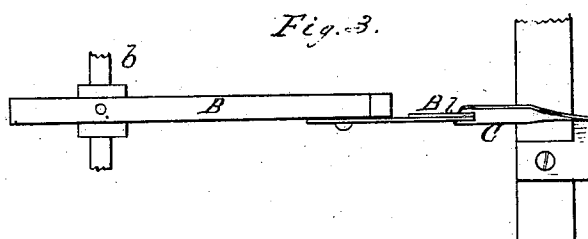
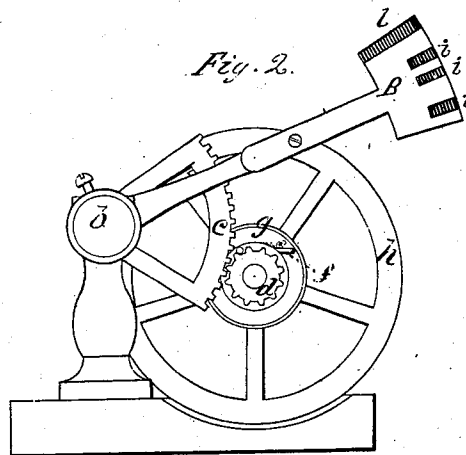
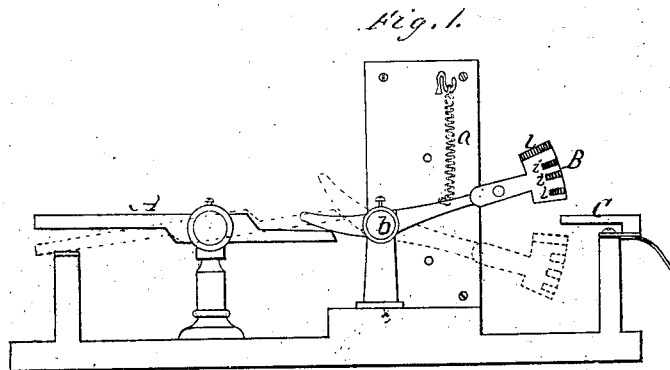


M. F. WESSMANN.

Telegraph Transmitting Keys.

No. 142,826.

Patented September 16, 1873.



Witnesses,
E. M. Gallaher,
R. D. Smith

Inventor,
Martin F. Wessmann,
By his Attorney,
J. S. Brown.

UNITED STATES PATENT OFFICE.

MARTIN F. WESSMANN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TELEGRAPH TRANSMITTING-KEYS.

Specification forming part of Letters Patent No. **142,826**, dated September 16, 1873; application filed February 11, 1873.

To all whom it may concern:

Be it known that I, MARTIN F. WESSMANN, of Brooklyn, in the county of Kings and State of New York, have invented an Improved Telegraph Transmitting-Instrument; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a side view of the instrument, showing one of the keys and the parts connected therewith; Fig. 2, a side view, showing one of the circuit closers and breakers, with a retarding device or governor connected therewith; Fig. 3, a top view of one of the circuit closers and breakers.

Like letters designate corresponding parts in all of the figures.

My improvements are upon that class of electro-magnetic telegraph-instruments in which each letter, figure, or sign is produced by closing and breaking the circuit of the transmitting-wire a few and specific number of times, each in a different way or succession of durations, the operation of closing and breaking the circuit being effected by means of a key, or its equivalent, for each of said letters, figures, or signs.

The first feature of my invention consists in the combination, with the several telegraph transmitting circuit closers and breakers, of a retarding device or governor, whereby the motions of such circuit closers and breakers are rendered uniform and always sufficiently slow to insure the complete closing and breaking of the circuit each time; and the second feature consists in bringing any one of such circuit closers and breakers simply into position for action by the depression of its key, so that the closing and breaking of the circuit is produced by the automatic return movement thereof after the hand of the operator is taken from the key and uncontrolled by the key.

In the drawings, let A represent one of the keys of the transmitting-instrument, and B

the circuit closer and breaker moved by the key. The circuit closer and breaker is pivoted or mounted separate from the key, the two adjacent arms of which parts may be connected by simple contact, as shown. As represented, the circuit closer and breaker is depressed by the depression of the key; and it is again raised by a counter-spring, *a*, or its equivalent, which, by its action on the circuit closer and breaker, may also again raise the key to position. In order to govern the automatic ascending motion of the circuit closer and breaker, its shaft or pivot *b* is connected with a suitable retarder or governor; that represented in Fig. 2 consisting of a segment-rack, *c*, attached to the shaft or pivot *b*, and gearing into a pinion, *d*, loose on another shaft, which pinion, as it is vibrated forward around its shaft, causes a friction-pawl, *f*, to act on the inner periphery of a clutch-wheel, *g*, and turns the same forward; but when the rack and pinion are reversed in their motions, the pawl slips on the clutch-wheel and does not turn it backward. With this clutch-wheel is connected a fly-wheel, *h*, which, by its inertia, prevents the too rapid turning of the pinion *d*, and consequently of the circuit closer and breaker controlled thereby. Any convenient equivalent of the fly-wheel may be employed, such as a train of gearing or a fly. The circuit closer and breaker is of metal, and is connected metallically with the line or ground wire, there being the required insulated spaces *i*, filled with india-rubber, gutta-percha, or other non-conductor of electricity. The circuit is closed by bringing its metallic part in contact with a stationary spring-plate, *C*, also in the main circuit of the line. One side, *l*, of the circuit closer and breaker is entirely covered with a non-conducting material, and it is placed in an oblique position, as well as the spring-plate or projection *C*, both being so arranged, as indicated in Fig. 3, that, when the circuit closer and breaker descends, its insulated side comes in contact with the spring-plate, and produces

no action; and when it ascends, its metallic or circuit closing and breaking surface comes in contact with the said spring-plate.

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

1. A telegraph transmitting circuit closer and breaker, in combination with a retarding device or governor, substantially as and for the purpose herein specified.

2. A telegraph transmitting circuit closer and breaker, acting in its return movement

by a regulated automatic motion after the depression of the key by the operator, and uncontrolled by the key, substantially as and for the purpose herein specified.

Specification signed by me this 5th day of February, 1873.

MARTIN F. WESSMANN.

Witnesses:

A. W. GLEASON,

E. D. F. SWEET.