

M. Harrington,

Door Spring.

No. 109512.

Patented Nov. 22, 1870.

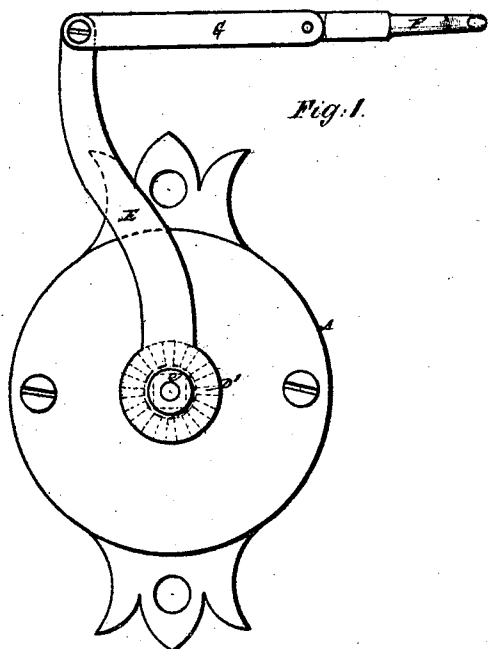


Fig. 1.

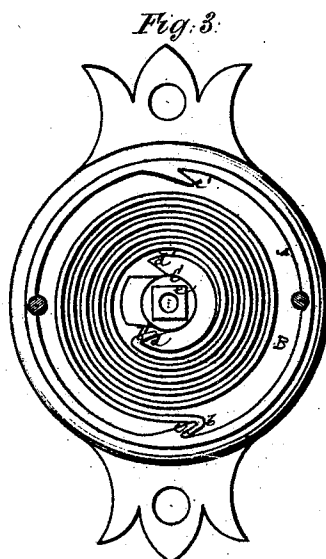


Fig. 3.

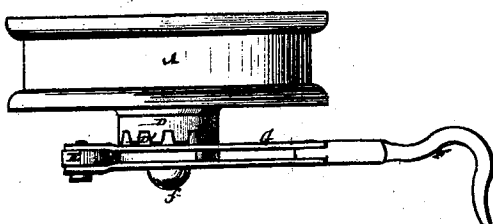


Fig. 2.

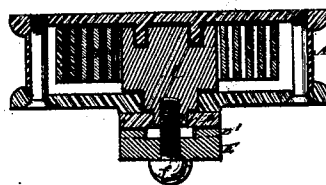


Fig. 4.

Witnesses:
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MELVIN HARRINGTON, OF WAUPUN, WISCONSIN.

Letters Patent No. 109,512, dated November 22, 1870.

IMPROVEMENT IN GATE AND DOOR-SPRINGS.

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, MELVIN HARRINGTON, of Waupun, in the county of Dodge and State of Wisconsin, have invented a new and useful Improvement in Gate and Door-Springs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figures 1 and 2 represent outside views, at right angles to each other, of a gate or door-spring constructed in accordance with my invention;

Figure 3, an interior view in a plane parallel with fig. 1; and

Figure 4, a transverse section of the device.

Similar letters of reference indicate corresponding parts.

The invention consists in a gate or door-closing device, made up of a coiled flat metal spring arranged within a box, and hooking in a reversible manner, to suit right-and-left-hand gates or doors, at its opposite ends onto hooks or notches in the case, and in or on a hub turning therein, and operated by a lever which connects it with the gate or door.

The invention also includes a combination of toothed disks for establishing the connection, in an adjustable manner, between the hub and the lever which operates it, to give more or less strength to the closing action of the device, according to the weight of the gate or door, or as other circumstances may require.

Referring to the accompanying drawing—

A is a cast-metal box secured in any suitable manner and place to the casing or frame within which the gate or door works.

In applying the device to a door, said box A should be secured to the top casing over the door, and the lever, by which the spring in the box is connected with the door, as hereinafter described, should be hooked to the door within two inches (more or less) of the hinge corner and of the top of the door.

In applying the device to a gate it may be secured to the side of the post near the hinge of the gate.

Said box A should be provided with a cover or covers to exclude dirt, and, in case of the application of the device to an outside door or gate, to keep out water and prevent the formation of ice on the spring.

B is the coiled flat metal spring, which, when the box A within which it is arranged is four inches in diameter, may be four feet in length or thereabout, one inch wide and one-eighth of an inch thick, it being preferable to make the spring a long one, as per-

manency of action is thereby secured and it is not so liable to break as a short spring.

Said spring B is hooked at its one end, *b*, to catch onto either one of reversely-arranged hooks, *c c'*, in the box A, and similarly hooked at its opposite end *b'* to catch into reversely-arranged notches or hooks *d d'* in or on a hub, C, which turns in the opening and closing of the gate or door.

By means of these reversely-arranged hooks *c c'* and *d d'* in or on the stationary box A and movable hub C, the spring B may be reversed to suit either right or left-hand gates or doors.

Fitted to the hub C, outside of the case or box, is a disk, D, having cogs on its face, and into which fits or locks a cogged disk or surface, D', on a lever, E, which connects the spring with the gate or door.

This lever E, when the device is applied to a door, should be connected with the latter by a hook, F, and jointed or pivoted link G, so arranged as to let the door open back against the wall, and the box A be arranged sufficiently near to the side casing to secure to the jointed connection its proper angle in the opening and closing of the door.

The hook F may be made to catch into an eye-headed screw entered within the door.

When the device is applied to a gate a direct or straight attachment of the hook may be substituted for the jointed connection.

The toothed disk D may be fitted in a detachable or variable manner to the arbor or hub C by a square shoulder, *e*, on the latter entering said disk, and the circular rack or toothed disk D' of the arm or lever E have its lock with the disk D effected in a detachable manner by a screw, *f*, so that, on changing the relative positions of the connection as established by the two disks, giving one disk as it were more or less lead of the other, the tension or force of the spring may be adjusted to suit light or heavy doors, and so prevent noise.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The reversely-arranged hooks or notches *c c'* and *d d'* on the case A and hub C respectively, as shown and described, for the purpose set forth.

2. The combination of the toothed disks D D' with the hub C and lever E, when the latter has the toothed disk cast upon it, substantially as shown and described.

MELVIN HARRINGTON.

Witnesses:

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