

(No Model.)

2 Sheets—Sheet 1.

R. LANSING & G. M. JONES.
TYPE WRITER ATTACHMENT.

No. 545,509.

Patented Sept. 3, 1895.

Fig. 1.

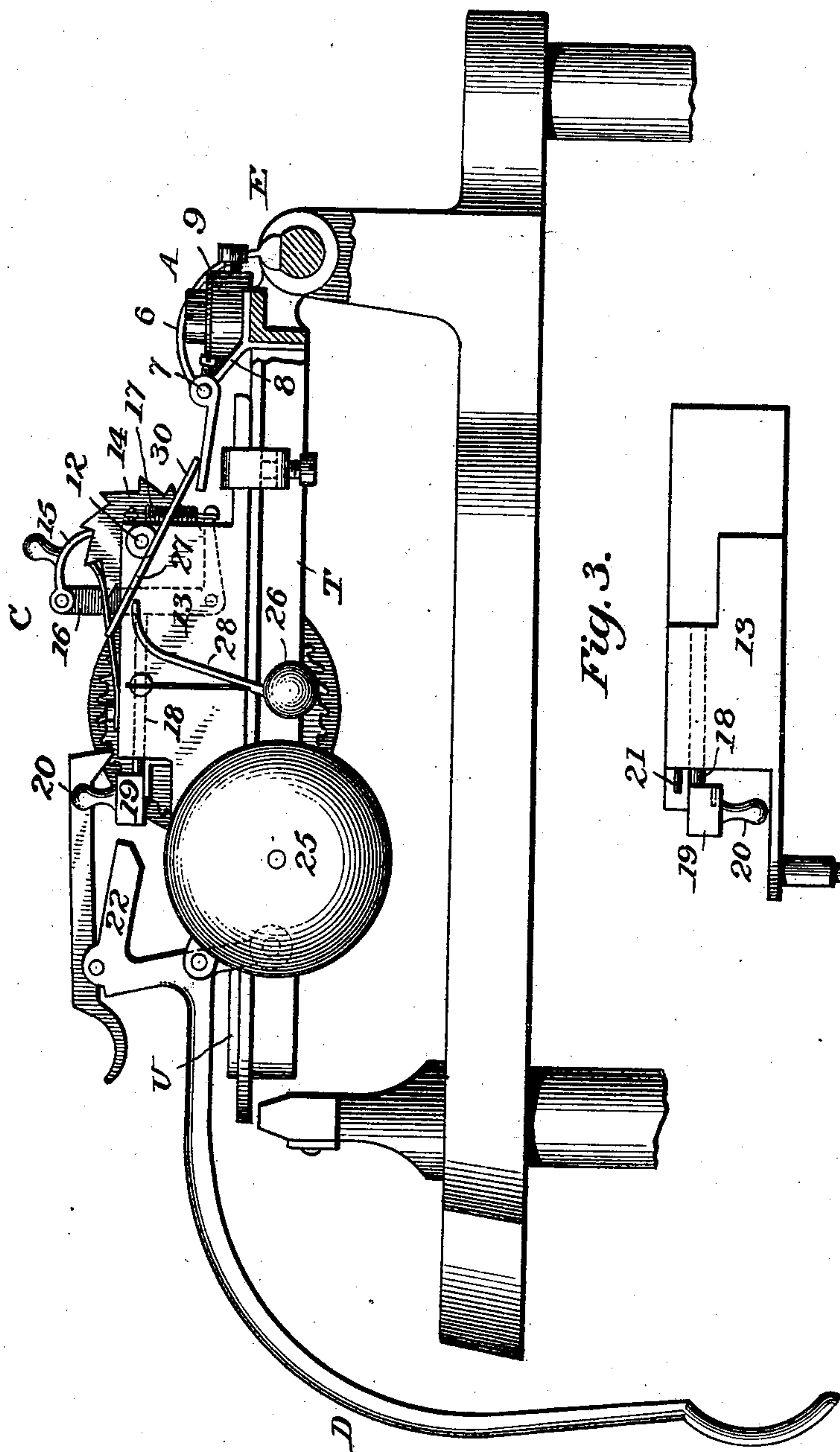
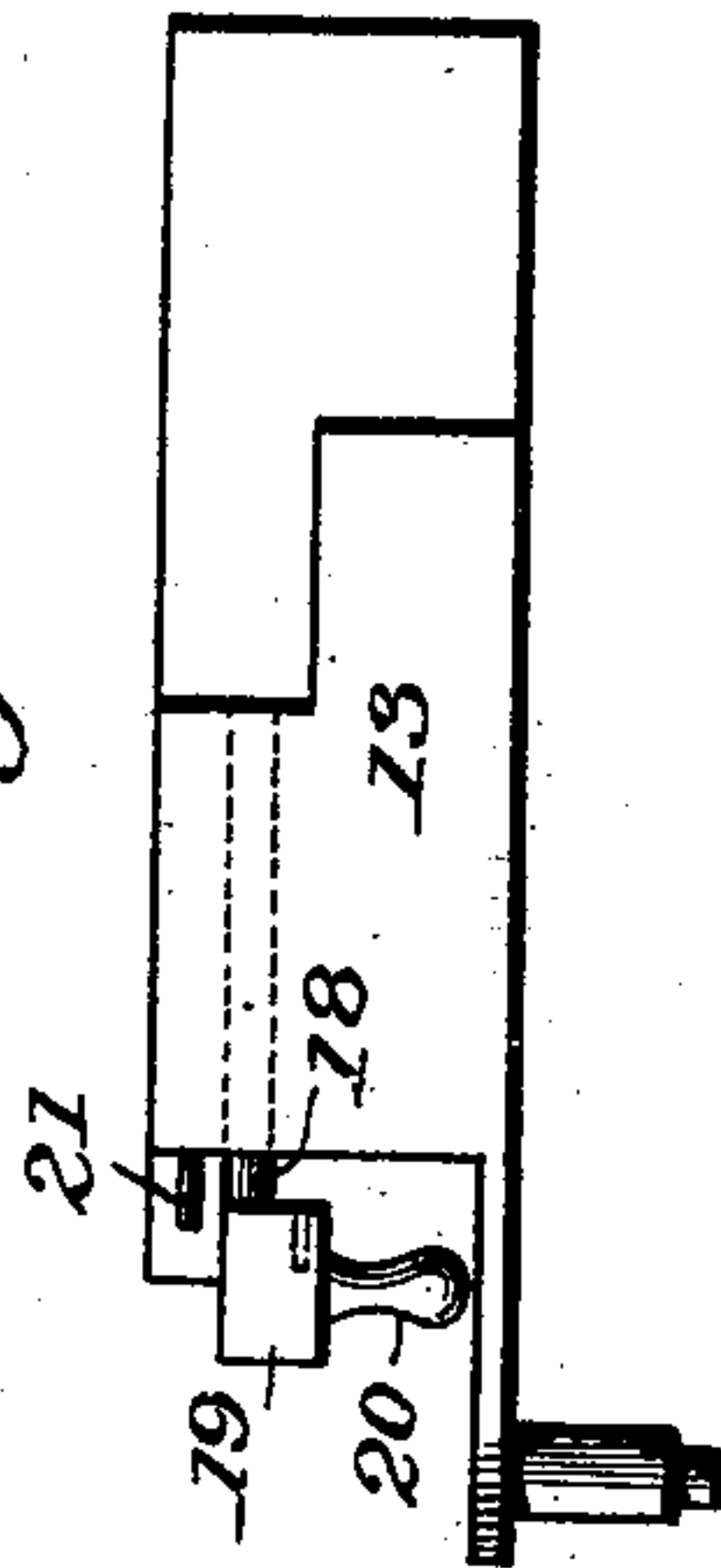


Fig. 3.



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2 Sheets—Sheet 2.

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Fig. 2.

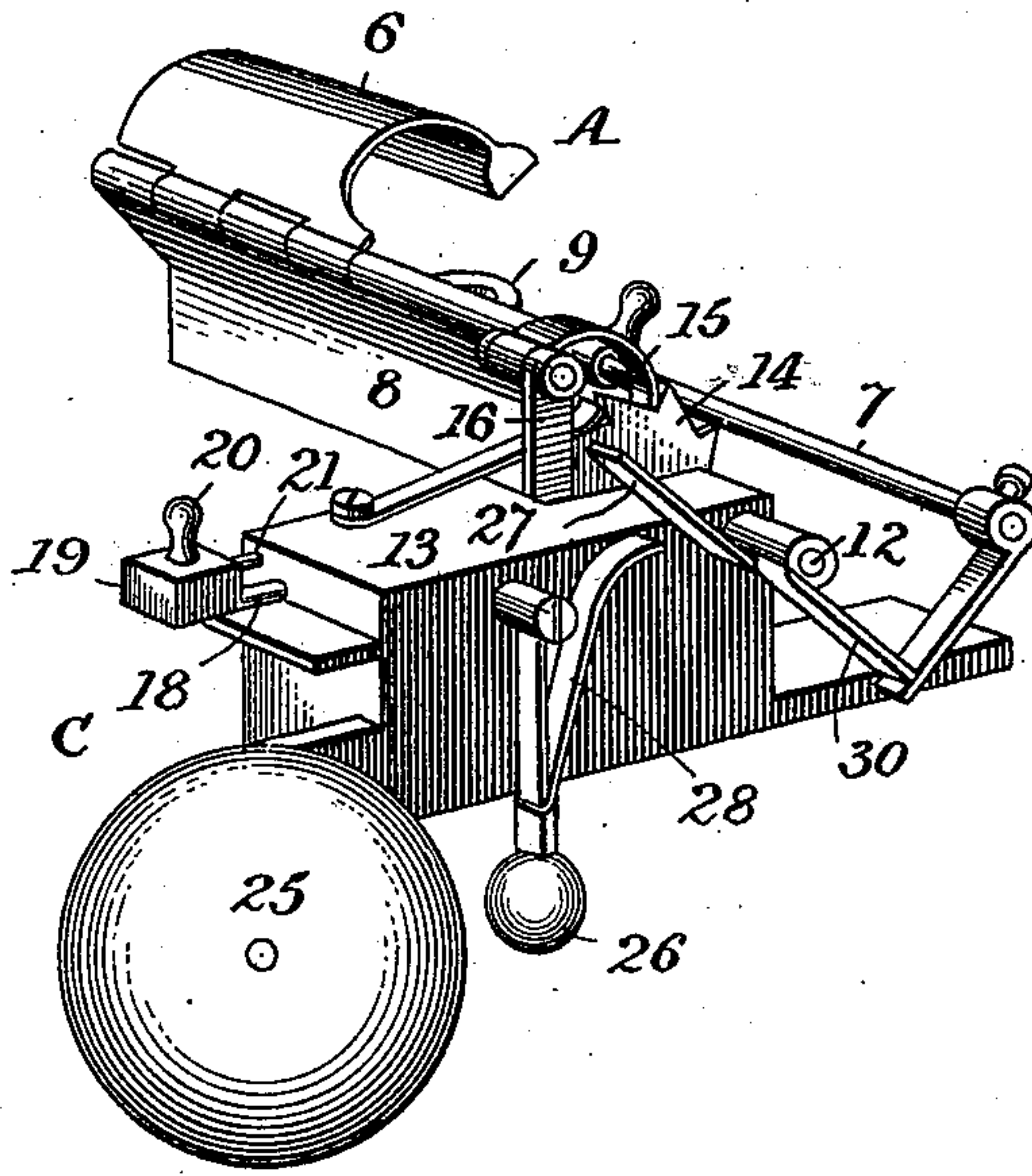
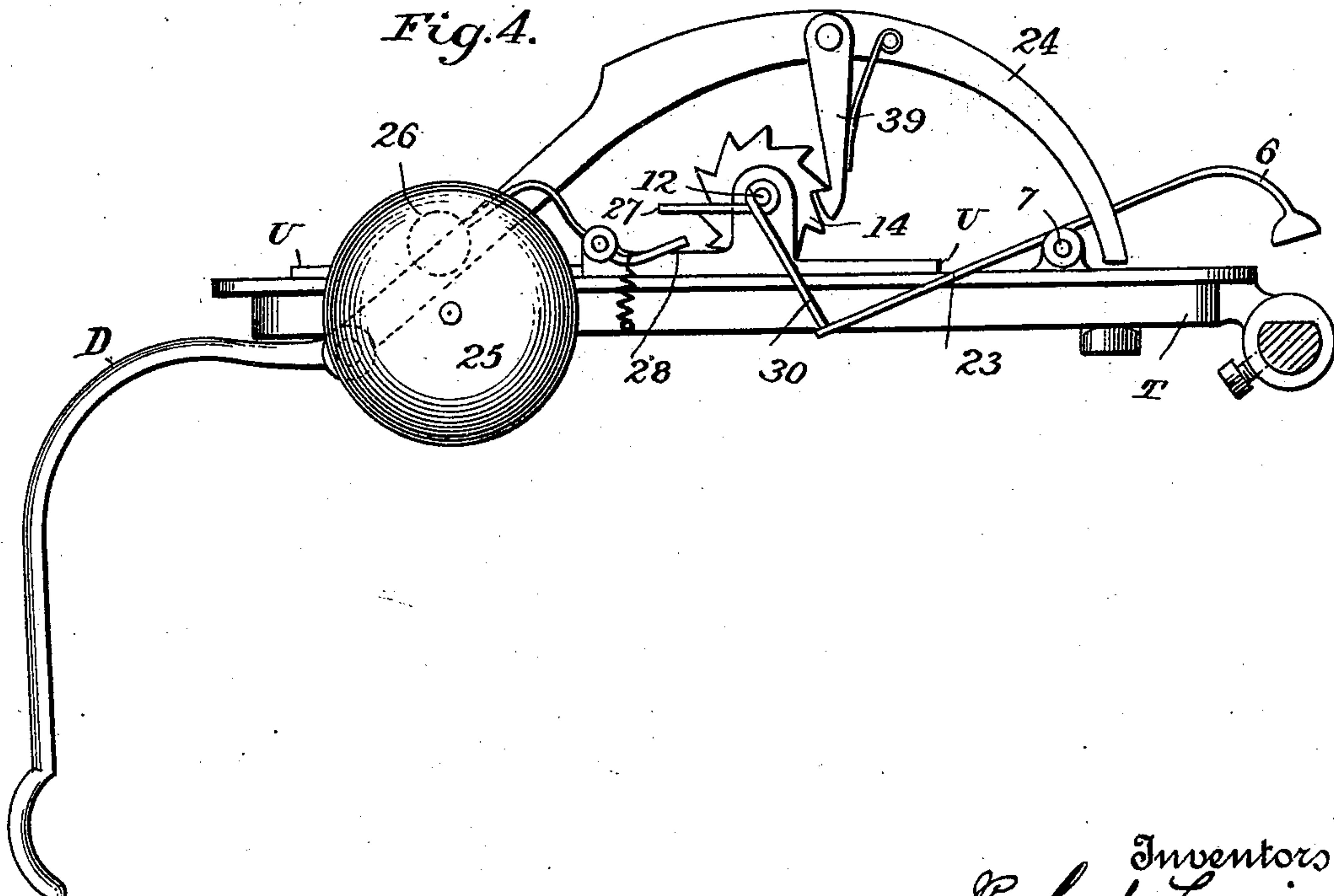


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT LANSING AND GARY M. JONES, OF WATERTOWN, NEW YORK.

TYPE-WRITER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 545,509, dated September 3, 1895.

Application filed June 19, 1895. Serial No. 553,344. (No model.)

To all whom it may concern:

Be it known that we, ROBERT LANSING and GARY M. JONES, citizens of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Type-Writer Attachments, of which the following is a specification.

Our invention has for its object to automatically vary the extent of sliding movement of the carriage of a type-writer at regular predetermined intervals, so as to normally limit the movement to print with the regular margin and at such intervals extend the movement, in order that folio-figures or other characters may be printed beyond the margin; and to this end we have provided devices which may be permanently or temporarily connected with type-writers of various constructions, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a No. 5 Remington type-writing machine provided with our improvement. Fig. 2 is a perspective view of the device as constructed for attachment to the type-writer detached therefrom. Fig. 3 is a plan view of part of the device. Fig. 4 is a side view illustrating the improvement in connection with a No. 3 Remington machine.

In our improved device there is combined with the movable carriage E a stop device A, of any suitable character, so arranged that when in position it will limit the movement of the carriage to the extent necessary for leaving what is termed "a margin," but when lifted or removed from position will permit a further movement of the carriage, so that there may be printed in the margin any suitable characters, as, for instance, the figures for successive folios; and there is combined with the spacing-lever D, or with any of the parts put in motion thereby, a stop-shifter device C and means for moving it gradually, preferably with a step-by-step motion, into position to shift the stop after the spacing-lever has been operated a certain number of times. By such a combination of parts the operations of the spacing-lever feed the paper, as usual, until a certain predetermined num-

ber of lines, as five or ten, have been printed, the stop being in position and determining the regular margin. After printing the said number of lines the stop-operating device is brought into such position as to shift the stop, so as to permit the carriage to move and print beyond the margin, a bell preferably being used in connection with the devices, which rings whenever the stop is shifted or about to be shifted, so that the operator may have her attention called to the fact that the folio-number or other character is to be printed in the margin. After such printing the next operation of the spacing-lever will bring the parts back to normal position and the printing will proceed with the usual margin until another number of lines has been printed, when the operations will proceed as before. These various parts may be constructed in various ways, according to the character of the machine to which they are applied.

In the construction Figs. 1 to 3 we have shown the parts as adapted to a No. 5 Remington machine, the device being so constructed that it may be applied to any of such machines in use without any alteration whatever of the latter.

In Fig. 4 we illustrate our invention in connection with a No. 3 Remington machine.

In the construction shown in Figs. 1 to 3 the stop is in the form of a curved blade or wing 6, which is secured to a shaft 7, turning in a bracket 8, which is bolted to the main frame T of the carriage by a bolt or stud on the carriage, passing through a socket 9.

Upon the shifting frame U of the carriage are supported the stop-operating devices C, which, as shown, consist of an arm 30 upon a shaft 12, supported in a block or bracket 13. Motion is imparted to the shaft 12 and its arm through the medium of a ratchet-wheel 14 upon the shaft and a reciprocating weighted pawl 15, carried by a vertical lever 16, the latter being normally held in its rear position by a spring 17, connected to an arm of the lever and with a stationary pin upon the block. The lever is thrown forward at each movement of the spacing-lever D. The devices for imparting this forward motion from the spacing-lever consist of a bar 18, sliding in the block or bracket 13, and bearing with its rear

end against the edge of the lever 16, and having an enlarged head 19, which is shown as rectangular and provided with a handle 20, the head having an opening adapted to receive a short pin 21 (extending from the block 13) when the handle 20 is vertical. When the handle 20 is vertical and the head is in the position shown in Figs. 1 and 2, the said head will be in position to be struck by the arm 22 of the spacing-lever D as the lower end of the latter is drawn out and the upper end is carried inward in turning the cylindrical platen in the ordinary manner. It thus results that whenever the spacing-lever D is drawn out in its usual operation the bar 18 will be forced inward, carrying with it the lever 16 and pawl 15 and turning the ratchet one step, carrying the arm 30 of the shaft 12 one step in its revolution. These operations will produce no effect, so far as the margin is concerned, until the arm 30 has been carried a complete revolution, which will be, say, ten steps. After moving nine steps the arm 30 will be in position above the arm 10, extending from the shaft 7. On the next movement of the lever D, therefore, the arm 30 will be carried down in contact with the arm 10, and the latter will be depressed, and the stop-wing 6 will be lifted, so that on drawing back the carriage to print the next line the carriage will proceed to its extreme limit, and the operator can then print beyond the usual and normal line of printing the figures necessary to indicate the folio or any other matter.

In order to direct the operator's attention to the fact that the next movement will carry the carriage beyond the regular limit, we combine a suitable alarm, as a bell 25 and a hammer 26, with the above-described parts, operating the hammer by means of an arm 27, extending from the shaft 12 in position to make contact with an arm 28, extending from the hammer of the bell, which consists of a ball connected to a stud by an ordinary spring-blade.

It sometimes becomes desirable to throw these parts out of use temporarily without taking them from the carriage, and this is very readily accomplished by throwing back the pawl 15 or by making the head 19 of the bar 18 adjustable into and out of position to be struck by the nose 22 of the lever D. Thus by drawing out the bar the head 19 may be carried beyond the pin 21, when the said head may be swung to one side, as shown in plan, Fig. 3, when a forward movement of the lever D will have no effect in operating the margin-regulating devices.

In Fig. 4 we have shown a construction which may be used in connection with a No. 3 Remington, where the spacing-lever D has an arm 24, to which may be pivoted a spring-pawl 39, engaging the ratchet 14, carrying the arm 30. The latter may operate upon a long lever 23, pivoted to the frame T and with its rear end in such position that when raised it

will permit the full movement of the carriage, but when down will limit it so as to make the desired margin. In this case the arm 27 upon the shaft 12 may make contact with the tail end of the arm of the bell as or just before the arm 30 is brought into contact with the lever 23.

It will be seen that by the use of an adjustable stop and means for shifting it at regular intervals from the action of the spacing-lever we are enabled to vary the travel of the carriage at regular intervals without demanding any special attention upon the part of the operator, the operations being wholly automatic, and therefore not liable to the mistakes which would result if the operator was called upon to keep account of the successive lines, as usual. It will also be seen that, although the devices described, or those embodying the features described, may form permanent parts of any type-writer construction, by supporting the operating-arm 30 and its connections upon a bracket or support capable of being bolted to the machine and the stop device also upon a bracket capable of being bolted to the machine we can supply machines already in use readily and without difficulty with the means for making the adjustments desired.

It will be evident that when the bracket 13 is attachable to an ordinary machine it may be secured by any suitable means, as by a clamp I and the bolt for passing through the socket 9 to secure the stop devices.

The stop devices may be all mounted in one frame in a single-case machine; but for a double-case machine the parts must be separated, as the bracket 13 and its parts are carried by the frame U, that slides forward and backward.

Without limiting ourselves to the precise construction and arrangement of parts shown, we claim as our invention—

1. A device for automatically varying at regular intervals, the travel of a type-writing machine carriage, consisting of a stop adjustable to positions to obstruct or permit the full movement of the carriage, a stop shifting device, and means for moving said stop shifting device on the movements of the spacing lever, substantially as described.

2. The combination with the carriage and spacing lever of a type-writing machine, of a stop for limiting the full movement of the carriage, and devices intermediate of the stop and lever for shifting the stop, substantially as described.

3. The combination with the carriage and spacing lever of a type-writing machine, of a stop for limiting the full movement of the carriage, and devices intermediate of the stop and lever for shifting the stop, and means for sounding an alarm upon each movement of the stop, substantially as described.

4. The combination with the frames T, U, and spacing lever of a type-writing machine,

of a movable stop device for the movement of the carriage supported by the frame T, a stop operating device supported by the frame U, and means for moving the latter device from
5 the spacing lever, substantially as described.

5. The combination of the carriage and spacing lever of a type writing machine, an adjustable stop, a device for shifting said stop at regular intervals, and adjustable means for
10 operating said device from the spacing lever, whereby to throw the shifting device into and out of operation, substantially as described.

6. The combination with the carriage and spacing lever of a typewriting machine, of an
15 adjustable stop, a shaft carrying a stop operating arm and ratchet wheel, and a lever, and a pawl for operating said wheel arranged to

be vibrated on the movement of the spacing lever, substantially as described.

7. An attachment for type writing machines, 20 consisting of a stop device and stop operating devices capable of a step by step movement under the action of the spacing lever, and means for securing the parts in position in respect to said lever, and to the frame of the 25 machine, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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GARY M. JONES.

Witnesses:

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