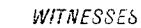


960,997.

2 SHEETS—SHEET 1.



L. H. Schmidt
C. E. Trainer

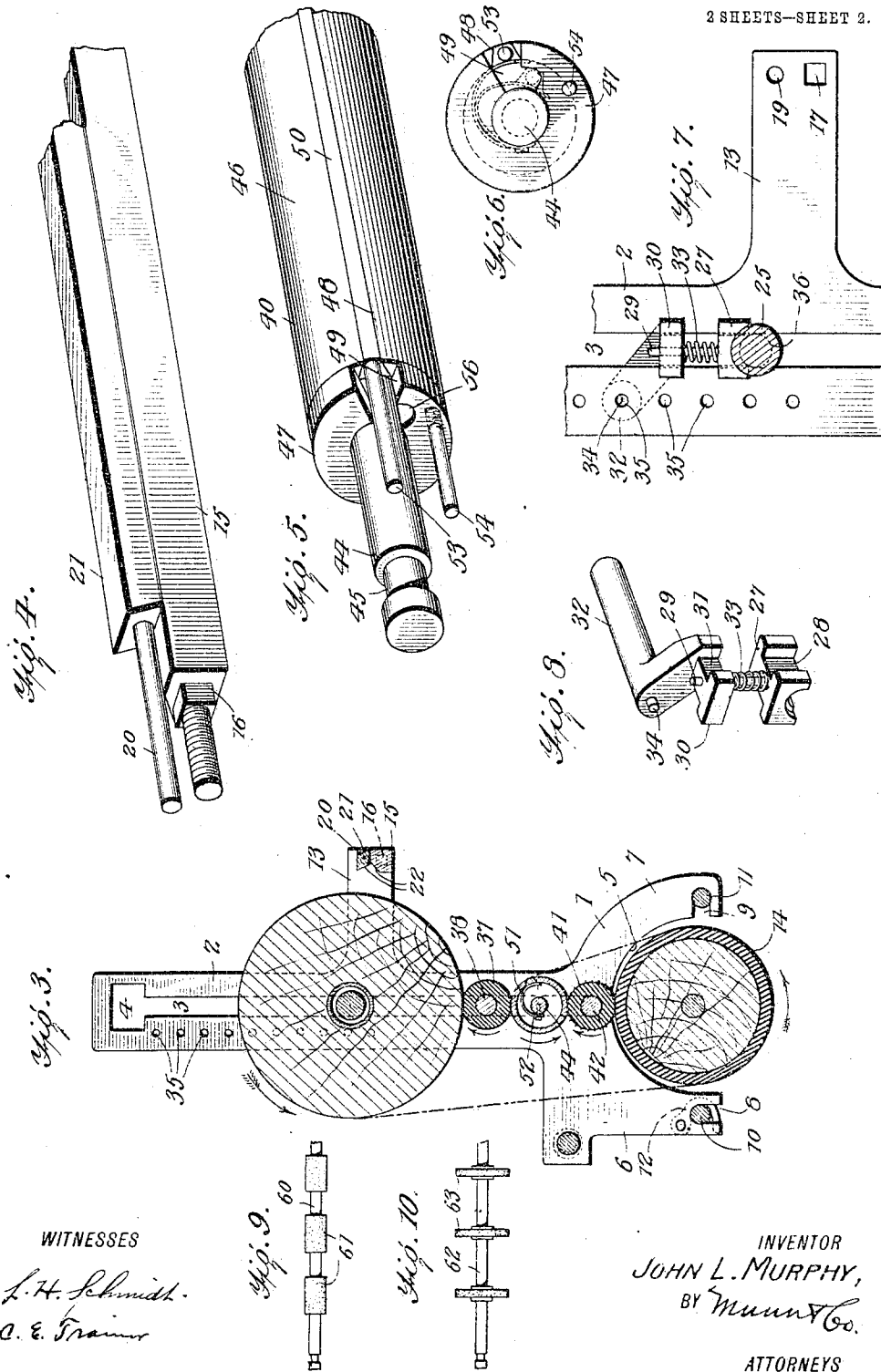
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J. L. MURPHY.
TYPE WRITER ATTACHMENT.
APPLICATION FILED NOV. 16, 1909.

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Patented June 7, 1910.

2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN L. MURPHY, OF COVINGTON, VIRGINIA.

TYPE-WRITER ATTACHMENT.

960,997.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed November 16, 1909. Serial No. 528,283.

To all whom it may concern:

Be it known that I, JOHN L. MURPHY, a citizen of the United States, and a resident of Covington, in the county of Alleghany and State of Virginia, have made certain new and useful Improvements in Type-Writer Attachments, of which the following is a specification.

My invention is an improvement in typewriter attachments, and consists in certain novel constructions and combinations of parts, hereinafter described and claimed.

The object of the invention is to provide an attachment of the class described, which may be easily attached to and detached from a typewriter carriage, and which will support a plurality of superposed strips of paper, and pass them through the typewriter, and which will automatically separate the fair copy from the carbon and deliver it at the front of the machine, and will roll up the copy and retain it in such condition until removed.

A further object of the invention is to provide a special form of paper strip, and a cooperating device whereby the strip may be separated into sheets, for binding or for other purposes.

Referring to the drawings forming a part hereof, Figure 1 is a plan view of a portion of the improvement, Fig. 2 is a horizontal section at the level of the axis of the upper roller, Fig. 3 is a transverse vertical section, Fig. 4 is a perspective view of a portion of the guide bars, Fig. 5 is a similar view of a portion of the central roller, Fig. 6 is an end view of the said roller, Fig. 7 is an enlarged sectional view of the mounting of one end of the upper roller, Fig. 8 is a detail perspective view of a portion of the same, Fig. 9 is a side view of a modified form of spacing roller, Fig. 10 is a similar view of another modification, and Fig. 11 is a plan view of a portion of the paper strip.

In the present embodiment of the invention, a pair of spaced frames are provided, each of which (Fig. 3) comprises a base 1, and an upright arm 2, the arm having a longitudinal slot 3, with a bi-lateral enlargement 4 at its top, and the base is provided with a semicircular cut away portion 5 at its center forming a foot 6 and 7 on each side thereof. The frames are connected at the rear by a rod 2^a, one end of which is secured to each frame.

The foot 6 is provided in its lower end

with a slot 8, and the foot 7 is provided on its inner face with a slot 9, and both slots are adapted to engage the carriage bars 10 and 11 of the typewriter. A hook 12 is pivoted to the foot 6 adjacent to the slot, and is adapted to engage below the bar 10, as shown in Fig. 3. The arm 2 is also provided with a lateral extension 13 from the side adjacent to the foot 7.

The platen 14 of the typewriter is received in the cut away portions 5 of the frames, and a plurality of rollers to be presently described in detail are supported in the slots 3. A bar 15 is provided at each end with a square stem 16 threaded at its extremity, which passes through a square opening 17 in the lateral extension 13 of the adjacent frame, and the threaded portion of the stem is engaged by a nut 18.

The extension 13 of each frame is also provided with a similar opening 19 above the opening 17, and the said openings are engaged by pins 20 extending from the ends of a second bar 21, which is above the upper face of the bar 15, and the inner edges of the adjacent faces of both bars are beveled as shown at 22.

A roller 23 is provided at each end with a hub 24, and a shaft 25 passes axially through the roller and the hubs, and set screws 26 traverse the hub and engage the shaft to hold the roller in place. The ends of the shaft extend through the slots 3 of the frames, and a bearing block 27 provided in each side with a groove 28 rests upon each end of the shaft, the grooves receiving the sides of the slot, and guiding the block.

Each of the blocks 27 is provided with a pin 29 extending upwardly from its upper face, and passing through an opening in a second block 30, also provided with grooves 31 for receiving the edges of the slot, and a crank arm 32 is integral with the outer face of the block. A spring 33 encircles the pin and normally retains the blocks in spaced relation, and the crank arm is provided with a pin 34, which is adapted to engage one of series of openings 35 in the adjacent frame.

It will be understood that the blocks 27 and the spring 33 form a means for yieldingly pressing the roller 23 downwardly, and that the said means may be adjusted vertically in the slots, and wherever held the roller will be permitted a limited yielding movement.

The resiliency of the frame permits the

disengagement of the pins from the openings, as does also the lost motion between the side walls of the groove 31 in the block and the edges of the slot.

5 The ends of the shaft are provided with annular grooves 36 for receiving the edges of the slot, the diameter of the shaft being greater than the width of the slot, and the blocks 27 and 30, and the shaft 25 may be removed from and replaced in the slots, by
10 means of the enlargement 4, which is of sufficient size to release the blocks.

A roller 37 is arranged directly below the roller 23, the said roller being mounted on
15 a shaft 38, whose ends are provided with annular grooves 39 for engaging the slot. A roller 40 to be presently described in detail is journaled below the roller 37, and another roller 41 is journaled between the
20 roller 37 and the platen roller 14. The roller 41 is secured to a shaft 42 whose ends are annularly grooved as at 43 for engaging the slots, and the roller 37 is secured to a shaft 44, having similar grooves 45 for a
25 like purpose.

The roller 40 before mentioned consists of a shell 46, and end plates 47, having each a central opening through which the shaft 44 passes, and the shell 46 is provided with
30 a longitudinal slot 48, both end plates having a radial slot 49 registering with the slot. A substantially wedge-shaped bar 50 is fitted in the slot, the edges thereof being beveled inwardly as shown in Fig. 5, and the
35 wedge-shaped bar is secured to the ends of plate springs 51, whose other ends are secured to the shaft 44 as shown at 52.

Each end of the bar 50 is provided with a pin 53 extending through the slot 49 and beyond the end of the roller and stopping short of the adjacent frame. Each end plate is also provided with a threaded opening adjacent to the cut away portion 49, and a pin 54 is threaded into each opening. The
40 outer face of the bar 50 is flush with the peripheral face of the roller, completely closing the slot as shown in Fig. 6.

It will be observed that the rollers 37 and 41 contact with the central roller, and with
50 the upper and platen roller respectively, and each of the said rollers is covered with rubber, or is provided with minute points, 55, to prevent slipping of the paper thereon. These points may be placed in bands as indicated in Fig. 1, or may extend through-
55 out the periphery of the roller.

The improvement is designed for use with the strips of paper shown in Fig. 11. Each strip is provided near one side edge with
60 circular openings 57, connected with the side edge by slots 58, and the strip is partially separated into sheets by means of transverse rows 59 of perforations. The circular openings 57 are for receiving the binding posts
65 of a loose leaf binder.

In operation, two strips of the paper shown in Fig. 11 with carbon therebetween are placed on the improvement, being wound on the roller 23, or passing over the said
70 roller. From the roller 23, the superposed strips pass down beneath the platen roller 14, and after being written upon pass to the roller 40, which is the receiving roller for the carbon and carbon sheet. The edges
75 of the sheets are inserted in the slot 48 of the roller, by depressing the bar 50. To depress the said bar, the pins 53 and 54 are gripped and pressed together, thus moving the bar against the resistance of the springs
80 51. Each of the end plates 47 is provided in one face of the radial slot 44, with a notch 56, for receiving the adjacent pin 53, to lock the bar in depressed position. After the edge of the sheet is inserted, the pins 53
85 are lifted out of the notches, and the bar is moved back into the slot by the springs. The upper strip or fair copy is inserted between the bars 15 and 21, and may be drawn through by pulling on the end of the said
90 upper strip. As the strips are moved by turning the platen roller in the usual manner, all of the rollers are rotated, and the fair copy is passed out between the bars 15 and 21, while the carbon copy is wound on
95 the roller 40. As the upper strip passes out, it may be separated on the lines of partial separation by holding down the bar 21 on the line of partial separation, and pulling on the free end of the strip. The roller
100 23 may be adjusted as the strips unwind by disengaging the pins 34, and engaging them with a lower opening. The rollers 37 and 41 are merely spacing rollers, to retain the rollers 14—40 and 23 in spaced relation, and to assist in transmitting the movement of
105 the platen roller to the other rollers. The springs 33 hold the roller 23 at all times with a yielding pressure; and the pressure may be varied to suit conditions. It will be observed that the copy is automatically
110 separated and stored away, while the fair copy is delivered in sheets of suitable size. When the roller 40 becomes too large the copy may be removed and bound or otherwise disposed of.

115 It will be evident that after the strips are once inserted, no further attention is necessary, the copy being taken care of, without any thought on the part of the operator. The bars 15 and 21 may be separated by turning the front end of the bar 21
120 upward, for the purpose of inserting the paper.

The rollers 37 and 41 may be solid as shown in Figs. 1 and 3, or they may be arranged as shown in Figs. 9 and 10. In Fig. 9 the shaft 60 is provided at spaced intervals with sleeves 61, while in Fig. 10 the shaft 62 is provided at regular intervals
125 with disks 63.

The sleeves and the disks are to be of rubber as shown. Both rollers should have a high coefficient of friction.

The entire improvement may be easily detached from the typewriter, by swinging the hook 12 open and detaching the slots from the carriage bars.

It will be observed that the periphery of the roller 41 extends below the edge of the frame, so that it will engage with the platen roller.

I claim—

1. A device of the character specified, comprising spaced frames, each having a vertical slot, and each being provided with means whereby it may be detachably connected with the carriage of a typewriter, a roller journaled in the slots and movable vertically therein, yielding means normally pressing said roller downwardly, means whereby the said yielding means may be adjusted vertically of the slots, a pair of superposed bars in front of the roller, said bars having their inner meeting edges beveled, means for rotatably mounting the upper bar, a roller having means for grasping a sheet of paper journaled in the slots; a spacing roller between the last-named roller and the first-named roller, and a spacing roller below the said last-named roller.

2. A device of the character specified, comprising a frame, a roller journaled in the frame and movable vertically thereof, springs normally pressing said roller downwardly, means whereby said springs may be adjusted vertically, a pair of superposed bars supported by the frame in front of and substantially parallel with the roller, the inner meeting edges of the bars being beveled, a roller journaled in the frame below said first-named roller and provided with means for gripping the edge of a strip of paper, a spacing roller journaled in the frame above the last-named roller, and a spacing roller journaled in the frame below the said last-named roller, the said spacing rollers being movable toward and from each other.

3. A device of the character specified, comprising a frame having spaced parallel vertical slots, a roller movable vertically therein, springs normally pressing the roller downwardly, means whereby the springs may be adjusted vertically, a pair of clamping bars supported in front of the roller and parallel therewith, a roller journaled in the slots below said first named roller, means in connection with the roller for gripping the end of a strip of paper, and a spacing roller in the slots above said roller.

4. In a device of the character specified, a clamping device, comprising a pair of parallel superposed bars having their meeting edges on one side beveled, a frame having a square lower opening and a circular

upper opening, said lower bar having at each end a reduced square portion for engaging the lower openings, the upper bar having pins at its ends for engaging the upper openings.

5. In a device of the character specified, a clamping device, comprising a pair of parallel superposed bars having their meeting edges on one side beveled, and means for supporting the bars, said lower bar being fixed and the upper bar being movable for the purpose specified.

6. In a device of the character specified, a roller, a shaft arranged axially of the roller and to which it is secured, said shaft having at each end an annular groove, a frame having vertical slots engaged by the annular grooves, a bearing block slidable in each slot and engaging the shaft, a second block slidable in the slot above the first and a spring between the blocks, said upper block having means engaging the frame for locking the block in adjusted position.

7. In a device of the character specified, a roller, a shaft arranged axially of the roller and to which it is secured, said shaft having at each end an annular groove, a frame having vertical slots engaged by the annular grooves, a block adjustable in such slot, and a spring between the block and the shaft.

8. In a device of the character specified, a hollow roller provided with a longitudinal slot, a bar in the roller and movable into and out of the slot, pins on the ends of the bar extending beyond the ends of the roller, and springs normally pressing the bar outwardly, said roller having notches for engagement by the pin to lock the bar out of operative position.

9. The combination with the typewriter, of a frame supported on the carriage thereof, a plurality of rollers journaled in the frame, in superposed relation, the lower roller resting on the platen roll, and springs normally pressing the upper roll toward the platen roll, said upper roller being adapted to receive a plurality of superposed strips of paper, wound thereon and passing under the platen roll, means on one of the intermediate rollers for gripping the end of the innermost strip of paper, and a pair of clamping bars in front of the rollers between which the upper strip passes, said strip being partially separated by transverse lines of perforations at spaced intervals for the purpose specified.

10. A typewriter attachment comprising a pair of spaced frames having means whereby they may be attached to the carriage bars of the typewriter, each of said frames having a concave recess for receiving the upper face of the platen and having a vertical slot provided with a bi-lateral enlargement at its upper end, a plurality of rollers, arranged in spaced relation, a shaft

for each roller extending beyond the ends thereof, and having annular grooves engaged by the slots of the frame, the lower-most roller engaging the platen roller of the typewriter, the next upper roller having means for grasping the edge of a sheet of paper, and a pair of superposed bars in front of the upper-most roller.

11. A typewriter attachment, comprising spaced frames, each having a vertical slot and being provided with means whereby it may be detachably connected to the carriage of a typewriter, a plurality of superposed rollers journaled in the slots, and

movable vertically therein, the lower-most roller engaging the platen roller of the typewriter, a pair of superposed bars in front of the upper-most roller, the intermediate roller having means for grasping the edge of a sheet of paper, springs normally pressing the intermediate roller downward, and means whereby the springs may be adjusted vertically.

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Witnesses:

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ISAAC CLARK.