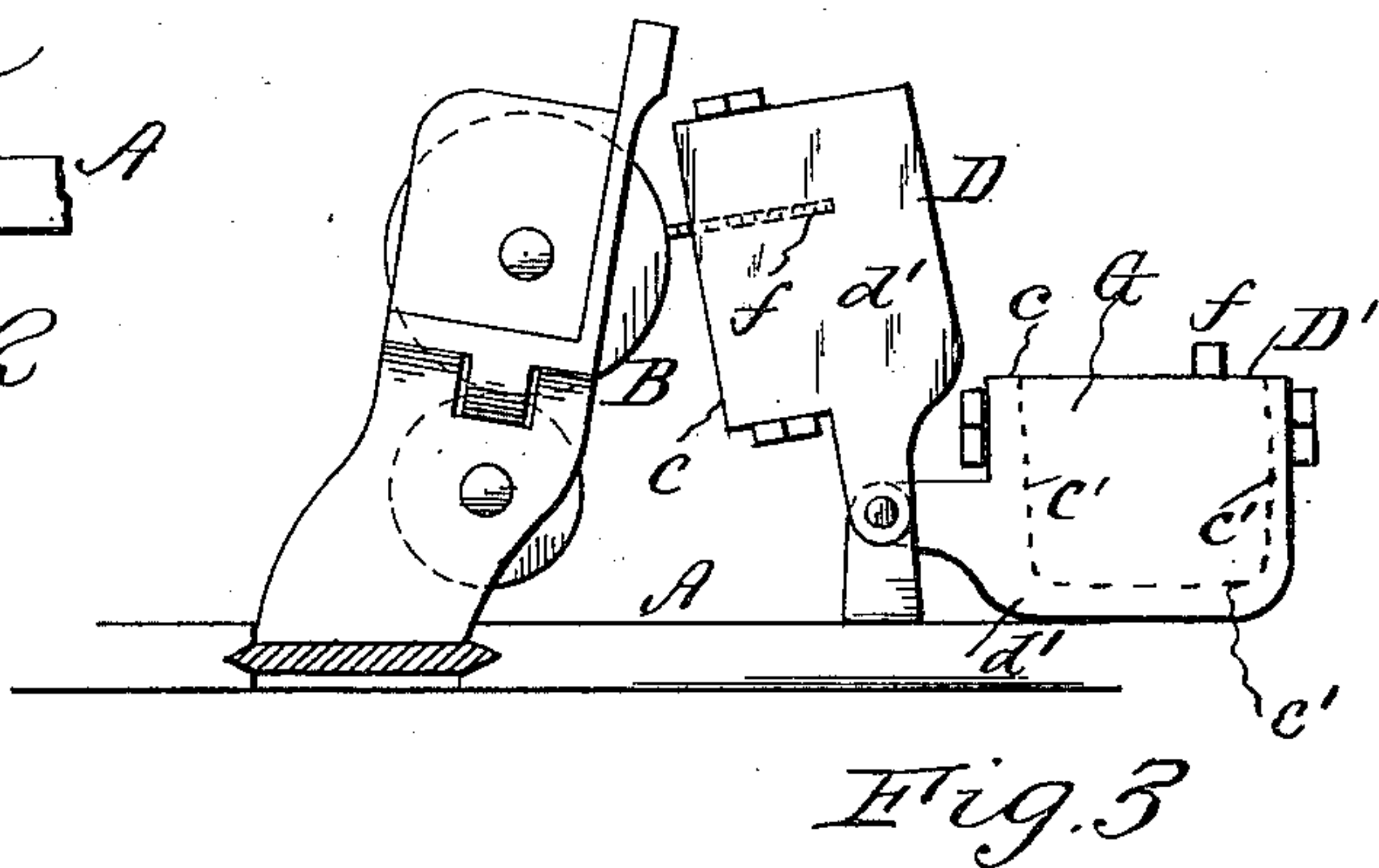
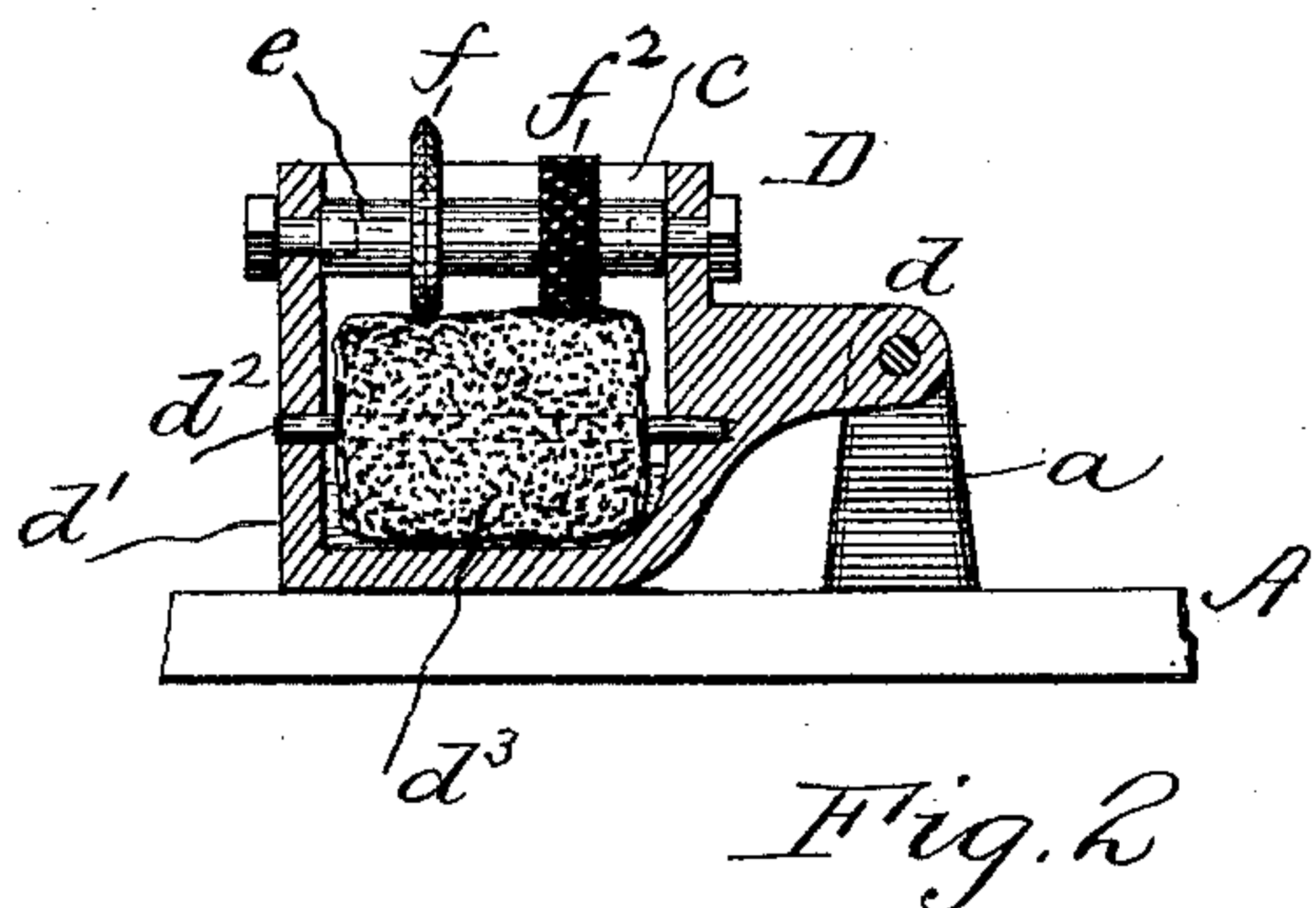
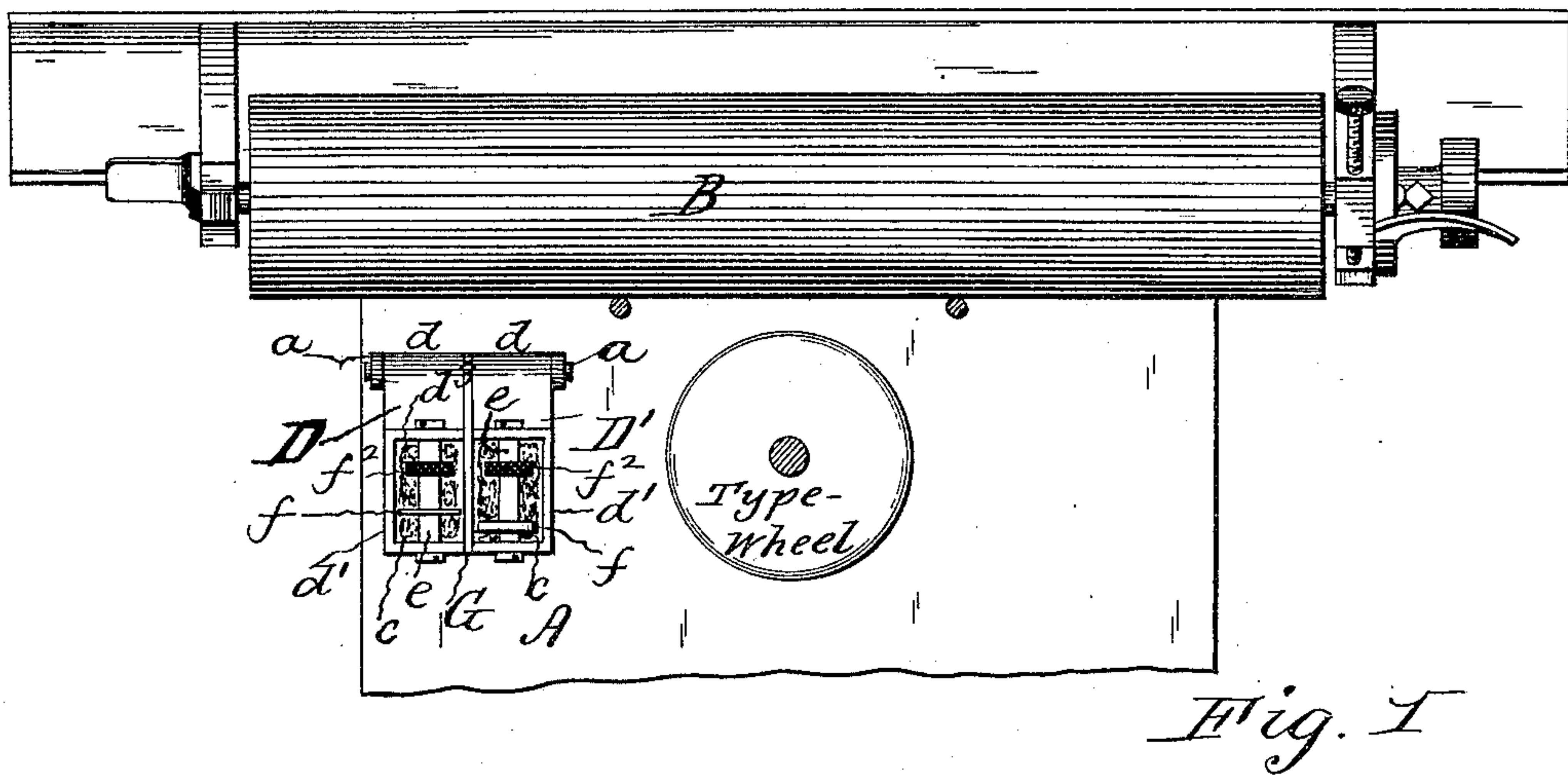


(No Model.)

G. C. BLICKENSDEFFER.  
TYPE WRITING MACHINE.

No. 432,298.

Patented July 15, 1890.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE C. BLICKENSDERFER, OF STAMFORD, CONNECTICUT, ASSIGNOR  
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## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 432,298, dated July 15, 1890.

Application filed July 5, 1889. Serial No. 316,590. (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  
and State of Connecticut, have invented cer-  
tain new and useful Improvements in Under-  
scoring, Canceling, and Space-Filling Attach-  
ments for Type-Writing Machines, of which  
the following is a specification.

This invention relates to means for under-  
scoring words and lines made by type-writ-  
ing machines, canceling words or lines printed  
by said machines, and for filling in the spaces  
left between said words or lines.

My invention has for its object to provide  
a simple, economically-constructed, durable,  
and quickly-operated form of underscoring,  
canceling, and filling-in-blank-space device,  
which is independent of the key-levers or  
other operative parts of the type-writer.

My invention accordingly consists of the  
underscoring, canceling, and filling-in-blank-  
space device, as will be hereinafter described  
in the specification, and pointed out in the  
claims.

Referring to the accompanying drawings,  
which are hereby made a part of the speci-  
fication, Figure 1 represents a top plan of  
part of a form of type-wheel type-writing ma-  
chine, which is the subject-matter of another  
application filed by me of even date here-  
with, Serial No. 316,951, having my improved  
underscoring, canceling, and blank-filling-in  
space devices attached thereto in the posi-  
tion that they take when not in use. Fig. 2  
represents a longitudinal section of the un-  
derscoring device, and Fig. 3 a side elevation  
showing one of the devices in position to act  
upon the matter on the paper or platen, and  
the other part in position when not in use.

A represents the top of the machine; B, the  
platen or roller of the paper-carriage; D, the  
underscoring device and D' the canceling de-  
vice, both of which are suitably pivoted or  
otherwise supported on the frame or other  
fixed part of the machine, so as to be mov-  
able to and from the roller B. As shown in  
the drawings, these said devices are pivoted  
at their ends *d* to standards *a* on the machine.

Each device consists of a casing *d'*, having  
an open face or top *c*, preferably, and pro-  
vided with a shaft *d<sup>2</sup>*, carrying an inking-pad  
*d<sup>3</sup>*, above which and suitably journaled is  
another shaft *e*, carrying a marking wheel or  
roller *f*, part of the periphery of which pro-  
jects through and beyond the open face or  
top *c*, as indicated more plainly in Figs. 2 and  
3, for underscoring, canceling, and filling in  
blank spaces. The casing *d'* is in the form  
of a receptacle, preferably of an oblong con-  
figuration, as indicated, and is open at its top  
or upper end for the canceling or underscor-  
ing device to project through. The shaft of  
the canceling and underscoring device is par-  
allel with the bottom of the casing and at  
right angles to its pivot or hinge connection.  
Between the shaft of the underscoring and  
canceling device and the bottom of the cas-  
ing a rotating inking-pad is placed. By so  
locating the pad the ink will not seep to one  
end thereof, as would be the case if the nor-  
mal position of the pad were vertical instead  
of horizontal. The pad therefore, when raised  
for operation, will always present an inked sur-  
face to the canceling or underscoring device  
for any extended length of operation of the  
same.

It is obvious that one device D, with a roller  
or wheel *f*, can be used for underscoring, can-  
celing, or filling in blank spaces; but I pre-  
fer to use a distinct device for each purpose,  
as the canceling and blank-space filling can  
be made without changing the position of the  
roller B, whereas in underscoring the roller B  
must be given a short turn to raise the printed  
matter above the wheel or roller *f*. By pro-  
viding two separate devices D and D', I am  
enabled to underscore without changing the  
position of the roller B, and this saves time.  
The underscoring and canceling wheel or roller  
*f* may be similar in form, and if the periph-  
ery be provided with teeth that make marks  
like periods or hyphens no other means need  
be used for revolving the feeding-pad for ink-  
ing wheel *f*, as its teeth will catch in the pad  
and turn it so that fresh inking-surfaces will  
be continuously presented to the wheels *f*.

In practice I prefer to use a wheel *f* having



two parallel rows of teeth or of periods or hyphens; but this is immaterial. Where a distinct device D' is used for canceling and filling in blank spaces, I prefer to make the wheel *f* of the underscoring device D with a V-shaped periphery, so as to make a continuous fine line under the matter underscored. In such case I also arrange the underscoring-wheel *f* on its shaft in such manner as to bring it under the matter to be underscored, and thus dispense with the shifting of the roller B. When this is done, a second toothed wheel *f*<sup>2</sup> is placed upon the shaft *e*, for turning the inking-pad *d*<sup>3</sup>, as the V-shaped wheel will not turn said pad, the wheel *f* being arranged, or is of such a diameter, as not to project beyond the face or top *c* of the casing *d'*. The ink is applied to the pads through one of the sides of the casing, which is left open or cut away for that purpose, as more plainly indicated in Fig. 3 by the dotted lines *c' c'*. This open side may be closed by any suitable partition G, pivoted at any suitable point. If both the underscoring and canceling devices be used, I prefer to hinge the partition G in the pivot at a point between the two casings and have the open sides *c'* in said casings opposite each other, so that one partition will close both openings when the two devices are in their normal position, as more plainly indicated in Fig. 1. When one of the devices D D' is raised, the partition covers only one of the openings *c'*; but as they are not separated for any length of time evaporation of the ink and accumulation of dust in the casings will be very small. When both devices are used, each may have different-colored inks in the pads, so that there will be a clear distinction between the two.

The operation is as follows: If it be desired to underscore, or cancel, or fill in blank spaces, and only one device be used for all the above-noted purposes, the device is turned up against the paper on the platen or roller B. If for canceling or filling in blank spaces, the paper-carriage-supporting roller B is moved by hand in a longitudinal direction to produce the result. If for underscoring, the roller B is turned the required distance, and the carriage is then moved in the longitudinal direction, the same as in canceling. When both devices D and D' are used, the turning of the roller B is not necessary in underscoring, as the wheel is so arranged upon its shaft as to bring the wheel at the desired point to do the underscoring. In any case it will be noted that the devices D D' are not subject to or under the control of the actuating mechanism for the type-writing machine.

It is obvious that with a few minor changes this device D can be applied to all kinds of type-writing machines; and the construction and operation of the device may be

greatly varied without departing from the spirit of my invention, and hence I do not limit myself to any particular construction of the device, nor to the manner of pivoting or hinging the same to the machine, nor to the location of the device with reference to the roller or platen B.

I do not herein broadly claim the combination, with a sliding paper-carriage, of the underscoring device affixed to the frame of the machine, so as to be independent of the key-levers and other operative or movable parts of the machine, as the same is claimed in application Serial No. 316,591 aforesaid.

I herein claim only the specific form of the canceling, underscoring, and blank-space-filling device and the separate canceling and underscoring devices in themselves, as hereinafter set forth in the claims, without reference to the sliding or movable paper-carriage; but in another pending application of even date herewith, Serial No. 316,591, I broadly claim the combination, with a sliding or movable paper-carriage, of an underscoring or canceling device mounted upon a fixed or immovable part of a type-writing machine, so as to be moved to or away from the paper-carriage.

What I claim is—

1. A type-writer underscoring or canceling device comprising a pivoted casing in the form of a receptacle having an open face or top, a marking-wheel projecting through said open face and having a shaft parallel with the bottom of the casing, and an inking-pad between said marking-wheel and the casing-bottom, substantially as set forth.
2. The underscoring device D, comprising a freely pivoted or hinged casing having an open side or face, and a marking-wheel and inking-pad journaled on said casing, with their shafts parallel to each other and the bottom of the casing and at right angles to the pivot-shaft for said casing, substantially as set forth.
3. In a type-writing machine, a separate underscoring device, a separate canceling device, both of which have inking-pads and marking wheels or rollers and adjacent open sides, a slide between said sides and said devices, and the slide hung upon a common support or pivot, substantially as set forth.
4. In a type-writing machine, a separate underscoring device, a separate canceling device, and both of said devices provided with an inking-pad and a marking wheel or roller, substantially as set forth.

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

GEORGE C. BLICKENSDECKER.

Witnesses:

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CHAS. F. VAN HORN.