

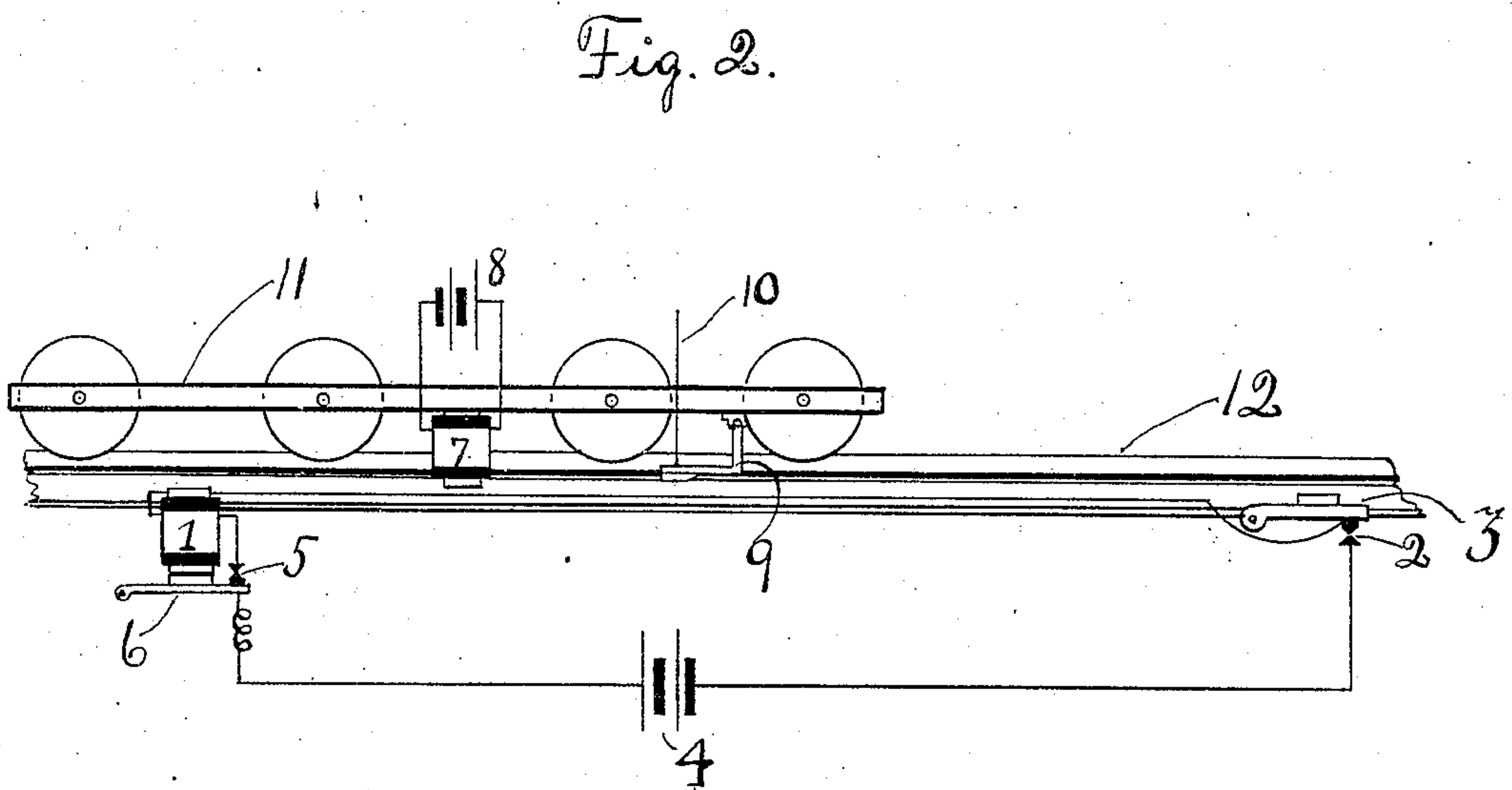
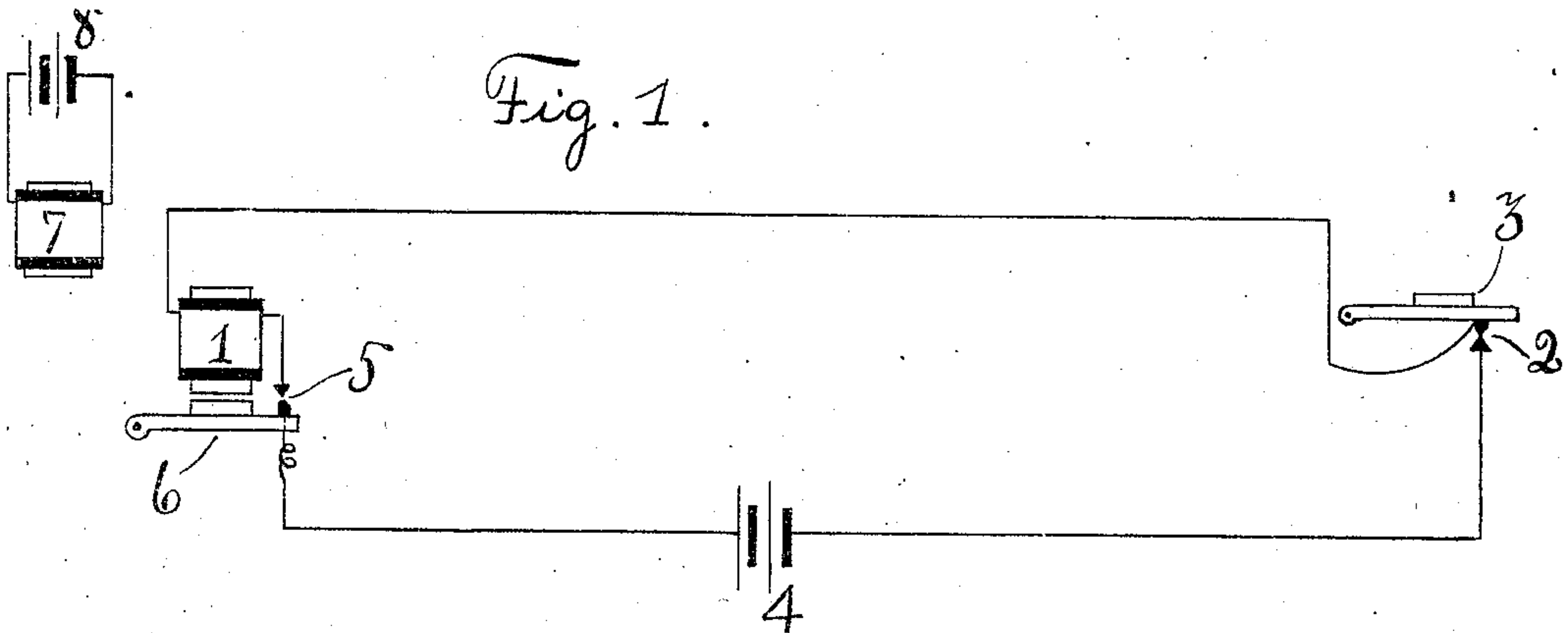
No. 785,448.

PATENTED MAR. 21, 1905.

G. THOMPSON.

MEANS FOR PROGRESSIVELY ESTABLISHING AND DISSOLVING MAGNETIC
SPHERES OF INFLUENCE.

APPLICATION FILED AUG. 2, 1902.



Witnesses
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UNITED STATES PATENT OFFICE.

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MEANS FOR PROGRESSIVELY ESTABLISHING AND DISSOLVING MAGNETIC SPHERES OF INFLUENCE.

SPECIFICATION forming part of Letters Patent No. 785,448, dated March 21, 1905.

Application filed August 2, 1902. Serial No. 118,072.

To all whom it may concern:

Be it known that I, GUION THOMPSON, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain Improvements in Means for Progressively Establishing and Dissolving Magnetic Spheres of Influence, of which the following is a specification.

My invention relates to means for progressively establishing and dissolving magnetic spheres of influence, and has for its object the provision of means which may be operated by transient means to establish a sphere of magnetic influence and subsequently be operated by said transient means at a farther point on the route of said transient means to dissolve the sphere thus established.

With this and other objects in view it consists of an electromagnet anchored upon the route of a conveyance, a normally open electric circuit comprising the coil of said electromagnet, a distant normally closed contact, a source of electricity, a normally open contact, means for closing said normally open contact, means for opening said normally closed contact, and transient means adapted to govern said closing and opening means.

It also consists of certain other constructions, combinations, and arrangements of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a diagram of my said invention. Fig. 2 is a diagram of my said invention, showing the same incorporated in a railway-locomotive-controlling system for the purpose of illustrating one of the utilities of said invention.

In the drawings, 1 is an electromagnet the coil of which is included in a normally open circuit, including a normally closed contact 2, a source of electricity 4, and a normally open contact 5. Said normally closed contact is adapted to be temporarily opened by suitable controlling means, preferably constituting an armature, as 3, and said normally open circuit is adapted to be closed by the operation of the armature 6 of the electromagnet 1. A transient magnet or electromagnet 7, maintained by a battery or other suitable source

of electricity, is adapted to be carried by any suitable conveyance successively within magnetically influential distance and position of said electromagnet 1 and of said armature 3 in such manner as, first, to magnetically energize said electromagnet and cause it to attract its armature, and, second, subsequently to attract said armature 3 and cause the same to open said normally closed contact.

The utilities of my said invention are manifold; but one illustration will be sufficient for which purpose said invention is shown in Fig. 2 of said drawings incorporated in a railway-locomotive-controlling system in which 11 is a diagram of a portion of a locomotive adapted to carry said electromagnet 7 and battery 8 and provided with a pivoted armature 9 or equivalent means, to which is attached a valve-stem 10 of a valve (not shown) adapted in operation to cut off the steam from the engine-cylinders, which locomotive moves on a track-rail 12. It will now be seen that if said armature 9 passes said electromagnet 7, as aforesaid, while said contact 5 is in its normally open position said armature 9 will remain inoperative. When, however, said magnet or electromagnet 7 passes over said electromagnet 1, magnetism is induced in the core of said electromagnet 1, causing it to attract said armature 6, and thereby to close said contact 5, whereupon said circuit, including said battery 4, will be closed and the energy of said electromagnet 1 will thereby be maintained. If now a second locomotive equipped in a similar manner to the first pass said electromagnet 1 before the first said locomotive has reached said controlling means 3, the armature 9 on said second locomotive will be attracted toward said electromagnet and will operate said valve-stem 10. It is obvious, however, that the operation of said armature 9 may be made to perform any one or more of various other offices. It is further obvious that the mechanical construction of the parts forming the channels of my said circuits and of said operating means may within the scope of my invention be altered, modified, extended, or varied in minor details and that any suitable mechanical arrangement of levers and

operating devices may be substituted as equivalents for said armature 3 and for said magnet 7, and I do not, therefore, desire to be limited to the exact construction shown or to the exact utility described.

Any suitable and desirable supporting or inclosing means for supporting, attaching, or protecting the physical parts of my said invention may be used in connection therewith.

10 Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In means for the purposes described the combination of a normally open electric circuit, comprising a source of electricity, a normally open circuit-controlling contact, the coil of an electromagnet and a distant normally closed contact; an armature for said electromagnet adapted when operated to close said normally open contact; a lever adapted when operated to open said normally closed contact; a traveling magnet adapted in passage to momentarily energize said electromagnet, and a traveling magnet for subsequently operating said lever, substantially as described.

2. In means for the purposes described, the combination of a normally open electric circuit, comprising a source of electricity, a normally open circuit-controlling contact, the coil of an electromagnet and a distant normally closed contact; an armature for said electromagnet adapted when operated to close said normally open circuit-controlling contact; a lever, embodying an armature independent of

said electromagnet, adapted when operated to open said normally closed contact, a traveling magnet adapted to cause the operation of the first said armature, and to attract and operate the second said armature after the first said armature has been operated, substantially as described.

3. In means for the purposes described, the combination of a normally open electric circuit, including a source of electricity, a normally open contact adapted to be closed by the operation of an armature, the coil of an electromagnet, a normally closed contact adapted to be opened by the operation of an armature; an armature for said electromagnet adapted by its operation to effect the closing of said normally open contact; a second armature independent of said electromagnet adapted by its operation to open said normally closed contact; a core within said electromagnet adapted to be magnetized and when magnetized to attract the first said armature; a traveling magnet adapted to magnetically energize said electromagnet and subsequently to attract said second armature to cause the same to open said normally closed contact, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GUION THOMPSON.

Witnesses:

MARIE LOUISE THOMPSON,
J. E. MASTER.