements for automatically moving one pawl element with relation to the other in one direction, and means connecting the elements for preventing such movement.

2. In a numbering-machine, the combination with a numbering-wheel, of relatively movable pawl elements mounted independently of each other, means associated with each element for automatically moving each element independently of and relatively to the other, and a device carried by one element and detachably engaging the other element for preventing such movement and holding the elements in different relative positions.

3. In a numbering-machine, the combination with a frame including a journal-rod, of numbering-wheels mounted in the frame, pawls separately journaled on the rod, a spring coiled upon the rod and having its opposite ends acting upon the pawls to relatively move them in opposite directions, and means connecting the pawls for holding the same against such movement.

4. In a numbering-machine, the combination with the numbering-wheels, of relatively movable pawl elements, one of which is provided with a plurality of shoulders, a connecting device carried by the other element and arranged to bear against the shoulders, and a spring bearing in opposite directions against the elements and serving to hold the connecting device in engagement with the shoulders.

5. In a numbering-machine, the combination with the numbering-wheels, of swinging pawl elements, one of which is provided with a series of radially-disposed shoulders, a con-

necting device carried by the other element and arranged to bear against the different shoulders, and a spring serving to swing the members in opposite directions and thereby hold the device in engagement with the different shoulders.

6. In a numbering-machine, the combination with the numbering-wheels, of a support, separately-swinging pawl elements, one of said elements having shoulders arranged at different distances from the axis of movement of the same, and a connecting device movably mounted upon the other element and coacting with the shoulders.

7. In a numbering-machine, the combination with the numbering-wheels, of a supporting-rod, separately-swinging pawl elements journaled on the rod, one of said elements having shoulders on its peripheral edge that are arranged at different distances from the axis of movement of said element, and a connecting-dog pivoted upon the other element and coacting with the shoulders.

8. In a numbering-machine, the combination with the numbering-wheels, of a pawl-block, an independently-movable pawl having shoulders, a spring bearing in opposite directions against the block and pawl to move the latter, and a dog pivoted upon the block

and engaging the shoulders to prevent such movement.

9. In a numbering-machine, the combination with the numbering-wheels, of a supporting-rod, a pawl-block journaled on the rod, an independently-movable pawl also journaled on the rod and having shoulders, a spring coiled upon the rod and bearing in opposite directions against the block and pawl to move the latter, and a dog pivoted upon the block and engaging the shoulders to prevent such movement of the pawl.

10. In a numbering-machine, the combination with the numbering-wheels, of a pawl-block coacting therewith, an independently-movable pawl mounted independently of the pawl-block, means for automatically moving the pawl away from the numbering-wheels, and a holding device carried by the pawl-block and engaging the pawl to prevent said movement thereof.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FLORIAN J. MARTIN.

Witnesses:

GARRET RINGENOLDUS,
CHAS. SCHERER.