

G. W. DONNING.  
ADJUSTABLE MARGINAL STOP DEVICE.

APPLICATION FILED FEB. 14, 1903.

NO MODEL.

Fig. 6.

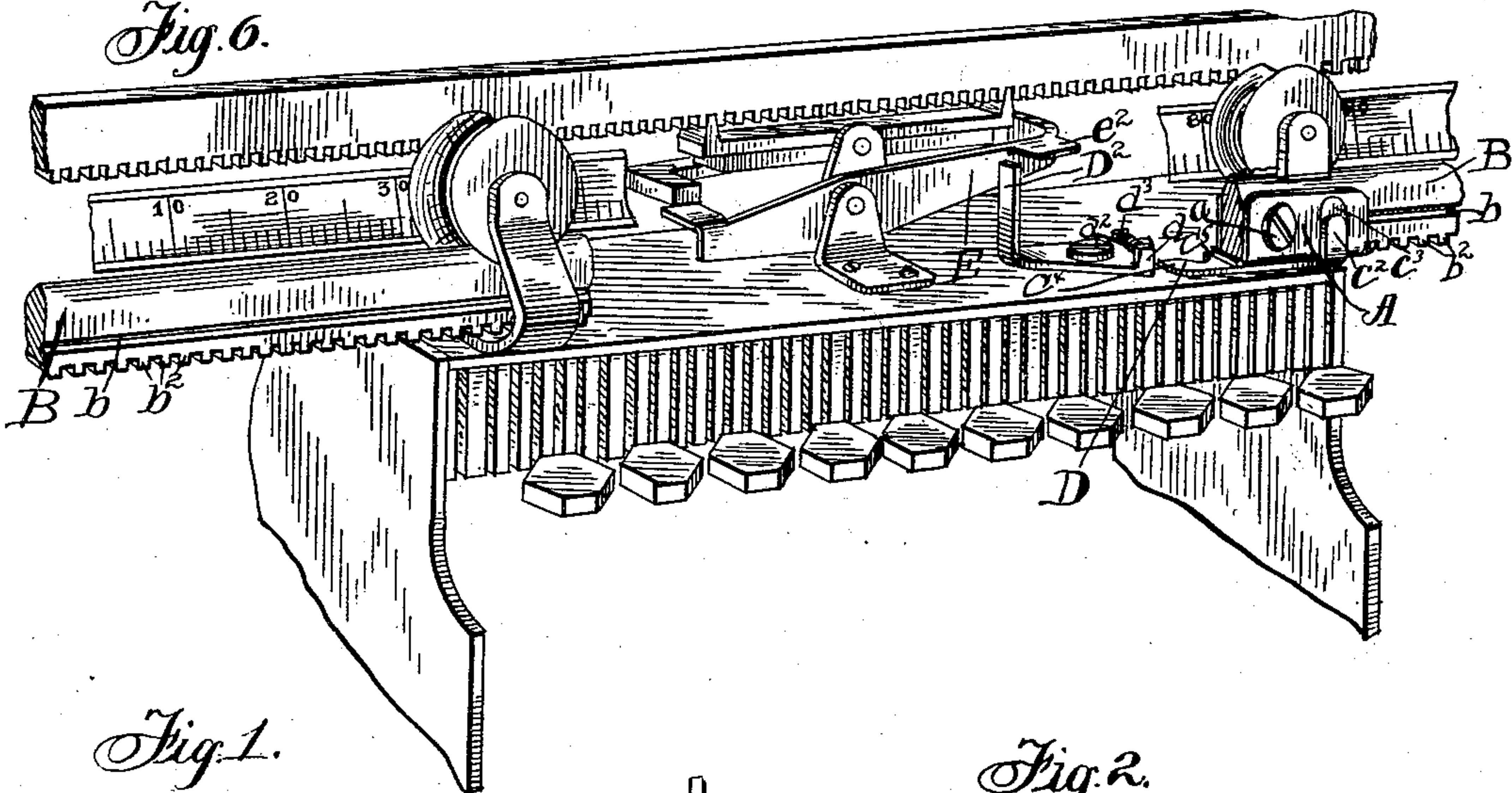


Fig. 1.

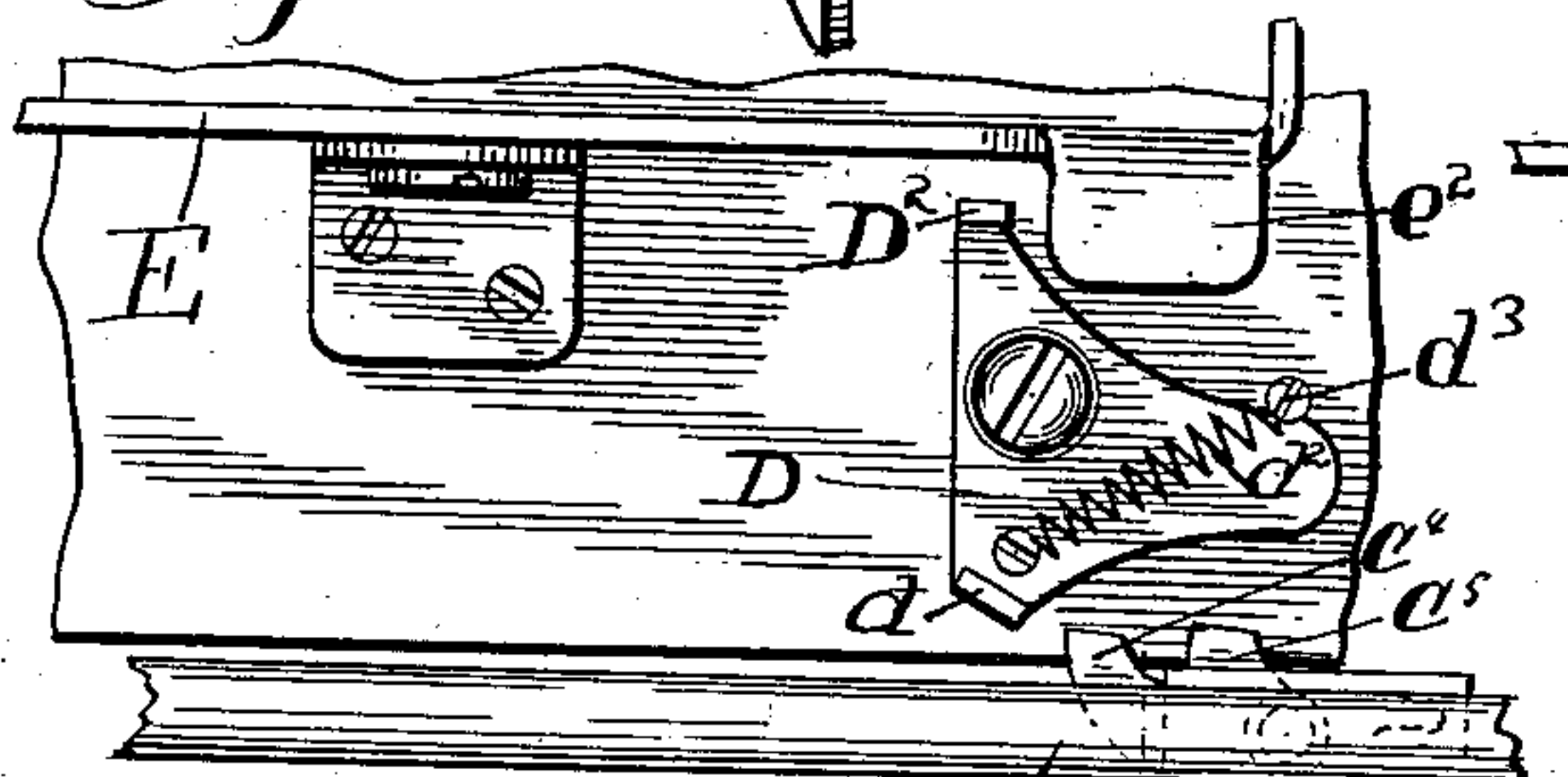


Fig. 2.

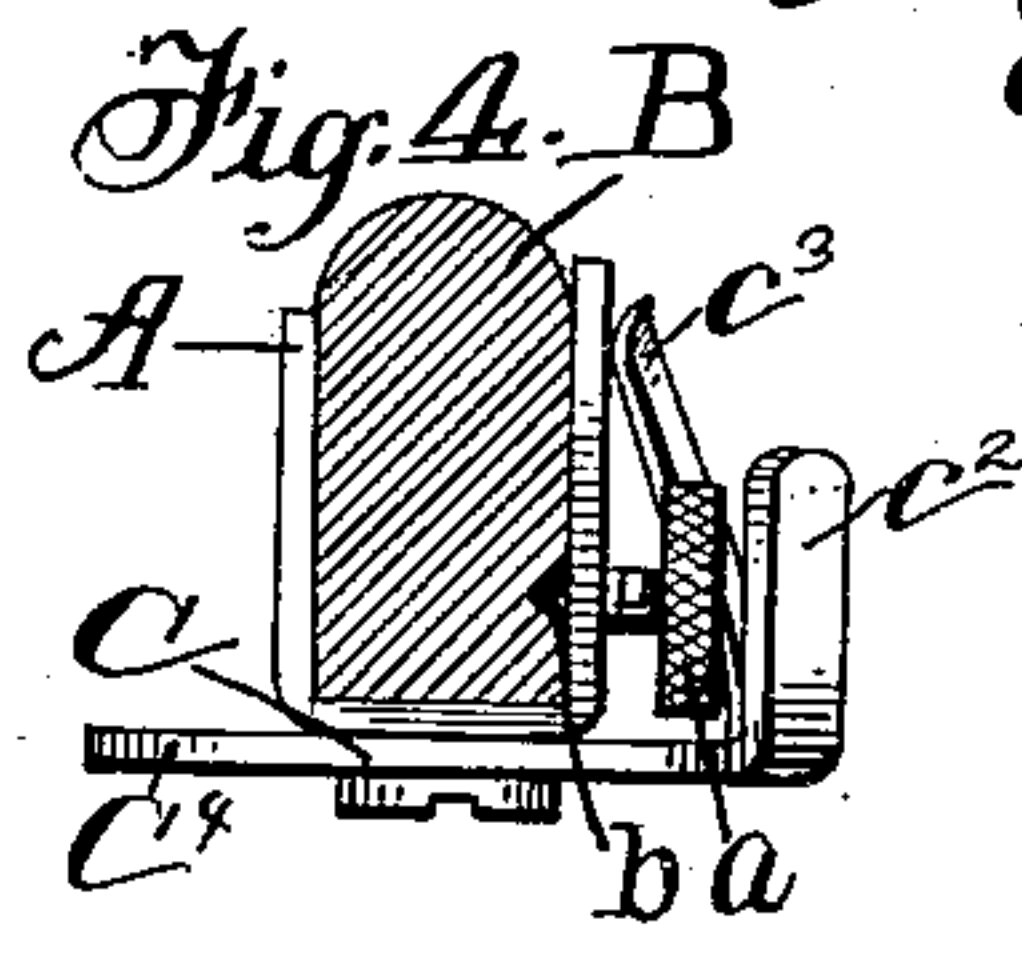
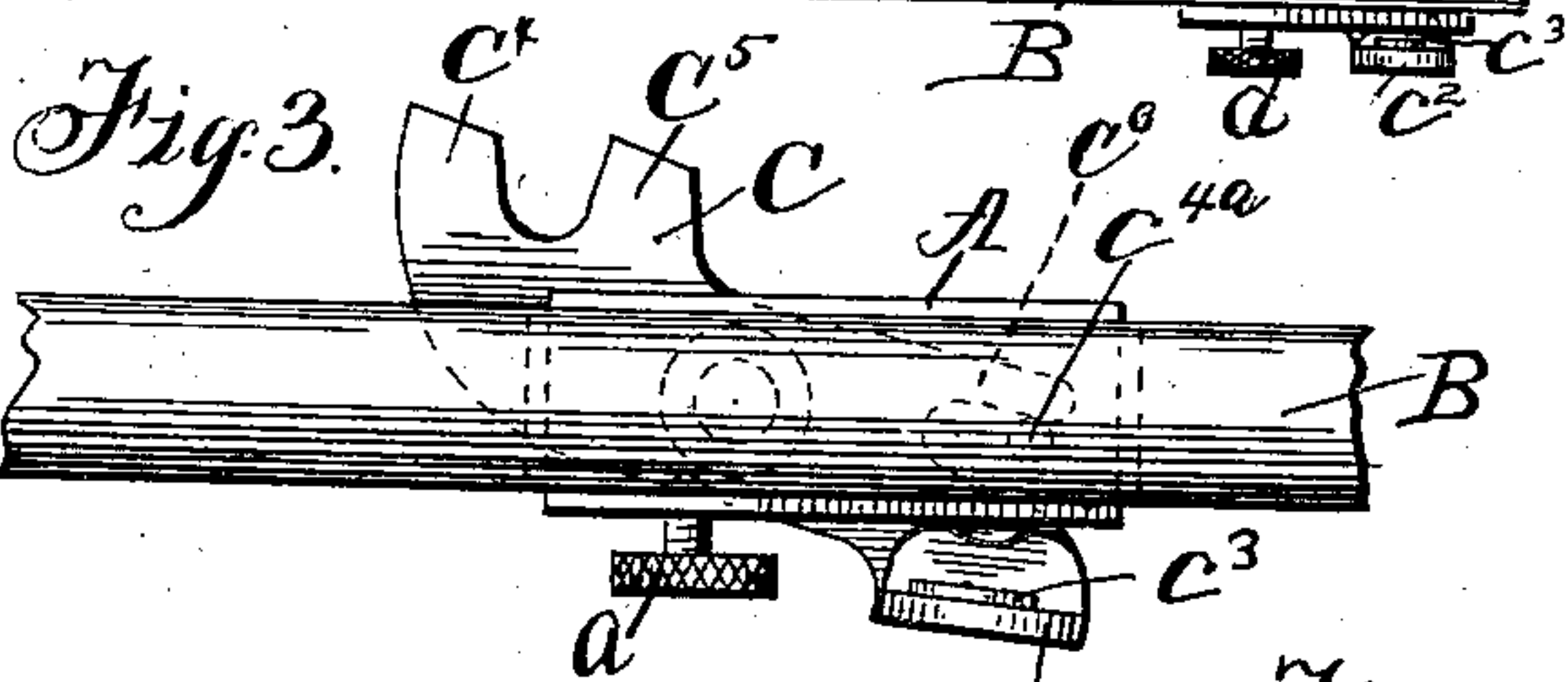
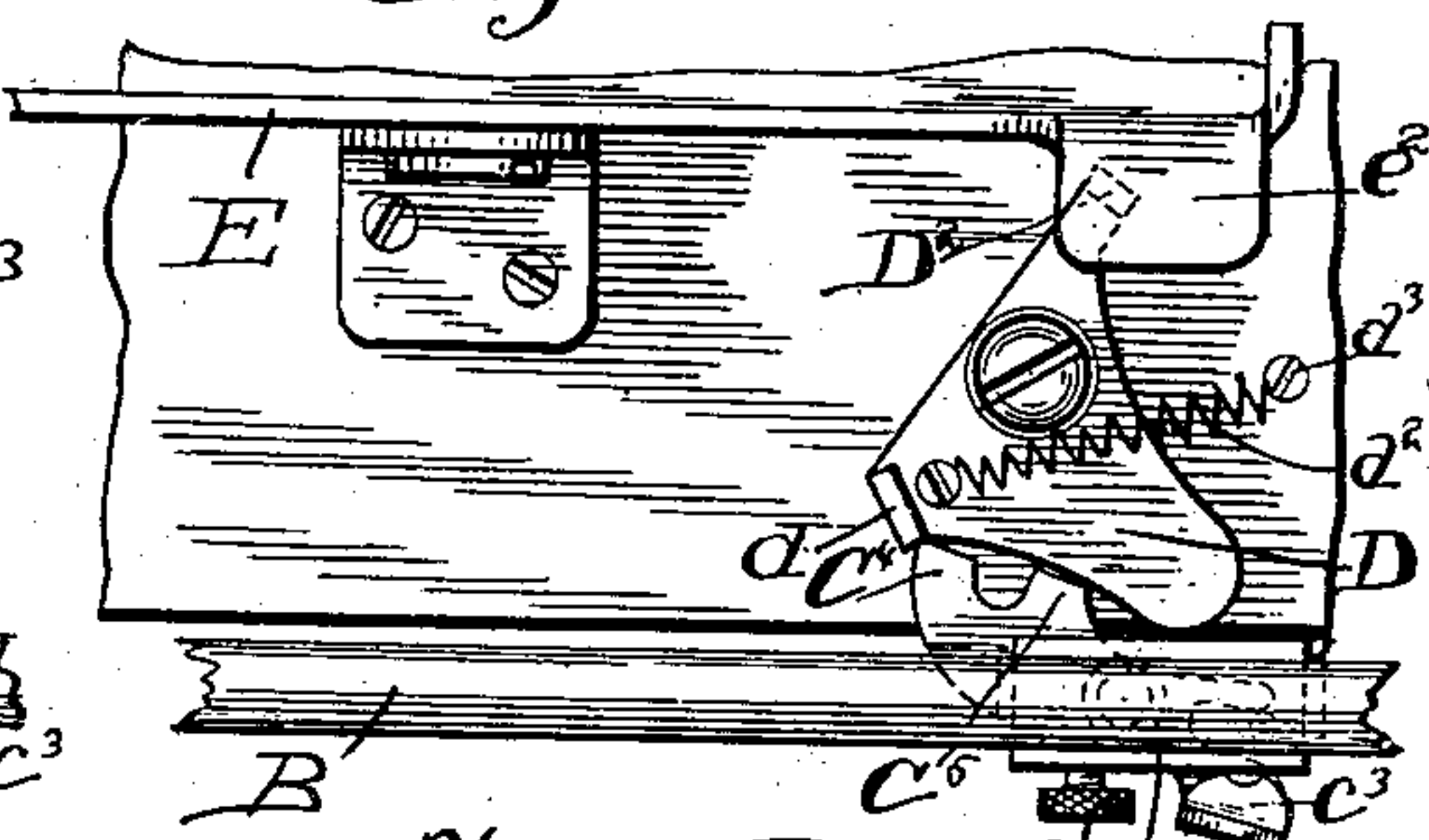
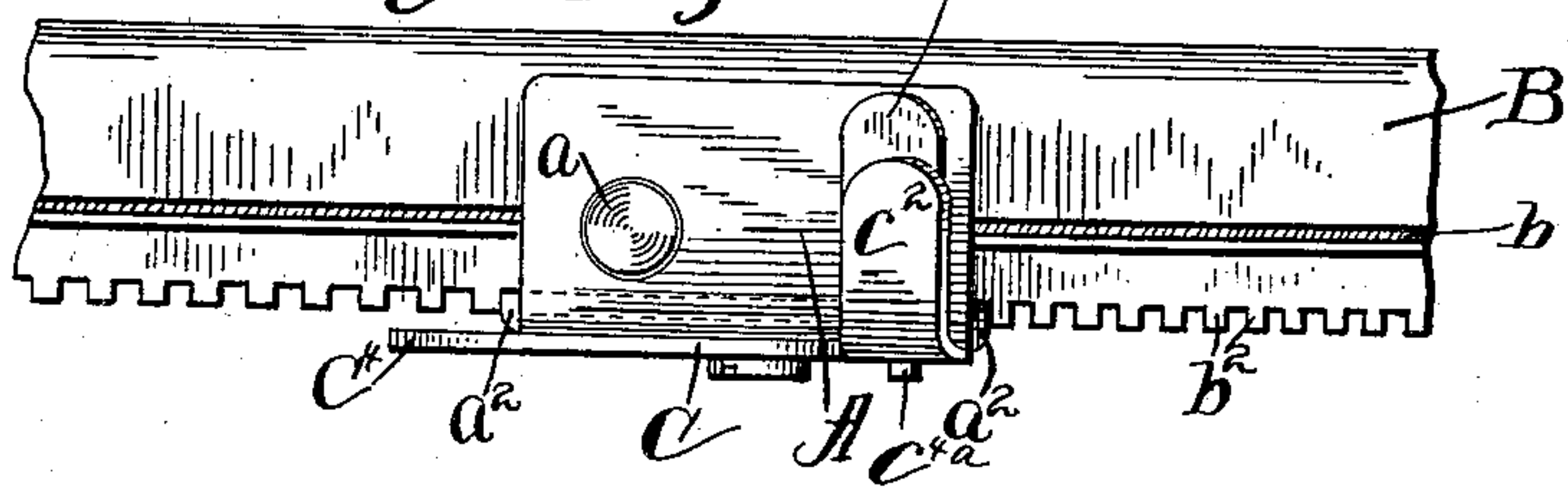


Fig. 5.



WITNESSES:

Eugene M. Slaney.  
G. W. Donning.

INVENTOR,  
George W. Donning,

by A. S. Slaney,  
his attorney.



# UNITED STATES PATENT OFFICE.

GEORGE W. DONNING, OF EAST ORANGE, NEW JERSEY, ASSIGNOR OF ONE  
HALF TO HARRY T. AMBROSE, OF ORANGE, NEW JERSEY.

## ADJUSTABLE MARGINAL STOP DEVICE.

SPECIFICATION forming part of Letters Patent No. 742,611, dated October 27, 1903.

Application filed February 14, 1903. Serial No. 143,423. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. DONNING, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Adjustable Marginal Stop Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved marginal stop for type-writers having a locking device that will automatically lock the carriage and other parts, if desired, against further operation and which can be released and thereby permit additional characters to be printed.

A further object is to provide means in combination with the above means that will lock the parts again after a certain predetermined number of characters.

A further object is to provide means whereby the parts can be released after the said second locking and permit still more characters to be printed.

The invention is especially adapted for use in a book type-writer, in which the work is stationary and the carriage carries the basket of the type bars, keys, &c.

With these objects in view my invention includes the construction, arrangement, and combination of parts, substantially as herein-after set forth with reference to the drawings and then pointed out in the claims.

In the drawings representing an apparatus embodying my invention in preferred form of construction and arrangement, Figure 1 is a plan view. Fig. 2 is a similar view showing the parts in a different position. Fig. 3 is a plan view of the adjustable stop. Fig. 4 is a detail sectional view showing the adjustable stop in end elevation. Fig. 5 is a front elevation showing the adjustable stop-bracket, and Fig. 6 is a perspective view with parts broken away for clearness.

Referring to the drawings, a stop-carrier A is made of a U-shaped plate to embrace the stationary track-rail B. The latter has a groove *b*, in which projects the conical end of a clamping-screw *a*, by which the carrier is

secured to the rail. The rail may also have a rack *b*<sup>2</sup> on its under side and the carrier have lugs *a*<sup>2</sup> *a*<sup>2</sup>, that engage the rack and serve to securely retain the carrier in its adjusted positions.

On the under part of the carrier is pivoted a stop-lever C, having an arm C<sup>2</sup> bent up at the front, where a flat spring C<sup>3</sup> tends to force the arm C<sup>2</sup> away from the carrier. The lever has two lugs C<sup>4</sup> and C<sup>5</sup>, that are normally held projecting beyond the carrier, as shown in Fig 1, by the spring C<sup>3</sup>. A pin C<sup>4a</sup> limits the swing of the lever by striking an arm C<sup>6</sup> on the latter.

The dog D is pivoted to a horizontal plate of the type-writer carriage and has a stop *d*, held normally in the path of the lugs C<sup>4</sup> C<sup>5</sup> on the stop-lever by the spring *d*<sup>2</sup> holding the edge of the dog against the stop-pin *d*<sup>3</sup>. This dog is arranged to engage some of the moving parts of the machine, so as to thereby lock the part or parts against operation. I preferably arrange it to engage an escapement-lever E, such as is disclosed by me in application Serial No. 104,842, filed April 26, 1902. The dog D has an arm D<sup>2</sup>, which is adapted to be brought upon movement of the dog into engaging relation with the detent *e*<sup>2</sup> of an escapement-lever E, but normally held by the spring *d*<sup>2</sup> out of such engaging relation.

In the operation of my device the stop-carrier A is adjusted in any desired position on the rail B, and during the travel of the type-writer carriage along the rail B the stop *d* will be carried into engagement with the lug C<sup>4</sup>, and thereby rock the dog D to the position shown in Figs. 2 and 6. In this position of the dog its arm D<sup>2</sup> lies in engaging relation with the detent *e*<sup>2</sup>, preventing any further operation of the escapement E and its connected parts, and thus limiting the travel of the type-writer carriage. Upon return movement of the type-writer carriage the dog D will be returned by the spring *d*<sup>2</sup> to its initial position, ready to be again actuated by the lug C<sup>4</sup> upon the travel of the carriage. However, should a further travel of the type-writer carriage be desired for the purpose of writing additional characters at the end of the type-writer line the arm C<sup>2</sup> can be pressed toward the rail B,



thus rocking the lug  $C^1$  from engagement with the stop  $d$  and permitting the spring  $d^2$  to swing the arm  $D^2$  out of engaging relation with the detent  $e^2$ . The escapement can then  
 5 be actuated for further travel of the typewriter carriage until the stop  $d$  engages the lug  $C^5$  and again swinging the arm  $D^2$  into engaging relation with the escapement-detent  $e^2$  stops further travel of the carriage. The  
 10 lug  $C^5$  is arranged adjacent the pivot of its lever  $C$  and is shown of such length as to prevent its withdrawal from engagement with the stop  $d$  by actuating said lever.

It will thus be seen that I have invented an  
 15 inexpensive, conveniently-applied, and simple double-locking means.

Without limiting myself to the details of construction and arrangement set forth, what I claim as new and desire to secure is—

- 20 1. The combination with a carriage, of an escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 25 adjustable along the path of the carriage and arranged to actuate said dog and thereby lock said escapement mechanism, means carried by said stop device and constructed to release said device from actuating engagement with the dog, and means supported on  
 30 said stop device and constructed to actuate the dog after such release, substantially as described.
- 35 2. The combination with a carriage, of an escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 40 adjustable along the path of the carriage and comprising two movably-supported lugs arranged to engage said dog, and a common means constructed to actuate both said lugs, substantially as described.
- 45 3. The combination with a carriage, of an escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 50 adjustable along the path of the carriage and comprising two movably-supported lugs arranged to engage said dog, and a common means carried by said stop device and constructed to actuate both said lugs, substantially as described.
- 55 4. The combination with a carriage, of an escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 60 adjustable along the path of the carriage and comprising a single movably-supported part provided with two lugs arranged to engage said dog, and means constructed to actuate said movably-supported part, substantially  
 65 as described.
5. The combination with a carriage, of an escapement mechanism mounted thereon, a

dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 70 adjustable along the path of the carriage and comprising a single movably-supported part provided with two lugs arranged to engage said dog, and means carried by said stop device and constructed to actuate said movably-  
 75 supported part, substantially as described.

6. The combination with a carriage, of an escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with  
 80 said escapement mechanism, a stop device adjustable along the path of the carriage and comprising a single movably-supported part provided with two lugs arranged to engage  
 85 said dog, and means constructed and arranged to actuate said movably-supported part and remove one, but not the other, of said lugs from engaging position relative to said dog, substantially as described.

7. The combination with a carriage, of an  
 90 escapement mechanism mounted thereon, a dog on the carriage and constructed for movement into and from locking engagement with said escapement mechanism, a stop device  
 95 adjustable along the path of the carriage and comprising a single movably-supported part provided with two lugs arranged to engage said dog, and means carried by said stop device and constructed and arranged to actuate  
 100 said movably-supported part and remove one, but not the other, of said lugs from engaging position relative to said dog, substantially as described.

8. The combination with a carriage having a movable member thereon, and a stationary  
 105 rail, of a dog on the carriage arranged to be moved to lock said member, a carrier adjustable on the rail, a lever on the carrier, a lug on the lever, a spring arranged normally to retain the lever in position to engage and  
 110 move the dog on the movement of the carriage and thereby lock said member, said lever and dog being arranged to release the said member when the lever is rocked, substantially as described.

9. The combination with a carriage having a movable member thereon, and a stationary  
 115 rail, of a dog on the carriage arranged to be moved to lock the said member, a carrier adjustable on the rail, a lever on the carrier, a spring arranged normally to retain the lever  
 120 in position to move the dog on the movement of the carriage and thereby lock said member, said lever and dog being arranged to release said member when the lever is rocked, and a  
 125 stop on the lever arranged to engage the dog and again lock the member upon a further movement of the carriage after said locking and release, substantially as described.

10. The combination with a carriage having  
 130 a movable member thereon, and a stationary rail, of a dog pivoted on the carriage, a detent on the said member, an arm on the dog arranged to engage the detent and lock the



said member on the movement of the carriage, a spring arranged normally to hold the dog out of the locking position, a carrier movable along the rail, means for locking the carrier in its adjusted positions, a lever pivoted on the carrier, a stop on the dog, a lug on the lever, a spring on the carrier arranged normally to retain the lever with its said lug in position to engage the stop on the dog upon the traverse of the carriage and thereby lock the movable member, substantially as described.

11. The combination with a carriage having a movable member thereon, and a stationary rail, of a dog pivoted on the carriage, a detent on the said member, an arm on the dog arranged to engage the detent and lock the said member on the movement of the carriage, a spring arranged normally to hold the dog out of the locking position, a carrier movable along the rail, means for locking the carrier in its adjusted positions, a lever pivoted on the carrier, a stop on the dog, a lug on the lever, a spring on the carrier, arranged normally to retain the lever with its said lug in position to engage the stop on the dog upon the traverse of the carriage and thereby lock said member, an arm on the lever arranged to rock it and thereby cause the dog to release the said member, and a second lug on the

lever arranged to engage the stop on the dog upon the further traverse of the carriage after said locking and release, and again lock the said member, substantially as described.

12. The combination with a carriage having a movable member thereon, and a stationary rail, of a dog on the carriage arranged to lock the movable member, a carrier adjustable on the rail, a lever on the carrier, a lug on the lever, a spring arranged to normally retain the lever in position to have its lug engage and move the dog on the movement of the carriage, and thereby lock the said member, the lever and the dog being arranged to release the said member when the lever is rocked, a second lug on the lever arranged to engage the dog on a further traverse of the carriage after said locking and release, said second lug being arranged to again release the dog and movable member on a movement of the lever after said second locking of the said member, substantially as described.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

GEORGE W. DONNING.

Witnesses:

ANDREW W. STEIGER,  
JOHN R. WILTSIE.