

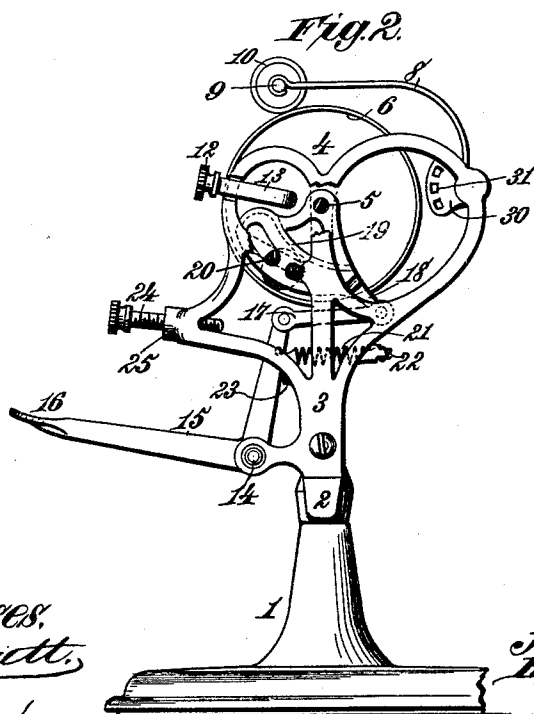
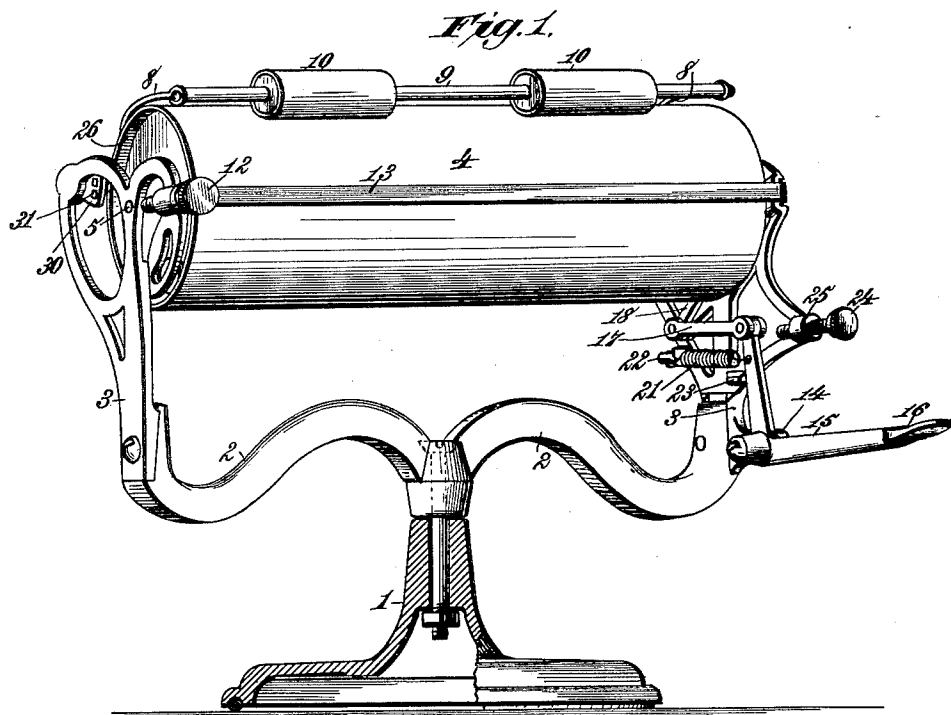
(No Model.)

2 Sheets—Sheet 1.

J. CHASE.
COPY HOLDER FOR TYPE WRITERS.

No. 460,847.

Patented Oct. 6, 1891.



Witnesses:
Phit G. G. G.
Geo. H. Rea

Inventor:
James Chase.
By *James L. Norris*
Norris

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

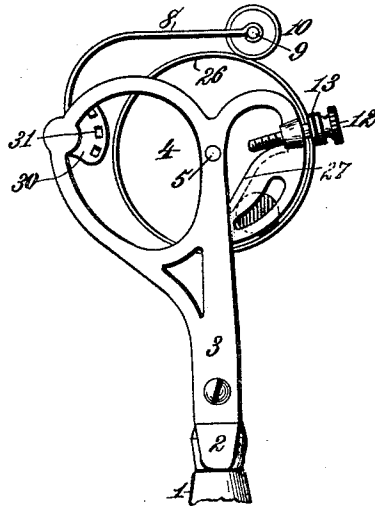


Fig. 4.

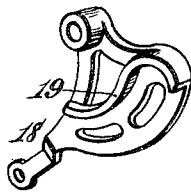


Fig. 5.

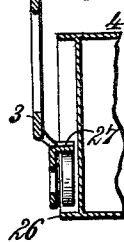


Fig. 6.

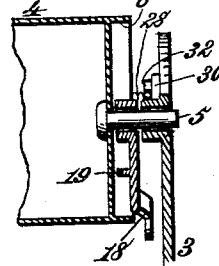


Fig. 7.

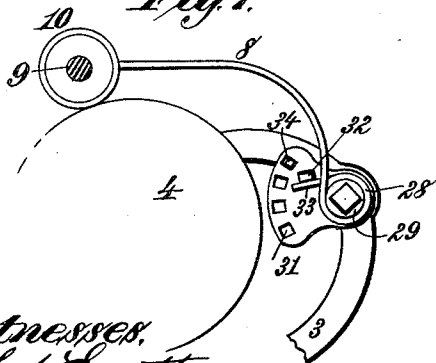
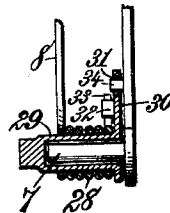


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES CHASE, OF ROCHESTER, NEW YORK.

COPY-HOLDER FOR TYPE-WRITERS.

SPECIFICATION forming part of Letters Patent No. 460,847, dated October 6, 1891.

Application filed October 22, 1889. Renewed February 10, 1891. Serial No. 380,876. (No model.)

To all whom it may concern:

Be it known that I, JAMES CHASE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented new and useful Improvements in Copy-Holders for Type-Writers, of which the following is a specification.

In my application for Letters Patent filed August 23, 1889, Serial No. 321,734, I describe and show a copy-holder for type-writers which comprises a rotating paper-moving cylinder operated by a key-lever to advance the sheet of paper or copy in relation to a line-marker that normally stands stationary along one side of the cylinder.

The object of my present invention is to improve the prior apparatus or machine by providing novel means for rotating the cylinder to move the copy; and to such end the invention consists, among other things, in the combination of a rotating cylinder having at one end a projecting annular rim or flange and adapted to support and advance the copy, an arm, a key-lever for moving the arm, and a rotating friction-roller moved by the arm for engaging the annular rim or flange of the cylinder when the key or lever is moved to rotate said cylinder, and thereby move the copy the required distance to bring another line in relation to the line-marker.

The invention is exhibited by the accompanying drawings, in which—

Figure 1 is a perspective view, partly in section, of the copy-holder embodying my improvement. Fig. 2 is a detail end elevation, omitting portions of the main frame to more clearly show the friction-roller dog. Fig. 3 is a similar view looking at the opposite end of the paper-moving cylinder. Fig. 4 is a detail view of the flanged arm that acts directly on the friction-roller dog. Fig. 5 is a detail sectional view showing the flange on the main frame for the rolling locking device. Fig. 6 is a detail central sectional view to show the construction of the cylinder-journals; Fig. 7, a detail side view of a portion of one end of the main frame, showing means for varying the pressure of the presser-roller; and Fig. 8, a detail sectional view taken on the line $x x$, Fig. 7.

In order to enable those skilled in the art to make and use my invention, I will now de-

scribe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates a base or stand supporting the main frame, which comprises a horizontal bar 2, provided at each end with a standard 3, of any form or pattern suitable for the conditions required. The main frame may be stationary on the base or stand, or it may be journaled to turn thereupon, if desired. A copy supporting and moving cylinder 4 is journaled at its ends to the end standards, as by pivots or journals 5, in any desired manner, and at one end the cylinder is formed or otherwise provided with an annular projecting flange 6 for the action of a clutch-dog, hereinafter explained. The main frame is provided with two lateral studs 7, around which are coiled the lower end portions of two spring-arms 8, the upper extremities of which support the ends of a roller-shaft 9, having one or two presser-rollers 10, which act on the copy to press it on the copy moving the cylinder. The main frame is provided at one end with a pivot in the form of a set-screw 12, to which is hung one end of a line-marker 13, having its opposite end bent to form a spring-catch to engage and disengage a portion of that end of the main frame which is opposite the pivot-screw in such manner that by releasing the catch the line-marker can be swung down in front of the apparatus to be out of the way when introducing the copy between the cylinder and the presser roller or rollers. The line-marker is preferably composed of a flexible strip of steel of suitable thickness, and the presser-roller shaft may be of wire adapted to rotate, or it may be fixed in the spring-arms and the roller or rollers made to turn on instead of with the shaft.

The set-screw 12 is adjustable in its bearing for the purpose of varying the distance of the line-marker from the surface of the paper-moving cylinder, for by adjusting the set-screw in or out the line-marker is correspondingly moved in or out.

The end of the main frame adjacent to the flange of the cylinder is provided with a stud 14, on which is pivoted the key-lever 15, which is made, as here shown, as a bell-crank with one arm approximately perpendicular and the other horizontal and furnished with

a finger-piece 16. The upper end of the perpendicular arm of the key-lever is jointed to a link 17, pivoted to the lower end of a pendant arm 18, loosely hung on one of the pivots 5 or journals of the copy-moving cylinder, and said arm is provided on its inner side with a lateral segmental flange 19, projecting toward the end of the cylinder and arranged in a circular line eccentric to the axis of the cylinder. 10 The segmental flange is preferably extended around at the upper end in the form of a hood, but this is not indispensable.

A dog composed of a friction-roller 20 is arranged in the space between the segmental 15 flange and the annular rim or flange on the cylinder, and this roller is adapted to axially rotate and also to rise and fall. The space between the flange on the arm and the rim or flange on the cylinder converges toward the 20 lowermost portion of the cylinder by reason of the flange on the arm being placed eccentric to the axis of the cylinder. In consequence of this arrangement when the key or lever 15 is depressed to draw forward the lower end 25 of the arm 18 the flange on the latter bears against the roller and causes it to bite the inside surface of the flange on the cylinder and at the same time to rise upward, thereby rotating the cylinder and moving the copy-sheet 30 the required distance. When the key or lever is released and with its flanged arm moves backward to its normal position, the friction-roller rotates and rolls by gravity and follows up the backward movement of the arm.

35 As the arm 18 is loosely hung on one of the journals of the cylinder, it will be evident that the flange on the arm and the flange of the cylinder bear the same relative distance or position to each other in the swinging 40 movements of the arm forward and backward.

The friction-roller will follow up the least backward movement of the arm, whereby the mechanism is adapted for any desired throw of the copy-moving cylinder.

45 A spiral or other spring 21 is connected at one end with the perpendicular arm of the key-lever and at the other end with a stud 22 on the main frame for retracting the lever after its horizontal arm has been depressed. 50 A stop-lug 23 on the main frame is arranged in the path of the key-lever to limit its backward movement under the influence of the spring.

The copy-holder is very useful for type- 55 writers, for it can be so placed that the key-lever will stand in close proximity to the keyboard of the machine, whereby the action of the hand to line the copy is in correspondence with the action of the hand in transcribing on 60 the type-writer, thus permitting great speed to be attained with the least possible danger of errors.

The stroke of the key-lever can be varied according to the distance between the lines of 65 the copy by means of a stroke-limiting stop, which, as here shown, is composed of an adjustable screw 24, having a thumb-piece and

engaging a screw-threaded socket 25 on the main frame. It is obvious that by adjusting the screw inward the stroke of the key-lever 70 is shortened to feed close-lined copies, while the converse is the case if the screw be adjusted outward.

While I have described the copy-holder as particularly useful in connection with type- 75 writers, it is quite obvious that it can be otherwise employed.

To prevent a retrograde movement of the copy-moving cylinder while in operation I provide a rolling locking device at the end 80 of the cylinder which is opposite the cylinder-rotating mechanism. The rolling locking device comprises a disk or roller capable of axially turning when the cylinder is rotated to advance the copy, but is jammed and 85 held against rotation by the least retrograde movement of the cylinder to thereby lock the cylinder against back motion by its frictional contact with the disk or roller. The roller acts upon the inner surface of a projecting 90 annular rim or flange 26 on the cylinder, and an inwardly-projecting flange 27 on the main frame, so arranged that the space between the rim or flange on the cylinder and the 95 flange of the frame converge downwardly in such manner that the ball can, as it were, rise, but is instantly jammed if the cylinder tends to move backward.

I am well aware that roller friction-clutches have heretofore been employed for rotating 100 wheels; but I am not aware that a friction-roller adapted to rotate axially and to rise and fall in a circular path has been combined with an annular rim on a copy-moving cylinder and a swinging arm operating the 105 roller and connected with a key-lever that is supported by and moves on a main frame which supports the copy-moving cylinder.

In this type of machines it is desirable to provide simple means for preventing the base- 110 plate from marring the desks or other furniture on which they are placed, and this I accomplish by constructing the lower face of the base-plate with an annular groove containing a flexible ring, such as a braided cord 115 of textile material or rubber.

The journals 5 of the cylinder are preferably applied by forming a hole in the center of one end of the hollow cylinder and passing therethrough a cylindrical pin having a 120 head which rests against the inside of the cylinder-head, as shown in Fig. 6.

It is sometimes desirable to change the pressure of the presser roller or rollers for light or heavy copy, and to accomplish this I 125 provide means for adjusting the tension of the springs 28 of the arms 8, that carry the roller-shaft 9. A socket-piece 29, having a flange 30, is journaled on the stud 7, and such flange 30 is provided with a circular row of 130 recesses 31 and a stud 32. The end 33 of the coiled spring 28 bears against the stud 32, and any one of the recesses 31 can be made to engage a pin 34 on the main frame

in such manner that by moving the socket-piece to disengage the flange 30 from the pin 34 and then rotating the socket-piece in the proper direction the tension of the coiled spring is adjusted, either lessening or increasing its tension, after which the proper recess 31 of the flange 30 is engaged with the pin 34. By this adjustment of the spring tension the required pressure of the roller or rollers for light or heavy copy can be obtained with ease and facility. The construction also provides for applying the presser-roller and its concomitants without marring the nickel or other ornamental parts of the main frame.

Having thus described my invention, what I claim is—

1. A copy-holder for type-writers, consisting of a main frame, a rotating copy supporting and moving cylinder having at one end a projecting annular rim, a key-lever supported by and moving on the main frame, and a friction-roller engaging with the annular rim of the copy-moving cylinder and adapted to axially rotate and rise and fall as the key-lever moves on the main frame, substantially as described.

2. A copy-holder consisting of a main frame, a rotating copy supporting and moving cylinder, a swinging arm, a rotating and rising and falling friction-roller moved by the arm into engagement with a part of the cylinder, and a key-lever supported by and moving on the frame and jointed to the swinging arm, substantially as described.

3. The combination, in a copy-holder for type-writers, of a line-marker, a copy-moving cylinder having an annular rim, a swinging arm, a dog moved by the arm to engage the

cylinder-rim, and a key-lever for swinging the arm, substantially as described.

4. A copy-holder for type-writers, having a copy-moving cylinder and cylinder-rotating mechanism, and a rolling locking device for preventing retrograde movement of the copy-moving cylinder, substantially as described.

5. A copy-holder for type-writers, consisting of a main frame having a flange, a copy-moving cylinder having an annular rim at one end, cylinder-rotating mechanism, and a rolling locking device between the cylinder-rim and the flange on the frame to prevent retrograde movement of the cylinder, substantially as described.

6. The combination, in a copy-holder, of a rotating copy supporting and moving cylinder, a shaft carrying a presser-roller, springs which act on the shaft to force the presser-roller toward the rotating copy supporting and moving cylinder, and adjusting devices for adjusting the tension of the springs to vary the pressure of the presser-roller as required for light or heavy copy, substantially as described.

7. The combination, with a main frame and a copy-moving cylinder supported by the frame, of a presser-roller-carrying shaft, a coiled spring acting on the shaft, and an adjustable socket-piece for varying the tension of the spring, substantially as described.

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

JAMES CHASE.

Witnesses:

GEO. S. RILEY,
WM. C. LOWREY.