No. 79,330. PATENTED JUNE 30, 1868.

C. DURANT.

RELAY MAGNET.

Fig 1

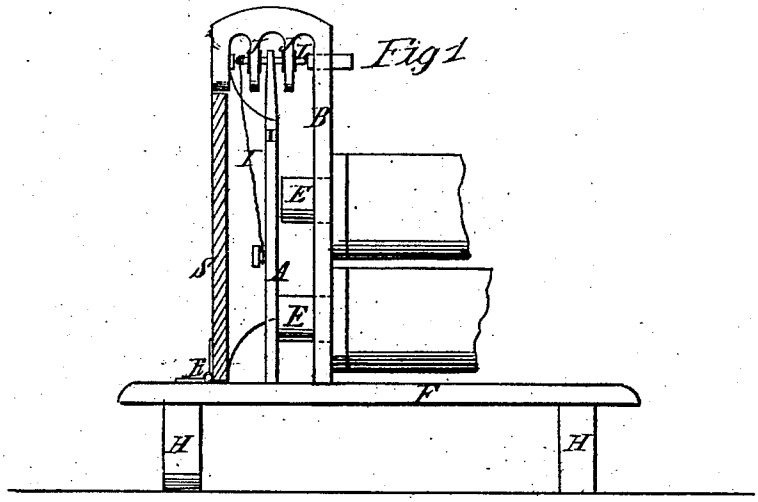
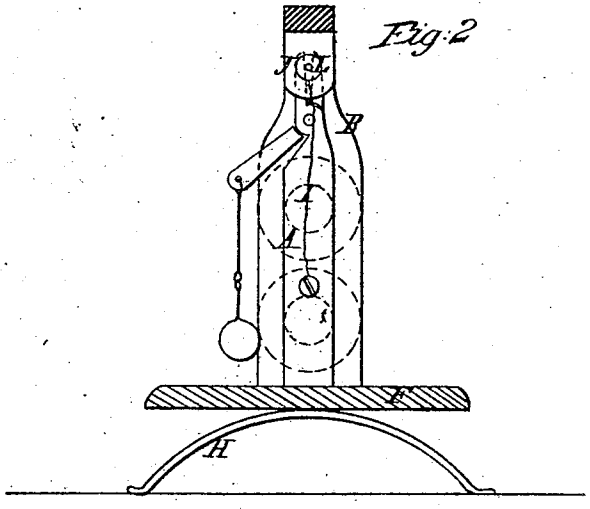


Fig 2



Witnesses

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Letters Patent No. 79,330, *dated June* 30, 1868.

IMPROVEMENT IN RELAY-MAGNETS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES DURANT, of Jersey City, in the county of Hudson, and State of New Jersey, have invented a new and useful Improvement in the Electro-Magnetic-Relay Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention consists, first, in supporting or suspending the electro-magnetic-relay machine by means of a spring or springs, a cushion or cushions, or any elastic substance or material, to protect it from the vibration or jarring occasioned by the operation of the sounder, or from any other cause, and thereby enabling the instrument to operate more efficiently, and in feebler electric currents than hitherto; second, in applying a shield or protector to the instrument, so as to cover and protect the conducting-wire, which connects the armature or armature-lever with the shifting or sliding-bolt, moving through or upon said armature or armature-lever.

The exposed position in the instrument occupied by said conducting-wire renders it very liable to be disconnected or otherwise deranged without such protection, which would materially affect the working of the instrument.

In the accompanying sheet of drawings—

Figure 1 is a side view of a portion of an electro-magnetic-relay machine, showing my improvement.

Figure 2 is an end view of the same, with the shield or protector detached.

Similar letters of reference indicate corresponding parts.

To enable those skilled in the art to make and use my invention, I will describe its construction and operation, thus:

F represents the base of the relay-machine.

A, the armature or armature-lever, which also constitutes an efficient and only spring for recoil.

E E, the cores of the magnet.

B, the post.

L, the shifting or sliding-bolt, which moves through and upon said armature or armature-lever A, and also moves through and upon the insulated projections or jaws in said post B, at the openings or bearings J J.

The base, F, of the relay-machine has springs, H, attached to it.

These springs may be constructed in any proper manner, and any proper or desired number used.

The ones shown in the drawings are of curved form, and constructed of steel or other suitable metal or elastic material.

In lieu of springs, a cushion or other elastic substance may be used for the instrument to rest upon, or the instrument may be suspended by a spring or springs.

The result in any of the above cases will be the same, to wit:

The vibration or jarring communicated to the table or desk on which the relay-machine rests by the operation of the sounder will not be transmitted to the relay-machine.

These vibrations or jars would have a tendency to render the working of the instrument very imperfect, especially in feeble electric currents, and my improvement effectually obviates this difficulty.

I is the conducting wire, which connects the armature or armature-lever A with the shifting or sliding-bolt L, as shown in both figures.

S is a shield or protector, constructed of suitable material and size to cover and protect the conducting-wire I.

It may be fastened, at one end, to the base, F, by means of a hinge, R, and wedged or screwed, at the other end, to the bent post B; or it may be otherwise secured in any more convenient place or manner, so long as it covers and protects the conducting-wire I.

I claim as new, and desire to secure by Letters Patent—

1. The application of a spring or springs, a cushion or cushions, or other elastic substance, to the electro-magnetic-relay machine, substantially as and for the purpose herein shown and described.

2. The shield or protector S, for the conducting-wire I, substantially as and for the purpose herein shown and described.

CHARLES DURANT.

Witnesses

WM. F. MCNAMARA,

ALEX. F. ROBERTS.