

H. G. MILLS.
 CARriage RETURN DEVICE FOR TYPE WRITERS.
 APPLICATION FILED MAY 23, 1908.

907,079.

Patented Dec. 15, 1908.

2 SHEETS—SHEET 1.

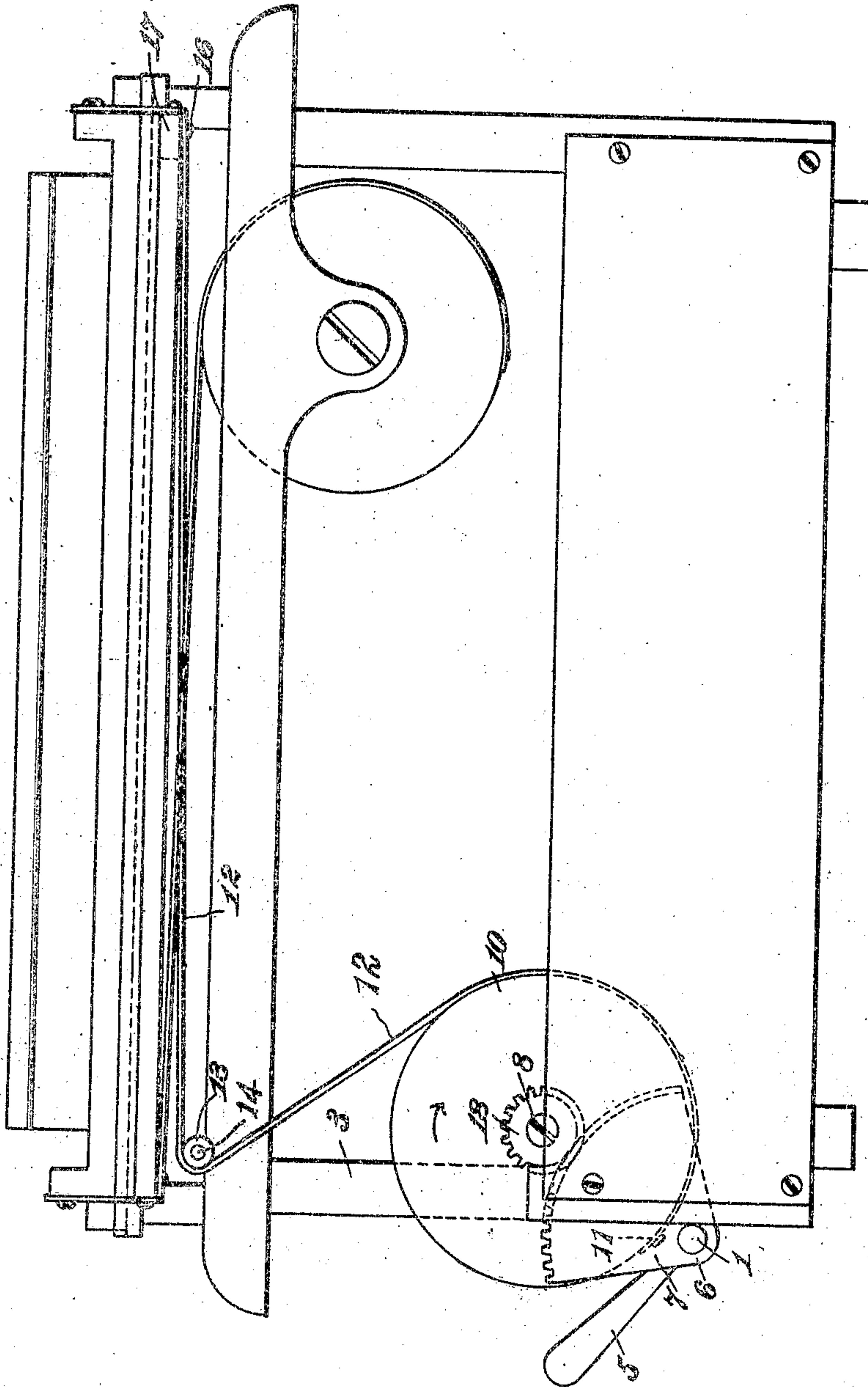


Fig. 1.

Witnesses:
 W. C. Smith
 A. A. Olson

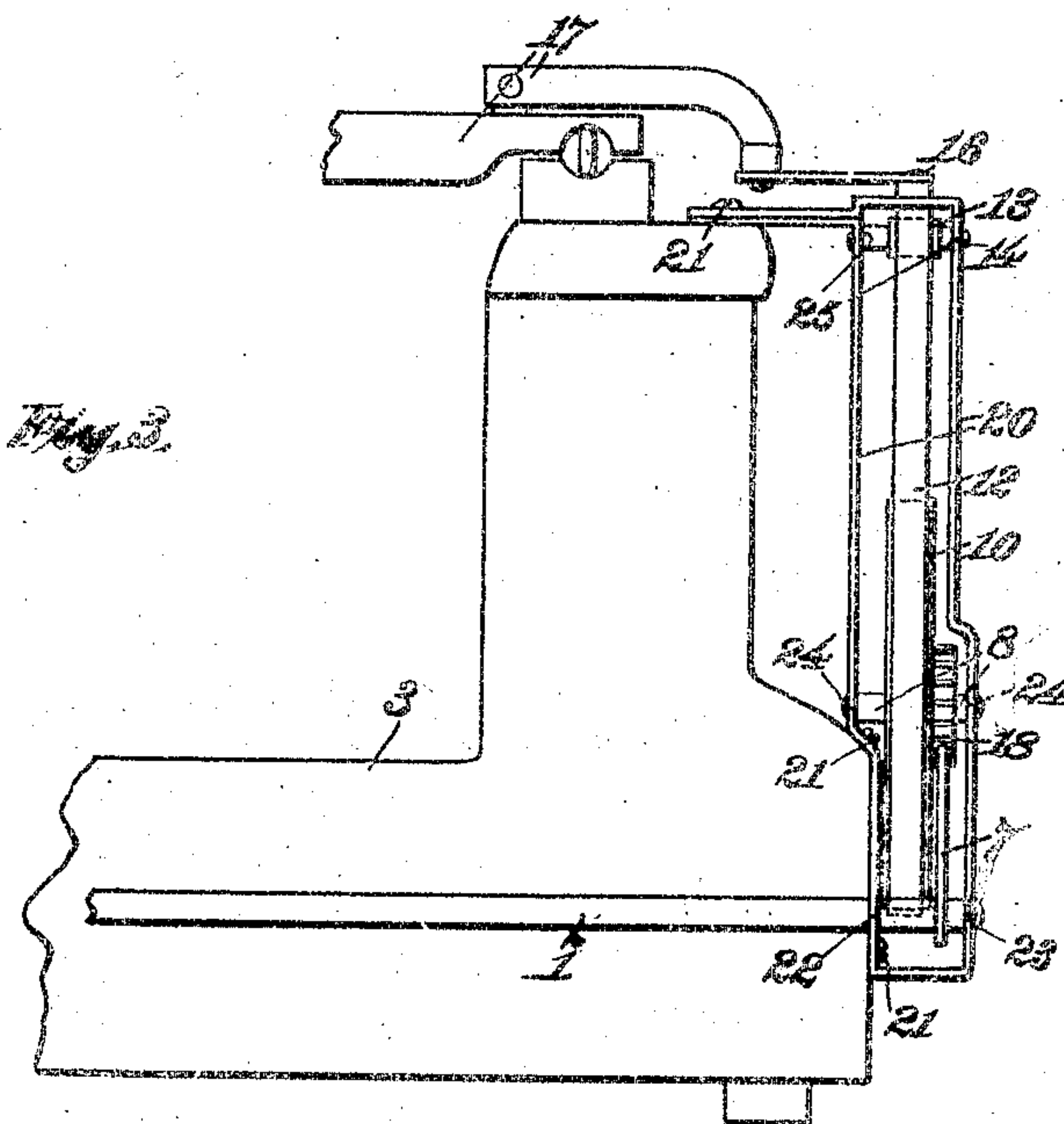
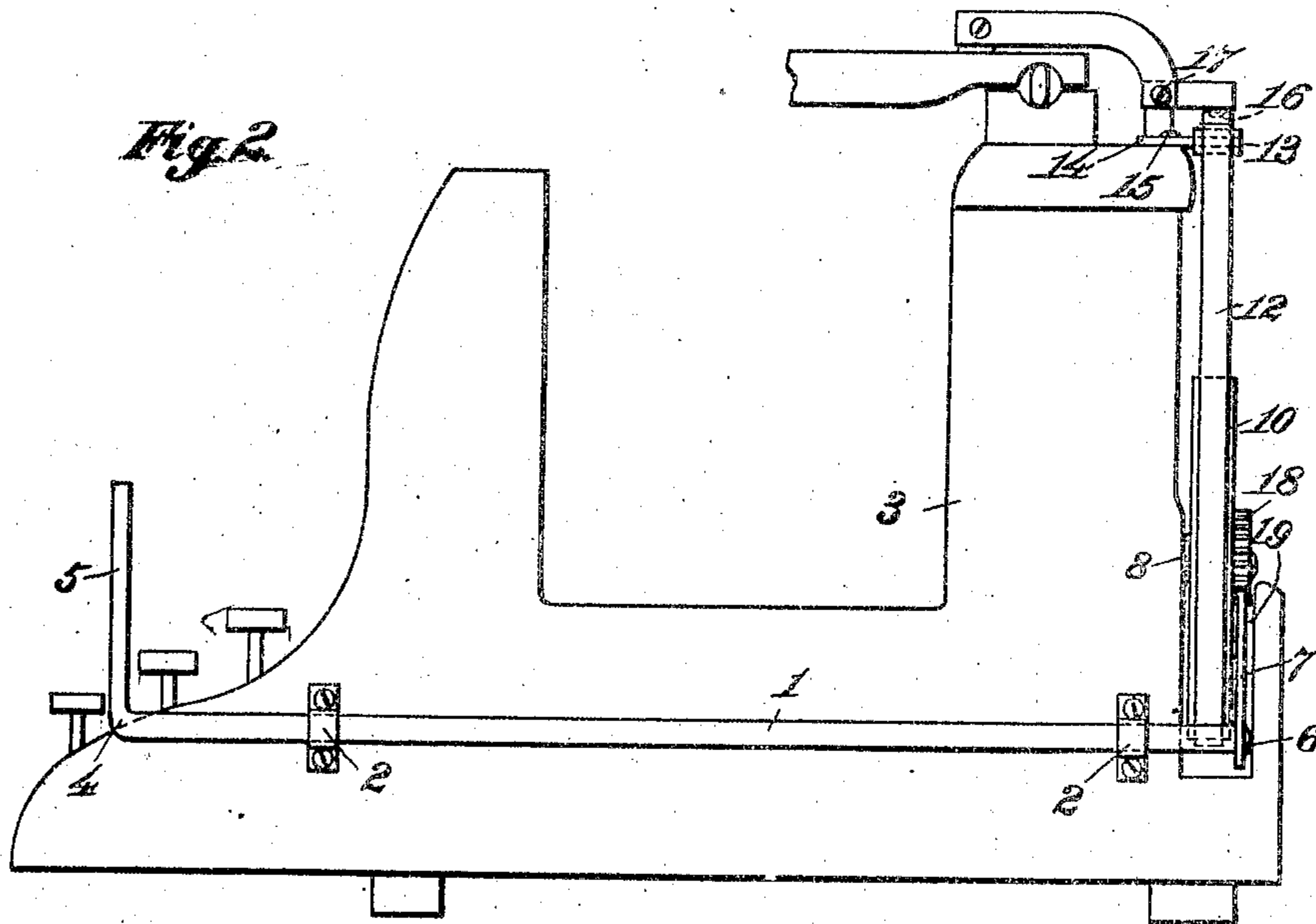
Inventor:
 Henry G. Mills
 By Joshua R. H. B. B.
 Atty

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Inventor:
Henry G. Mills,
By Joshua R. Potts,
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UNITED STATES PATENT OFFICE.

HENRY G. MILLS, OF MILWAUKEE, WISCONSIN.

CARRIAGE-RETURN DEVICE FOR TYPE-WRITERS.

No. 907,079.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed May 23, 1908. Serial No. 434,569.

To all whom it may concern:

Be it known that I, HENRY G. MILLS, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Carriage-Return Devices for Type-Writers, of which the following is a specification.

My invention relates to typewriters having the ordinary carriage, and more particularly to carriage return devices in typewriters.

The object of my invention is to provide a device by means of which, the carriage may be quickly and easily returned to initial position, that is, in position to start a new line without raising the hand above the keyboard, but by a single lateral movement thereof.

A further object, is to provide a device which will be strong, durable, of low cost to manufacture, and one which will not readily get out of order.

A still further object, is to provide a device which may be easily attached to any typewriter.

Other objects will appear hereinafter.

My invention consists generally in an oscillatory shaft, at one end of which is an upwardly extending arm adapted to be actuated by the operator of the machine, and at the other end of the shaft, a segmental gear, which in combination with a pinion, drum, and flexible tape, draws back the carriage, the arm being arranged at one side and adjacent to the keyboard.

My invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, and in which,

Figure 1 is a side elevation of a typewriter equipped with a device embodying my invention, in its preferred form, Fig. 2 is an end elevation of the same, and Fig. 3 is an end elevation of a typewriter equipped with a device embodying my invention in a modified form.

Referring now to the drawings, especially to Figs. 1 and 2, 1 is a shaft mounted in the bearings 2 on the right-hand side of the frame 3 of the typewriter. Upon the forward end of the shaft 1, is an upwardly extending handle or lever, which is of a suitable length. As shown in the drawings, the shaft is bent upwardly as at 4, forming the

handle or lever 5. On the other end of the shaft 1 is brazed, or otherwise secured, the segmental gear 7.

Suitably mounted on a stud shaft 8 fixed to the frame 3, is a drum 10. Riveted or otherwise secured to the drum 10, as at 11, is a flexible tape 12. The tape 12 is partially wound about the drum, and extends upwardly and passes over a roller 13, the shaft 14 of which, is suitably secured to the frame 3. As shown in Fig. 2 of the drawings, it is secured to the top of the frame by the screw 15. The tape 12 then extends to the opposite end of the machine, where it is suitably secured as at 16 to the carriage 17.

Rotatably fixed on the shaft 8 is a pinion 18 which meshes with the segmental gear 7. The latter are of such proportion that a quarter turn of the segment 7, or obviously of the handle 5, will cause a complete rotation of the pinion 18 and consequently the drum 10.

The form of my device just described (Figs. 1 and 2) is to be manufactured or assembled simultaneously with the rest of the machine, and the frame will have to be shaped when cast, to accommodate the device.

As shown in the drawings (Figs. 1 and 2), the frame 3 is recessed as at 19 to receive the drum 10 and the segmental gear 7. The shaft 1 is secured to the frame 3 in a horizontal position. When the carriage of the machine is in initial position, the handle or lever 5 is down, but as the carriage moves to the left, it gradually rises, until the carriage is at the limit of its movement when the handle is in a vertical position. Now the operator by a right lateral movement of the hand, gives the handle a quarter turn downwardly, that is to a horizontal position. This oscillates the shaft, which in turn through the medium of the segment 7 and pinion 18, revolves the drum 10. The drum draws the tape with it, and the tape being secured to the carriage, pulls it to the right, thus returning the carriage to its normal position. It is obvious that this form of my device is not adapted to be attached to a machine which is already in use, as it would be too expensive, and in some cases impossible to recess the frame so as to receive the device.

To facilitate placing the device on a machine already in use, I so construct the device as to constitute an attachment. This

form is shown in Fig. 3 of the drawings. As shown therein, the main parts of the device remain the same, the difference being in the support. This is formed of a stout metal band or casting 20, which is bent or cast to conform to the shape of that portion of the frame to which it is to be attached, and is secured to it by the screws 21. It is obvious that for each separate make, this auxiliary frame will have to be of a slightly different shape so as to conform to the particular shape of the frame of the typewriter. In the attachment form shown in Fig. 3, the shaft 1, is suitably mounted at its rear end in bearings 22 and 23 in the auxiliary frame 20 instead of in the rear bracket 2 as shown in Fig. 2, the drum and pinion shaft 8 also being suitably mounted as at 24 in the frame 20 above the shaft 1. The roller shaft 14 instead of being mounted on the frame 3 as in Figs. 1 and 2, has bearings 25 in the frame 20. Thus all parts of my device are mounted in the auxiliary frame 20 forming a complete attachment which may be readily secured to the frame of the typewriter.

Having described my invention what I

claim as new, and desire to secure by Letters Patent, is:—

A typewriter having the ordinary carriage and frame, in combination with an oscillatory shaft mounted upon the side of said frame, an upwardly extending lever upon the forward end of said shaft, said lever being arranged at one side of and adjacent to the key board and adapted to be swung outwardly and downwardly by a lateral movement of the hand of the operator to oscillate said shaft, a segmental gear fixed to one end of said shaft, a drum rotatably mounted adjacent to said segmental gear, a pinion fixed to said drum and meshing with said gear, and a flexible tape secured at one end to said drum and at the other end to said carriage, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY G. MILLS.

Witnesses:

JANET E. HOGAN,
HELEN F. LILLES.