Aug. 26, 1924. 1,506,508

F. L. STERCHELE

ROLLING DOOR

Filed Sept. 5, 1922

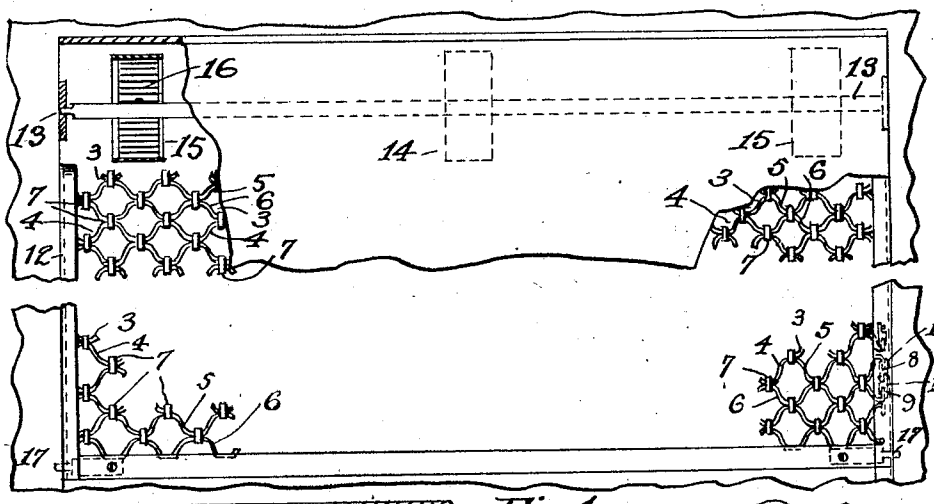


Fig. 1.

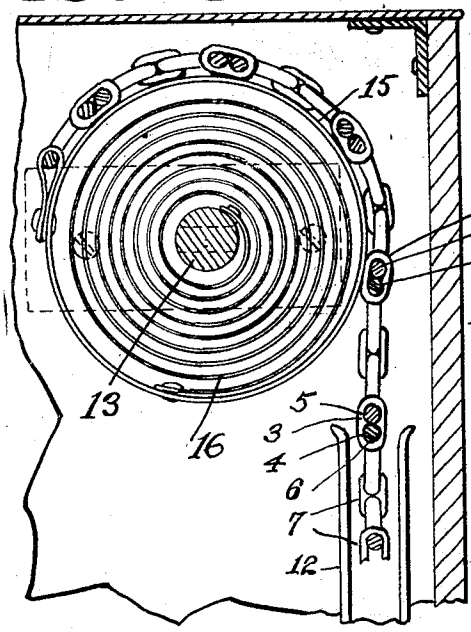


Fig. 2.

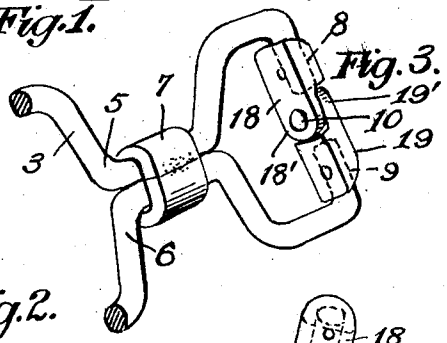


Fig. 3.

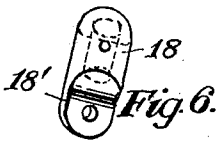


Fig. 6.

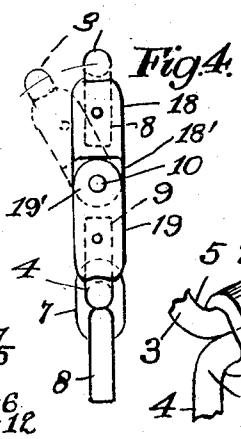


Fig. 4.

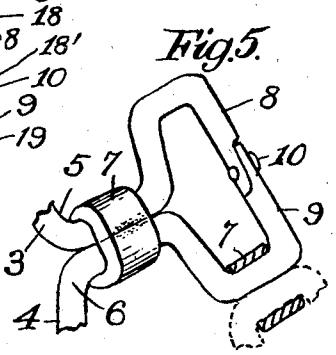
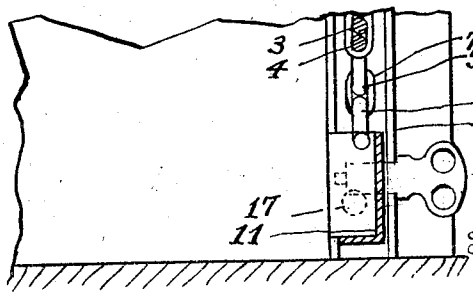


Fig. 5.



Inventor

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By his Attorney

Wm. H. Reid

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UNITED STATES PATENT OFFICE.

FELIX L. STERCHELE, OF NEW YORK, N. Y.

ROLLING DOOR.

Application filed September 5, 1922. Serial No. 586,094.

To all whom it may concern:

Be it known that I, FELIX L. STERCHELE, a subject of the King of Italy, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Rolling Doors, of which the following is a specification.

This invention has reference to doors of the character that are formed of flexible material and each are designed to roll up into the frame of the door-way or opening, and which can be applied to any form of an opening, such as a door or window.

The object of this invention is to provide a device of this character that will be composed of elements in the nature of a lattice work, that can be readily rolled up on a suitable rotating member, yet will be strong and durable, and effectually prevent entrance through the door-way.

A further object of this invention is to provide means for rolling up a door and guiding it to its proper closed position.

In the accompanying drawing showing one embodiment of my invention, Figure 1, is a front elevation partly in section.

Fig. 2 shows a broken vertical section enlarged.

Figs. 3, 4, 5 and 6 show details of the hinge.

The apparatus as shown comprises a lattice door denoted generally by 2. This is formed of transverse rods 3 and 4, that are bent in opposite directions in the form of a sinusoid, whereby the bent portions 5 of the rods are adjacent at one portion, and the bent portion 6 are adjacent at another portion of each rod. These adjacent portions are hinged together by links 7 preferably closed or welded. At the extremities the rods have their ends bent transversely at 8 and 9 and pivoted together by suitable means. As shown I provide a pair of hinge blocks 20 and 21, each having a socket 22 in which a lining ends 8 and 9 of the rods, are inserted and secured by suitable means, such as rivets 23. These hinge blocks have lapping portions 24 suitably apertured to receive a hinge pin 25. In Fig. 5 another pivoting means as shown, in which the extremities 8 and 9 have lapping portions suitably apertured to receive a hinge pin 30. At the lower end the rod is hinged to a cross bar 11 as shown. This device is arranged to slide on a doorway preferably by having channel irons 12 inserted in the doorway, that will receive the pivoted end portions of the rods at 8 and 9.

I provide means at the top of the door frame for winding up this flexible rolling door. As shown a shaft 13 is arranged above the door-way, and drums with coil springs receive the lattice door, that will wind around the drums as rotated by the springs; whereby when the door is pulled down the springs will be put under tension, that will roll up the door when released. I provide two or more of drums 14 and 15 that rotate on the shaft 13 and the upper end of the lattice door is secured to these drums arranged near the end of the shaft. In each drum is a coil spring 16 with one end secured to the shaft and the other end secured to the drum. Since the shaft is fixed, when the drum is pulled down through the guide-way the springs in the drums will be wound up and serve to roll up the door when released.

I preferably provide locking means on the lower cross bar 11, such as a key lock 17 at each end of this bar, having a bolt that moves into a slot in the guide-way 12.

A device of this character serves to close the door-way in a very secure and efficient manner and makes the entrance practically burglar proof, as it is made of strong and heavy material and could not be easily removed or broken. By merely loosening the bolts at the bottom, the door is released and automatically rolls itself into the frame above the door-way, and practically no part is exposed, except the lower bar. It will be further seen that the door-way is free and does not have any objectionable door members at the sides to occupy space.

It will be obvious that this door and controlling means can be used to close a window or any opening in a building.

What I claim is:—

1. A lattice rolling door composed of a series of lateral rods, each rod bent in the plane of the door alternately in opposite directions in the form of a sinusoid, links connecting adjacent portions of the rods so that each rod is hinged to the next rod above it and also below it in a staggered relation across the door, a block fast to each end of the rods and means to pivot the blocks together.

2. A lattice rolling door composed of a series of lateral rods, each rod bent in the

plane of the door alternately in opposite directions in the form of a sinusoid, links connecting adjacent portions of the rods so that each rod is hinged to the next rod above it and also below it in a staggered relation across the door, a block fast to each end of the rods, and means to pivot the blocks together, upright guides arranged to each side of the doorway, an overhead shaft, drums loose on the shaft having one end of the said lattice door secured thereto whereby the door can be wound around the drums and rolled up from the door-way, and a spring between each drum and the shaft to turn the drum to wind up the door, and which springs are put under tension when the door is drawn down in the door-way to closed position.

3. A lattice rolling door composed of a series of lateral rods, each rod bent in the plane of the door alternately in opposite directions in the form of a sinusoid, links connecting adjacent portions of the rods so that each rod is hinged to the next rod above it, and also below it in a staggered relation across the door, a set of blocks each having a socket in one end and thereby secured to the end portions of said rods, said blocks having reduced end portions that lap and are hinged.

4. A lattice rolling door composed of a series of lateral rods, each rod bent in the plane of the door alternately in opposite directions in the form of a sinusoid, links connecting adjacent portions of the rods so that each rod is hinged to the next rod above it, and also below it in a staggered relation across the door, a set of blocks each having a socket in one end and thereby secured to the end portions of said rods, said blocks having reduced end portions that lap and are hinged upright, guides at each side of the door-way in which said blocks slide.

Signed at New York, N. Y., on Sept. 1, 1922.

FELIX L. STERCHELE.