

(No Model.)

H. BALDWIN & J. J. SMITH.
INK ERASER.

No. 402,710.

Patented May 7, 1889.

Fig. 1.

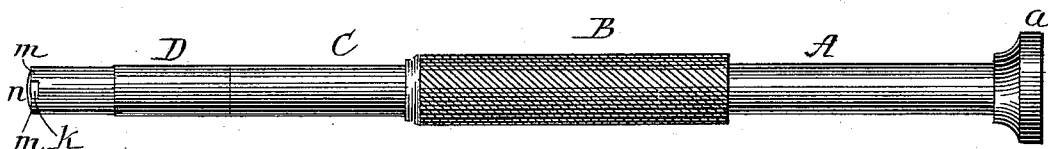


Fig. 2.

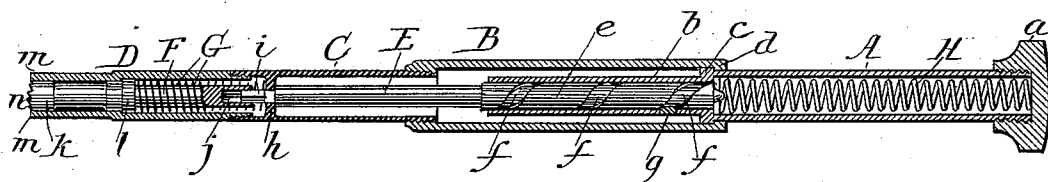


Fig. 3.

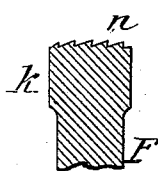


Fig. 4.

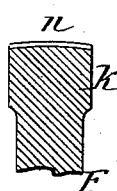
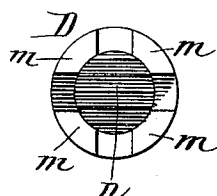


Fig. 5.



Witnesses:
Henry T. Jones.
Albert H. Adams.

Inventor:
Hiram Baldwin.
Justin G. Smith.
By West & Bond Attys.

UNITED STATES PATENT OFFICE.

HIRAM BALDWIN AND JUSTIN J. SMITH, OF TOLEDO, IOWA.

INK-ERASER.

SPECIFICATION forming part of Letters Patent No. 402,710, dated May 7, 1889.

Application filed March 22, 1889. Serial No. 304,340. (No model.)

To all whom it may concern:

Be it known that we, HIRAM BALDWIN and JUSTIN J. SMITH, residing at Toledo, in the county of Tama and State of Iowa, and citizens of the United States, have invented a new and useful Improvement in Ink-Erasers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a longitudinal section. Figs. 3 and 4 are sections through the erasing-head, Fig. 3 being taken on a line at right angles to the teeth and Fig. 4 on a line parallel to said teeth. Fig. 5 is a bottom view of the erasing-head and its inclosing-tube. All of the figures are enlarged.

This invention relates to ink-erasers, and is designed, primarily, for correcting mistakes in type-writing, and has for its object to provide a device that can be applied over a letter or character and erase such letter or character by means of a rotating erasing or cutting head; and its nature consists in providing in a suitable casing a rotatable rod having an erasing-head on its lower end, and in the combinations of devices for securing and operating said rod, all as illustrated in the drawings and hereinafter described.

That which we claim as new will be set forth in the claims.

In the drawings, A is a tube, to the upper end of which, as shown, is secured a cap or head, *a*. The tube A has an extension, *b*, of smaller diameter than the tube A. Between the tube A and its extension *b*, and formed therewith, is a collar or ring, *c*, which forms an inside and outside shoulder.

B is a tube of larger diameter than A, in which the extension *b* is placed. At the upper end of the tube B is a flange, *d*, which fits around the tube A, and against which the ring *c* comes in contact and prevents the separation of the tubes A B. This tube B can be roughened on its exterior to permit it to be more readily grasped.

C and D are other and shorter tubes screwed to each other. C is screwed into the lower end of the tube B.

E is a rod within the tubes B C. The upper portion, *e*, of this rod is enlarged and fits in the extension *b*. This enlarged portion *e* is

provided with a spiral groove, *f*, as shown, into which projects a pin or stud, *g*, formed with or secured to the extension *b*. The rod E is journaled near its lower end in a wall or cross-plate, *h*, formed across the tube C near its lower end. A shoulder formed on the rod E rests against the plate *h*, so that this plate *h* prevents the downward pressure that is applied to the rod E from being communicated to the rod carrying the erasing-head. The end *i* of the rod E that projects beyond the cross-plate *h* is squared or of other angular shape.

F is a short rod located in the tube D, which rod is provided at its upper end with a socket, *j*, into which the end *i* of the rod E projects, and at the other end with a head, *k*, which projects slightly beyond the end of the inclosing-tube D. This head *k* is provided with a number of sharpened teeth or ridges, *n*. A ring, *l*, formed on the rod F comes in contact with a shoulder formed on the inside of the tube D, and prevents the rod F from falling out or its head *k* from projecting too far. As shown in Figs. 1 and 5, the tube D is provided at its lower end with projections *m*, which rest on the paper being operated upon and prevent the head *k* from being pressed too hard upon the paper.

G is a coiled spring around the rod F. This spring rests against the wall *h* and the ring *l*, and acts to keep the head *k* projected, as shown in Fig. 2.

H is a coiled spring in the tube A, one end of which rests against the head or cap *a* and the other end against the ring or collar *c*.

The operation is as follows: In use the head *k* is placed on the letter or character which is to be erased. The tube A is then to be forced down into the tube B by pressing on the head or cap *a*, which will force the extension *b* down part way into the tube C, and the pin or stud *g*, which projects into the spiral groove *f* in the enlarged part *e* of the rod E, will cause the rod E to rotate. As the squared end *i* of the rod E projects into the socket *j* in the rod F, this rod and its head *k* will also be rotated, and the head *k* being pressed on the paper by the spring G will partially erase the letter or character. When the pressure on the tube A has been removed, the spring

H will act to return the tube A to its normal position, which will rotate the rods EF in the reverse direction, and the head *k* will erase more of the letter or character on which it is placed. One downward and upward movement of the tube A will probably not rotate the rods E and F sufficiently to make a complete erasure; but such tube can be worked up and down quite rapidly and the erasure quickly and easily made.

It will be noticed that the socket *j* is quite long, which allows a longitudinal movement of the rod F. The entire pressure of the head *k* on the paper is given by the spring G.

What we claim as new, and desire to secure by Letters Patent, is as follows:

1. In an eraser, the combination of a case, a rotary cutting-head, *k*, carried by a rod, F, and a spring, G, to hold the head against the paper, substantially as specified.

2. In an eraser, the combination of a case, a rotating head, *k*, carried by a rod, F, a spring to hold the face of the head *k* against the pa-

per, a spirally-grooved rod, E, and a movable tube, A, having an extension, *b*, provided with a pin or stud, *g*, to enter the groove *f*, substantially as and for the purpose described.

3. In an eraser, the rod F, having at one end an erasing-head, *k*, and at the other end a socket, *j*, and a spring, G, in combination with a rod, E, having its lower end, *i*, formed to fit in the socket *j* and having its upper portion spirally grooved, and tube A, having an extension, *b*, provided with a pin or stud, *g*, substantially as and for the purpose specified.

4. In an eraser, a rod, F, provided with an erasing-head, *k*, and a spring, G, in combination with a case provided with a plate, *h*, and rotatable rod E, provided with a shoulder that rests against the plate *h*, substantially as and for the purpose specified.

HIRAM BALDWIN.
JUSTIN J. SMITH.

Witnesses:

ELLA POWELL,
L. E. BAKER.