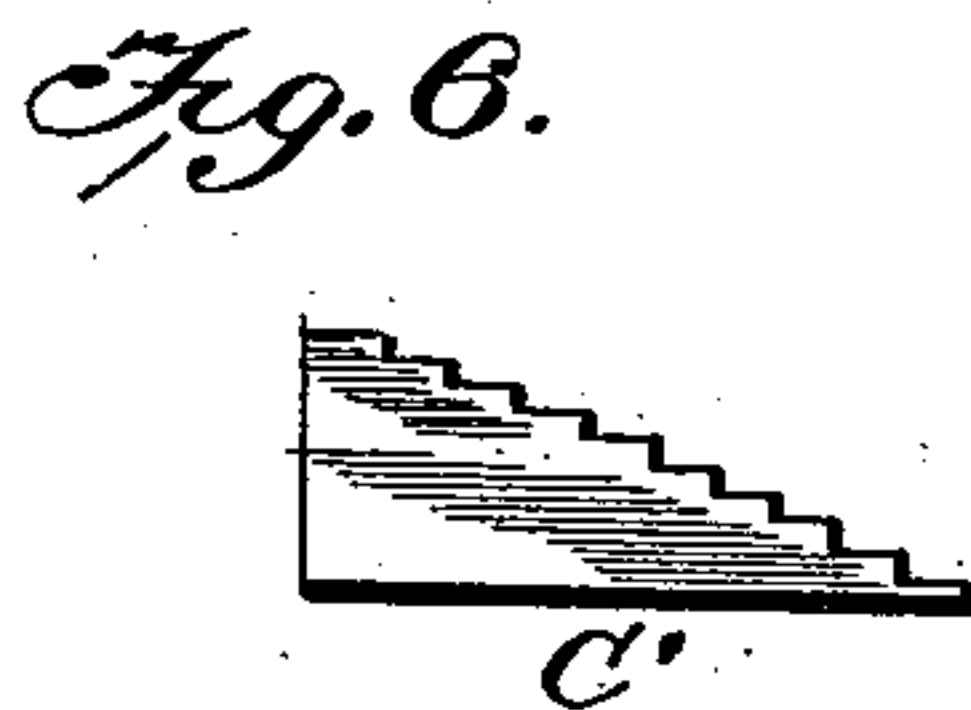
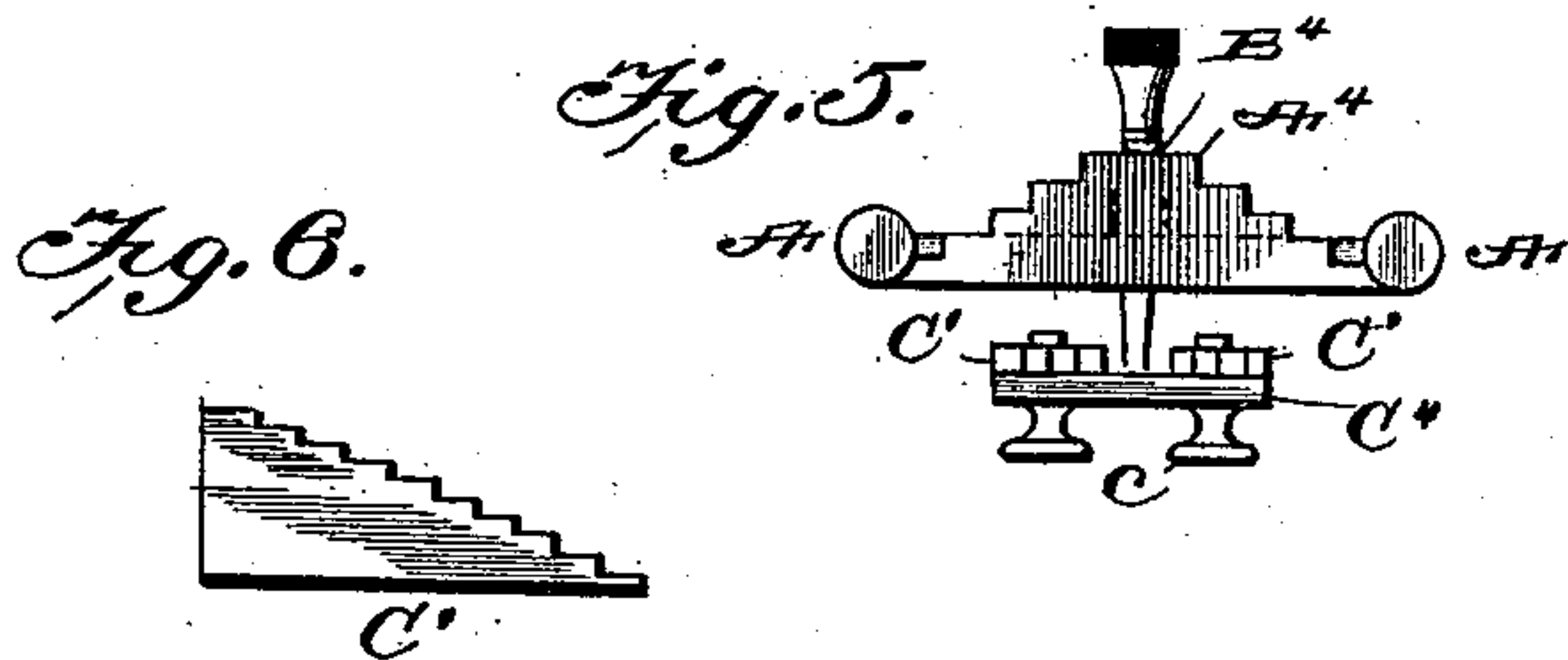
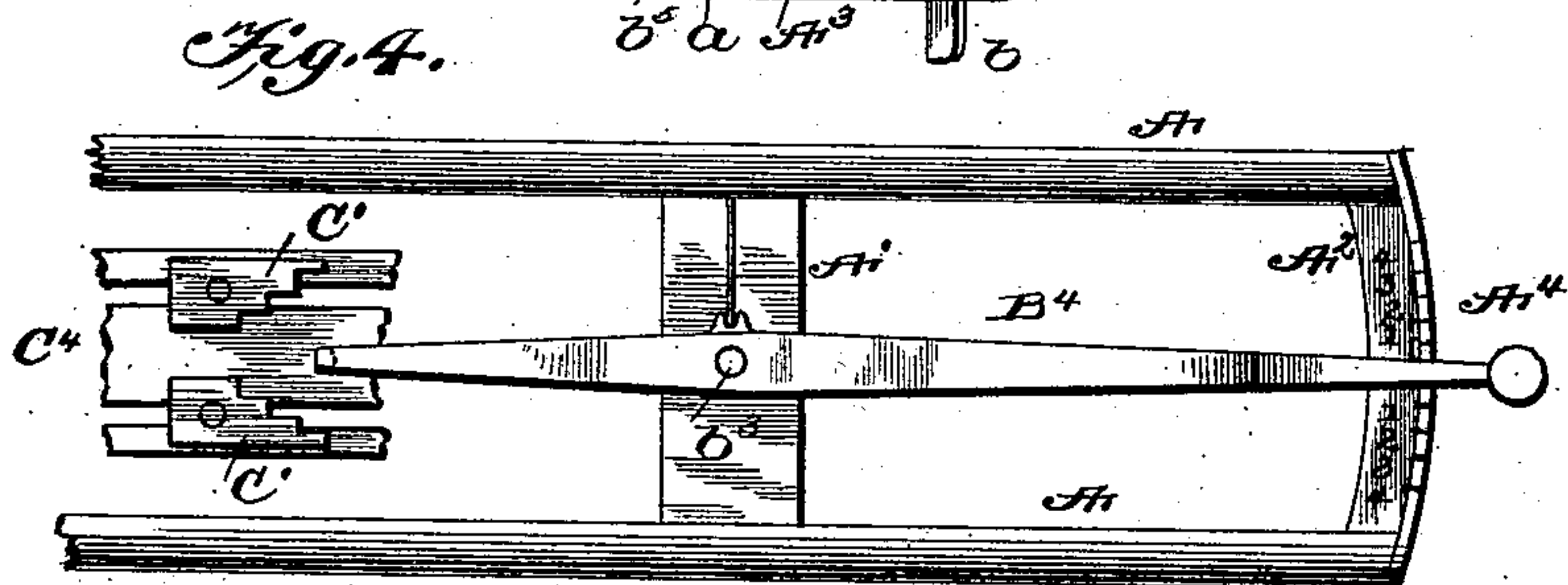
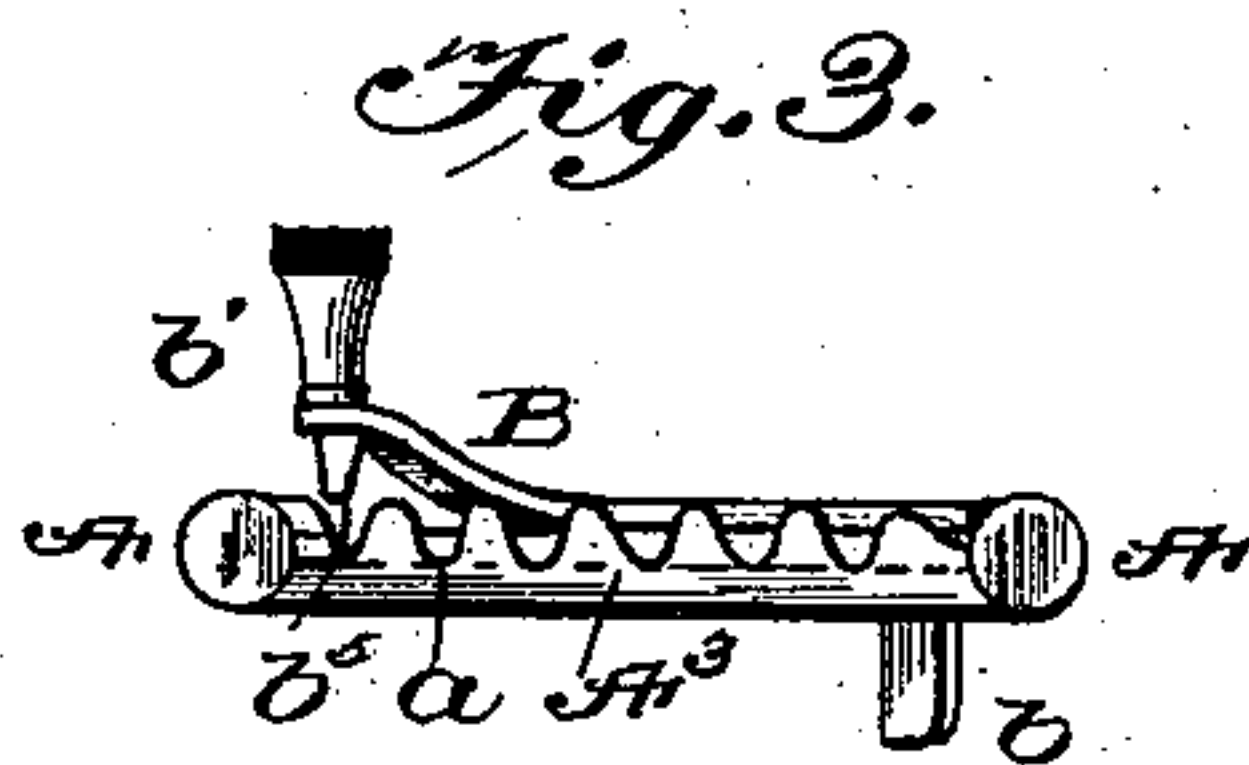
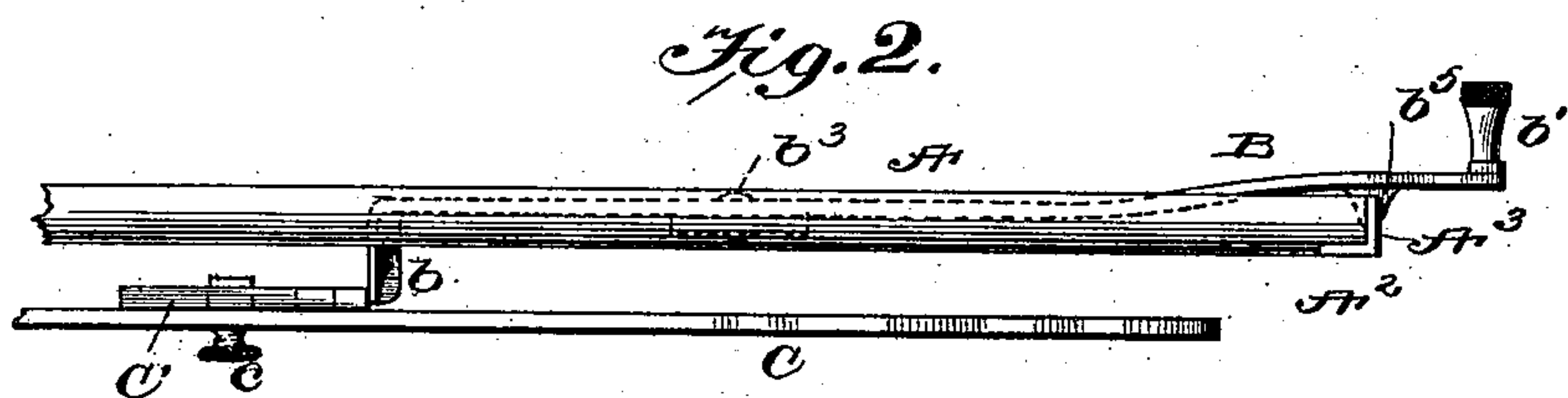
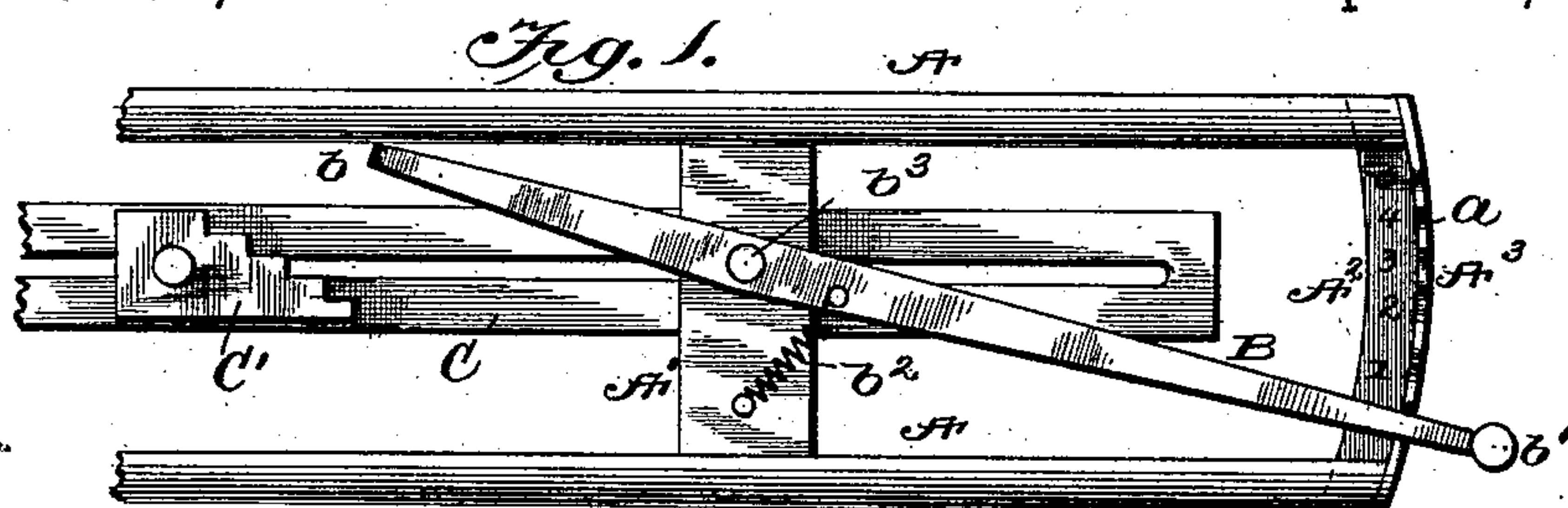


(No Model.)

G. C. BLICKENS DERFER.  
TYPE WRITING MACHINE.

No. 472,694.

Patented Apr. 12, 1892.



Witnesses

John D. Irvine  
Franklin Moore

Inventor

G. C. Blickensderfer  
By his Attorneys  
Hallock and Halleck



# UNITED STATES PATENT OFFICE.

GEORGE C. BLICKENS DERFER, OF STAMFORD, CONNECTICUT, ASSIGNOR TO  
THE BLICKENS DERFER MANUFACTURING COMPANY, OF NEW YORK, N. Y.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 472,694, dated April 12, 1892.

Application filed October 29, 1891. Serial No. 410,232. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. BLICKENS DERFER, a citizen of the United States, residing at Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines; 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.

This invention relates to type-writing machines; and it consists in certain new and useful improvements in the means for stopping the carriage at any predetermined point while moving to the left, so as to enable the operator to columnate matter with exactness and rapidity and without observing the scales of the machine, as will be hereinafter fully set forth, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a top view of the right-hand end of the paper-carriage of a type-writing machine and a stop-bar C and stop C', located below the carriage and fixed onto the frame of the machine, said frame not being shown. Fig. 2 is a side view of the same parts shown in Fig. 1. Fig. 3 is an end view of the carriage shown in Fig. 1. Fig. 4 is a plan view like Fig. 1, showing an alternative construction of certain parts. Fig. 5 is an end view of the parts shown in Fig. 4. Figs. 6 and 7 show alternative forms of the stop-block.

A A' A<sup>2</sup> marks the carriage-frame; B, the variable laterally-swinging catch-lever on the carriage; C, the stop-bar on the frame of the machine; C', the adjustable laterally-graduated stop-block on the stop-bar. The carriage is stopped by the end *b* of the lever B coming into contact with the stop-block C'. This will only occur when the lever B is so placed as to bring the point *b* into line with the block C', and the point at which the carriage will be stopped will be regulated by the stop or notch on the block C' with which the lever B contacts, and this will depend on the position of the lever B. The block C' can be adjusted at various places on the bar C for the purpose of fixing the point where the column of matter to be printed shall be located on the sheet.

The notches or stops on the block C' represent units, tens, hundreds, and so on, beginning with the notch or stop farthest to the left, as shown in Fig. 1. For example, the lever B is pivoted at *b*<sup>3</sup> in the frame-piece A' of the carriage and is held, as shown in Fig. 1, by a spring *b*<sup>2</sup>, so as to have the catch-point *b* so far to one side as to not come in contact with the block C'. On the frame-piece A<sup>2</sup> of the carriage is a notched quadrant A<sup>3</sup> with figures "1 2 3," &c., opposite its notches *a*. On the under side of the lever is a lug *b*<sup>5</sup> for engagement with the notches *a* of the quadrant, said lever having enough spring to allow it to be moved vertically. To stop the carriage at the unit-point, the operator will move the lever so that it will rest in the notch *a* opposite the figure "1," and this will bring the catch point *b* into line with the first notch on the left of the stop-block. To stop at tens, the lever will be adjusted in the notch marked "2," and so on.

In printing bills or like matter the operator will first print in the item, then set the lever B on the quadrant A<sup>3</sup> to the number equal to the number of digits in the amount to be printed, and then move the carriage until the catch-lever engages the stop-block, then release the lever B from the notch on the quadrant, and let it assume the position shown in Fig. 1, so as to leave the carriage free to move to the left by the action of the keys, and then proceed to put in the number.

In the construction shown in Figs. 4 and 5 the neutral position of the catch-lever B<sup>4</sup> is parallel with the frame-pieces A A, and by having two stop-blocks C' C', as shown, the lever can be moved in either direction the requisite number of notches to engage and stop the carriage, and the quadrant A<sup>4</sup> is made with oppositely-graduated notches.

In Fig. 6 the stop-block C' is shown with ten distinct stops in place of five, as in Fig. 1.

In Fig. 7 the stop-block C<sup>2</sup> is shown without any notches, its inclined or graduated side being left plane. Such a block could be used.

I do not herein claim an attachment for type-writing machines consisting, essentially, of a series of stops arranged side by side and a letter-distance apart for the purpose of de-



termining the stopping-point of the carriage, as said construction is claimed in a separate application, Serial No. 410,893, filed by me November 4, 1891; nor do I claim herein the combination of a carriage, a stop mechanism for arresting the carriage at different points as it moves to the left, and a key mechanism for manipulating the stop mechanism to stop the traverse of the carriage at any desired point in the line; nor do I claim herein the combination of a carriage, a stop mechanism, and a key mechanism for positioning said stop mechanism to stop the traverse of the carriage at any desired point in the line during the motion toward a uniform point, as both of said subjects-matter are claimed in a separate application, Serial No. 398,672, filed by me July 7, 1891; nor do I claim herein the combination of a paper-carriage, a stop mechanism for stopping said carriage at varying predetermined points within its forward traverse, and means for bringing said stop into action and out of action and fixing the variable point at which said carriage shall be stopped, which means are under the control of the hand of the operator while it is moving the carriage; nor do I claim the combination of a paper-carriage, a variable stop or catch mechanism carried by said carriage and under the control of the operator's hand while moving the carriage, and a stop (which may be adjustable) on the frame of the machine for engaging with the variable stop or catch mechanism; nor the combination of a paper-carriage, a stop on the frame of the machine, a variable catch mechanism on the carriage, and means for actuating said variable catch while moving the carriage, as said subjects-matter are claimed in application, Serial No. 399,117, filed by me July 11, 1891; nor do I claim herein the combination of a frame having a series of stops in the path of the paper-carriage, and said carriage having a key-controlled stop mechanism normally out of the way of said stops when the carriage is moved, as that forms one of the subjects-matter claimed in application, Serial No. 410,231, filed by me October 29, 1891; nor do I claim in this

application a columnating attachment consisting of a stop and a catch-lever on the part of the machine opposite to the stop and having a variable throw relative to said stop, nor when said stop is on the frame and the catch is on the carriage, as said constructions form the subjects-matter of application Serial No. 410,230; nor do I claim in this application the combination of a stop and a catch variably engaging and manually adjustable relative to said stop, and automatically reverting to a uniform normal position, nor when said catch is variable longitudinally, nor when said catch is normally out of the path of the stop, nor when said catch is under control of the operator's hand, as such constructions form part of the subjects-matter of application, Serial No. 422,867, filed by me February 26, 1892.

What I claim as new is—

1. In a type-writing machine, the combination, with the paper-carriage thereof, of a horizontally-swinging catch on the carriage and laterally-graded stop-block connected with the frame below the carriage for engaging said catch and stopping the carriage at various predetermined points.

2. In a type-writing machine, the combination, with the carriage thereof, of a laterally-graded stop connected with the frame-work below the carriage, a laterally-swinging catch on the carriage, a lever for moving said catch, and a series of catches for holding said lever at various points of adjustment.

3. In a type-writing machine, the combination, with the paper-carriage thereof, of a laterally-graded adjustable stop-block connected with the frame-work below the carriage, a laterally-swinging catch on the carriage, a laterally-swinging and vertically-flexible lever for moving said catch, and a notched bar for engaging the flexible end of said lever.

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

GEORGE C. BLICKENSDECKER.

Witnesses:

M. F. HALLECK,  
FRANKLIN MOORE.