G. A. SMITH.

MARGINAL STOP DEVICE FOR TYPE WRITERS.

APPLICATION FILED APR. 22, 1908.

961,547.

Patented June 14, 1910.

2 SHEETS—SHEET 1.

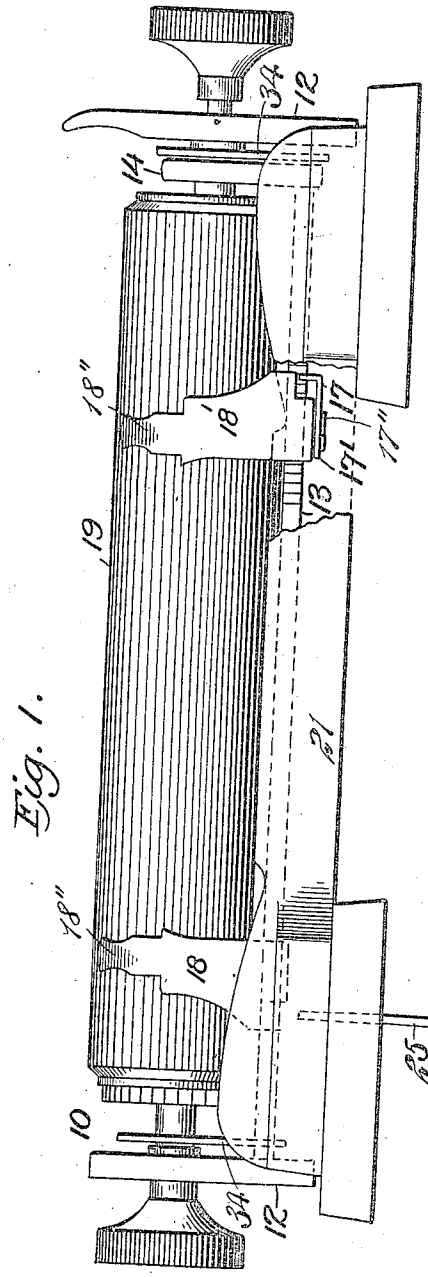

Fig. 1.

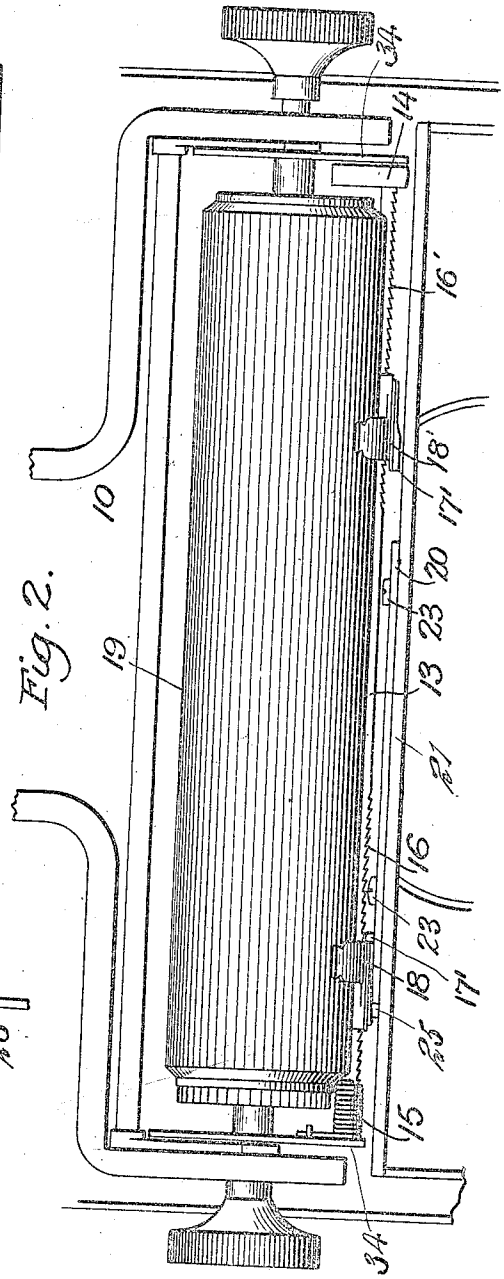

Fig. 2.

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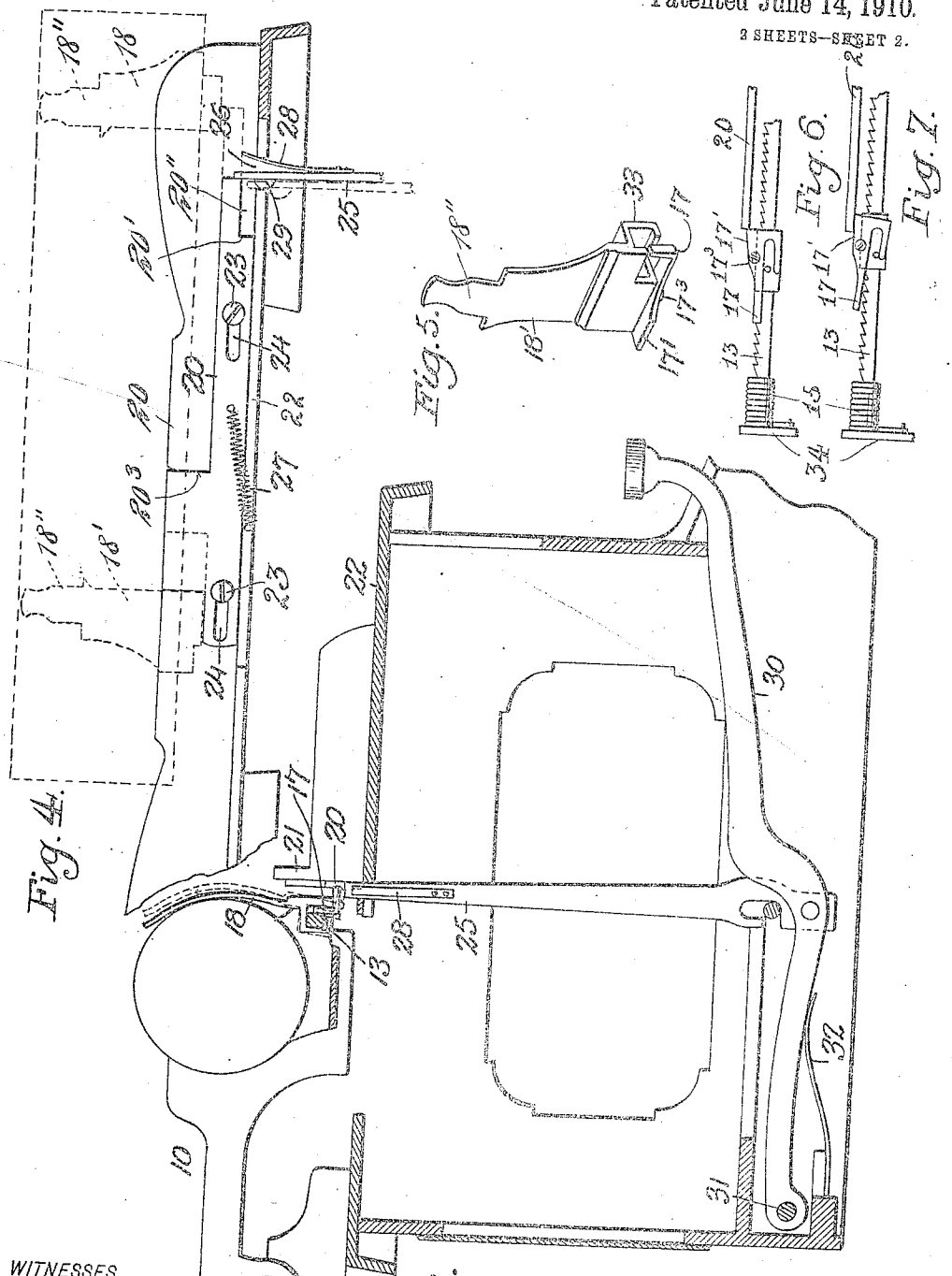

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 3.

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GEORGE A. SMITH, OF NEW YORK, N. Y., ASSIGNOR OF SIXTEEN ONE-HUNDRED-AND FOURTHS TO JAMES W. HENNESSEY, OF RICHMOND, NEW YORK, FORTY-SIX ONE-HUNDRED-AND-FOURTHS TO ARTHUR LETTS, OF LOS ANGELES, CALIFORNIA, AND TWENTY-ONE ONE-HUNDRED-AND-FOURTHS TO FREDERICK H. WARD, OF BROOKLYN, NEW YORK.

MARGINAL-STOP DEVICE FOR TYPE-WRITERS

931,547. Specification of Letters Patent. Patented June 14, 1910.

Application filed April 22, 1908. Serial No. 428,485.

To all whom it may concern:

Be it known that I, GEORGE A. SMITH, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Marginal-Stop Devices for Type-Writers, of which the following is a specification.

This invention relates to marginal stops for type-writer carriages, by means of which the length of the lines are regulated, and it consists of stops arranged so that the width of the margin or the length of the lines can be regulated at both sides in the superior manner to be more fully described hereinafter and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of an ordinary type-writer carriage to which my marginal stops are applied, parts being cut away to better show the mechanism beneath. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section through the machine for the purpose of showing how one of the stops is operated from the key-board. Fig. 4, a rear elevation of the same in which dotted lines show the changed position of the parts, when the mechanism in the preceding figures is thrown into action. Fig. 5 is a detail, perspective view of one of the stops. Figs. 6 and 7 are inverted detail views of the manually adjustable stop mechanism showing the parts in different positions.

The carriage 10 is mounted to slide and tilt on a horizontal rail 11 at the rear, and may be driven by any suitable means which it is not thought necesary to show because such means are common and well understood, and form no part of this invention.

19 represents an ordinary cylindrical platen. In front of this platen and below its axis is located a long, horizontal ratchet bar 13 pivoted at its opposite ends in arms 34. This bar is provided with a rearwardly extending handle 14 at its right-hand end by means of which it can be turned on its longitudinal axis when shifting the carriage, or when lifting a pair of fingers or holders 18″ which hold and guide the writing paper on the platen through the action of a spring 15 coiled around the ratchet bar 13 at the left-hand end thereof. One end of the spring is attached to the arm 34, and the free end to the bar 13. These paper guiding and holding fingers 18″ are made integral with two stops 18 and 18′, the former limiting the length of the trip of the carriage from left to right, and the latter limiting it from right to left, whereby any desired width of marginal space may be left upon either side of the page. Each stop is held in sliding adjustment on the ratchet bar 13 by means of a rectangular sleeve 33 which embraces the bar. On the bottom of the sleeve a pawl 17 is pivoted at 17ª so that its upturned end will engage a vertical ratchet 16 on the front face of the spring-actuated ratchet bar 13.

As the carriage moves from right to left, as when writing, it carries the stop 18′ along with it until the stop comes in contact with a releasable stop or buffer plate 20, as seen in dotted lines in Fig. 4, which stops it at any predetermined point thereby limiting the length of the line and allowing the space desired on the right-hand side of the page. When it is necessary to prolong the line beyond its normal length in order to complete a word or for other reasons, the buffer-plate 20 is made to yield to the contact of the stop 18′, and to be carried along with the stop the required distance. This result is accomplished through the medium of a stop or buffer releasing device consisting of a key-lever 30, fulcrumed at 31, (Fig. 3) which lever when depressed pulls down with it a vertical detent bar 25, the upper end of which acts as a detent to hold the buffer plate 20 and stop the carriage normally in the position shown in full lines in Fig. 4, so that the plate will serve as a buffer which coöperates with the stop 18′ in stopping the progress of the carriage. The withdrawal of this detent bar 25 releases the buffer-plate 20 which is then carried along longitudinally by the carriage the required excess distance, as shown in dotted lines in Fig. 4. The buffer-plate is secured to the vertical wall 21 of top-plate 22, by screws 23 which pass through horizontal oblong slots 24 having a length equal to the additional travel required. 27 is a spring for retracting the buffer-plate when the stop and the carriage are thrown back to start a new line. The detent bar 25 yieldingly resists the buffer-

plate 20 through the medium of a cushioning spring 28, the free end of which bears against the edge of a recess 26 in the top-plate 22. On the opposite side of the detent bar 25 is a cam 29 situated just below its upper end and normally bearing against the edge of the top-plate 22. When the detent bar is pulled down by key-lever 30, this cam 29 slides forward and under the plate 22, as seen in dotted lines, thereby leaving the end of the detent bar projecting above the plate enough to arrest the further advance of the buffer-plate 20 by coming in contact with a shoulder 20′ farther back on the under side of the plate 20 at the inner end of a recess 20″ which receives the end of the detent bar. When the carriage is returned to start a new line, the stop 18′ releases the buffer-plate 20, which plate is then returned by the retracting spring 27 until stopped at the right-hand ends of slots 24, thereby liberating the end of the detent 25 which is automatically forced up and returned to its original position by a spring 32 acting directly upon the under side of releasing key-lever 30.

The construction and operation of the right-hand marginal stop having been described, the means for regulating the left-hand marginal space will now be explained.

The left-hand stop 18 (Fig. 1) is constructed exactly like the right-hand stop 18′ excepting that its sleeve 33, and pawl 17 extend toward the left, so that the pawl will engage ratchet 16 which has its teeth facing in a direction opposite to that of the right-hand ratchet 16′. In the present instance, as seen in Fig. 2, the pawl 17 is shown held out of engagement by means of a laterally projecting cam 17′ having a straight outer edge which bears against the face of the buffer-plate 20, thereby turning the pawl on its pivot 17^3 and lifting it clear of the ratchet and holding it out of action. This stop 18 can be manually set at any position throughout the length of its ratchet 16, and the width of the left-hand margin regulated accordingly, for it is apparent that the shoulder 17′, when lying on the left-hand side of the buffer-plate, will come in contact with the left-hand edge of the latter and stop the carriage against further movement in traveling from left to right. The left-hand marginal space can be still further extended for the addition of one or more characters, by pulling the top of the stop 18 forward, thereby rocking the bar 13 as seen in dotted lines in Fig. 3, against the tension of the spring 15 and allowing the shoulder of the cam 17′ to clear the left-hand edge of the buffer-plate 20 and pass between said plate and ratchet bar 13, the cam 17′ holding the pawl 17 out of engagement with the ratchet as seen in Figs. 2 and 7.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a typewriter, the combination with a carriage, of a pivoted bar carried thereby and extending longitudinally thereof, and being provided with adjustable stops having paper-holding fingers, a tension-spring connected with the bar to force the fingers toward the platen, an arm on the bar to rock the latter and lift the fingers away from the platen, a buffer contacted by the stops to arrest the movement of the carriage in both directions, and manually operated devices for releasing the buffer and hence the stops.

2. In a typewriter, the combination with a buffer-plate, of means for holding the plate, means for releasing the plate, a carriage, a ratchet bar journaled in the frame of the carriage in front of the platen and having a tension spring, one or more carriage stops adjustable on the bar and carrying paper holding and guiding fingers, devices on the stops to engage the bar, and means for holding said devices out of engagement with the ratchet bar.

Signed at New York city, this 6th day of April, 1908.

GEORGE A. SMITH.

Witnesses:

RICHARD CONDON,

C. B. SCHROEDER.