J. H. C. WATTS.

DISTRICT TELEGRAPH SIGNAL-BOXES.

No. 181,383. Patented Aug. 22, 1876.

Fig. 1.

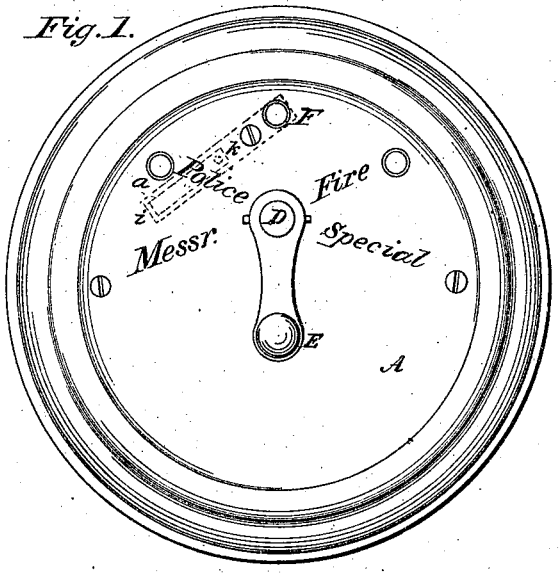


Fig. 2.

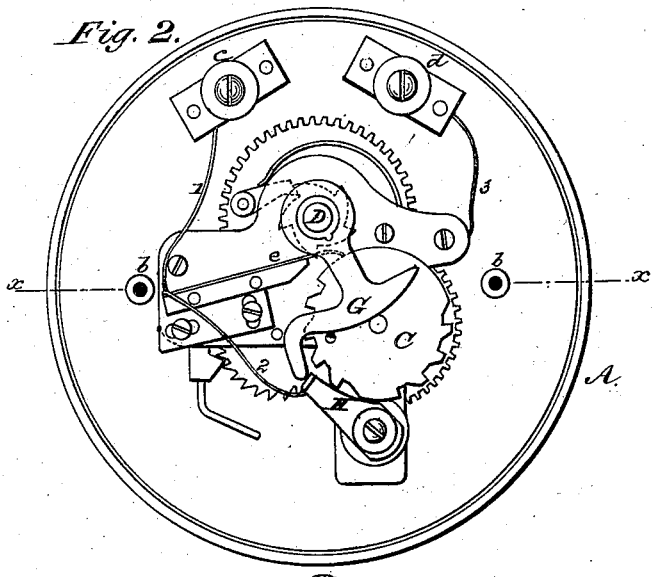
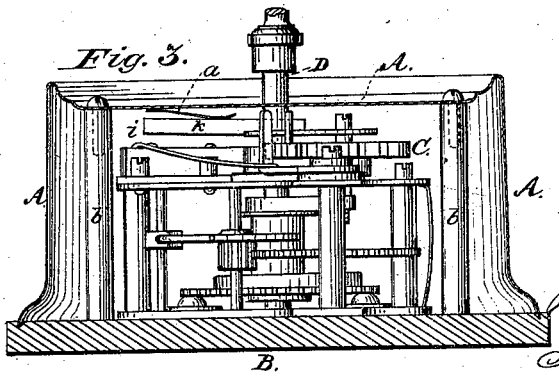


Fig. 3.



Witnesses:
Jas. A. King
Morell & Marean

Inventor:
John H. C. Watts
by
Fred. W. Royce
Atty.

UNITED STATES PATENT OFFICE.

JOHN H. C. WATTS, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN DISTRICT-TELEGRAPH SIGNAL-BOXES.

Specification forming part of Letters Patent No. **181,383**, dated August 22, 1876; application filed June 8, 1876.

To all whom it may concern:

Be it known that I, JOHN H. C. WATTS, of the city of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in District-Telegraph Signal-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

In operating that class of signal-boxes in which the character of the service wanted by the sender is determined by the number of times the signal is repeated, which, in turn, is determined by the distance the crank winding the spring of the box is turned, mistakes often occur by the crank being thrown to too great a distance, owing to the hurry or carelessness of the operator. The great majority of the calls are for "Messenger," and consequently the smallest movement of the crank is used for that signal. Carelessly or hurriedly the crank is often turned too far, summoning "Police" or "Fire." One object of my invention is to prevent this by arranging in the box a stop which shall normally allow the crank to be turned to signal "Messenger" only, and which must be operated to allow the crank to be turned for either of the other signals, thus normally guarding against either being called unless they are actually desired, and insuring that attention to the operation of the crank which is necessary to intelligently summon the officers of the company.

In addition, as such boxes are ordinarily made, they consist of two metallic parts, ordinarily cast, rendering necessary the use of many pieces of some insulating material, which are small and liable to become misplaced, the which happening to them might derange that box, and perhaps the entire circuit. Moreover, such boxes are more expensive than is desirable when they are made ornamental, as is desired from their conspicuous position in dwellings, counting-houses, offices, &c.

To remedy these things, my invention also consists in a case formed of the combination of a case spun or struck up from sheet metal, which may be plated or etched, as desired, and an insulating-base, upon which the operative parts are mounted.

Having thus generally designated the nature of my invention, I will describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of the case of my box, and Fig. 2 a front view of the operative parts, the case being removed; and Fig. 3, a section on line *x x*, Fig. 2.

B is an insulating-base, upon which is mounted the case A, inclosing and protecting the operative parts of the box. Posts *b b* pass from one to the other, uniting them firmly by means of screws or other equivalent fastening devices. On this base B is mounted the ordinary signal mechanism, consisting of a brake-wheel, C, having its periphery properly fashioned to give a determinate signal, and actuated by means of clock-work and a spring, as shown, the spring being wound, through the medium of a crank, E, on a winding-shaft, D, as usual. On the same shaft D is a hooked arm, G, which normally takes against a stud or arm, H, in the box, short-circuiting the brake-wheel and spring C and *e* by completing a circuit, *c* 1 2 H, clock-work 3 *d*. Whenever the crank is moved to operate the box this arm moves with it and breaks the short circuit, compelling the current to flow over the circuit *c* 1 *e* C 3 *d*, in order that the necessary interruptions may be given.

Affixed to the top of the case on the under side is a pivoted lever, K, normally held away at one end from the box by a spring, *a*. At its other end a button, F, projects through the front of the case, the depression of which pushes the other end of the lever up toward the box against the force of the spring *a*. The outer end *i* of this lever is arranged as shown, so that normally the arm G shall take against the same, the revolution of the crank being thereby stopped. Its position in relation thereto is such that the crank may at all times be turned sufficiently far, and only so far, to summon a messenger. If it be desired to signal any other call, the button F must be depressed by one hand until the crank be turned a little beyond "Messenger." It may then be turned to either of the other signals. This effectu-

ally prevents any careless unintentional transmission of the "Police" or "Fire" signals, and, when either is desired, insures that attention which enables the operator to signal with certainty for that one which is desired.

Having thus described my invention, what I claim is—

1. The combination, with the operative portion of a signal-box, of a stop, arranged substantially as described, allowing the crank to be turned at all times for one class of signals, but locking its further operation to send other classes of signals until it be operated to release the mechanism, substantially as and for the purpose set forth.

2. The alarm-signal box composed of an insulating-base and a spun or struck-up sheet-metal case or cover, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN H. C. WATTS.

Witnesses:

ALFRED E. WAIT,

OLIVER H. HICKS.