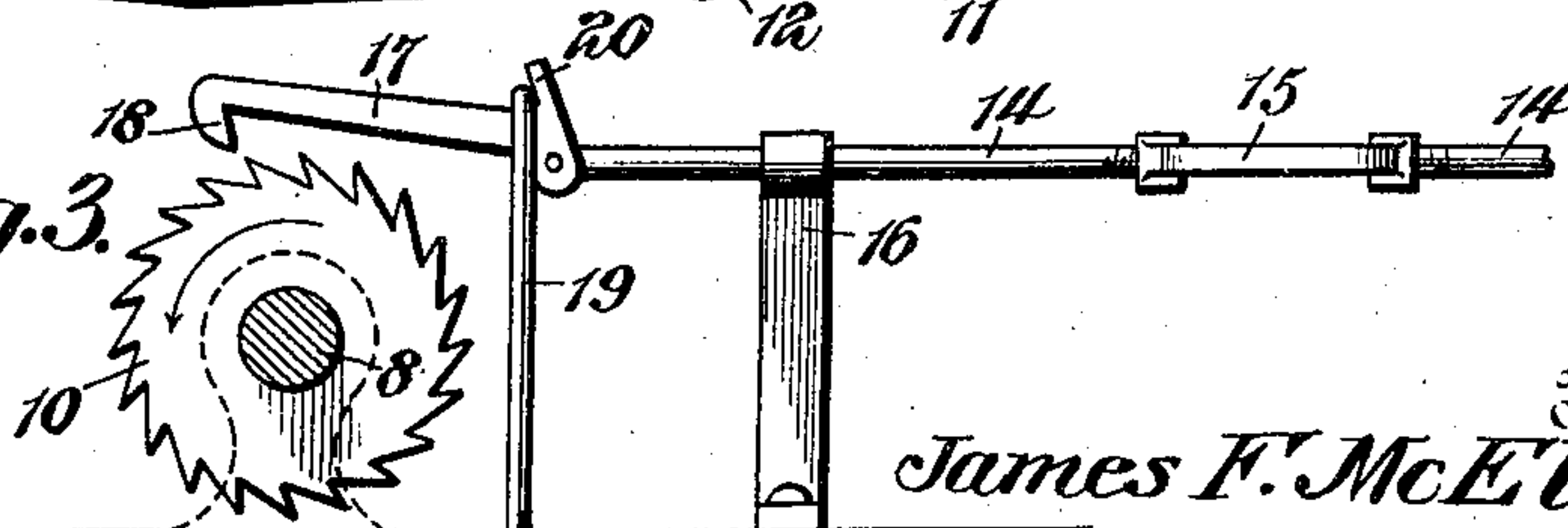


PATENTED FEB. 19, 1907.

2 SHEETS--SHEET 1.



Inventor,
James F. McElhinny

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E. G. Siggers

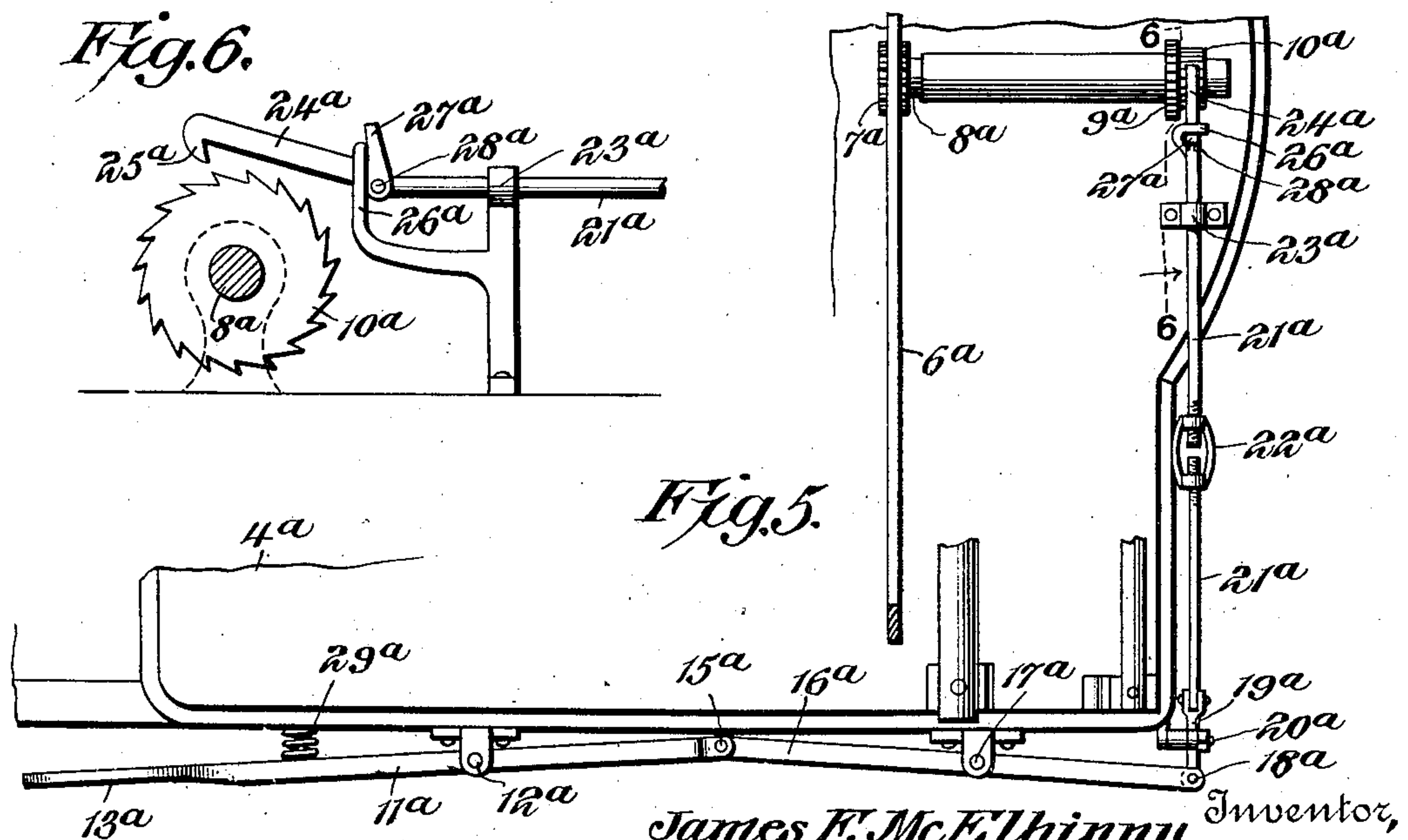
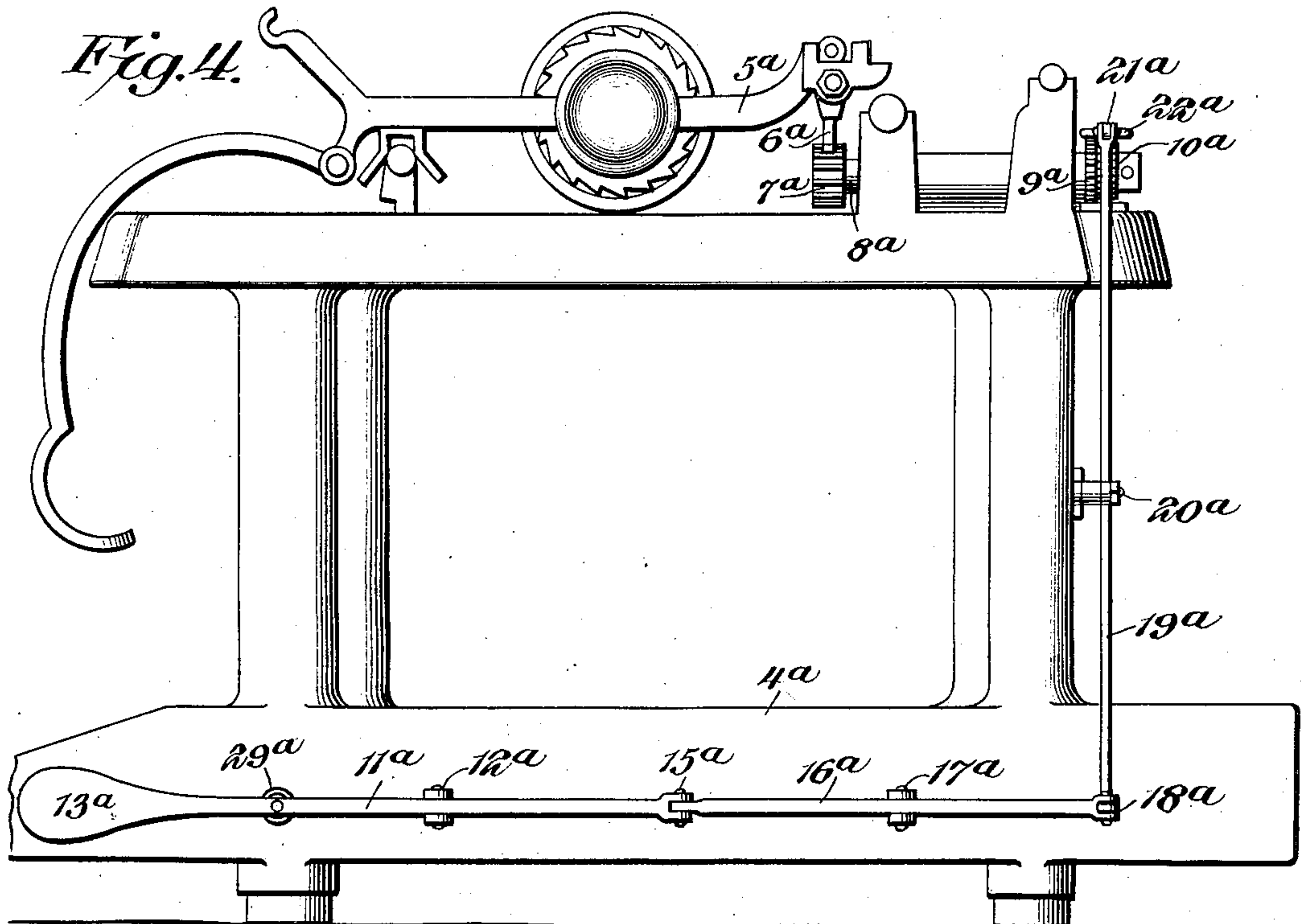
Attorney

No. 844,532.

PATENTED FEB. 19, 1907.

J. F. McELHINNY.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 21, 1905.

2 SHEETS—SHEET 2.



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Witnesses
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UNITED STATES PATENT OFFICE.

JAMES F. McELHINNY, OF EVANSVILLE, INDIANA, ASSIGNOR OF ONE-HALF
TO JOHN H. FENDRICH, OF EVANSVILLE, INDIANA.

TYPE-WRITING MACHINE.

No. 844,532.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed November 21, 1905. Serial No. 288,441.

To all whom it may concern:

Be it known that I, JAMES F. McELHINNY, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented a new and useful Type-Writing Machine, of which the following is a specification.

This invention relates more particularly to means for controlling the movement of the paper-carriage of a type-writing machine.

The principal object is to provide simple means of a novel nature whereby the carriage may be moved backwardly step by step a single space at the time, so that changes and corrections may be made with greater ease and expedition than with the ordinary carriage now in common use, which the operator has to grasp and manually return to the desired position, requiring considerable care and attention.

Two embodiments of the invention are illustrated in the accompanying drawings, wherein—

Figure 1 is an end elevation of a portion of a machine, showing one form of back-spacing mechanism applied thereto. Fig. 2 is a top plan view of the same. Fig. 3 is a detail sectional view on the line 3 3 of Fig. 2. Fig. 4 is an end elevation of a type-writing machine, showing another and perhaps preferred embodiment of the invention. Fig. 5 is a top plan view of a portion of said machine, showing the back-spacing mechanism. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 5.

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

In the present embodiment of the invention a portion of the usual frame of a well-known machine is shown and is designated 4, said frame having mounted thereon the usual paper-carriage 5. The letter-spacing mechanism of this carriage includes a rack 6, which is engaged with a pinion 7 on a shaft 8, journaled on the frame and extending to the rear side thereof. The usual wheel 9, with which letter-spacing dogs cooperate, is secured to the rear end of the shaft. So far as thus described the parts are well known.

Directly in rear of the wheel 9 and secured to the shaft 8 is a ratchet-wheel 10, and fulcrumed between its ends on one end of the frame is a lever 11, the fulcrum and mounting for said lever being shown at 12. The

front end of the lever is preferably flattened to provide a manually-engaged portion 13, and to the rear end is pivoted a draft-rod comprising sections 14, connected by a turn-buckle 15. The draft-rod reciprocates in bearings 16, located on the rear of the machine, and pivoted to the rear end of this draft-rod is a dog or pawl 17, the tooth 18 of which is arranged to cooperate with the ratchet-wheel 10. The said dog is normally held out of engagement with the ratchet-wheel by means of a stop-pin 19, carried by a suitable portion of the frame, which pin engages an upstanding lug 20, carried by the dog. A spring 21, interposed between the front portion of the lever and the frame, serves to throw the hand-engaged portion outwardly, and thus maintains the dog 17 out of engagement with the ratchet-wheel.

It will be apparent that as the dog is out of the path of movement of the ratchet-wheel under ordinary conditions the shaft 7 may be revolved as usual, and thus permit the letter-spacing movement of the carriage. If, however, it is desired to return the carriage one or more spaces—as, for instance, in making a correction—the operator has only to press the handle portion 13 of the lever toward the frame. This will cause the dog to be moved in an opposite direction, or, in other words, away from the stop-pin 19, whereupon said dog will drop into engagement with the wheel and move the same one increment, or, in other words, a single letter-space. A repetition of the operation will cause another corresponding movement. It will thus be seen that simple means are provided whereby a carriage may be easily and expeditiously returned to any point desired, and the necessity for grasping the same and carefully adjusting it is obviated.

Another and perhaps preferred embodiment of the invention is illustrated in Figs. 4, 5, and 6. In this form the machine-frame is designated 4^a and has mounted thereon a paper-carriage 5^a, the letter-spacing mechanism of which includes a rack 6^a, that is engaged with a pinion 7^a on a shaft 8^a. The usual wheel 9^a, with which letter-spacing dogs cooperate, is carried by the rear end of the shaft, and directly in rear of said wheel 9^a and secured to the shaft 8^a is a ratchet-wheel 10^a. Fulcrumed between its ends on the end of the base of the frame 4^a is a lever

11^a, the fulcrum for said lever being shown at 12^a. The front end of the lever is preferably flattened to provide a manually-engaged handle portion 13^a, and to its rear end is pivotally connected, as shown at 15^a, another lever 16^a, that is fulcrumed between its ends, as shown at 17^a. To the rear end of the lever 16^a is loosely connected, as shown at 18^a, the lower end of an upright lever 19^a, fulcrumed between its ends to a suitable part of the machine-frame, as shown at 20^a. A draft-rod is pivoted to the upper end of the lever 19^a and comprises sections 21^a, connected by a turnbuckle 22^a. The draft-rod reciprocates in a bearing 23^a, mounted on the rear of the machine, and pivoted to the inner end of this draft-rod is a dog or pawl 24^a, the tooth 25^a of which is arranged to cooperate with the ratchet-wheel 10^a. Said dog is normally held out of engagement with the ratchet-wheel by means of a stop 26^a, that is in the form of a bracket, carried by the bearing 23^a, said stop engaging an upstanding lug 27^a, carried by the dog above its pivotal connection 28^a with the draft-rod. A spring 29^a, interposed between the front portion of the lever 11^a and the frame, serves to throw the hand-engaged portion 13^a outwardly, and through the interposed lever mechanism said spring maintains the tooth 25^a of the dog 24^a out of engagement with the ratchet-wheel.

The operation of this structure is substantially the same as that already described, for it will be apparent that if the handle portion 13^a is pressed toward the frame of the machine the lug 27^a of the dog will be moved away from the stop 26^a. Consequently said dog will drop into engagement with the wheel and the wheel will be moved one increment. The advantage for this structure is that the handle portion is disposed in convenient relation to the keyboard, and the connections between the same and the dog are entirely out of the way of the carriage and the associated mechanism.

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 type-writing machine, the combination with a frame, of a carriage movably mounted thereon, and means for effecting the back spacing of the carriage, said means including a rotary ratchet-wheel associated with the carriage, a reciprocatory draft-rod extending in a horizontal plane above the wheel, means for reciprocating the rod, a dog pivoted on the portion of the rod that is adjacent to the ratchet-wheel and having a depending tooth movable downwardly into engagement with said wheel, said dog also having an upstanding lug, and a stationary stop arranged over the dog and in the path of movement of the lug to normally maintain the tooth of said dog out of engagement with the ratchet-wheel.

2. In a type-writing machine, the combination with a frame, of a carriage movably mounted thereon, and means for effecting the back spacing of the carriage, said means including a toothed device associated with the carriage, a reciprocatory draft-rod extending above the device, means for reciprocating the rod, a dog pivoted on the rod and having a tooth cooperating with the teeth of the device, said dog also having an upstanding lug and a stop located over the dog and in the path of movement of the lug to normally maintain the tooth of said dog out of engagement with the toothed device.

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

JAMES F. McELHINNY.

Witnesses:

I. F. CAMPBELL,
E. G. McCORMACK.