

No. 113,041.

PATENTED MAR. 28, 1871.

J. GAMBLE.
MECHANICAL TELEGRAPH INSTRUMENT.

Fig. 1.

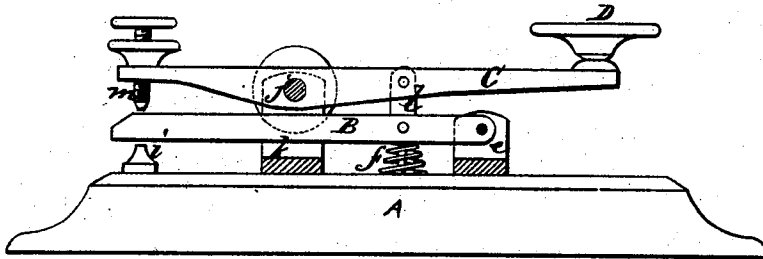
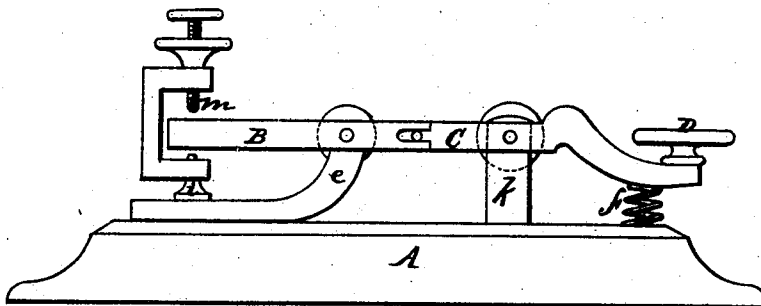


Fig. 2.



Witnesses.
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Letters Patent No. 113,041, dated March 28, 1871.

IMPROVEMENT IN MECHANICAL TELEGRAPH-INSTRUMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES GAMBLE, of the city and county of San Francisco, State of California, have invented an Improved Telegraph-Key Sounder; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to a device to be employed more particularly by persons learning to telegraph, by which the hand can be taught the proper motion for writing with the signal-key and the ear become familiar with the telegraphic sound or click made by the key in writing, without the expense and trouble of keeping a battery in order; and

It consists of a hollow or concave bed-plate, with an upper level surface, upon which is fixed horizontal levers, one of which is provided with the usual ivory hand-key. These levers are so connected that, by pressing upon the key, one of the levers will be caused to move up and down, striking upon metallic points, which produces a clicking sound almost precisely similar to that produced by the ordinary telegraph-key.

In order to more fully explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

A represents the base or stand upon which my telegraphic sounder-key is secured. This base may be made of hard wood, metal, or other suitable material, and is hollow or concave on its under side, so as to give a better or more distinct sound.

Upon the upper face of this base or stand are arranged two parallel levers, B and C, one above the other.

One end of the upper lever C extends beyond the end of the lower one B, and has fixed to its upper side the ordinary hand-knob D.

The end of the lever C which is nearest the knob D is hung upon a shaft between two short standards, *e e*, and a spiral or other spring, *f*, is placed between it and the base or stand, a little in front of the pivoted end, so that the spring will raise the lever to a certain height.

A short metallic stud or projection, *i*, is fixed upon the stand A, directly beneath the opposite or vibrating end of the lever, upon which, when the lever is forced downward, it will strike.

The upper lever C is hung upon a shaft, *j*, which passes across directly above the middle of the lever B, bearing in standards K K upon each side.

These two levers are connected by a link or plate, *l*, directly above the spring *f*, so that the up-and-down

movement of the upper lever will also cause the lower one to vibrate up and down.

A screw, *m*, passes through the end of the lever C, above the vibrating end of the lever B, so as to project below the lever C, and against which the lever B, when thrown upward by the spring *f*, after having been depressed by the hand, will strike.

By operating upon the knob D in a precisely similar manner to that employed in operating the regular telegraph-key, the lower lever B will be caused to vibrate between the stud *i* and end of the downwardly-projecting screw *m*, so as to give the same clicking-sound which enables the telegrapher to distinguish the various letters of the alphabet which may be written with the key.

This key can also be used in telegraphing in place of the ordinary key, and on account of its freedom of movement will avoid what is known as "sticking," that is, the refusal of the key at times to act.

The device is cheap and simple, acting in all respects like the ordinary telegraph-key, and is just as accurate. It obviates the necessity of using a sounder and keeping a battery in order for teaching beginners, the key and sounder being combined in the one instrument. It can be carried about the person and placed upon a desk, ready at all times to write when properly manipulated.

Instead of employing two levers, one above the other, as above described, the two can be placed in a line and have their ends united by a joint, as shown at Figure 2. In this case each lever will be hung upon a shaft, and the one to which the knob is attached be kept in position by a spiral spring, as before described.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

A telegraph-key sounder, secured upon the hollow or convex base A, and consisting of the two vibrating levers C and B, either hinged together or connected by a link or plate, *l*, and arranged as described, so that between a pressure applied to the knob D and the spring *f* one end of the lever B shall vibrate between two metallic points, *i* and *m*, and by its contact produce the clicking sound, substantially as above described.

In witness whereof I have hereunto set my hand and seal.

JAS. GAMBLE. [L. s.]

Witnesses:

WM. H. RUNNELS,
GEO. H. MUMFORD.