(No Model.)

# A. F. PURDY.

## TELEGRAPH KEY.

No. 437,510. Patented Sept. 30, 1890.

Fig. 1.

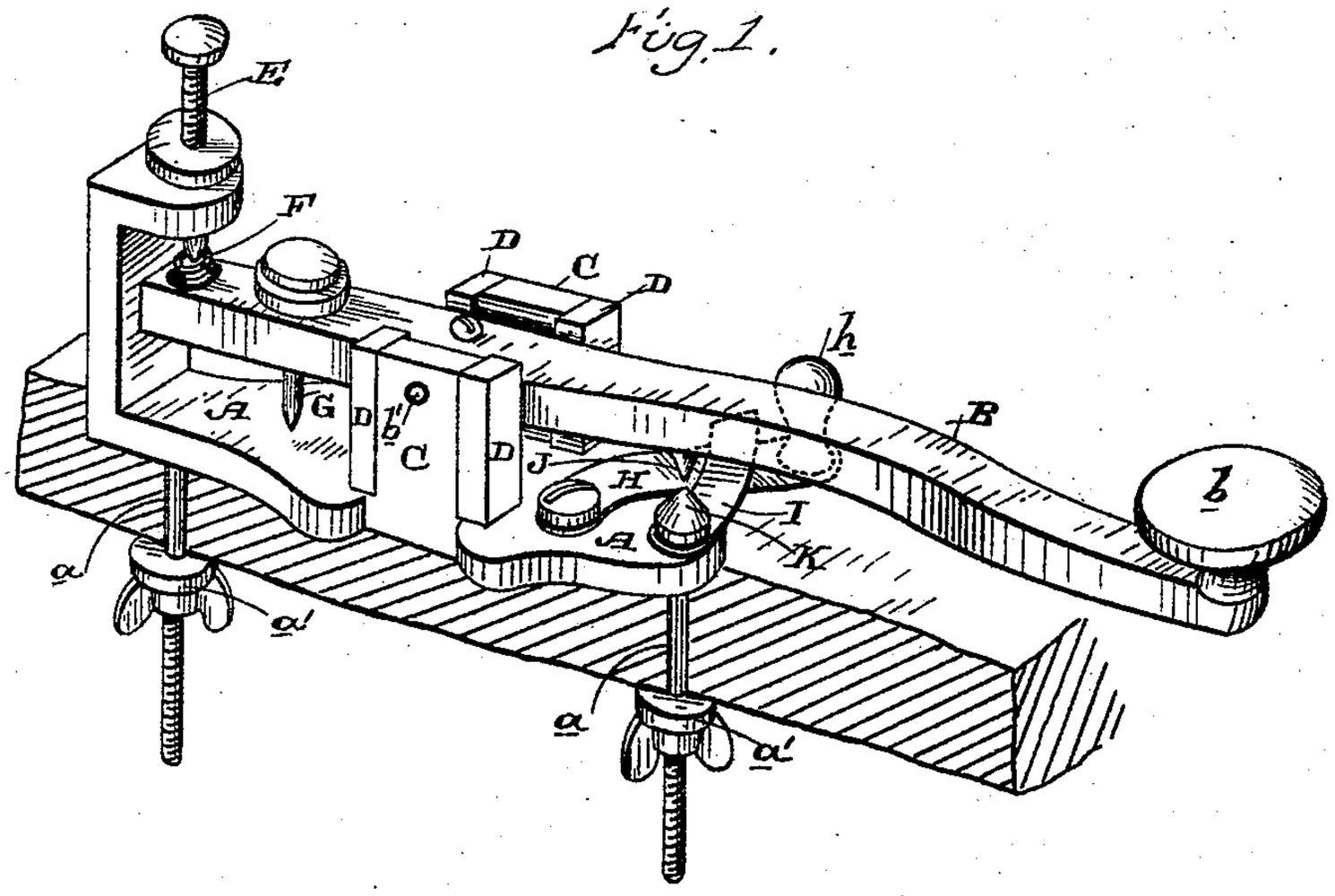
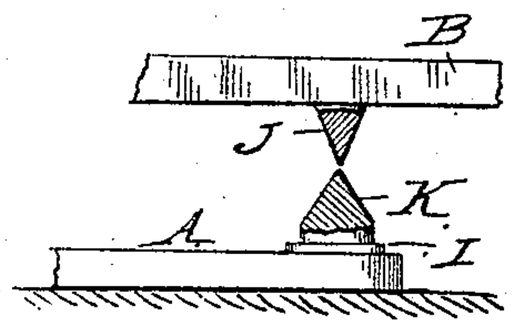



Fig. 2.

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# UNITED STATES PATENT OFFICE.

ARTHUR F. PURDY, OF LAWRENCE, CALIFORNIA.

## TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 437,510, dated September 30, 1890.

Application filed April 15, 1890. Serial No. 348,050. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR F. PURDY, a citizen of the United States, residing at Lawrence, Santa Clara county, State of California, have invented an Improvement in Telegraph-Keys, of which the following a full, clear, and exact description.

My invention relates to telegraph-keys; and it consists in the novel constructions hereinafter fully described, and specifically pointed out in the claims.

The general object of my invention is to provide a simple and effective device of this class. Particular objects and advantages will be hereinafter set forth.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my key. Fig. 2 is a detail showing the conical contacts in section.

A is the bed-plate or frame of the key, having extending downwardly from it the bolts *a*, provided with washers and thumb-nuts *a'*, whereby the key is adapted to be secured to the table.

B is the lever of the key, having at its outer end the usual button *b*. This lever is mounted as follows: Rising from the frame A are standards C, in which is journaled the pivot-pin *b'* of the lever. On each edge of these standards is secured in any suitable manner, as by small rivets, pins, screws, or by soldering, a steel plate D, which projects inwardly far enough beyond the inner surface of the standards to come up closely to the sides of the lever, and thereby form for it guides, which firmly hold the lever, and, while permitting its free up-and-down movement, avoid and prevent any lateral play. The inner surfaces of the standards do not come up close to the lever, so that there is only a small frictional surface due to the guides. These guides, being of steel, do not wear, but will hold the lever firmly in its position, as described.

In the rear arm of the bed-plate A is mounted the spring-adjusting screw E, the lower end of which is in contact or connection with the adjusting-spring F, the lower end of said spring being properly seated in the extreme rear end or portion of the lever B.

G is the limiting or stop screw of the lever, the lower end of which bears on the bed-plate.

H is the small switch-lever having on its outer end a button *h*, by which it is turned and adapted to form an electrical connection with the contact-spring I of the bed-plate.

Under the main lever is one of the contact-points, designated by J. This is of a conical shape, having its point a perfect apex. The opposing point K is also conical.

It will be seen that the entire key is neat and simple. It is narrower than keys generally used, while at the same time it is no longer and no higher. This is of advantage where many keys are used in one office.

The adjusting-spring F being arranged at the extreme back or rear end of the lever, the full effect is obtained, and it can be adjusted to suit the taste of the sending-operator. There is no side motion of the main lever, and its pivotal connection is of such a character as to be very desirable and is not liable to get out of order. The strips of steel on either side hold it perfectly rigid and avoid or reduce friction by projecting inwardly beyond the surface of the standards, so that the sides of the key have but small frictional surface to bear against.

It will be noticed that, instead of the usual pins which form the contact-points of ordinary keys, I make my points conical with perfect apices. These apices coming together give the finest and most perfect contact. The advantage of the perfect contact is in avoiding what is known as "sticking." By this is meant the jumping, as it were, of the current from point to point when they are open. To fully realize this advantage, the points should have perfect apices, for if they be truncated to even the slightest extent they become no more and have no other effect than the ordinary blunt-ended pins; but where the apices are perfect the contact between the two points is of the finest nature and effects as good a result, as far as not sticking is concerned, as very fine-pointed pins would, but without the disadvantage of such pins, of rapidly wearing out.

It is common in using the ordinary keys to stop from time to time and set the points farther apart before continuing; but with my key the points may be set so close together that there will scarcely be any perceptible motion, and yet there will be no sticking.

The main lever may be made either heavy or light, as the operator may wish. The lighter ones are usually preferred; but the heavier ones are sometimes desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a telegraph-key, the bed-plate having the side standards, in combination with the key-lever pivoted in said standards and the guide-strips on the edges of the standards, their inner surfaces projecting beyond the inner surfaces of said standards and bearing against the sides of the key-lever, whereby lateral motion is prevented and wear avoided, substantially as herein described.

2. In a telegraph-key, the combination of the bed-plate, the key-lever pivoted thereon, the adjusting-spring seated in the rear end of the lever, and the set-screw for regulating said spring, substantially as herein described.

3. In a telegraph-key, opposing contact-points, each conically-shaped with perfect apices, one of said points being smaller than the other, substantially as herein described.

4. In a telegraph-key, the combination of the bed-plate, the key-lever pivoted in the bed-plate, the conical contact-point on the bed-plate, and the smaller conical contact-point on the key-lever, both of said contact-points having perfect apices, substantially as herein described.

5. A telegraph-key consisting of the combination of the bed-plate having the standards, the key-lever pivoted in said standards, the guide bars or strips on the edges of the standards bearing against the sides of the lever, the adjusting-spring at the rear end of the lever, the set-screw for controlling the spring, the switch-lever under the key-lever, the contact-spring of said switch-lever, and the conical contact-points of the bed-plate and key-lever, substantially as herein described.

In witness whereof I have hereunto set my hand.

ARTHUR F. PURDY.

Witnesses:

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D. W. HERRINGTON.