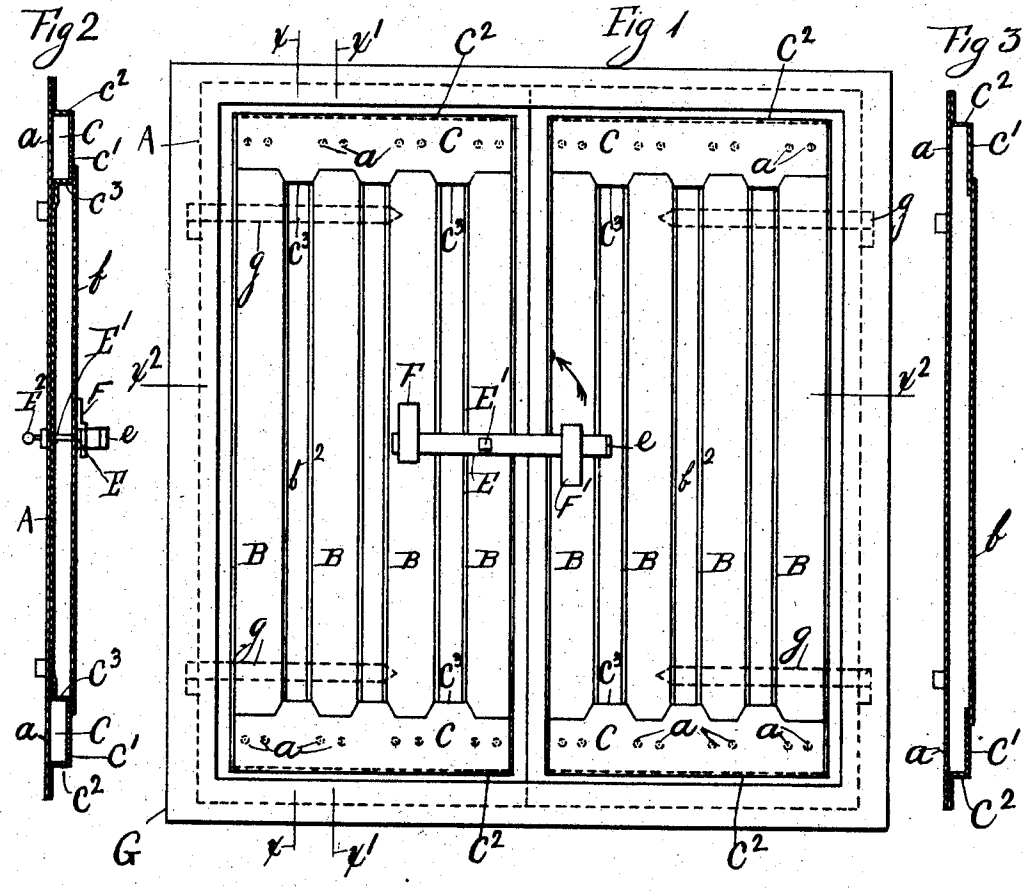
No. 778,279. PATENTED DEC. 27, 1904.

F. P. SCHRODER.

FIREPROOF SHUTTER.

APPLICATION FILED JULY 19, 1904.

2 SHEETS—SHEET 1.



Witnesses
Myron H. Cook
O. Otto.

Inventor
Frank P. Schroder.
By his Attorney
Alf de Bonneville

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2 SHEETS—SHEET 2.

Fig 6

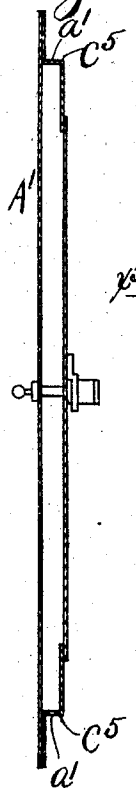
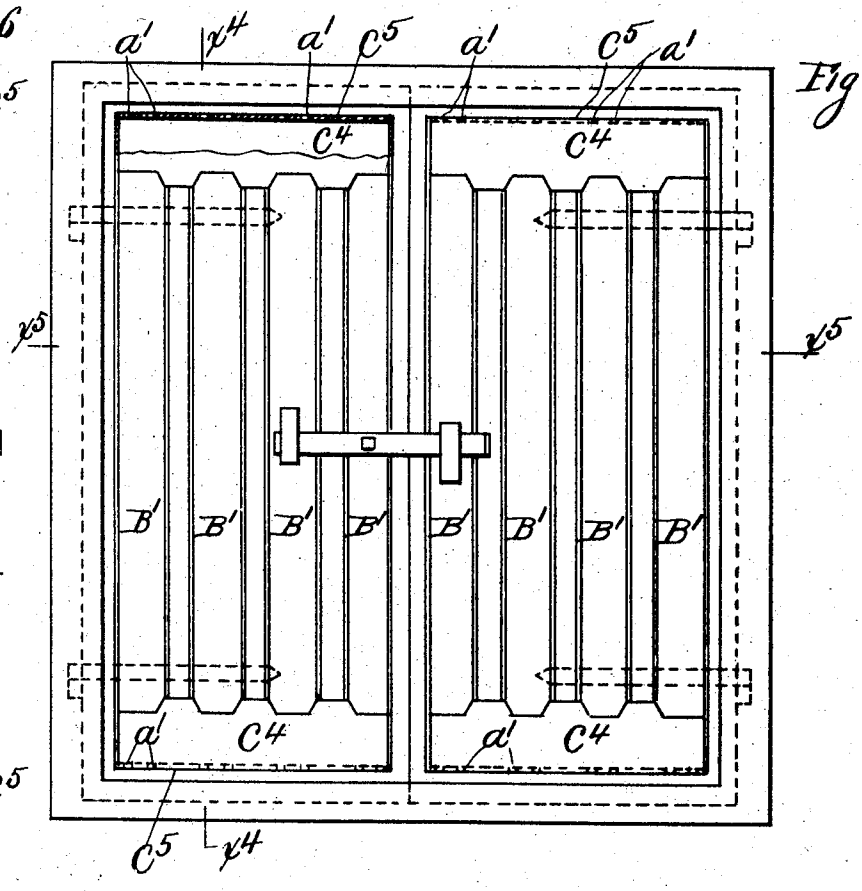


Fig 5



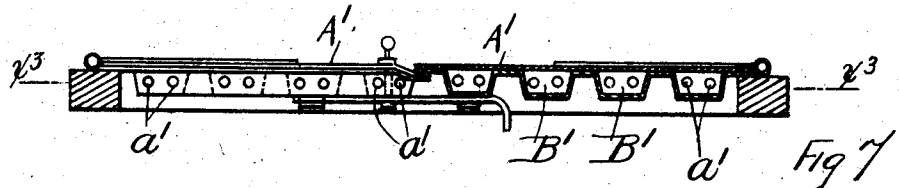


Fig 7

Witnesses
Myron N. Cook
O. Otto.

Inventor,
Frank P. Schroder.
By his Attorney
Alfred Bonneville

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UNITED STATES PATENT OFFICE.

FRANK P. SCHRODER, OF JERSEY CITY, NEW JERSEY.

FIREPROOF SHUTTER.

SPECIFICATION forming part of Letters Patent No. 778,279, dated December 27, 1904.

Application filed July 19, 1904. Serial No. 217,197.

To all whom it may concern:

Be it known that I, FRANK P. SCHRODER, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Fireproof Shutters, of which the following is a specification.

This invention relates to fireproof shutters, doors, ceilings, partitions, walls of buildings, and the like.

It comprises means whereby a circulation of air is obtained between the plates or surfaces of shutters, doors, and the like to make them fireproof.

Referring to the drawings, Figure 1 represents the invention with an elevation of a pair of shutters and the accompanying casing. Fig. 2 shows a section of one of the shutters shown in Fig. 1 on the line $x\,x$. Fig. 3 represents a section of one of the shutters shown in Fig. 1 on the line $x'\,x'$. Fig. 4 is a partial top view and section of Fig. 1 on the line $x^2\,x^2$. Fig. 5 represents a view similar to Fig. 1 modified and a partial section, as on the line $x^3\,x^3$ of Fig. 7. Fig. 6 is a section of one of the shutters shown in Fig. 5 on the line $x^4\,x^4$. Fig. 7 is a partial top view and section of Fig. 5 on the line $x^5\,x^5$.

Referring particularly to Figs. 1 to 4, a shutter is shown consisting of a front plate A, from which extend longitudinal ducts B, that run into or are connected at their ends by the cross-ducts C. The longitudinal ducts B comprise the rear walls b, parallel to the front plate A, the inclined side walls b', and the connecting portions b^2, by means of which latter the said ducts are secured to the front plate A. The cross-ducts C comprise the rear walls C', parallel to the front plate A, the end walls C^2, perpendicular thereto, and the walls C^3, parallel to the walls C^2 and located between and near the ends of the longitudinal ducts B. In the front plates A and opposite the ducts C are formed openings a, each pair of which are generally located adjacent to the ends of the ducts B. A latch E is journaled on the spindle E', from which latter extends on the outside face of the shutter the handle E^2. A stop F is fastened to one shutter, and stop F' is fastened to the other. One end, e, of the latch is bent at right angles to the body thereof to serve as a handle. The latch is shown as connecting the shutters, and by turning it in the direction of the arrow the shutters can be opened. The latch can be turned by bearing up on the end e or by bearing down on the handle E^2. A suitable casing is shown at G, from which the shutters are swung by means of the hinges g. It is evident that the combination of a plate with longitudinal and cross ducts and openings leading into the ducts secure means to circulate air through the ducts and against the plate, making the plate and ducts fireproof.

It is evident that the invention can be applied to doors, ceilings, walls of buildings, partitions, and the like without departing from the spirit of the same.

In Figs. 5 to 7 there are shown shutters with front plates A', longitudinal ducts B', extending from the rear faces thereof, and cross-ducts C^4. In the end walls C^5 of the latter are formed the openings a, each pair of which are generally located to face the ends of the longitudinal ducts.

Having described my invention, I claim—

1. The combination of a plate, having a couple of rows of openings, ducts extending from the plate and covering each row of openings, other ducts connecting the ducts over the said openings.

2. In a fireproof shutter the combination of a plate having openings at two opposite ends thereof, ducts extending from the plate over the said openings, and other ducts connecting the ducts located over the said openings.

3. In a fireproof shutter the combination of a plate having a row of openings at the bottom portion thereof, and a row of openings at the top portion, a duct at the top portion of the plate over the row of openings therein, and a second duct at the bottom portion of the plate and over the openings therein, and other ducts connecting the said ducts at the top and bottom portions of the plate.

4. In a pair of fireproof shutters the combination of a plate having openings for each shutter, ducts extending from the plate over the openings, other ducts connecting the ducts

over the openings, a latch journaled to one of the shutters a stop on one side of each shutter for the latch, a handle connected with the latch and extending on the outside of the shutter, on the side of said shutter opposite to the side carrying the stops, a second handle extending from the latch on the same side of the shutter with the stops.

5. In a pair of fireproof shutters the combination of a plate for each shutter having openings for the circulation of air, vertical air-ducts extending from the rear face of the plate, cross-ducts connecting the vertical ducts and over the openings in the plate, a latch journaled to one of the shutters, a stop on one side of each shutter for the latch, a handle on the opposite side of one of the shutters and connected with the latch, and other means on the latch to turn the latter on the side of the shutter opposite the handle.

Signed at Jersey City, in the county of Hudson and State of New Jersey, this 12th day of July, A. D. 1904.

FRANK P. SCHRODER.

Witnesses:
JOS. F. FARMER,
DENNIS B. RYAN.