

(No Model.)

F. SCHNELL, Sr.
FIRE ESCAPE.

No. 446,295.

Patented Feb. 10, 1891.

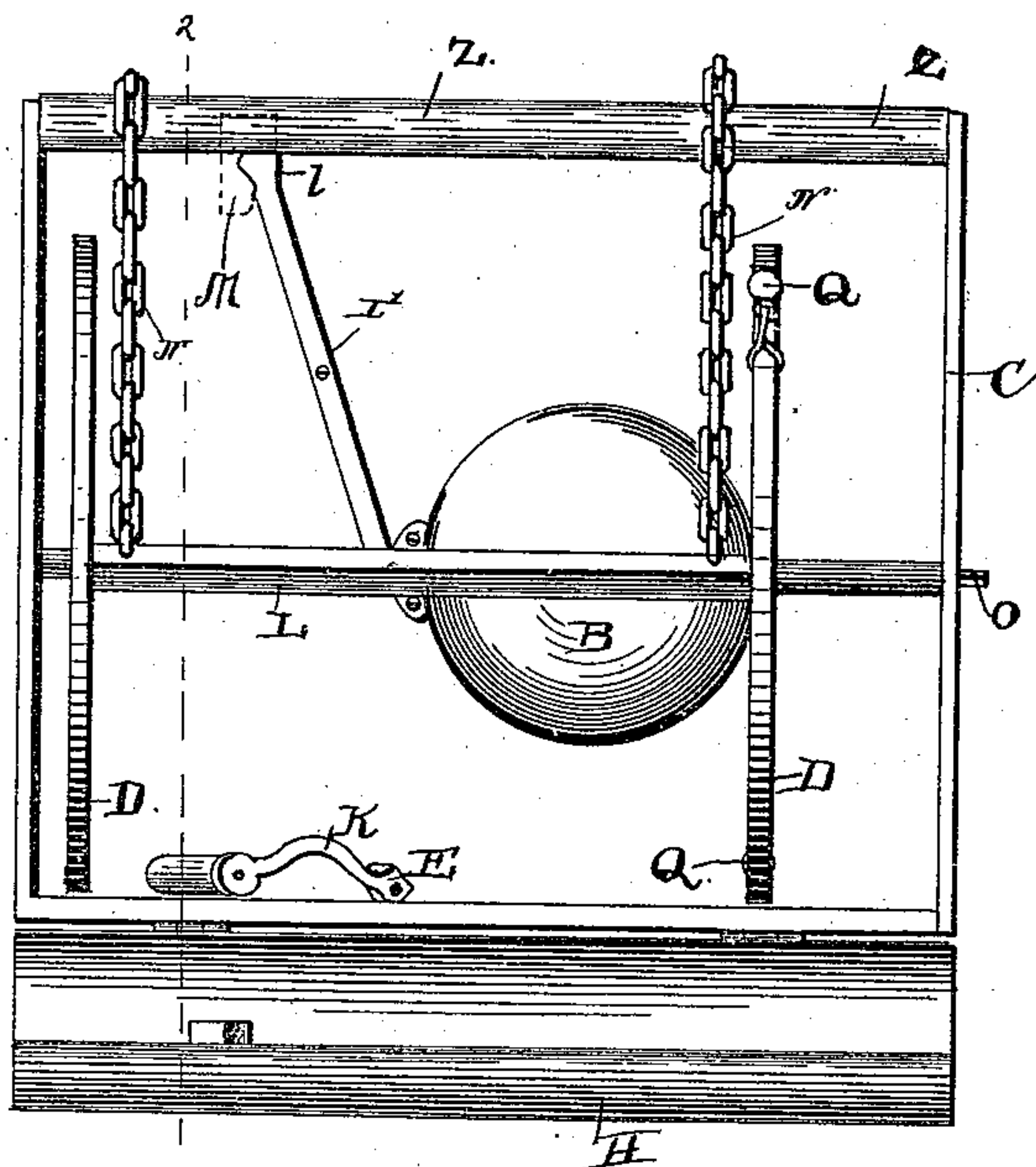


Fig. 1.

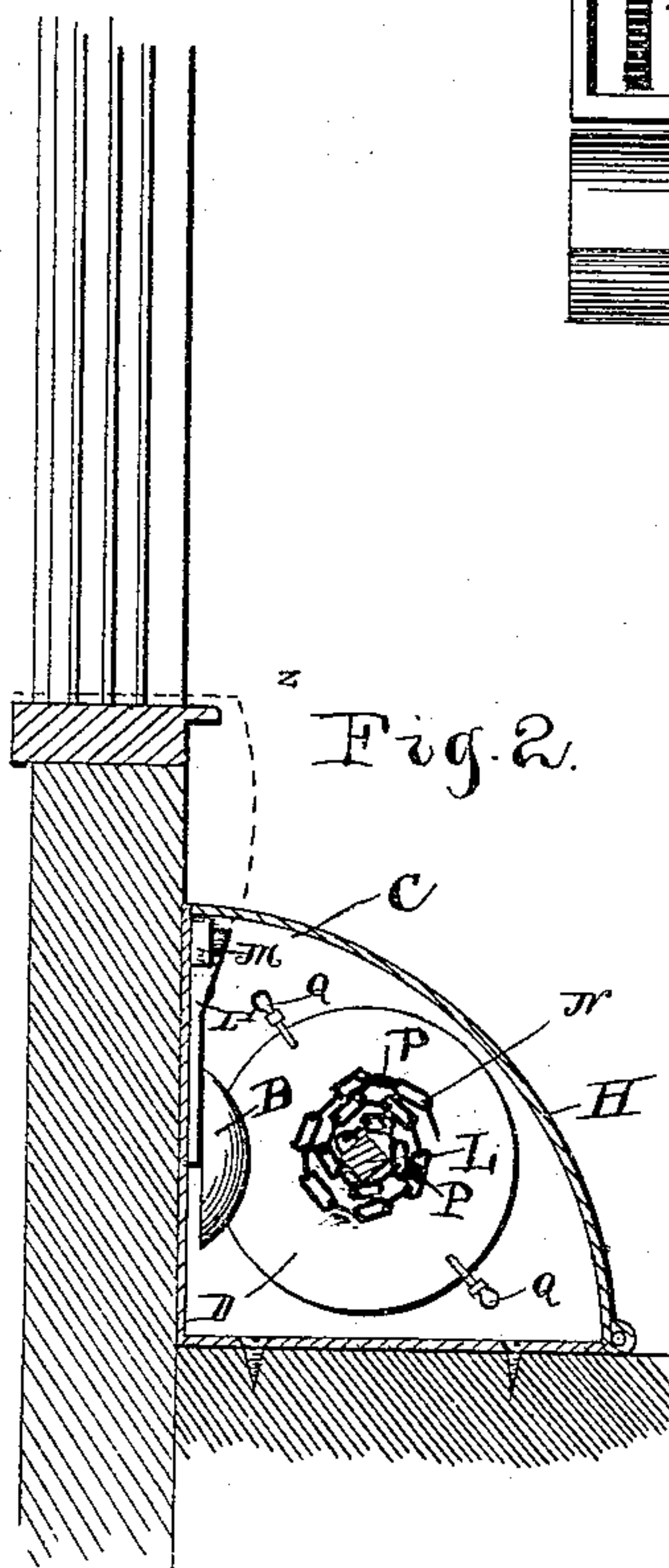


Fig. 2.

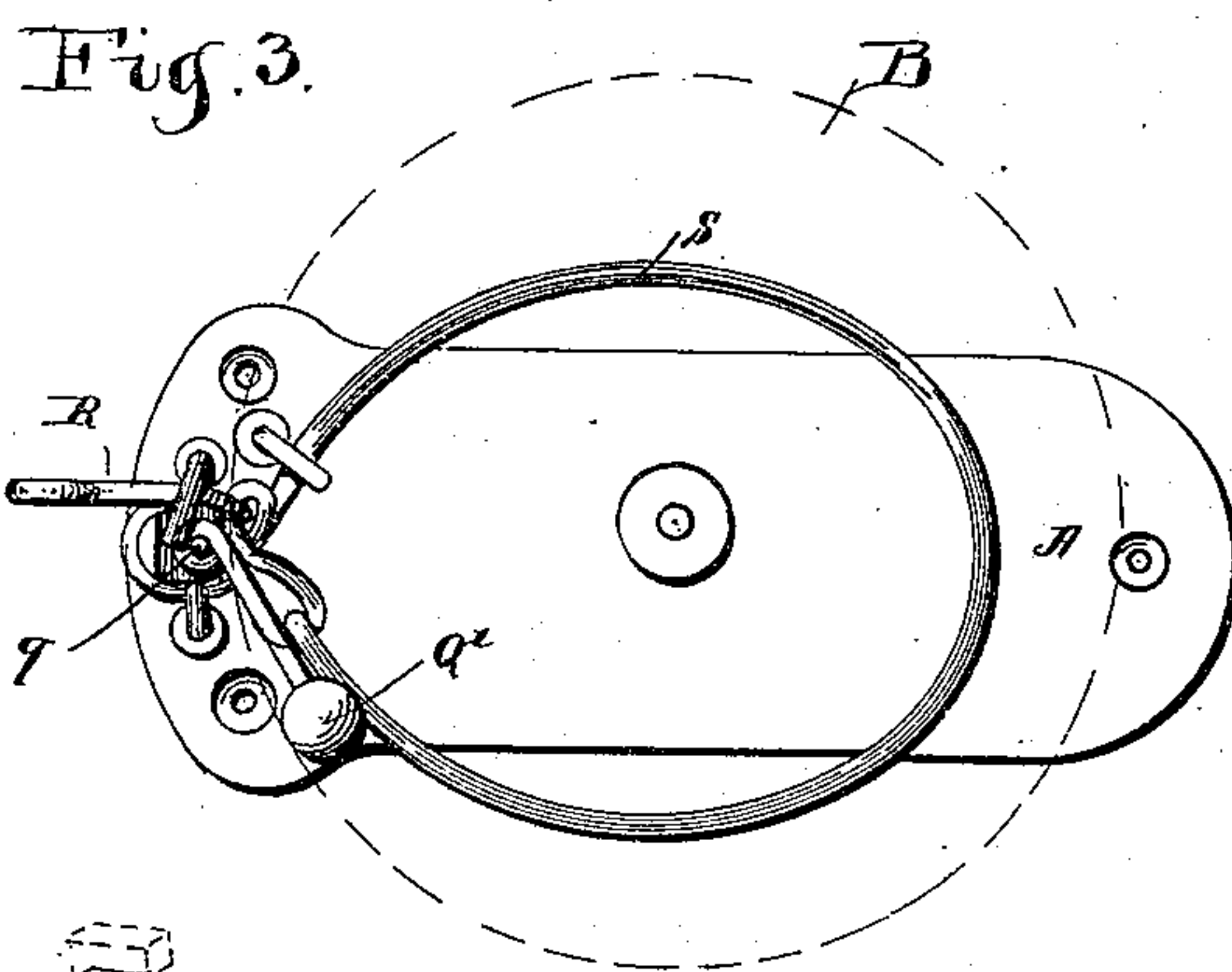


Fig. 3.

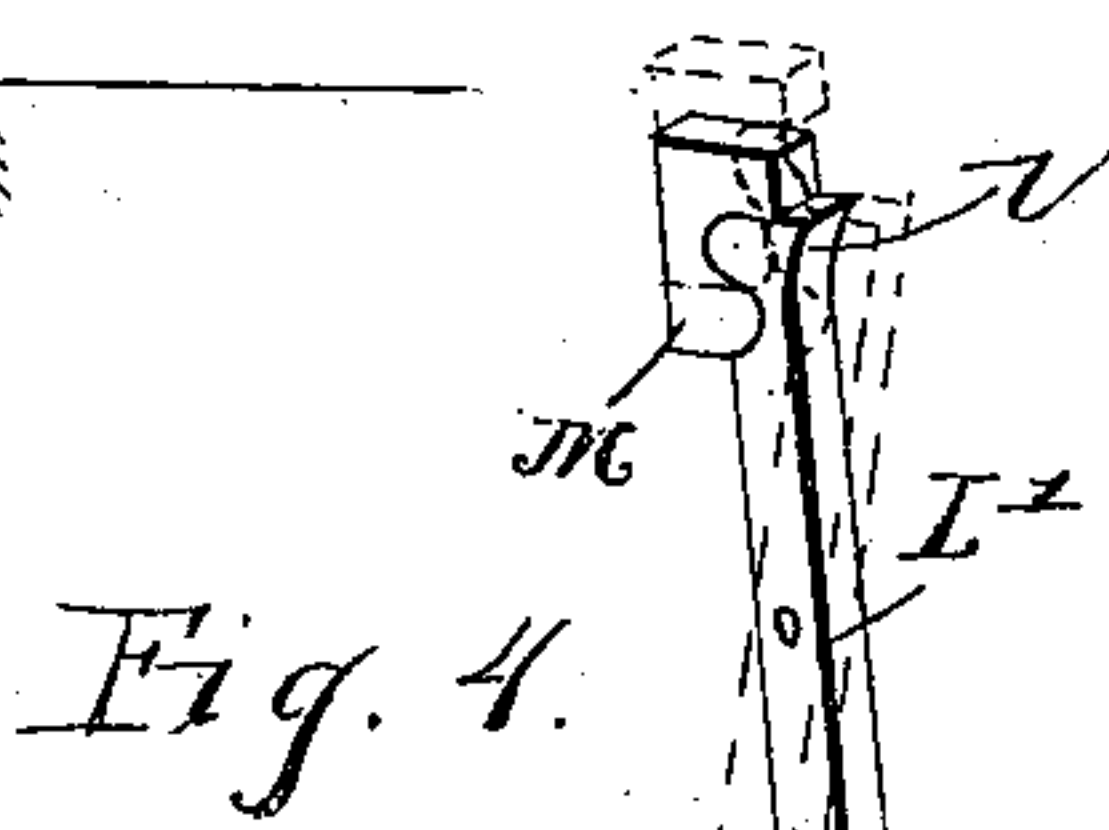


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

FRIEDRICH SCHNELL, SR., OF FORT MADISON, IOWA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 446,295, dated February 10, 1891.

Application filed October 21, 1890. Serial No. 368,794. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH SCHNELL, Sr., a citizen of the United States, residing at Fort Madison, in the county of Lee and State of Iowa, have invented a new and useful Fire-Escape, of which the following is a specification.

This invention relates to fire-escapes; and the object of the same is to effect improvements upon devices of this same general character heretofore existing.

The invention consists in the details of construction hereinafter more fully described and claimed, and as illustrated in the drawings, in which—

Figure 1 is a large front elevation of my improved fire-escape, showing the ladder as unwound and the casing-door as open. Fig. 2 is a vertical section on the line 2 2 of Fig. 1, taken through the casing when closed and through a portion of the front wall of a house, the chain being wound upon the drum in this case and the cloth cushion being shown in dotted lines as passed over the window-sill. Fig. 3 is a detail view of the support of the bell, showing the improved clapper therein. Fig. 4 is a perspective detail of the lever, cam, and bell-clapper rod.

Referring to the said drawings, the letter C designates a casing, preferably of sheet metal, having a hinged cover H, as shown, and having holes in its bottom by which it can be secured to the floor. The casing is preferably of the shape of one-quarter of a cylinder and occupies a position beneath a window in one of the rooms of a house, with its curved side toward the room and closed by the cover H. Journaled through the ends of the casing C is a longitudinal shaft L, having a squared outer end O, and having disks D upon its body within the casing. Secured to this shaft is a pair of chains N, connected by occasional rods P, and constituting a ladder adapted to be wound upon the drum, which is composed of said shaft and disks. This ladder is long enough to reach to the window below that in which the casing is located.

K is a crank-handle having a square socket at its inner end E, adapted to be passed over the outer end O of said shaft when it is desired to wind the drum; but the handle en-

tire is at other times stored within the casing C, as shown in Fig. 1, it being understood that the cover H of the casing is to be closed to conceal the ladder from view.

The letter B designates a bell, which is located within the casing C, and which may be of any desired size, but is preferably constructed as shown in Fig. 3. The clapper of this bell is connected with the hinged cover of the casing, and when said cover is opened the clapper gives two sharp alarms upon the bell. Upon one of the disks D is a number of clappers Q, adapted to strike the bell when the drum is rotated. By this means an alarm is given whenever the fire-escape is used, either in the proper manner or by any person attempting to gain admittance to the house by improper means.

The occupant of the room when he wishes to escape opens the door H, passes the end of the ladder out the window, and pays out enough so that the weight thereof will cause the drum to unwind. The ladder, when unwound, reaches to the window below, where he can find another ladder, and so on down to the ground. The ladder can be rewound upon the drum by using the crank K in a well-known manner.

In order that the ladder may not injure the window-sill, I provide a piece of stout cloth Z, secured inside the casing, and before the ladder is unwound this cloth is thrown from the casing out over the window-sill in a manner which will be obvious. Of course whenever the drum is rotated the clappers Q sound an audible alarm and give notice to others in the building that the escape is being used for some purpose or other.

The letter A is a base secured to the back of the casing C, and upon which is mounted the bell B.

q is a stud, to which is secured one end of a spring S, the free end of which operates a clapper Q' inside the bell, and holds said clapper normally in the position shown in Fig. 3.

R is a rod connected to the clapper Q', which latter is pivoted upon the stud q, and the outer end of this rod is connected to a lever L', having an enlargement l at its upper end.

To the hinged cover H is secured a cam M,

having beveled faces, and when this cover is closed the cam passes over the enlargement *l* and moves the lever *L'* first in one direction and then in the other to give two strokes on the bell; also, when the cover is opened two strokes are given. In this manner an alarm is given whenever the cover is opened for any purpose, as above stated.

What is claimed as new is—

10 1. The herein-described fire-escape, the same comprising a quadri-cylindrical casing *C*, whose curved face *H* is hinged thereto, a longitudinal shaft *L*, journaled in the ends of said casing, a crank *K* upon one end of said shaft, a ladder connected to said shaft and adapted to be wound thereon, and a cushion *Z*, connected at one end to and inside said casing and adapted to pass over the window-sill, as and for the purpose set forth.

20 2. The combination, with a casing, a hinged cover thereto, and a cam carried by said cover, of a bell having a spring-actuated clapper and a lever pivoted to the casing, connected at one end to said clapper and having an en-

largement at its other end adapted to be struck by said cam, all as and for the purpose set forth. 25

3. The combination, with a casing, a shaft journaled therein, a disk on said shaft, clappers projecting from said disk, and a ladder wound on the shaft, of a cover hinged to said casing, a cam on said cover extending into the casing, a spring-actuated clapper pivotally mounted on a base, a bell supported on said base and in line with the clappers on the disk, and a lever pivoted to the casing, connected at one end to said spring-actuated clapper and having an enlargement at its other end standing normally in the path of said cam, all as and for the purpose hereinbefore set forth. 30 35 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRIEDRICH SCHNELL, SR.

Witnesses:

WM. G. ALBRIGHT,
THEODORE SALMON.