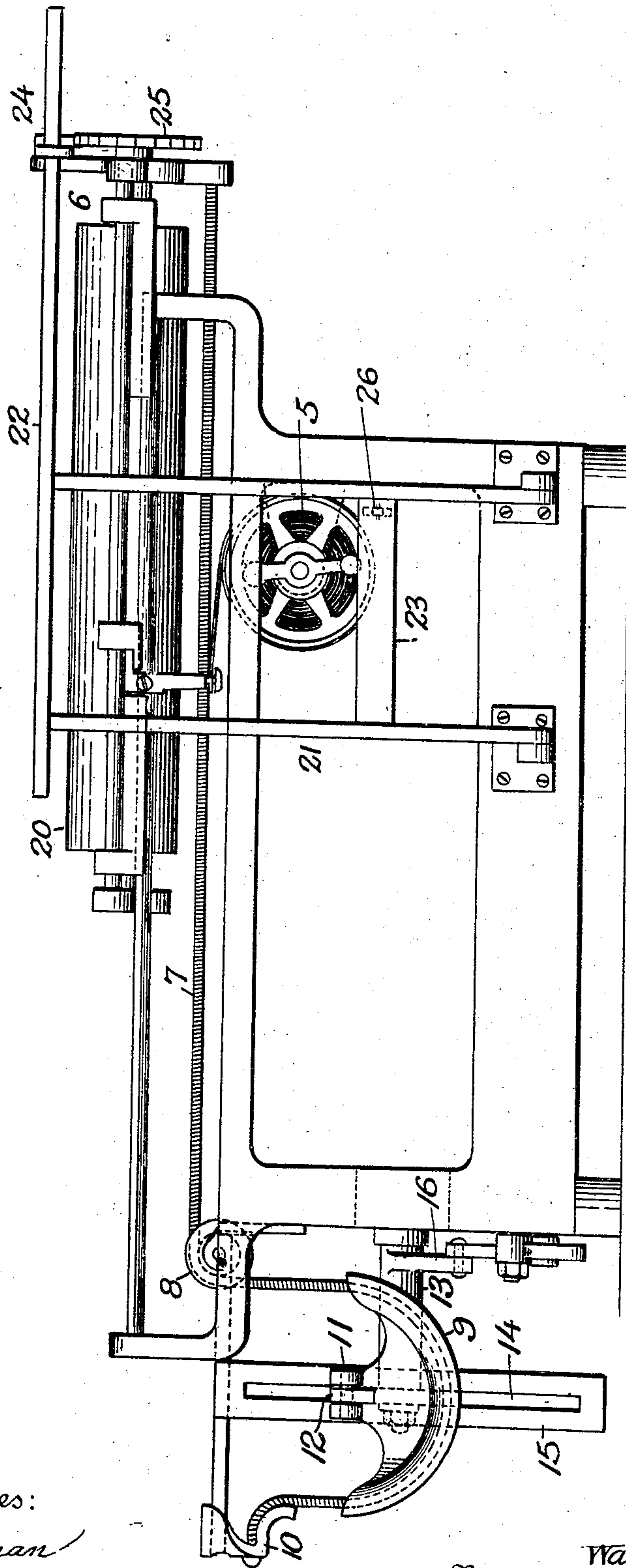


W. BLOOMFIELD.
CARRIAGE RETURN MECHANISM FOR TYPE WRITERS.
APPLICATION FILED APR. 20, 1909.

956,471.

Patented Apr. 26, 1910.
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
J. W. Wiman
K. Delabar.

Inventor
Walter Bloomfield
By Attorney
Victor J. Evans.

W. BLOOMFIELD.
CARRIAGE RETURN MECHANISM FOR TYPE WRITERS.
APPLICATION FILED APR. 20, 1909.

956,471.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 2.

Fig. 2.

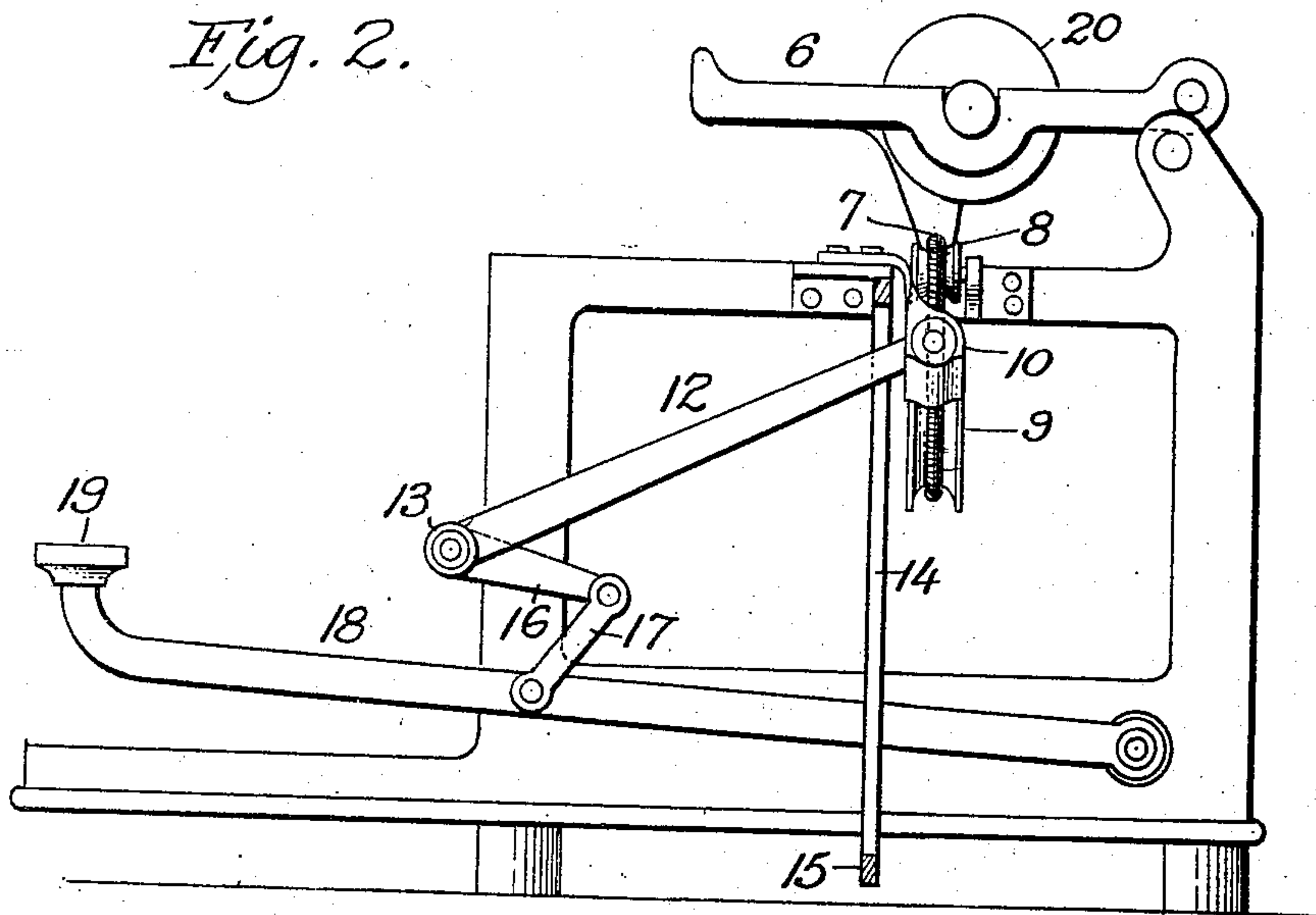
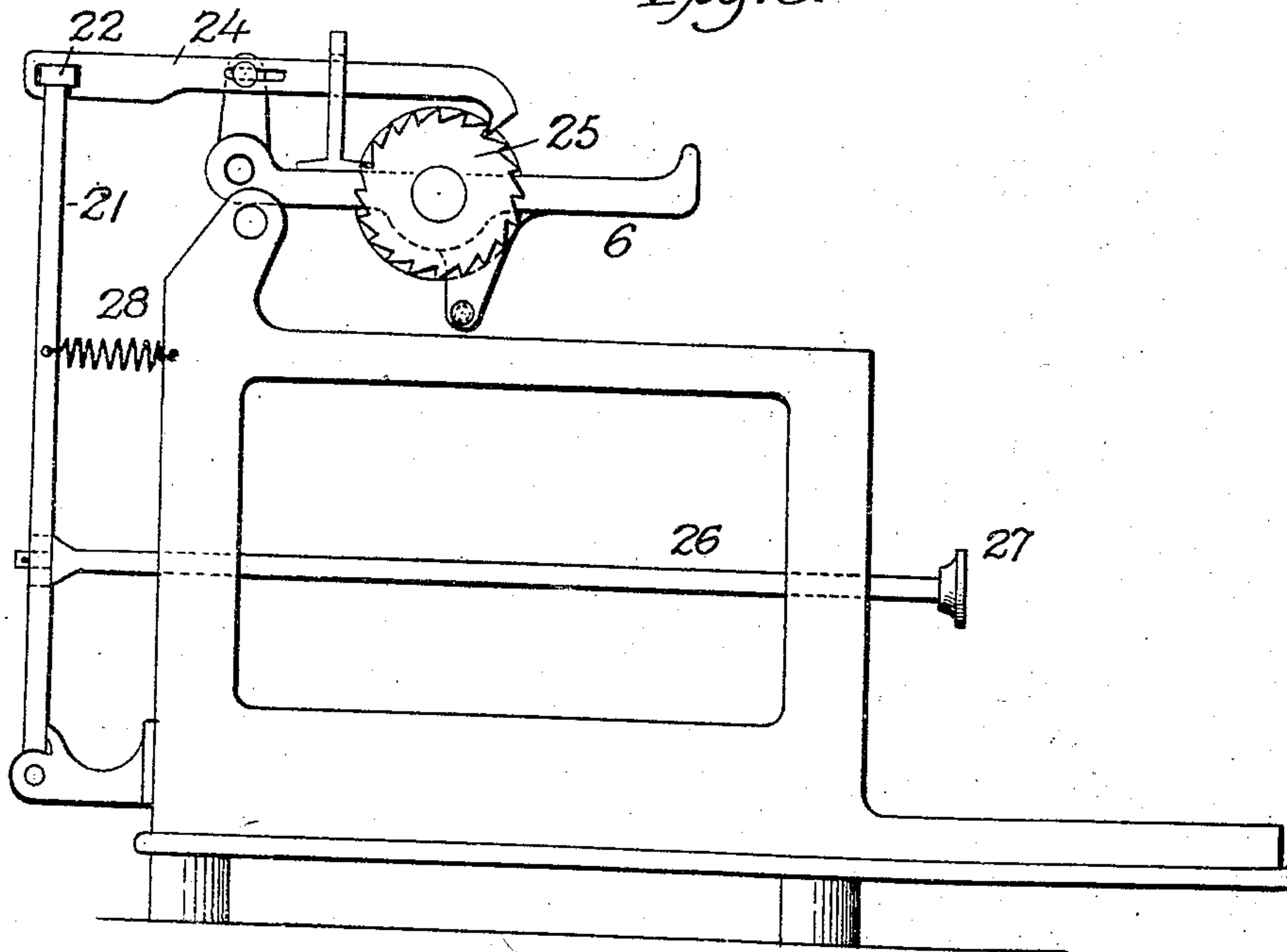


Fig. 3.



Witnesses:
J. W. H. H. H. H.
K. Delabar.

Inventor
Walter Bloomfield,
By Attorney
Victor J. Evans

UNITED STATES PATENT OFFICE.

WALTER BLOOMFIELD, OF RIDGEFIELD PARK, NEW JERSEY.

CARRIAGE-RETURN MECHANISM FOR TYPE-WRITERS.

956,471.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed April 20, 1909. Serial No. 491,068.

To all whom it may concern:

Be it known that I, WALTER BLOOMFIELD, a subject of the King of Great Britain, residing at Ridgefield Park, in the county of Bergen and State of New Jersey, have invented new and useful Improvements in Carriage-Return Mechanism for Type-Writers, of which the following is a specification.

This invention relates to typewriters and more especially to the class of carriage return mechanism by which the carriage after it has been carried to the end of the frame by the usual propelling spring may be returned to its starting point by means of certain simple mechanism operated by a key lever from the front of the machine as will be more fully explained in the following specification set forth in the claims and illustrated in the drawings where:

Figure 1 represents a rear elevation of a typewriter with the invention applied to same. Fig. 2 is an elevation of one end of the machine. Fig. 3 is a view of the other end.

In the devices heretofore invented to accomplish the same result the carriage moving spring has been weakened by certain mechanism attached to the carriage to return same to its starting point and the spring has been obliged to do its heaviest work when its force is weakest. The present invention puts very little additional work on the spring 5 and the work is uniform from beginning to end.

The drawings illustrate a type-writer of any of the well known types having the usual feeding spring 5 to move the carriage 6 forward and to the latter and preferably the front end is secured a resilient cord or similar material 7 which for better wear may be a coil spring of steel or similar yielding metal which runs the length of the frame and is directed downward by the roller 8 at the corner of the frame and under a grooved segment 9 and is secured to a bracket 10 extending from the side of the machine.

The upper end 11 of the segment is forked and in this fork is pivoted the end of an arm 12 on a shaft 13 that is journaled at the front of the machine and the arm near its end plays in a slot 14 of the plate 15 depending from the bracket 10 while the shaft 13 also has projecting from it the short

arm 16 connected by means of a link 17 with the key lever 18 pivoted at the rear of the machine and having the usual button 19 at its outer end.

The groove in the segment 9 is smooth and when the key lever 18 is depressed it throws down the arm 12 which carries down the segment and exerts a pressure on the spring 7 until its tension overcomes the strength of the spring 5 and the carriage is drawn back to its starting point and the tension of the spring relaxed, the key lever being released the remaining tension lifts the segment slightly until the spring 7 is restored to its normal condition. As the carriage 6 moves forward the segment and key lever 18 are elevated as shown in the drawings ready for the operation of retracting the carriage.

With the retraction of the carriage it is necessary that the platen 20 be provided with some means for line spacing at any point in its movement and for this purpose a frame 21 is hinged to the back of the machine near its bottom and carries a rail 22 at its top and the two uprights of the frame are connected near their lower end by the cross piece 23. The carriage 6 has adjustably pivoted at one of its ends the pawl 24 whose toothed end engages the ratchet wheel 25 while the rear end is slotted to fit around the rail 22 to move with it when it oscillates and to move the frame and pawl a rod 26 is attached to the frame and extends toward the front of the machine where it has a push button 27 to operate it. The frame is held in its forward position normally by a spring 28.

This mechanism imposes very little work on the usual propelling spring and its parts are simple and cheap. The spring 7 may be of such length or strength to properly return the carriage to its starting point without giving it a momentum which would be apt to injure the machine. The operative parts may also be made or adjusted to proper proportions to accomplish the same results.

It is obvious that the various details may be altered or otherwise arranged without departing from the essential features above described.

What I claim as new and desire to secure by Letters Patent is:

1. In a carriage return mechanism the combination with the frame, of a typewriter,

of a moving carriage, resilient means connecting the carriage and frame and means for increasing the tension of the resilient means and interposed between its ends.

5 2. In a carriage return mechanism, the combination with a frame of a typewriter, of a carriage, a feed spring attached to the carriage, resilient means adapted to overcome the action of the feed spring and
10 attached to the frame and the carriage, and means for increasing the tension of the resilient means and located between its ends.

3. In a carriage return mechanism, the combination with a typewriter frame and
15 carriage, of a feed spring, a return spring normally weaker than the feed spring and attached to the frame and carriage, and means for increasing the strength of the return spring and located between its points
20 of attachment.

4. In a carriage return mechanism, the combination with a typewriter frame and carriage, of a feed spring, a return spring connecting the frame and carriage and
25 means for causing the return spring to overcome the action of the feed spring and located between its points of attachment.

5. In a carriage return mechanism, the combination with a typewriter frame and
30 carriage, of a feed spring to propel the carriage forward, a return spring attached at one end to the carriage and at the other end to the frame, and intermediate means to bear upon and increase the tension of the
35 latter spring to overcome the tension of the feed spring.

6. In a carriage return mechanism, the combination with a typewriter carriage and
40 frame, of a feed spring for the carriage a return spring connected with the carriage and attached to the frame, and means attached to the frame intermediate of the ends

of the return spring to bear upon and increase its tension.

7. In a carriage return mechanism, the combination with a typewriter frame and
45 carriage, of a feed spring for the carriage, a return spring normally relieved from tension as the carriage moves forward, curved means adapted to be depressed upon the return spring to put it under tension and a
50 lever at the front of the machine adapted to depress the curved means.

8. In a carriage return mechanism, the combination with a typewriter frame and
55 carriage, of a feed spring for the carriage, a return coil spring having one end attached to the carriage and the other to a bracket on the frame, a slotted plate adjacent to the bracket, a lever operated from the front of
60 the machine and playing in the slot of the plate, and a grooved segment carried by the lever and impinging the spring to depress it between its ends and increase its
65 tension.

9. In a carriage return mechanism, the combination with a typewriter frame and
carriage, of a feed spring connected with the carriage, a coil spring attached at one end to the carriage and at the other to a
70 bracket on the frame, a grooved segment adapted to take up the slack in the coil spring when the carriage is retracted and to put the spring under tension when it occupies a forward position, a lever operating the segment, and a key lever connected
75 with said operating lever.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER BLOOMFIELD.

Witnesses:

GEORGE BLOOMFIELD,
JAMES F. DUHAMEL.