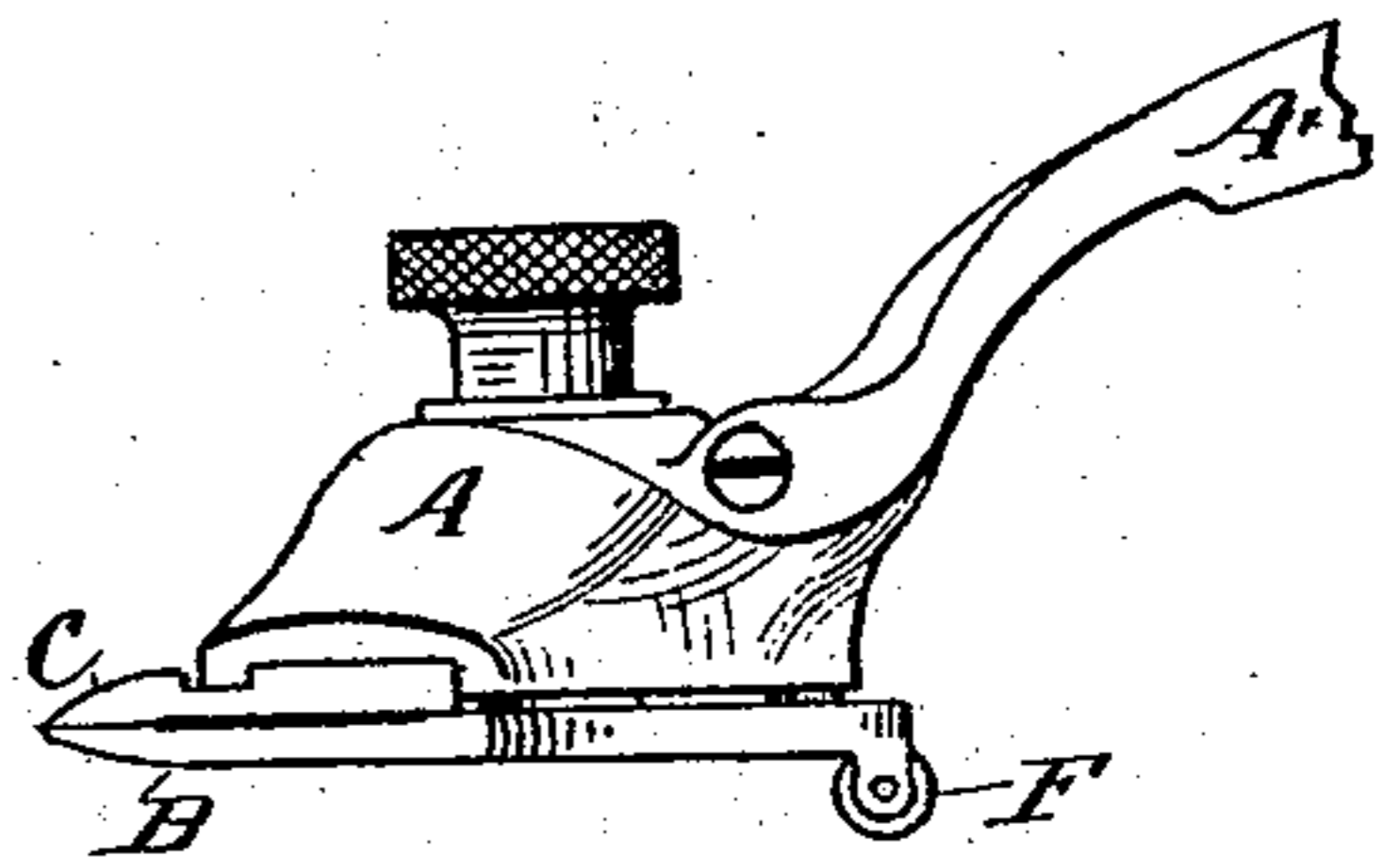
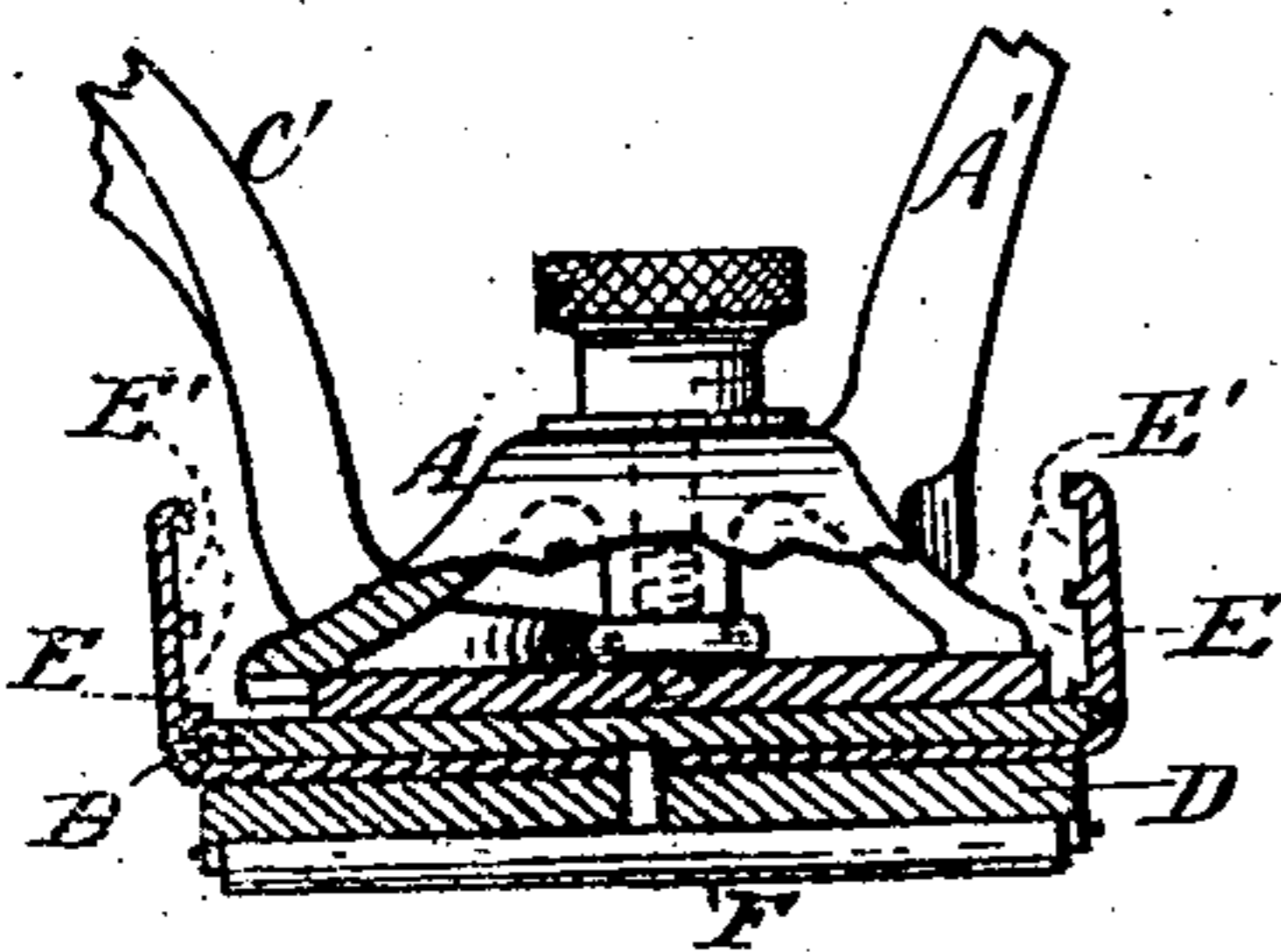
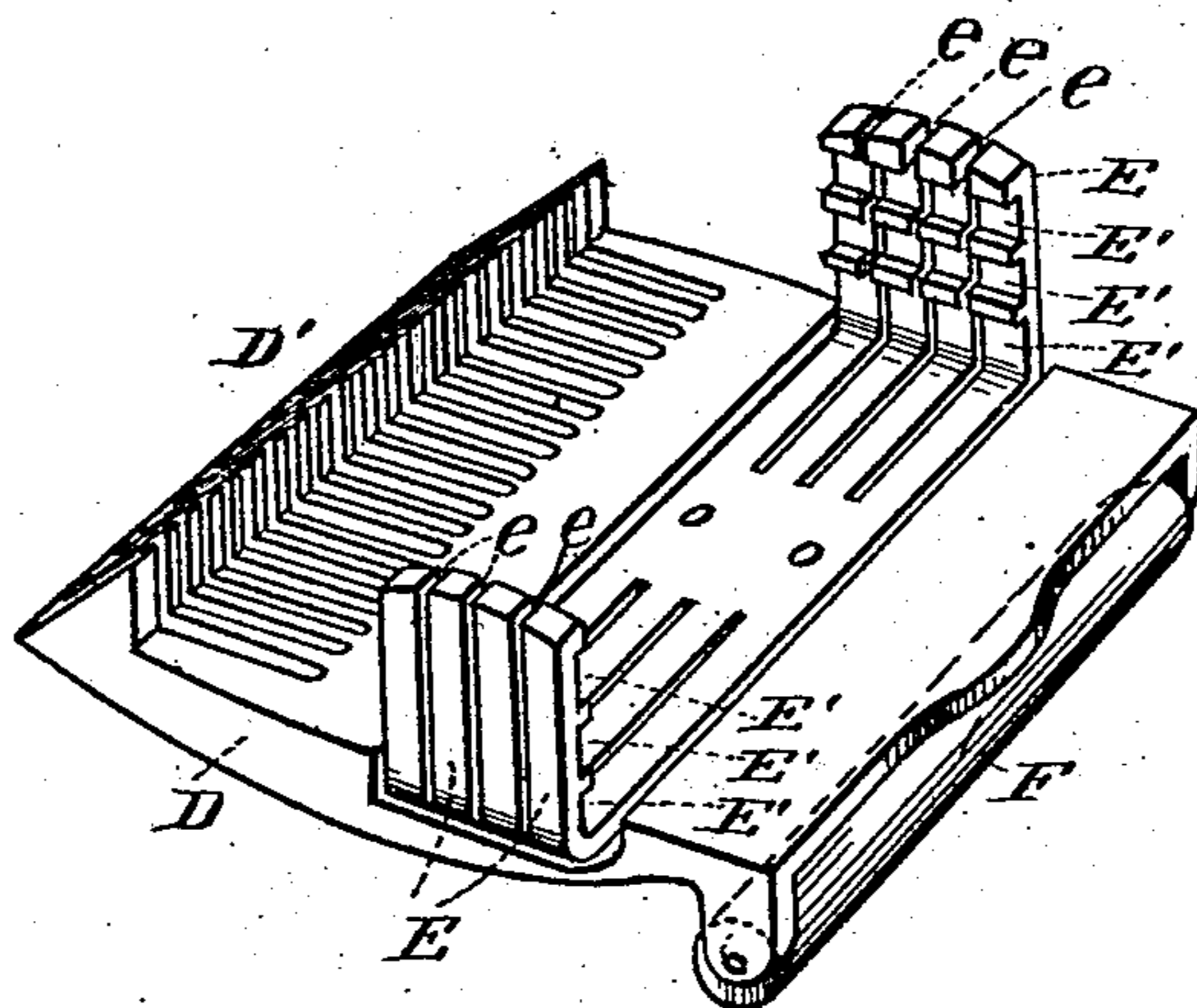
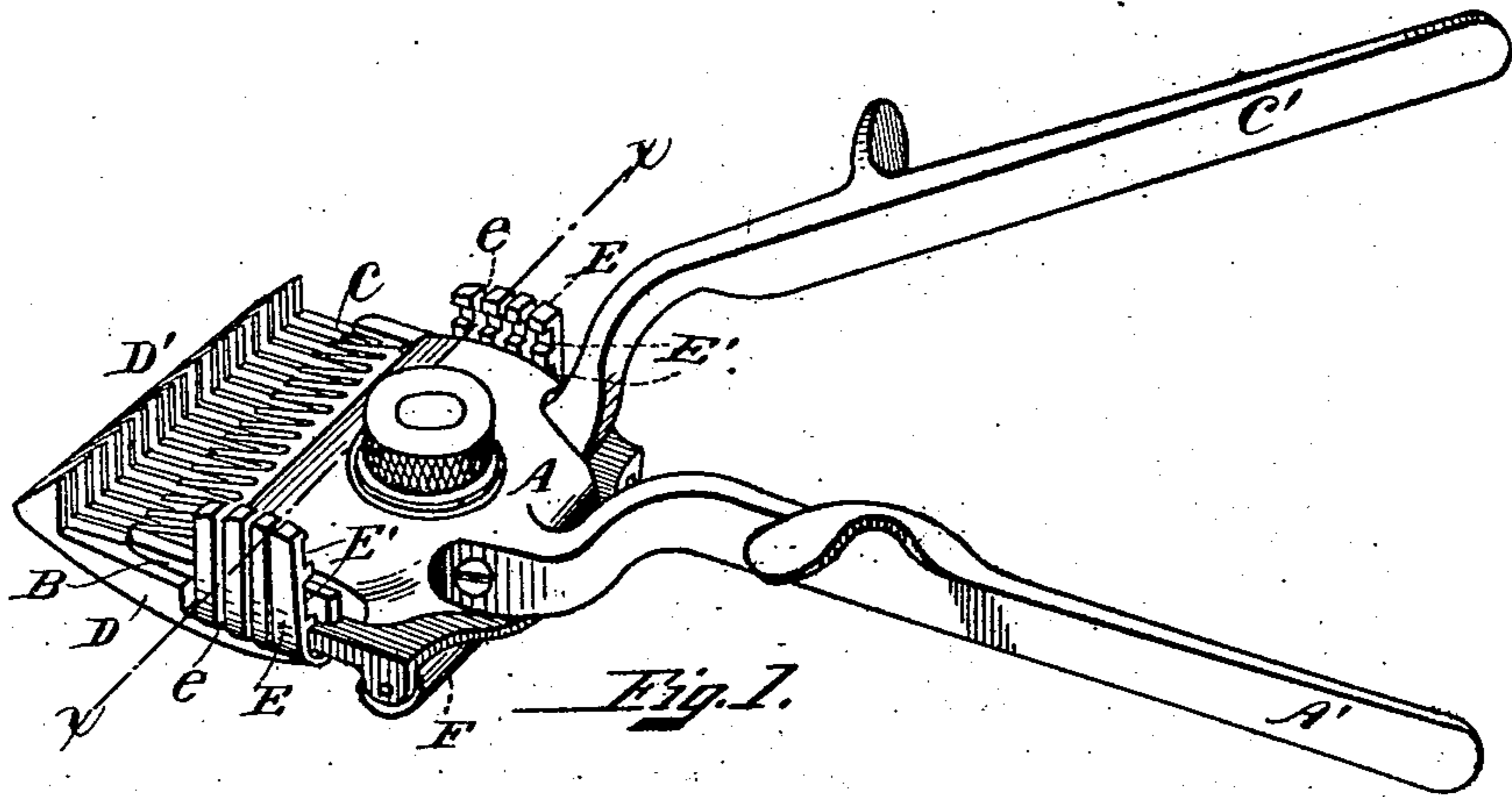


(No Model.)

J. W. SMITH.  
HAIR CLIPPER.

No. 481,977.

Patented Sept. 6, 1892.



Witnesses  
Alice A. Perkins  
Frances J. Surrance

Inventor  
John Waterston Smith  
by Wm. Andrew Smith

# UNITED STATES PATENT OFFICE.

JOHN WATERSTON SMITH, OF BOSTON, MASSACHUSETTS.

## HAIR-CLIPPER.

SPECIFICATION forming part of Letters Patent No. 481,977, dated September 6, 1892.

Application filed November 25, 1891. Serial No. 413,077. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WATERSTON SMITH, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Hair-Clippers, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in hair-clippers; and it consists, in combination with a movable and stationary clipper-plate, of a detachable comb-plate having vertically-slitted spring-clips adapted to serve as yielding fingers for the purpose of securing said comb-plate to the stationary clipper-plate in a detachable manner; also, in providing said spring-clips on their inner sides with a series of parallel grooves for the purpose of securing said comb-plate in different positions relative to the clipper-plate, according to the closeness of cut desired, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a perspective view of a hair-clipper embodying my improvements. Fig. 2 represents a perspective detail view of the improved detachable comb-plate. Fig. 3 represents a cross-section on the line X X, shown in Fig. 1; and Fig. 4 represents a side view of a modification of the invention.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents the frame, as usual, on a hair-clipper having made in one piece with it a handle A'.

B is the toothed lower stationary clipper-plate, which is secured in a suitable manner to the frame A, and between the latter and said lower clipper-plate is guided the movable upper toothed clipper-plate C, which is actuated by means of the handle C' and a spring, as is common in devices of this kind. In connection with said hair-clipper I use a detachable comb-plate D, having hooked teeth D' D' on its forward end, as shown in Figs. 1 and 2, and such comb-plate is used on the under side of the clipper-plate B for the purpose of cutting the hair more or less close, as may be

desired, according to the position of said comb-plate relative to the under side of the stationary clipper-plate B. The said comb-plate is adjustably secured to the opposite edges of the stationary clipper-plate B by means of spring-clips E E, attached in a suitable manner to the comb-plate D and provided on their insides with a series of parallel grooves E' E' E', adapted to receive the edges of the clipper-plate B when the comb-plate is to be used on the clipping device. It will readily be seen that by having a series of parallel grooves on the inside of each of said spring-clips E E the comb-plate D may be secured to the stationary clipper-plate in different positions, according to the closeness of the cut desired, thus dispensing with comb-plates of different thicknesses. For the purpose of causing the said spring clips to be held with a yielding pressure against the edges of the lower clipper-plate and in such a manner as to conform to the shape of the latter, I make such clips finger-shaped—that is, having vertical slits e e e, as shown in Figs. 1 and 2, by which each clip is, as it were, subdivided in a series of laterally-grooved fingers, each one of which is adapted to hold, cling, and conform to and against the edge or upper surfaces of the stationary clipper-plate.

In using a clipper it is very desirable to enable it to be moved and guided with a minimum of frictional resistance against the flesh and hair, and for this purpose I arrange on the under side of the comb-plate D, Figs. 1 and 2, or on the under side of the lower clipper-plate B, Fig. 4, a loosely-journaled roller F, which is preferably made cylindrical, but may be made of other form or shape without departing from the essence of my invention.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. In a hair-clipper, a stationary and movable clipper-plate and a detachable comb-plate having spring-clips provided with a series of grooves for the purpose of securing the said comb-plate in different positions relative to the clipper-plates, substantially as specified.

2. In a hair-clipper, a stationary and movable clipper-plate and a detachable comb-plate having laterally-grooved and longitudinally-slitted spring-clips for securing said  
5 comb-plate to the clipper, substantially as and for the purpose set forth.

In testimony whereof I have signed my

name to this specification, in the presence of two subscribing witnesses, on this 23d day of September, A. D. 1891.

JOHN WATERSTON SMITH.

Witnesses:

ALBAN ANDRÉN,

ALICE A. PERKINS.