No. 683,172. Patented Sept. 24, 1901.

S. L. FOSTER.

ELECTRICAL BLOCK SIGNAL SYSTEM.

(Application filed Oct. 16, 1900.)

(No Model.)

Fig. 1.

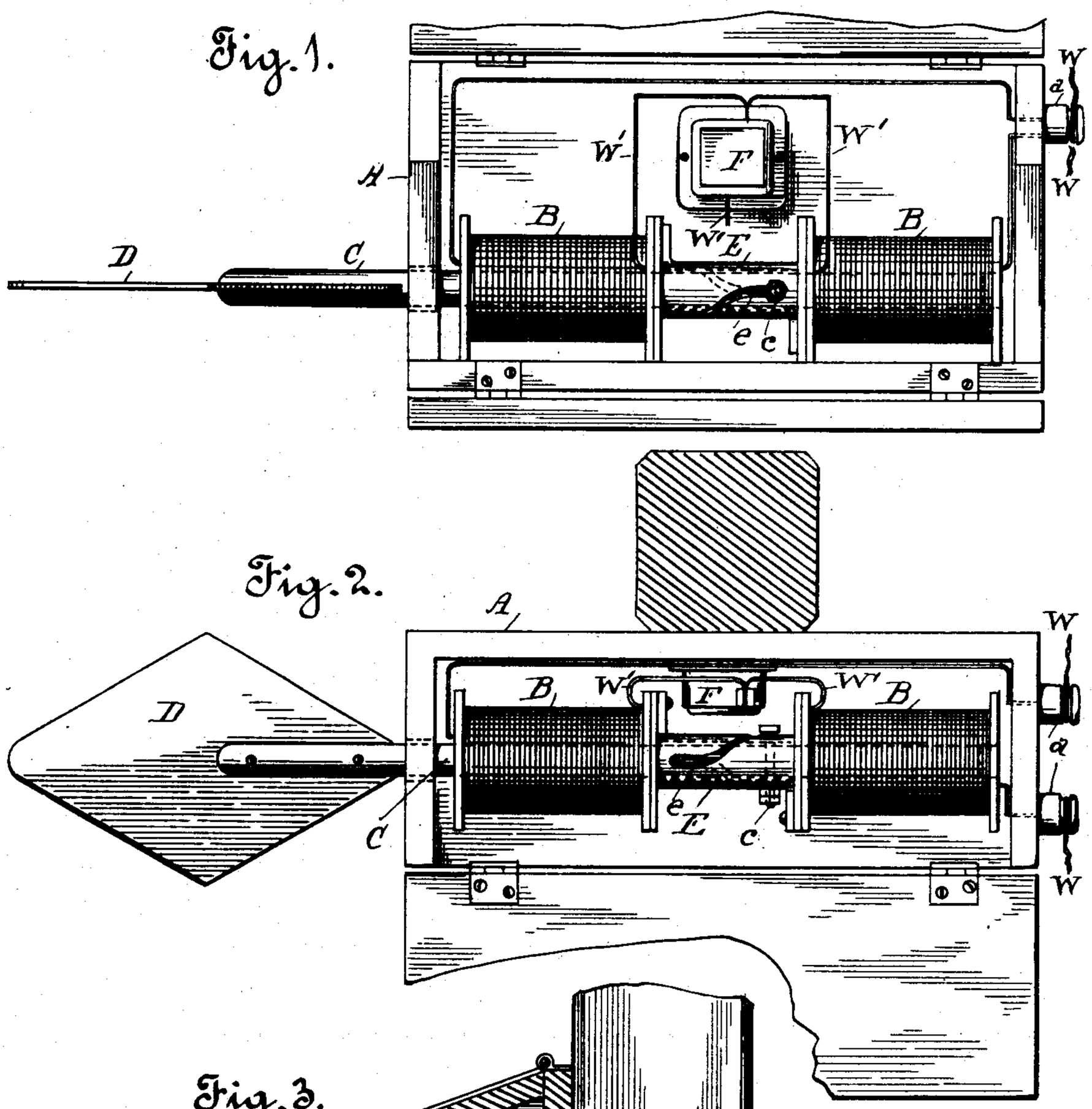
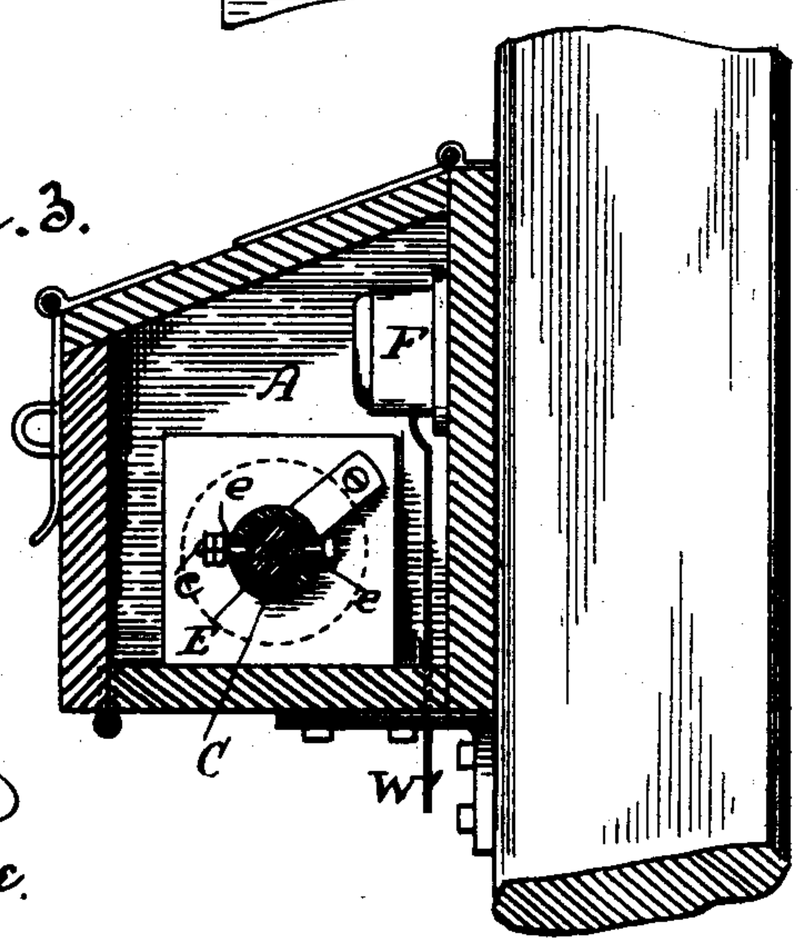


Fig. 2.

Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

SAMUEL L. FOSTER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE MARKET STREET RAILWAY COMPANY, OF SAME PLACE.

ELECTRICAL BLOCK-SIGNAL SYSTEM.

SPECIFICATION forming part of Letters Patent No. 683,172, dated September 24, 1901.

Application filed October 16, 1900. Serial No. 33,201. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. FOSTER, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Electrical Signals; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to electrically-operated signals.

It consists in the novel means for operating the targets, as I shall fully describe.

The object of my invention is to provide a simple and effective electrical signal.

Referring to the accompanying drawings, Figure 1 is a front view of the interior parts of box A, showing an edge view of the target D. Fig. 2 is a top view of same. Fig. 3 is a cross-section through the sleeve E.

A is a box containing a pair of solenoids B, the cores of which are or form part of a rod C, which projects outwardly through one end of the box and carries the target D. Between the solenoids is a sleeve E, in the walls of which are made the spiral or cam grooves *e*. The core-rod C is fitted with a cross-stud *c*, which travels in the cam-grooves *e* of the sleeve E and causes the core-rod when said rod is moved longitudinally to turn on its axis through a quarter-revolution, thereby throwing the target to either a vertical or a horizontal position, according to the direction in which said rod is moved. The circuit-wires W W lead in through insulators *a*—one to each solenoid—and into the ground-wires W′ W′ is let an ordinary safety fuse-box, (represented by F.)

The operation of the signal may be briefly stated as follows: When either of the solenoids is energized, the core-rod will travel to the right or left, as the case may be, carrying with it the cross-stud *c*, and as the latter travels in the cam-grooves *e* said rod will be caused to turn a quarter-revolution in one or the other direction, whereby the target D, carried by the end of the rod, will be correspondingly operated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an electrical signal, a pair of solenoids, a core-rod common to both solenoids and adapted to be moved longitudinally in one direction by one solenoid and in the opposite direction by the other solenoid, a fixed sleeve between said solenoids surrounding said core-rod, and having a cam-slot, a projection on the core-rod engaging in said slot to cause the rotation of said core, when the latter is moved longitudinally by the solenoids, and a target operatively connected with said core-rod and turned thereby, substantially as described.

In witness whereof I have hereunto set my hand.

SAMUEL L. FOSTER.

Witnesses:
GEO. B. WILLCUTT,
M. H. SHIELDS.