(Model.)

C. BARLOW.

Fire Escape.

No. 238,551. **Patented March 8, 1881.**

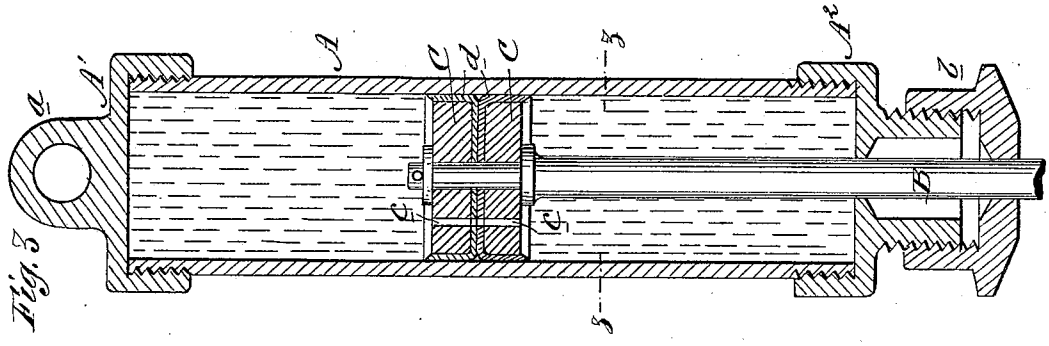


Fig. 3

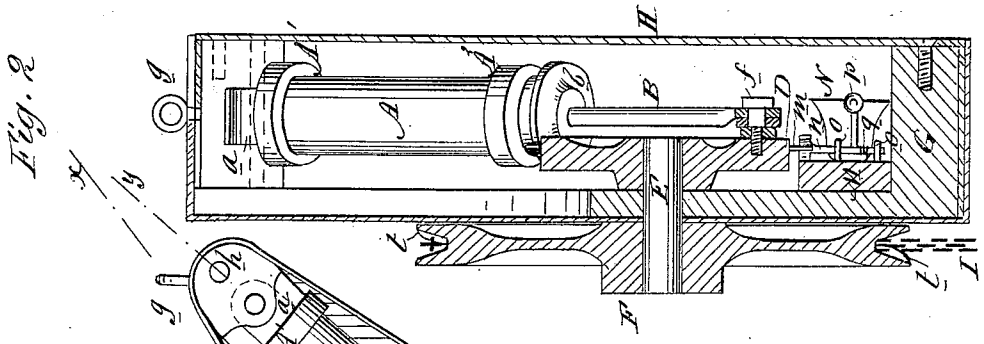


Fig. 2

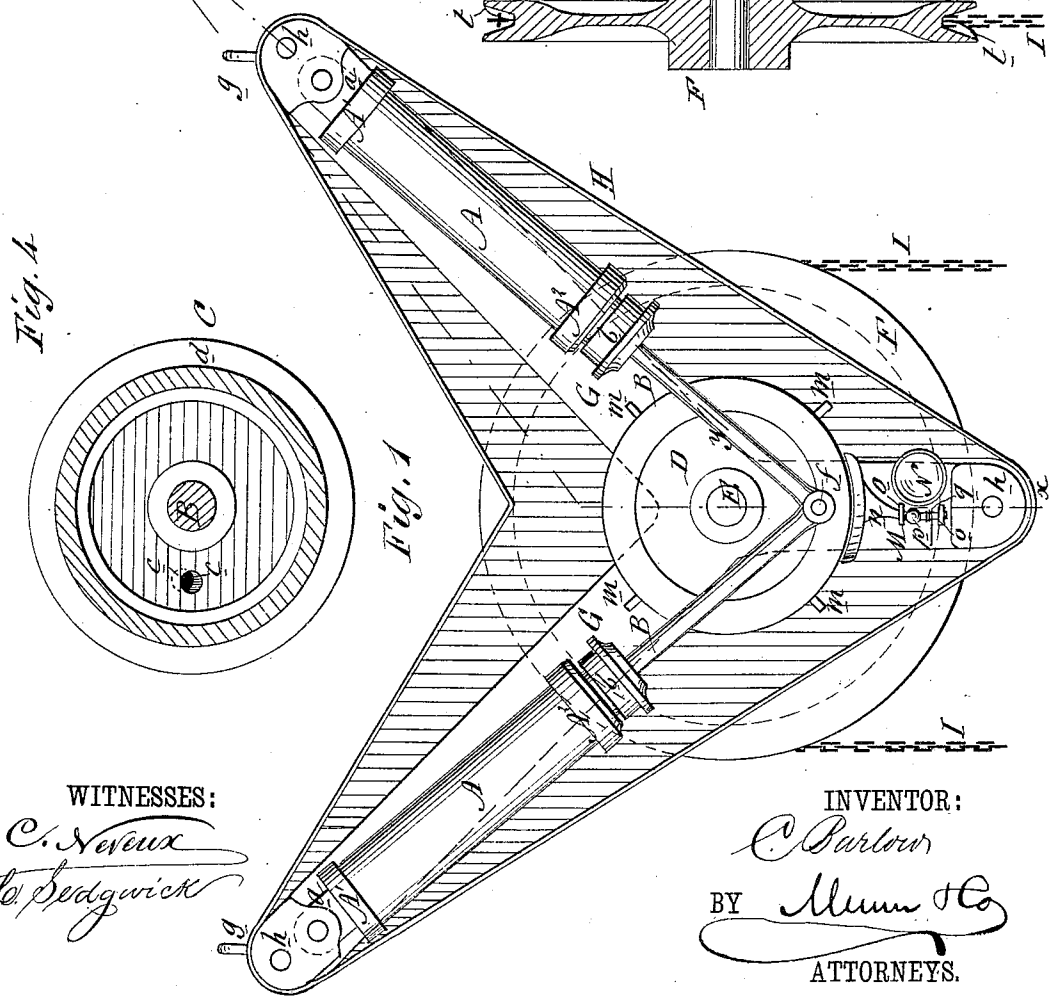


Fig. 1

Fig. 4

WITNESSES:

C. Neveux

H. Sedgwick

INVENTOR:

C. Barlow

BY Munn & Co

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES BARLOW, OF COOKSHIRE, QUEBEC, CANADA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 238,551, dated March 8, 1881.

Application filed November 1, 1880. (Model.)

To all whom it may concern:

Be it known that I, CHARLES BARLOW, of Cookshire, in the Province of Quebec and Dominion of Canada, have invented a new and Improved Fire-Escape, of which the following is a specification.

The object of this invention is to provide a safe and simple stationary fire-escape, suitable for buildings of all kinds, and serviceable, at the same time, for lowering heavy weights.

The invention consists of two cylinders fixed on different radii, each cylinder being filled with liquid, air, or gas, and containing two pistons provided with orifices that may be opened or closed by the relative adjustment of the pistons, to prevent or permit the passage of the liquid or air from one end to the other of said cylinders, and thereby retard or hasten the operation of the device.

Figure 1 is a front elevation of the device fixed in a suitable frame and case. Fig. 2 is a vertical section of the same on line *x x*, Fig. 1. Fig. 3 is an enlarged longitudinal section of a cylinder on line *y y*, Fig. 1. Fig. 4 is a cross-section of the same on line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts.

In the drawings, A A represent the cylinders, whose ends are closed by the screw-caps A' A^2, the upper one of which is provided with a perforated lug, *a*, whereby to suspend the said cylinder in position, while the lower cap, A^2, serves also as a stuffing-box for the piston-rod B, and has a gland, *b*, screwed down on it to prevent the escape of the contents of the said cylinder A.

In each cylinder A is a piston-rod, B, on the inner end of which are secured two pistons, C C, provided with apertures *c c*, and having between them packing-sheets *d*, whose edges project beyond the peripheries of said pistons C C, and serve to make tight joints between said pistons C C and the inner walls of the cylinder A. The outer ends of these piston-rods B B are pivoted, by a screw or stud, *f*, to the face of a wheel, D, that is keyed on an end of a shaft, E, which is fixed in the frame G at right angles to the piston-rods B B, and has secured on its opposite end, outside of the case H, the sheave F, provided with teeth *t*. This device is designed to be secured to a frame, G, to keep the parts in position, and to be inclosed in a case, H, for protection of the parts from injury, and it is intended to be suspended or secured, by means of the screw-eyes *g g* or holes *h h*, or other suitable device, to a rail, post, or other convenient part of a building.

I represents an endless chain engaged on the sheave F, and forming the means of descent from the building in which the fire-escape is secured. Said endless chain I is held by the teeth *t* of the said sheave F, so that a downward pull on either side of said chain I shall cause the sheave F to revolve, and in consequence the wheel D.

The cylinders A A being filled with liquid, air, or gas, and each pair of pistons C C being adjusted with their apertures *c c* in suitable relative position to each other for the descent of a light or heavy weight, as the case may be, the operator takes hold of the chain I and lowers himself out of the window or other convenient place of the house. The consequent speed of revolution of the wheel D is regulated by the resulting reciprocations of the pistons C C. If the apertures *c c* of said pistons C C are set opposite each other in each cylinder A, a light weight on the chain I will cause the contents of the said cylinders to pass rapidly from one side of the pistons C C to the other, and thereby permit their rapid reciprocation. If the apertures *c c* are brought but partly in correspondence with each other, greater resistance is offered to the pistons C C by the contents of the cylinders A, while the said pistons C C will be immovable, if the apertures *c c* are completely closed. It is designed, however, to have the apertures *c c* partly open in all instances when the device is set in place for use. As the wheel D revolves in the operation of the machine the pins *m m*, radiating from the periphery of said wheel, come successively in contact with the striking mechanism M of a gong or bell, N, and cause said gong or bell N to sound. Said mechanism M consists of rocking shaft *n*, journaled horizontally in standards *o*, that are fixed in the frame G, and having secured to it at right angles a hammer, *p*, the broad flaring end of said shaft *n* being slightly inclined sidewise and in contact with the periphery of the wheel D, and a spring, *q*,

having one end secured in the frame G, has its other end twisted about the shaft *n* and the shank of the hammer *p*, thereby forcing said hammer *p* in contact with the bell or gong N, that is fixed on said frame G. As the wheel D revolves, the pins *m* successively pass beneath and in contact with the flaring end of the shaft *n* and incline it upward in a horizontal position, thereby moving the hammer *p* from the bell N, and on the breaking of contact between the pin *m* and shaft *n*, the spring *q* forces the said hammer *p* again against the bell N. The special advantage of this gong or bell mechanism is, that it will give an alarm should any one attempt to enter or leave the house surreptitiously by means of the fire-escape; and the advantage of using a pair of pistons is, that the resistance is thereby rendered more constant and uniform.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A fire-escape constructed substantially as herein shown and described, consisting of two cylinders, A A, fixed on different radii, filled with liquid, air, or gas, and each containing two pistons, C C, provided with orifices *c c*, that may be opened or closed by the relative adjustment of said pistons C C, piston-rods B B, pivoted together to a wheel, D, supported on shaft E, and sheave and chain F I, operated as set forth.

2. In a fire-escape, the combination of the two cylinders A A, filled with liquid, air, or gas, and fixed on different radii, perforated double pistons C, and piston-rods B, substantially as herein shown and described.

CHARLES BARLOW.

Witnesses:
CHAS. C. BAILEY,
J. L. POPE.