

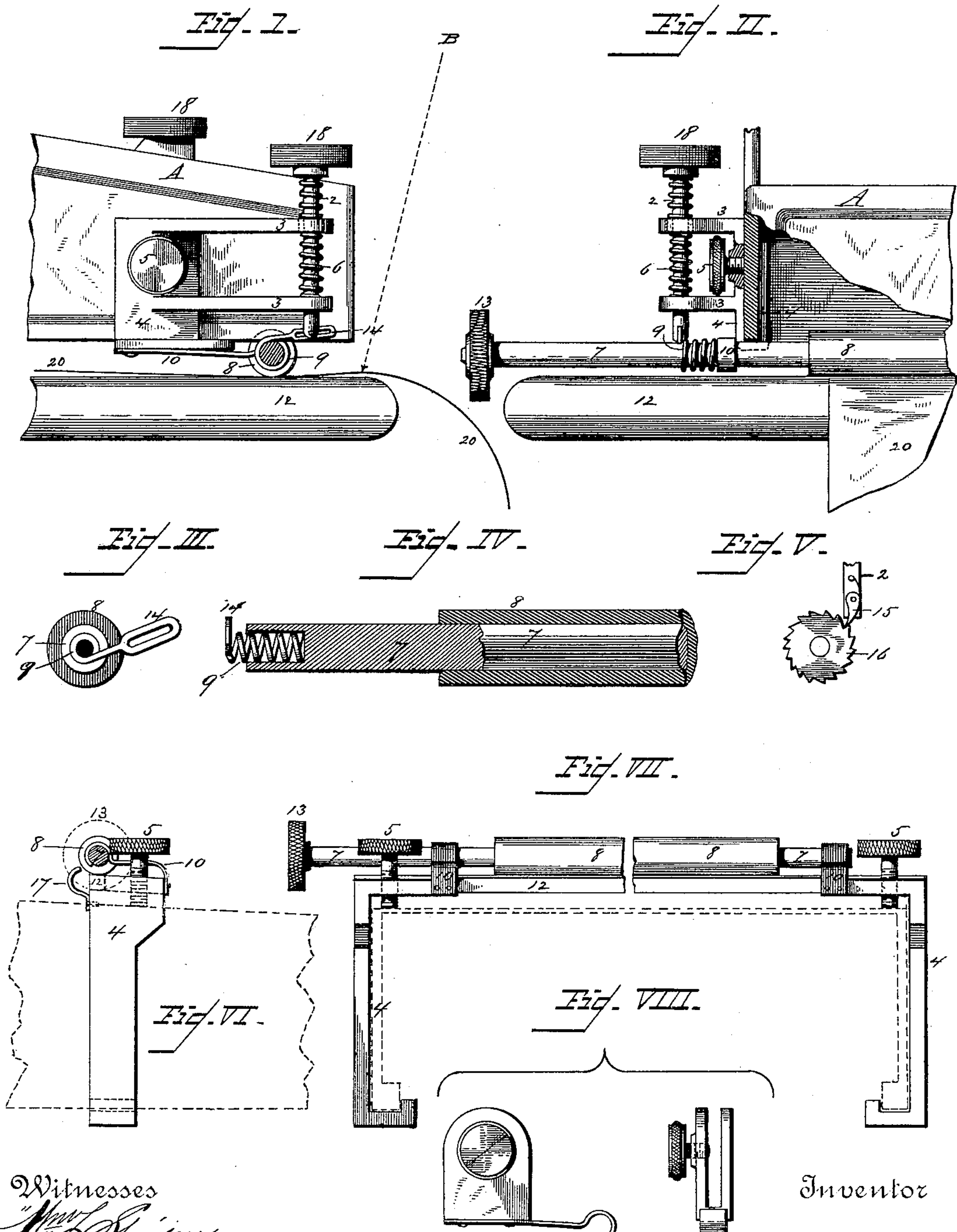
(No Model.)

T. A. CURTIS

LEAF HOLDING ATTACHMENT FOR TYPE WRITING MACHINES.

No. 353,625.

Patented Nov. 30, 1886.



Witnesses
Albert Speiden.
Albert Speiden.

Inventor
Theodore A. Curtis.

UNITED STATES PATENT OFFICE.

THEODORE A. CURTIS, OF FORMOSA, FLORIDA.

LEAF-HOLDING ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 353,625, dated November 30, 1886.

Application filed July 7, 1886. Serial No. 207,336. (No model.)

To all whom it may concern:

Be it known that I, THEODORE A. CURTIS, of Formosa, in the county of Orange and State of Florida, have invented a new and useful
5 Improvement in Leaf-Holding Attachments for Type-Writing Machines, of which the following is a specification and description.

The object of my invention is to provide a
10 cheap and convenient attachment to a type-writer for holding leaves of written or printed matter while copying it with the machine; and my invention consists of a friction feed or pressure roll adapted to be revolved in adjustable or spring bearings made on the frame of
15 the type-writing machine, or adapted to be clamped or secured thereto, and to be revolved in contact with a friction-surface or platen, so that one of the sheets or leaves of written or printed matter will be clamped between said
20 feed-roll and the platen, and may be moved in by said roll as fast as each line thereon is copied, so that the copied portion may be concealed from view, while that portion of the sheet remaining to be copied may be exposed to view
25 in front of the key-board of the machine, and each line as it is moved forward to be copied will be suitably indicated, either by the roll itself or by the front edge of the machine, all of which will be more fully hereinafter described, and illustrated in the accompanying
30 drawings, in which—

Figure I is a side view of the front portion of the frame of the key-board of a "Remington" type-writing machine having my invention
35 attached, and with the feed or pressure roll adapted to be intermittently revolved by a finger-key. Fig. II is a front view of the some portion of the frame, with a part of the latter broken away to show the clamping-screw turned in against the frame, and with the feed
40 or pressure roll in place, and adapted to be rotated either by a knob on its end or a finger-key. Fig. III is an end view of the feed-roll, showing an inside clutch for turning the feed-roll by a finger-key, instead of the outside one
45 shown in Figs. I and II. Fig. IV is a longitudinal section of a portion of the feed-roll, showing the inside clutch for turning the same. Fig. V shows a ratchet-and-pawl connection between the lower end of the finger-

key and the feed-roll, for turning the latter. Fig. VI shows a side view of my invention adapted for attachment to a "Caligraph" type-writing machine. Fig. VII is a front view of the same. Fig. VIII is a side and front view
55 of my attachment without the arrangement of the finger-key, and which I prefer to use when the feed-roll is to be revolved by a knob on its end.

In the drawings, A represents the front portion of the frame of a key-board of a Remington type-writing machine, within which
60 are located the keys 18, to the lower part of which frame, and on each side near the front, I attach a clamp, 4, (shown in Fig. VIII,) by means of a clamp-screw, 5, turned into a threaded hole made in one side of each
65 clamp and against the frame. This clamp 4 may be made by bending a suitably-thick piece of sheet metal nearly double, with a space between the end portions, as shown in Fig.
70 VIII, so as to clasp onto the lower edge of the frame A; or it may be made of cast metal.

A spring, 10, is secured to the lower portion of the clamp 4, and the free end of this
75 spring extends forward toward the front of the machine, and is bent into form to receive a rod, 7, as shown in Figs. VI and VIII. This rod is provided with a piece of rubber tubing,
80 drawn thereon so as to fit snugly, (shown at 8,) and also a knob, 13, by which to turn it with the thumb and finger; and when the clamps and the rod are in position on the machine the rod, which I denominate the "feed-
85 roll," extends beneath the frame of the machine in front and parallel with its front edge, with each end portion of the roll in the curved end of the spring 10 on each side, and the rubber part 8 held down upon the upper surface
90 of the platen 12 by the springs 10, secured to said clamps 4 with the desired pressure.

When it is desired to copy any written or printed matter with a Remington type-writer, the clamps, made as shown in Fig. VIII,
95 are attached to the lower edge of the machine, as above explained, and in the position shown in Figs. I and II, and the upper edge of the leaf containing the original written or printed matter is inserted beneath the rub-
100

ber part of the feed-roll, and the latter is turned by its knob 13 to move the upper edge of the leaf in beneath the key-board of the machine until the upper line of the written or printed matter is in position just outside and in front of the front part of the frame at the lower end of the dotted line B in Fig. 1. After this line has been copied with the machine the feed-roll 7 is turned to move the leaf farther in until that first line is moved in beneath the front part of the frame A, leaving the second line exposed to view; and after this second line is copied the leaf is again moved by another partial turn of the feed-roll, leaving the third line exposed, and so on, the leaf, as the lines thereon are successively copied, being moved farther in by a partial turn of the feed-roll, so as to carry the last line copied beneath the frame of the machine and out of sight, leaving the next one to be copied exposed to view along the front edge of the machine until all the lines have been copied, when the whole leaf will have been carried in beneath the frame of the machine, or beneath the key-board, and out of sight.

During the work the operator looks down upon the line being copied approximately in the direction of the dotted line B, while those lines which have been copied are all out of sight, the front part of the machine serving as an indicating-guide, and to make the division and to keep the place or indicate the line which the operator is to copy or is at work upon.

The advantage of this device is that it is easily and quickly attached to any Remington machine already made, and is very quickly operated, and the written or printed matter which is being copied is directly under the eye of the operator, and is easily seen without turning the head from its position when looking at the key-board of the machine.

Instead of turning the feed-roll 7 with the thumb and finger by a knob on its end, it may be provided with a finger-key similar to those on the key-board of the machine, so that it may be turned by a touch or downward pressure of the finger of the operator. In this case, reference being had to Figs. I and II, 3 represents two ears or horizontal projections made on the outside of one of the clamps, with vertical holes made therein, through which extends the key, consisting of a vertical rod, 2, with a button on its upper end, and with a spring, 6, to hold the key in its highest position. A single ear 3 would answer quite as well if the vertical bearing therein is sufficiently long to keep the key steady and vertical in its movement, as these ears simply serve as a guide for the key. The lower end of the key-rod 2 engages with the free extended end of a spring-wire coiled around the roll 7, so as to fit snugly thereon, said wire being shown at 9, and as thus arranged, if the key be pressed down it forces down the free extended end of the wire 9 and winds its coiled portion more

snugly around the roll, clamping the latter so hard as to turn it and move the leaf farther in past the roll, hiding the last line copied from sight and bringing the next line to be copied up in front of the frame of the machine and in full view. As soon as the pressure is relieved from the key the spring 6 forces the key up to its original position and lifts the free extended end of the coiled wire 9, uncoiling the latter slightly on the roll and causing it to slip thereon, the roll remaining stationary and without turning backward, by its pressure and friction on the paper and pressure bed or platen beneath.

As adapted for use upon the type-writing machine known as the "caligraph," I make each side piece or clamp, 4, with the bent end portions shorter and the part between longer, so that they may be clamped onto that part of the machine in front of the key-board horizontally, instead of vertically, so that the bent portion at its lower end hooks under the lower edge of the machine and the upper end extending inward horizontally a short distance over the front part of the machine, as shown in Fig. VII, the machine occupying the position shown in dotted lines between the clamps 4, and the clamp-screw 5 is turned down through a threaded hole made in the upper horizontal part of each piece 4 and down against the top of the front part of the machine, as shown in Fig. VII. A pressure-bed or platen consisting of a bar, 12, is secured at its ends to the clamps 4, so that when secured in place on the machine there is a small space between this pressure bed or bar 12 and the top of the machine, and a guide, 17, whose form in cross-section is curved, as shown in end view in Fig. VI, is secured at its ends to the clamps 4, as shown in Fig. VI. In this case I make the springs 10 curved, as shown in Fig. VI, and each secured at one end to its respective clamp 4 on each side of the machine, said spring extending upward and forward to a point above the pressure-bed 12, with its free end bent to receive the roll 7, and when adjusted properly the springs hold the feed-roll down upon the pressure-bed or platen 12 with just sufficient pressure that when a sheet or leaf is inserted between the feed-roll and its pressure-bed the former, when turned, will move the sheet forward.

If a leaf of written or printed matter is to be copied, the upper edge of the leaf is inserted between the feed-roll and the pressure-bed or platen 12, and when the roll is turned the leaf is moved in, and its upper edge, striking against the curved side of the guide 17, is bent or deflected downward and backward until the first line to be copied is brought up in front of the feed-roll. After it is copied the roll is partially turned, bringing the next line up in front of the roll until that is copied; and so on, and as the paper is moved farther in between the roll and its pressure-bed 12 that part of the paper from which the written or printed mat-

ter has been copied passes back beneath that part from which the matter has not been copied and is out of sight of the operator; or if the paper is in sight the matter written or printed thereon is then on its lower side and next to the machine, and not in view of the operator. When all the matter thereon has been copied, the sheet lies with its blank side uppermost on the front part of the machine, and may be removed and a new one substituted. As thus adapted for use on the calligraph machine, the device holds the paper in convenient position, so that the operator may easily see the original at the same time the attention is given to the position of the fingers on the keys and without turning the head, which is a great advantage over the use of those devices which require the head to be turned often and constantly entirely away from the machine and back again.

A finger-key, similar to that shown in Figs. I and II, may be used on the device as adapted to the calligraph machine by having horizontal pieces or ears 3 made on the side of one of the clamps 4 of Figs. VI and VII, and the vertical rod 2, extending down through holes in said ears, and a spring, 6, to move said rod to its original position again after being depressed, and also the coiled wire on the feed-roll, with the free extended end of the wire 9 connected with the upper end portion of the vertical rod 2, instead of with its lower end portion, as shown in Figs. I and II.

It is of course evident that when the type-writing machine is made these springs 10 may be permanently secured to the side of the frame, in which case the clamps 4 would not be required. They are adapted especially for convenience in attaching the device to such machines as are already in use. It is also evident that, instead of the wire 9, to connect the lower end of the key 2 with the feed-roll, to turn the latter, a ratchet-wheel, 16, may be se-

cured to the feed-roll, and a pawl, 15, be secured to the lower end of the key 2.

If the inside clutch arrangement shown in Figs. III and IV were used, the feed-roll should not extend out farther than to a point beneath the key 2, in which case a hole is made in the end of the feed-roll, and the wire 9 is coiled to snugly fit into said hole, and the depression of the key 2 should then operate to uncoil the wire, to make its coil larger to fit the hole more snugly and turn the roll 7, this action being merely a reversal of that shown in Figs. I and II.

Having thus described my invention, what I claim as new is—

1. The combination of the frame of the keyboard portion of a type-writing machine, a spring-pressure feed-roll having its bearings connected with said portion of the frame, and a pressure-bed or platen against which said feed-roll is adapted to be rotated, whereby a sheet or leaf having written or printed matter thereon may be moved in between said roll and pressure-bed or platen and the successive lines to be copied indicated thereby, substantially as described.

2. The combination of the frame of the keyboard portion of a type-writing machine, a spring-pressure feed-roll having its bearings connected with said portion of the frame, a pressure-bed or platen against which said feed-roll is adapted to be rotated, and a finger-key consisting of a rod having a clutch-connection with said pressure feed-roll, whereby said roll may be given an intermittent rotary movement in one direction only by pressure of the finger on said key, substantially as described.

THEODORE A. CURTIS.

Witnesses:

EVELYN S. HALL,
JAMES LAWRENSON.