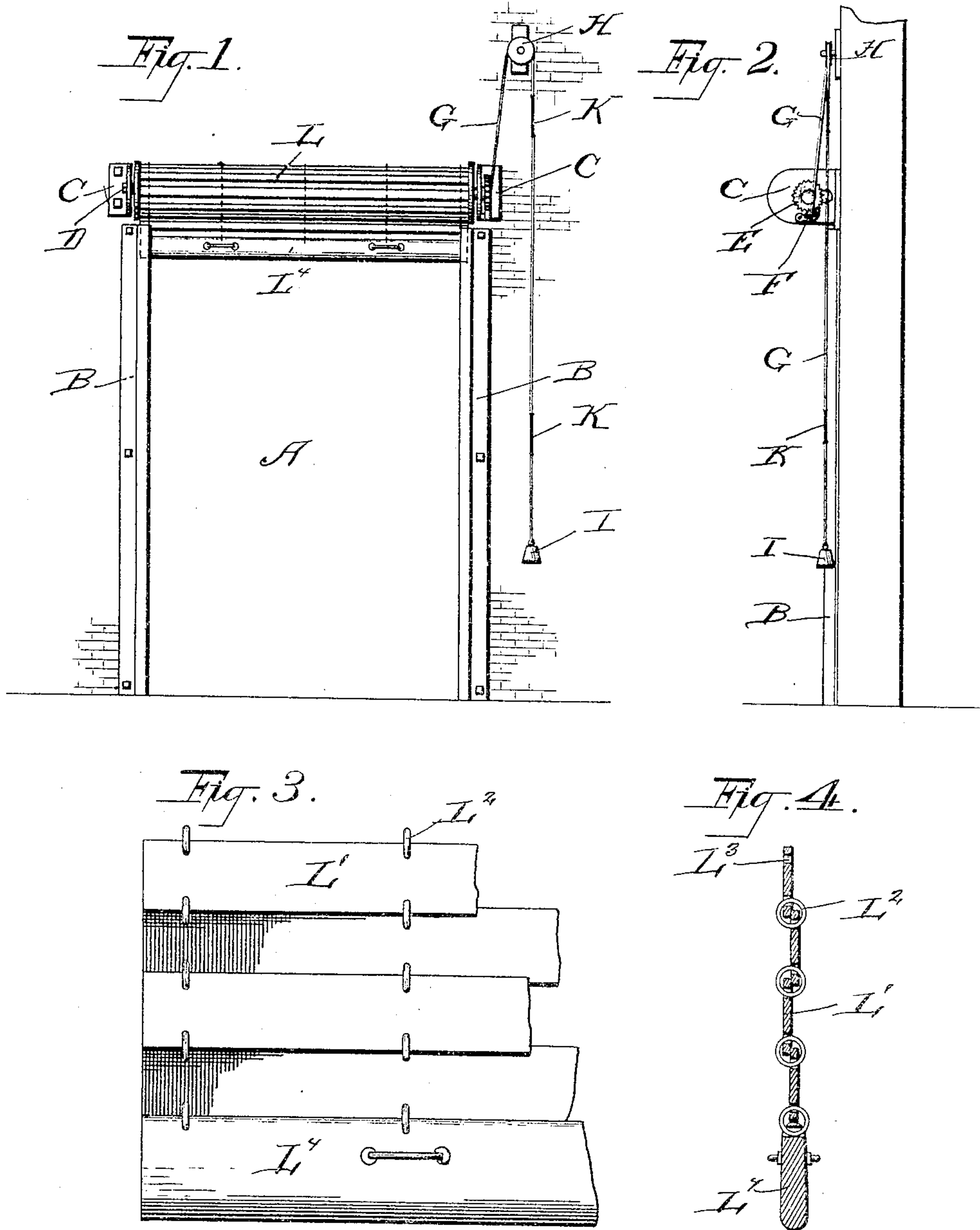


No. 803,618.

PATENTED NOV. 7, 1905.

R. D. MUMFORD.
SELF CLOSING FIREPROOF DOOR.

APPLICATION FILED MAR. 15, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

RICHARD DAVIS MUMFORD, OF WEST PHILADELPHIA, PENNSYLVANIA.

SELF-CLOSING FIREPROOF DOOR.

No. 803,618.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed March 15, 1905. Serial No. 250,240.

To all whom it may concern:

Be it known that I, RICHARD DAVIS MUMFORD, a citizen of the United States, residing in West Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Self-Closing Fireproof Doors, of which the following is a specification.

This invention is an improved construction of self-closing fireproof door, the object being to provide an exceedingly simple and efficient form of door for closing and opening in case of fire.

Another object of my invention is to provide a door which will be automatically released as soon as the temperature reaches a predetermined point.

With these objects in view my invention consists, essentially, of a door consisting of a series of overlapping metal strips linked together, said door being connected to an axle and capable of being wound upon said axle, means for holding the axle against rotation when the door is wound thereon, and a cable having one or more fusible sections therein, said cable having a weight connected thereto for the purpose of holding the means for locking the axle in operative position.

The invention consists also in certain details of construction hereinafter fully described, and pointed out in the claim.

In the drawings forming a part of this specification, Figure 1 is a view showing the practical application of my invention, the door being raised and held in such position. Fig. 2 is a side view of the mechanism for so holding the door. Fig. 3 is an enlarged detail view of a portion of the door, and Fig. 4 is a detail sectional view of the same.

Referring to the drawings, A indicates the opening, and B the metal guiding-strips arranged upon opposite sides thereof and forming guideways for the door to slide in, said metal guiding-strips holding the door close to the wall when closed. Brackets C are connected to the wall just above the upper ends of the guiding-strips B, and journaled in said brackets is an axle D, having a ratchet-wheel E arranged upon one end, and pivotally connected to the bracket adjacent said ratchet-wheel is the spring-actuated pawl F, said spring normally acting upon the pawl to throw the same away from the ratchet-wheel. A cable G is connected at one end to this pawl, passes over a pulley H, fastened to the wall

above the brackets, and carries a weight I at its lower end, said weight serving to normally hold the pawl in engagement with the ratchet-wheel upon the end of the axle. The cable G has one or more fusible portions K arranged therein, said fusible portions having sufficient strength to maintain the weight; but their composition is such that they will fuse or melt at a very low temperature, and thereby drop the weight, and the moment the weight is dropped the spring acting upon the pawl will serve to throw said pawl out of engagement with the ratchet-wheel.

Connected to the axle D is a rolling or foldable door L, consisting of a series of metal slats L', having their adjacent edges overlapping, as shown, and connected by means of links or rings L², which pass through the apertures L³ produced in the slats adjacent their edges, said links and perforations being of such size as to permit the door to be rolled upon the axle, as indicated in Fig. 1. The ends of the slats slide in the guideways B, and the bottom slat L⁴ is made particularly heavy, so that the moment the weight is released and the pawl is thrown out of contact with the ratchet the weight of this bottom strip will be sufficient to unroll the door, and the slatted door will then move downwardly in the guideways and completely close the opening A. The pawl and ratchet are of such character that the door can be rolled upon the axle without disturbing the pawl, cable, and weight; but it is obvious that the moment the pawl is released the foldable door must descend by its own weight, and thereby close the opening, and inasmuch as the ends of the door are held against the wall by means of the guiding-strips it is obvious that the opening will be effectively closed and it will be impossible for drafts or explosions to displace the door.

The purpose and advantages of a door constructed in accordance with my invention will be obvious to every one.

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

A self-closing fireproof door comprising a plurality of metallic strips having their adjacent edges overlapping, links passing through the overlapping edges of the strips and thereby flexibly connecting said strips, the bottom strip being made heavier than the other strips, an axle journaled in brackets and to

which the upper strip of the foldable door is
connected, the metallic guide-strips in which
the door slides, a ratchet-wheel arranged
upon one end of the axle, a spring-actuated
5 pawl for engaging said ratchet-wheel, a cable
connected to said pawl, and having a weight
upon its lower end, said cable having one or

more fusible sections arranged therein, as
and for the purpose described.

RICHARD DAVIS MUMFORD.

Witnesses:

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