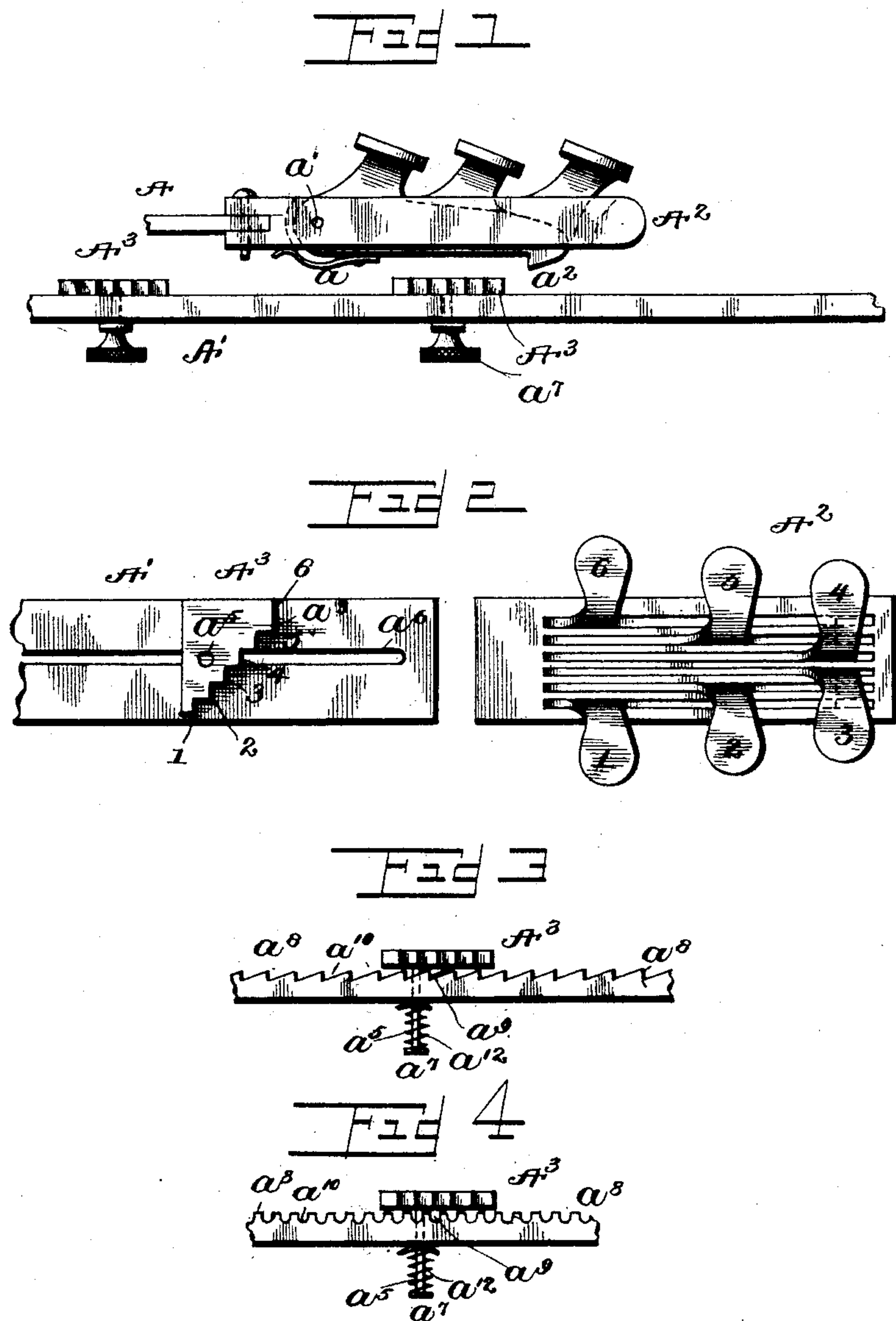


(No Model.)

G. C. BLICKENSDETFER.
ATTACHMENT FOR TYPE WRITING MACHINES.

No. 472,695.

Patented Apr. 12, 1892.



Witnesses

John D. Smith
Franklin Moore

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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 472,695, dated April 12, 1892.

Application filed December 1, 1891. Serial No. 413,674. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. BLICKENS-
DERFER, a citizen of the United States, resid-
ing at Stamford, in the county of Fairfield
5 and State of Connecticut, have invented cer-
tain new and useful Improvements in Attach-
ments for Type-Writing Machines; and I do
hereby declare the following to be a full, clear,
and exact description of the invention, such as
10 will enable others skilled in the art to which
it appertains to make and use the same.

My invention relates generally to devices
for stopping the traverse of a paper-carriage
at any desired position in the line, such as
15 are shown in my pending applications, Serial
No. 399,117, filed July 11, 1891; Serial Nos.
410,230, 410,231, and 410,232, filed October 30,
1891, and Serial No. 410,893, filed November
4, 1891, and particularly to means for accu-
20 rately setting the adjustable lug or stop.

In application Serial No. 410,232 the adjust-
able lug or stop is secured to a bar or frame by
means of a set-screw. No means are provided
for accurately setting this stop so that when
25 set the edge that receives the impact of the
part controlled by the key mechanism will be
in such position that when the carriage is
stopped the point on the paper will be in ex-
actly the position necessary to receive the
30 proper impression. In other words, if it be
desired to shift the stop one or more letter-
spaces the operator would have to use a scale,
which may be marked upon or applied to the
bar or frame to which the stop is secured.
35 To remedy this objection, I propose to dentate
some part of the bar or frame and arrange the
adjustable stop in such manner that a part of
itself will fit into the spaces between the teeth,
which may be of any desired form. The ne-
40 cessity of setting the nut to fix the stop in
place is also objectionable when compared
with a retaining device that will prevent the
stop from jumping between the teeth and at
the same time permit the operator to set the
45 lug or stop without having to unscrew any
part. While I prefer such a construction, I
do not desire to limit myself to it, as it is ob-
vious that many means could be provided for
holding the stop in place without departing
50 from my invention, which consists of construc-

tions and combinations, as well as details of
constructions, all as will be set forth in the
accompanying specification and pointed out
in the claims, reference being had to the ac-
companying drawings, which show several ap- 55
plications of my devices, and in which—

Figure 1 represents a side elevation of part
of a frame and paper-carriage having the stop
mechanism attached thereto; Fig. 2, a top
plan showing the arrangement of the key 60
mechanism and one of the stops; Fig. 3, a de-
tail showing means for setting the adjustable
stop; Fig. 4, a detail showing a modification
of the teeth and means for holding the stop
in the spaces between the teeth. 65

A represents a part of the paper-carriage;
A', part of the frame of a machine or an at-
tachment to the frame; A², the key mechan-
ism, and A³ stops. These stops are provided
on one of their edges with a series of steps or 70
gradations a^3 , corresponding in number to the
number of keys of the key mechanism A².
These keys, which may be of any desired num-
ber, are pivoted, preferably, upon a common
fulcrum a' , and each have a catch a^2 on the 75
same traverse line. These catches are also
on the same longitudinal line as the grada-
tions on the stops—that is, the catch a^2 on
key-lever 1 is on the same longitudinal line as
gradation 1 on the stops, the catch a^2 on the 80
key-lever 2 is on the same longitudinal line
as gradation 2, and so on to the end. If the
carriage be moved toward the stops and one
of the keys be depressed, the catch a^2 on the
key will strike its corresponding gradation on 85
the stop and arrest further movement of the
carriage until the catch is raised, which is ac-
complished by the spring a acting upon the
key when the pressure of the finger is re-
moved. The carriage can then be moved in 90
the usual way.

The graded stop is secured to the frame or
bar in any desired manner, and is preferably
made movable, so that it can be adjusted to
any position thereon. The manner of secur- 95
ing the stop to the plate can be varied in so
many different ways that I have shown only
one specific mechanism producing that effect,
which consists of a pin a^5 on the stop and a
slot a^6 in the frame or bar, and through which 100

the pin is passed and secured in any desired way. In Fig. 1 the stop is clamped in place by a nut or cap a^7 .

When a dentated plate or bar is used, the 5 graded stop is provided with parts that fit into the notches between the teeth. In the device shown in the drawings the teeth a^8 are shown on the upper side of the frame, and the stop is provided with lugs a^9 , which fit 10 into the notches a^{10} between the teeth, and are held therein by any suitable retaining device. My preferred form of teeth are those shown in Fig. 3, and known as "ratchet-teeth." Their points project toward the catch upon 15 the carriage, so that when said catch strikes the stop the teeth will prevent the stop from moving. This form of device is very useful where the stop is held in place by a yielding retaining device. One form of such a construction is shown in Figs. 3 and 4. The pin 20 a^5 is elongated and the nut or cap a^7 is placed on the lower end and a spring a^{12} interposed between the frame or bar and the nut or cap a^7 . The spring a^{12} holds the lugs a^9 in the 25 notches a^{10} , and at the same time permits of the operator drawing the stop in one direction without lifting the stop from contact with the teeth. If, however, he desires to move the stop in the opposite direction—*i. e.*, to- 30 ward the point of the teeth—the stop must be lifted above the teeth.

In Fig. 4 the dentations are of a slightly-different character from those shown in Fig. 3, the ends being flattened and the notches of 35 a U shape. It is obvious that the form of the teeth may be varied at will and the lugs or projections on the stop changed accordingly. In practice I prefer to place the notches

a letter-space distance apart, so that when it is desired to move the stop any number of 40 letter-spaces the notches can be counted and the stop moved to the proper one to make the required change. By such a construction an operator can always locate the exact point 45 that he desires to reach and the carriage can be stopped at that point, and any desired impression can be made upon the paper on the platen with the certainty that the impression has been properly made relative to the im- 50 pressions in the same and other lines.

What I claim as new is—

1. In a type-writing machine, the combination of a paper-carriage, a key mechanism having catches on the same horizontal line, and a graded stop having its gradations on the 55 same longitudinal lines as the catches, all of which have a separate gradation.

2. In a type-writing machine, the combination of a paper-carriage, a key mechanism having catches on the same horizontal line, 60 and an adjustable graded stop having its gradations on the same longitudinal lines as the catches, all of which have a separate gradation.

3. In a type-writing machine, the combination of a key mechanism having catches, a 65 slotted bar or frame having teeth pointing toward said catches, and a stop held against said teeth by a yielding retaining device.

In testimony whereof I affix my signature in 70 presence of two witnesses.

G. C. BLICKENSDECKER.

Witnesses:

M. F. HALLECK,
FRANKLIN MOORE.