

No. 670,939.

Patented Apr. 2, 1901.

J. W. RAPP.

DOOR.

(Application filed Apr. 19, 1900.)

(No Model.)

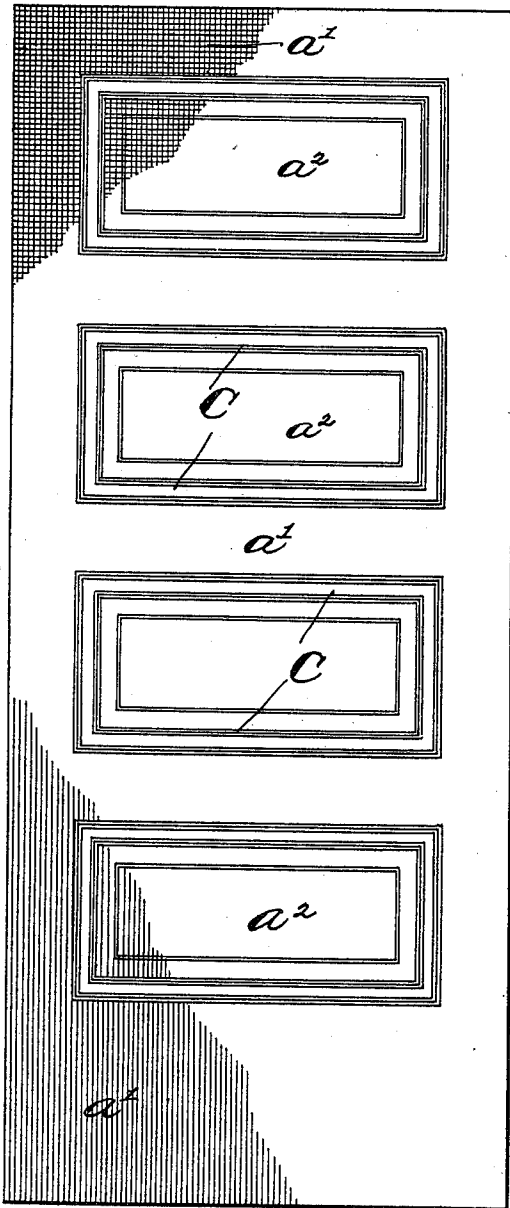


Fig. 1.

Fig. 2.

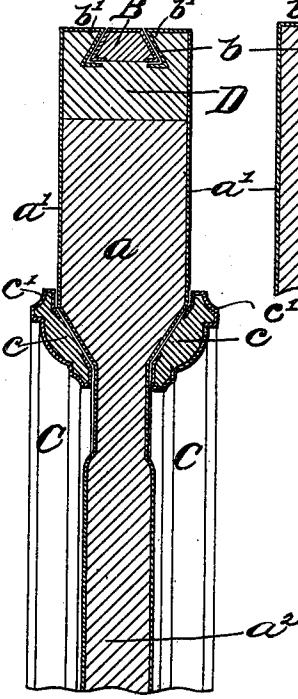


Fig. 3.

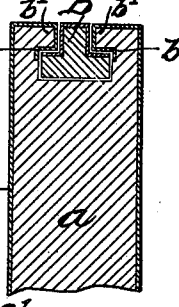


Fig. 4.

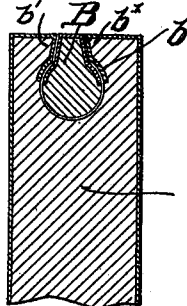


Fig. 5.

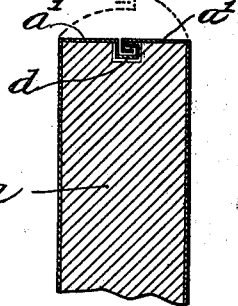


Fig. 6.

Fig. 7.

WITNESSES:

J. Stallman
Ed. E. Brown

INVENTOR

John W. Rapp

BY

Edwin A. Brown

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN W. RAPP, OF NEW YORK, N. Y.

DOOR.

SPECIFICATION forming part of Letters Patent No. 670,939, dated April 2, 1901.

Application filed April 19, 1900. Serial No. 13,422. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. RAPP, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Doors, of which the following is a specification.

My invention relates to doors, and particularly to fireproof doors.

I will describe a door embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is an elevational view of a door embodying my invention. Fig. 2 is a detail sectional view of a portion of the door and showing molding employed on the door and a form of key for holding the edge portions of the fireproof covering. Figs. 3 and 4 are detail sectional views showing modifications of the form of key. Fig. 5 is a detail sectional view showing how adjacent edges of the fireproof covering are locked together and held in the core or filler of the door. Figs. 6 and 7 are detail views showing different corrugations in the fireproof covering. Figs. 2 to 7, inclusive, are drawn to a larger scale than Fig. 1.

Similar letters of reference designate corresponding parts in all of the figures.

The door comprises, essentially, a core or filler *a*, of any material, preferably wood, a fireproof covering *a'* for the front and back of the core, which is preferably of metal, and a key B for holding the edge portions of the front and back covering to the core.

The core *a* may be provided with panel portions *a*², and the fireproof coverings are so stamped as to conform to the configuration of the core. This is so in any case, except in the case of an open frame constituting the core. In this case the fireproof covering is stamped to have any desired configuration. In the case of the core having panels and the fireproof covering conforming thereto molding C is preferably employed around the edges of the panels. The molding consists of a core *c* and a fireproof covering *c'*. The core *c* may have any surface configuration and the covering may correspond with such configuration.

The fireproof covering for the core is preferably crimped or corrugated to allow for expansion and contraction. The crimping or

corrugations may be single ones, as indicated in the lower left-hand portion of Fig. 1 and as indicated in Fig. 6, or they may be double or cross-crimped, as indicated in the upper left-hand portion of Fig. 1 and as indicated on Fig. 7. The crimps or corrugations may extend in any desired direction and may be produced by any desired means.

In securing the front and back coverings to the core the edge portions of the coverings are bent over the edges of the core and then suitably secured. At the top and bottom of the core a recess *d* is provided, (see Fig. 5,) in which the locked edge portions of the coverings are held. The edge portions at top and bottom are first locked outside of the recesses, as indicated in dotted lines, Fig. 5, after which the locked edges are forced into the recesses and the remaining portions pressed against the top and bottom of the core. Along each side of the core I provide a groove or recess *b*, which grooves or recesses receive the keys B. The recesses may be of any desired shape in cross-section and the keys have the same shape in cross-section. In any case the opening between the edges *b'* *b'* of each groove is narrower in width than any other portion of the groove. With this arrangement the keys will be prevented from becoming displaced in a lateral direction. The keys are prevented from longitudinal movement by the edge portions of the covering at the top and bottom, the keys being inserted before the top and bottom edge portions are locked and placed in the recesses. The edge portions of the coverings along the sides of the core are turned into the recesses *b*, as shown in Figs. 2, 3, and 4. The keys B, which are partially covered with metal, are then inserted into the grooves or recesses *b* to hold the edge portions.

In the manufacture of doors I also preferably make the core of a width smaller than standard or smaller than the opening to be closed and then secure to the core along the longitudinal edges toeing-pieces D. These toeing-pieces are of different wood and are for the purpose of preventing the core warping. The fireproof covering also incloses the toeing-pieces.

What I claim as invention is—

1. In a door, the combination of a core, toeing-pieces provided along the longitudinal

edges thereof, and a cover for said core and toeing-pieces.

2. In a door, the combination of a core having recesses or grooves provided along-edge portions thereof, each of said recesses, in cross-section, having different widths and the narrowest width at the surface, a fireproof covering for the core having its edge portions turned into said recesses, and a key of the same cross-section as the recesses fitting in each recess.

3. In a door, the combination of a core having recesses or grooves provided along edge portions thereof, each of said recesses, in cross-section, having different widths and the narrowest width at the surface, a fireproof covering for the core having its edge portions turned into said recesses and a key of the same section having a fireproof covering, fitting in each recess.

4. In a door, the combination of a core hav-

ing a recess provided along each longitudinal edge thereof, which recesses are of different widths, and a recess along the top and bottom, a fireproof covering for said core, the side edge portions of which covering are turned into the longitudinal recesses, and the top edge portions locked and forced into the recesses at the top and bottom, and keys for said longitudinal recesses.

5. In a door, the combination of a core and a fireproof covering for said core, said covering being crimped or corrugated in two directions which cross.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. RAPP.

Witnesses:

GEO. E. CRUSE,
DONALD CAMPBELL.