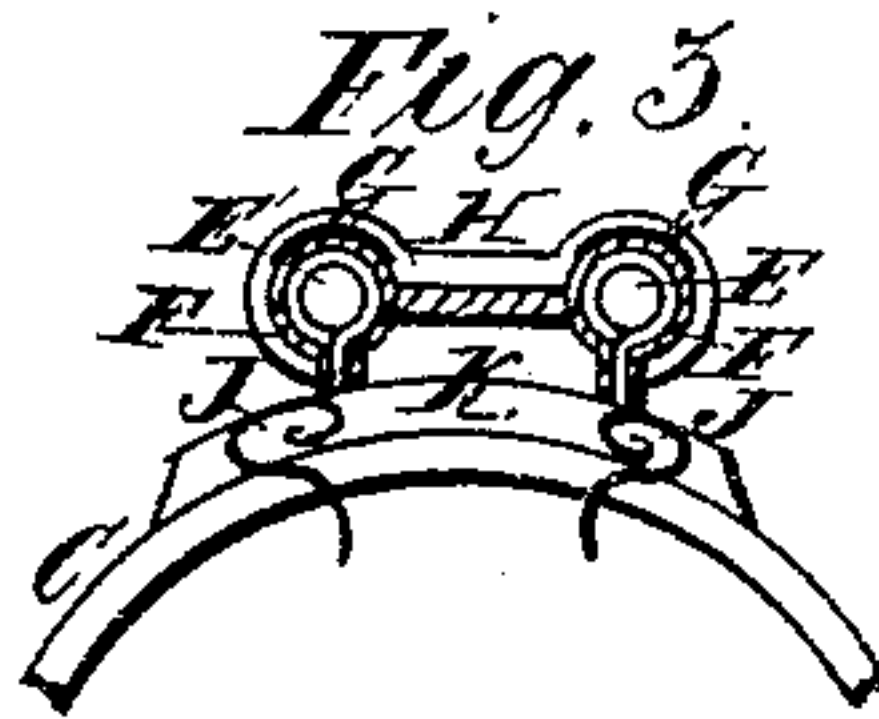
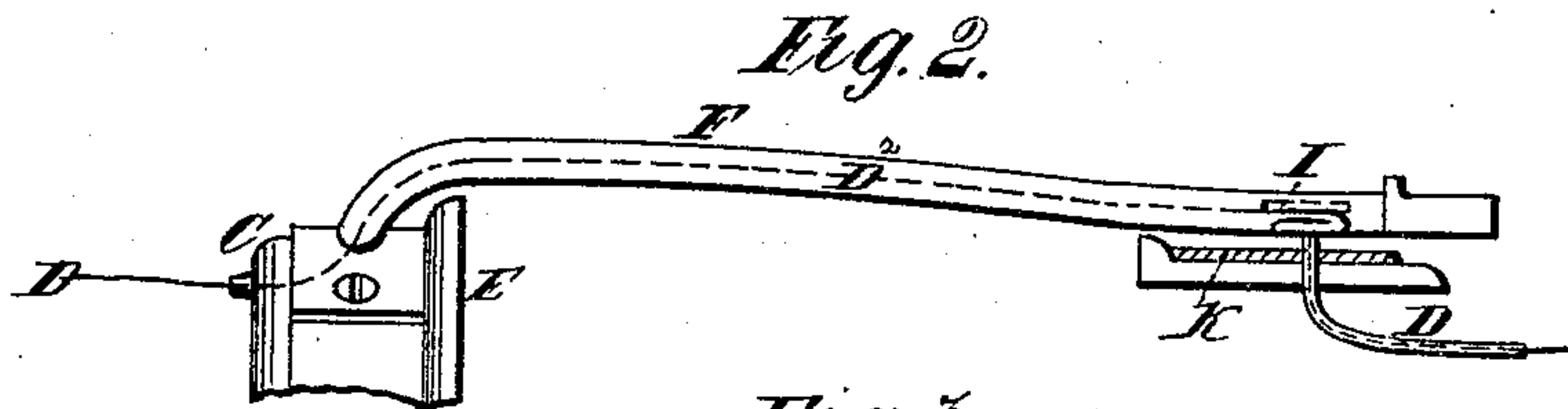
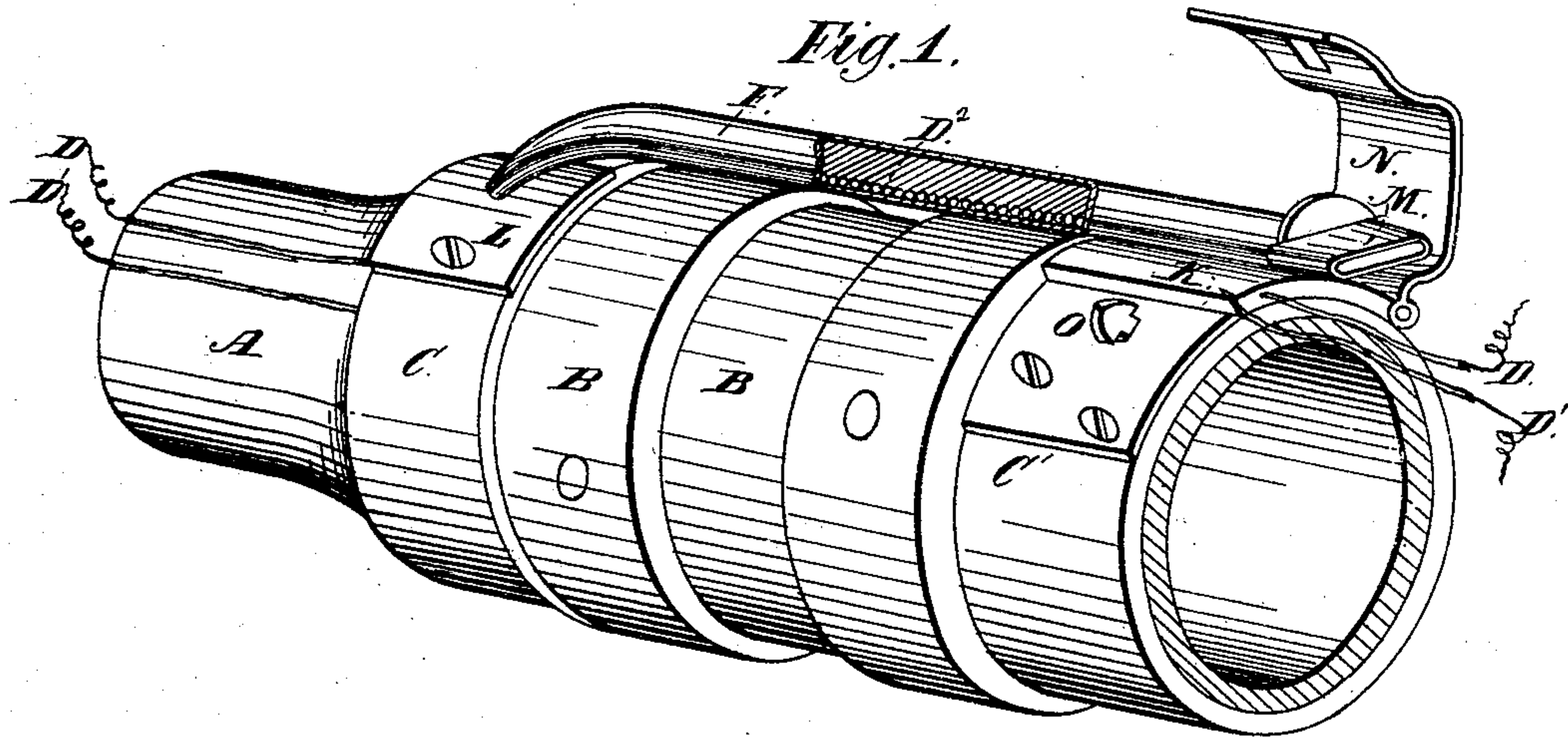


J. BUCHEL.

Electric Signal Apparatus for Fire-Hose.

No. 151,750.

Patented June 9, 1874.



Attest.

C. B. Talbot.
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Inventor.

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UNITED STATES PATENT OFFICE.

JOSEPH BUCHTEL, OF PORTLAND, OREGON.

IMPROVEMENT IN ELECTRIC SIGNAL APPARATUS FOR FIRE-HOSE.

Specification forming part of Letters Patent No. **151,750**, dated June 9, 1874; application filed April 1, 1874.

To all whom it may concern:

Be it known that I, JOSEPH BUCHTEL, of Portland, in the county of Multnomah and State of Oregon, have invented an Electric Signal Apparatus for Fire-Hose, of which the following is a specification:

Figure 1 is a perspective view. Fig. 2 is a side elevation, and Fig. 3 is a section and end elevation at the point of connection in the circuit.

A leather strap, F, containing a helical coil of wire, insulated in a flexible rubber pipe, extends from one collar, C, on one end of the hose across the coupling to the collar C' of the abutting end. One end of the strap F is secured to the butt-collar C by a segmental-shaped washer, L, the leather passing, with the contained insulated wire, through an elongated opening in the same, piece L being secured to the collar C by screws, and the end of the leather strap is secured to the collar C'. The loose end is inclosed in a band of metal, M, on the edge of which a little projection is made, which prevents the strap from pulling out when the hasp N is thrown across, and closed by the pin O in the staple P. In the loose end of the strap F the contained wires are brought through to the under surface, and turned and clinched in the leather or insulating material, in such a way that they are exposed lengthwise the strap, (see I, Fig. 2,) and cross the end of the insulated wires on the insulating-piece K. This piece K is made of hard rubber or bone, or any non-conducting substance suitable. By this cross-laying of the wires in contact, the certainty of connection is increased. In order that they may certainly touch each other, a layer, G, of soft rubber is placed above the wires, in such a position that when the hasp N is fastened it forms a spring or cushion, pressing the wires together, and into firm contact or connection.

The position of the cross-wires in K is seen at J, Fig. 3. The main connecting-wires are denoted by the letters D, extending from coupling to coupling along or through the hose A. In the case of leather hose, the wires are insulated by rubber or gutta-percha, or any of the common methods; but in that known as "carbolyzed" or "rubber" hose, the wires are placed in the hose material during the process of manufacture. In the leather hose the wires will be put between the lines of rivets, or by direct attachment in any proper manner. B represents the movable parts of the coupling, as in common use. In the strap F the helix is used in order to insure a greater degree of flexibility.

The fireman at the nozzle has an ordinary circuit-breaker or telegraph-key, with which he signals the engine to stop or start, fast or slow, &c., by a system of numbers, ringing on each break of the circuit a bell on the engine. The wires are excited by any of the common methods in use, by a battery on a convenient part of the engine.

By this system much of the damage at fires by water may be avoided, as no water is brought into the building until the hosemen want it, and they are in the proper position, and when they want to shift the hose or change nozzles, there are no delays in communicating with the engine, in this way avoiding much confusion and delay.

I claim—

In a fire-telegraph, the insulated wires D D¹, embedded in the hose A, and having their sections connected by the double coil D², inclosed in the case F, substantially as shown and described.

JOSEPH BUCHTEL.

Witnesses:

C. B. TALBOT,
R. L. DURHAM.