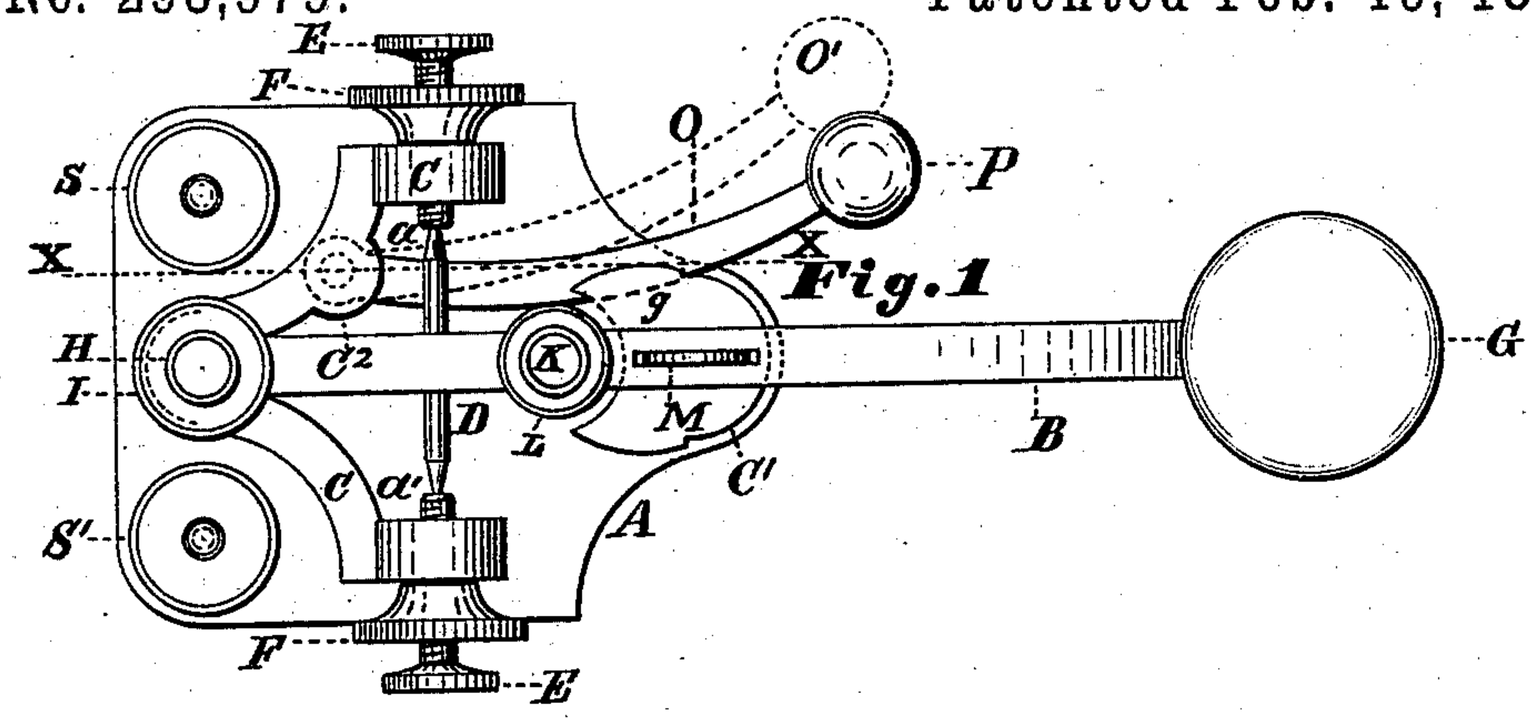
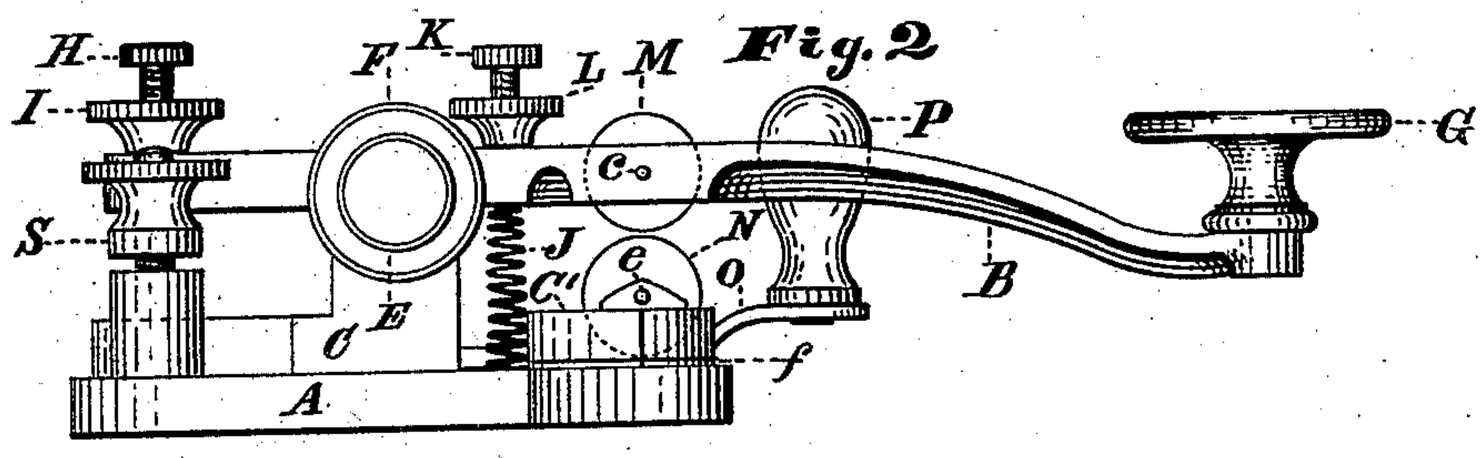
(Model.)

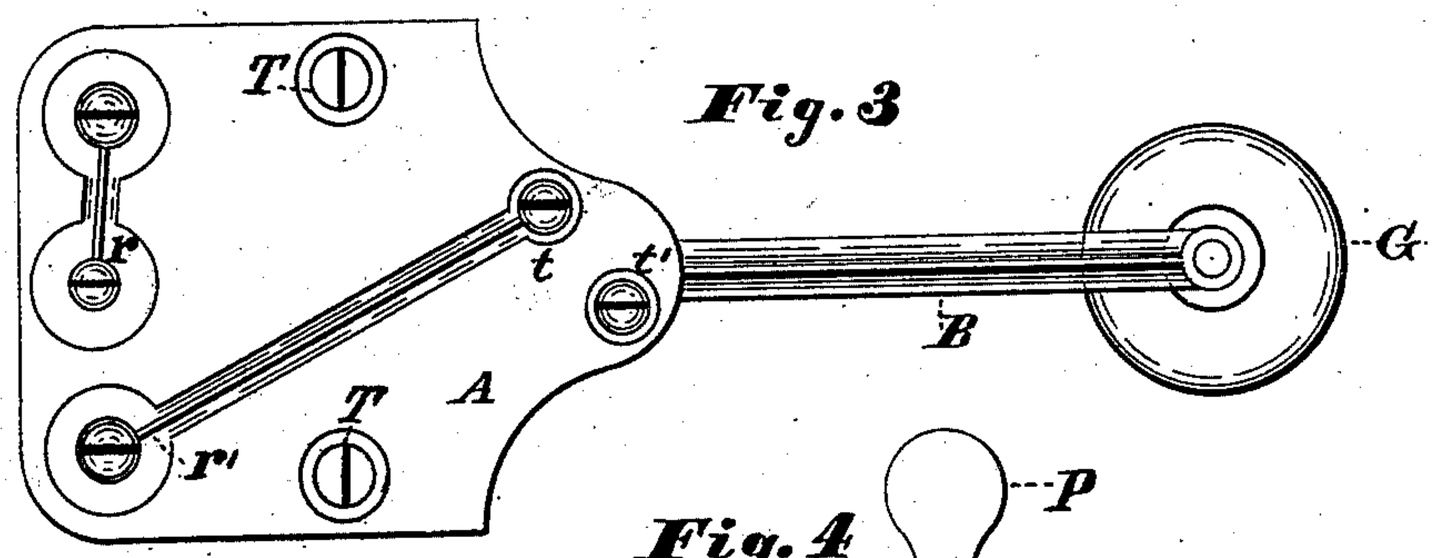
C. PLUMB.

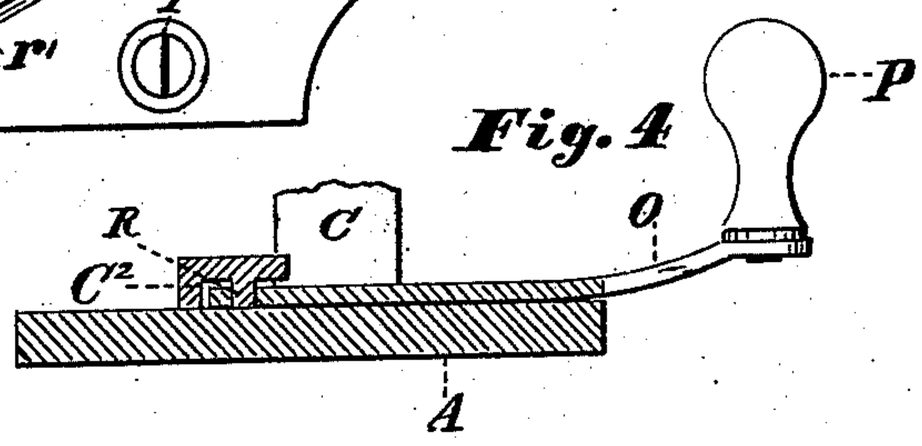
TELEGRAPH KEY.

No. 293,979. Patented Feb. 19, 1884.









Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES PLUMB, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO O. P. BABCOCK, OF SAME PLACE.

TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 293,979, dated February 19, 1884.

Application filed February 18, 1881. Renewed January 14, 1884. (Model.)

To all whom it may concern:

Be it known that I, CHARLES PLUMB, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Telegraph-Keys, of which the following is a specification.

The object of my invention is, first, to provide the means for easily and instantly changing the contact-surfaces of both the hammer and anvil, whereby new portions of the faces of both will be simultaneously presented for contact; second, to provide an elastic or soft foundation for the anvil and the means for holding the switch securely in place; and it consists of a telegraph transmitting-key having the hammer in the form of a wheel arranged so as to be easily reached and turned or operated by the fingers when required, in combination with an anvil consisting of a wheel, of metal or other suitable conducting material, capable of being turned on its axis by a movement of the wheel forming the hammer when both of said wheels are in contact.

My invention further consists of a telegraph transmitting-anvil the base of which is separate from the rest of the metallic frame-work, and of a switch held securely in place by a downwardly-projecting pin forming a part of or rigidly fastened to the frame, which pin projects through the opening in the end of the switch, whereby it is jointed to the frame, so that it will be impossible to get loose or out of place, there being no screws to get loose or out of place, as by the usual way of fastening them.

My invention further consists of a telegraphic transmitting-anvil having a thin layer of soft rubber interposed between the anvil and the base, all of which will be more clearly hereinafter shown by reference to the drawings, in which—

Figure 1 is a top view; Fig. 2, a side elevation; Fig. 3, a bottom view of the base and hammer lever or arm; and Fig. 4 represents a section through the switch, a portion of the supporting-frame and the base, in line X X, Fig. 1.

A represents the base, of rubber or other suitable hard non-conducting material.

The hammer-arm B is supported in the frame C on a shaft, D, pivoted in the usual way at *a a'*, so that it may be adjusted by means of the set-screws E and jam-nuts F.

G represents the handle or knob by which it is operated. To limit its vibration at the back end, and to adjust the length of the vibration, the ordinary set-screw, H, and jam-nut I are used.

J represents a spring for holding the hammer away from the anvil. It is adjusted by the set-screw K and jam-nut L.

M is the hammer, made in the form of a wheel and arranged on pivots *c* on the arm B, so as to turn easily without rattling.

N represents the anvil, which is also in the form of a wheel, arranged on pivots *e* on the anvil-base C', so as to turn easily, which base C' rests upon a thin sheet of soft india-rubber or other elastic material, *f*, (see Fig. 2,) for the purpose of giving an elastic base to the anvil and deadening the sound. It will now be seen that the hammer-wheel M may be easily turned by the thumb or finger, and that when it is pressed against the anvil-wheel N and moved the friction of the upper wheel will cause the lower one to move, and thereby instantly change the points of contact of both.

O represents the switch. It is provided with the usual handle, P, and is securely held or jointed to the frame C at the point C^2 (see Figs. 1 and 4) by means of a downwardly-projecting pin, R, (shown in section in Fig. 4,) which pin R either forms a part of the frame C, or is rigidly fastened to it by solder or by riveting, so that when the frame C is fastened to the base A by the screws T (see Fig. 3) it is impossible for the switch to get off or out of place. It is connected with the anvil by being moved into a groove in the side of the base C', as shown by dotted lines *g* in Fig. 1. When disconnected therefrom it is in the position of the dotted lines O'. The wires from the battery are connected by means of the well-known screws S S'. (See Figs. 1 and 2.)

In the bottom view, Fig. 3, the connecting-wires are shown. The wire *r* connects with the frame C, and from thence with the hammer M, and the wire *r'* connects with the anvil. The screws *t t'* hold the anvil-base firmly to the base A.

This invention is also adapted to and is in-

tended to be used for relays, repeaters, and all other instruments requiring an adjustable contact for forming or breaking a circuit.

I do not claim, broadly, the combination of a telegraph-key with two rollers having a peripheral contact; but

What I claim as my invention is—

1. A telegraph transmitting-key carrying a loosely-revolving contact-wheel, M, in combination with an anvil consisting of a loosely-suspended contact-wheel, N, with its axis parallel to that of the wheel M, substantially as described.

2. A telegraph-key provided with the wheel-hammer M, arranged in the shank, in combination with an easily-movable anvil-wheel, N, arranged in the same plane therewith, their axes being parallel, as and for the purposes described.

3. The combination of the anvil N, its supporting-base C′, hard-rubber non-conducting base A, and an intermediate sheet of soft rubber or other soft material, *f*, for the purposes described.

4. A telegraphic key-lever supported on a shaft, D, and pivoted to the frame C, in combination with the spring J, contact-wheel hammer M, set-screws H, jam-nut L, and anvil N, the said anvil N being arranged to operate in the same plane with the wheel M, for the purposes described.

5. In a telegraph transmitting-key, a switch, O, and frame C, provided with a downwardly-projecting pin, R, adapted to pass through a hole in the switch, substantially as shown, in combination with a base, A, to which it is attached, as and for the purposes specified.

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Witnesses:

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