(No Model.)

M. W. GOODYEAR.

TELEGRAPH KEY.

No. 245,947. Patented Aug. 23, 1881.

Fig. 1.

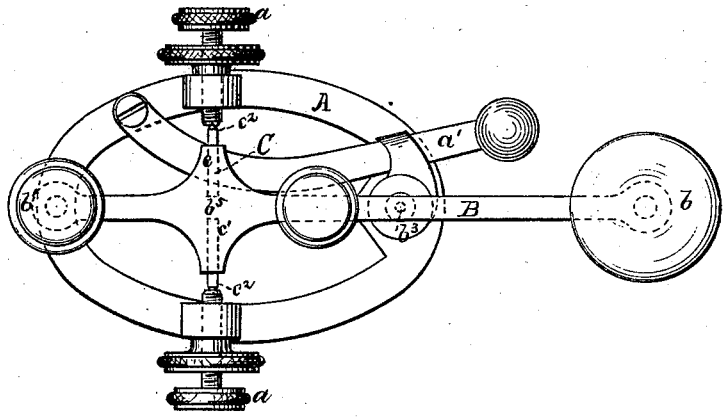


Fig. 2.

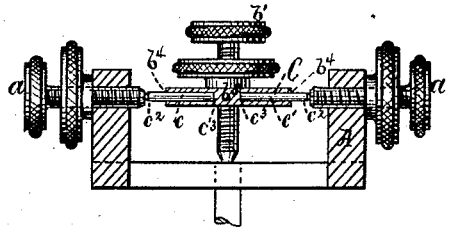
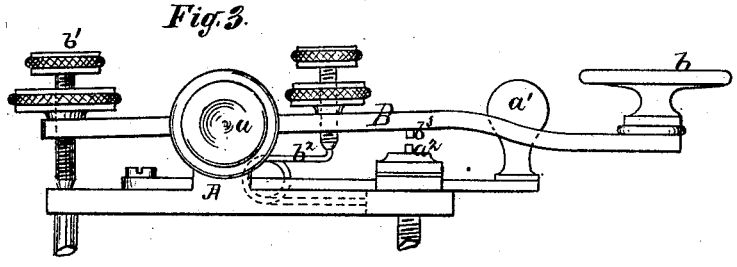


Fig. 3.



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UNITED STATES PATENT OFFICE.

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TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 245,947, dated August 23, 1881.

Application filed February 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, MILES W. GOODYEAR, of the city of New York, in the county and State of New York, am the inventor of an Improved Telegraph-Key, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention consists in a telegraph operating-key hung and arranged to swing upon a sectional axle, the two sections of which are seated in line with each other on opposite sides of the key, in recesses formed in the body of the key, with the outer or extended ends having centered bearings in the key-frame, and with their inner adjacent ends abutting against a dividing-partition between the bases of the said recesses, composed of a portion of and homogeneous with the mass of the body of the key, whereby the key may be constituted with a body of brass and a steel axis, which is desirable, and at the same time the liability of the key-body to become, by wear in using, loosened or displaced laterally on its axis, and the consequent displacement out of line from each other of the "points," is avoided, all as hereinafter particularly described, and recited in the claim.

Figure 1 is a plan of a telegraph-key embodying my invention. Fig. 2 is a sectional view of the same on the line x x, Fig. 1; and Fig. 3 is a side elevation of the same.

A is the frame or standard of the key, on which the key is mounted to swing on its axis and carrying the adjustable bearing set-screws a for said axis, and the usual switch, a', as shown.

B is the key, provided with the usual finger-piece, b, the device b' for limiting its motion, and the controlling-spring b^2, and carrying on its stem the usual signal-point, b^3, which is in line with the similar point a^2 in the frame, and capable of connection with the switch.

There are no novel features in the devices thus far described, as they are common to all telegraph-keys in present use.

The invention here presented relates to the peculiar form and arrangement of the axle of the key.

C is my improved sectional axle, which is formed of steel, and is composed of the two sections, c c', that are fixedly seated in line with each other on opposite sides of the key, in suitable recesses, b^4, formed in the body of the key, and having their ends c^2, which extend beyond the key-body, centered in bearings in the adjustable set-screws a, as shown, and with their inner adjacent ends, c^3, abutting against a partition, b^5, which constitutes the dividing-wall between the bases of the said recesses b^4, and which partition is composed of a portion of and is homogeneous with the mass of the body of the key, as shown in the drawings.

It is evident that by means of a key provided with an axle formed and arranged as described the body of the key may be constituted of brass and the axle and its bearing-points of steel, which is exceedingly desirable in telegraph-keys, while at the same time the liability of the key to become loosened or laterally displaced on its axle by wear in using, and the consequent displacements of the signal-points b^3 and a^2 from their proper and necessary position for the satisfactory working of the instrument in transmitting signals—namely, in line with each other vertically—is avoided.

It is also evident that the construction of the key is made easier and less expensive, inasmuch as the sections of the axle may be formed by themselves and turned true and finished in a lathe, and then driven to their seats in the recesses in the key-body, instead of requiring the entire key, with its axle fitted to it, to be placed in a lathe for the turning and finishing of the axial points or bearings.

Heretofore in constructing telegraph-keys it has been customary to hang the key upon an axle which passed entirely through the key-body in a channel cut therein for that purpose, and to hold the key in place upon the axle by means of a set-screw working in the mass of the key and impinging upon the surface of the axle. By this means it has been sought to produce a key the body of which is of brass and the axle of which is steel; but in keys thus constructed it has been found that in the use of the key its rapid and continuous movement on its axle would produce a jarring of the parts, so as to cause a wearing away of the channel

in which the axle was seated, and a consequent loosening of the key on it (the axle) and its lateral displacement thereon, and that this would of course have the effect of throwing the signal-point b^3, carried by the key, out of line with the point a^2, and hence the working of the key in the transmitting of signals would become imperfect. The attempt has also been made to produce a key which would obviate these defects by forming the key and its axle wholly of steel, in one piece; but a key composed thus wholly of steel is not acceptable for the perfect electrical working of the instrument, and a key and axle composed wholly of brass in one piece would not be serviceable, inasmuch as the brass bearing-points would rapidly wear away under the rapid and constant jar upon the key in its operation.

By means of my invention, as described, it is evident that a key may be constituted the body of which may be of brass and the axis of steel, and at the same time the loosening or lateral displacement of the key-body on its axis, and the consequent displacement of the signaling-points by the wear of the apparatus, are wholly avoided.

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

As a new article of manufacture, a telegraph-key hung upon a sectional axle, the two sections of which are seated diametrically opposite to each other and in recesses in the key-body, with their extended ends in centered bearings in the key-standard, and with their inner adjacent ends abutting against a partition constituting the dividing-wall between the bases of said recesses, and composed of a portion of and homogeneous with the mass of the key-body, as described, and for the purpose specified.

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