

No. 812,732.

PATENTED FEB. 13, 1906.

F. DUTCHER.  
FIREPROOF SASH STRUCTURE.  
APPLICATION FILED JULY 14, 1905.

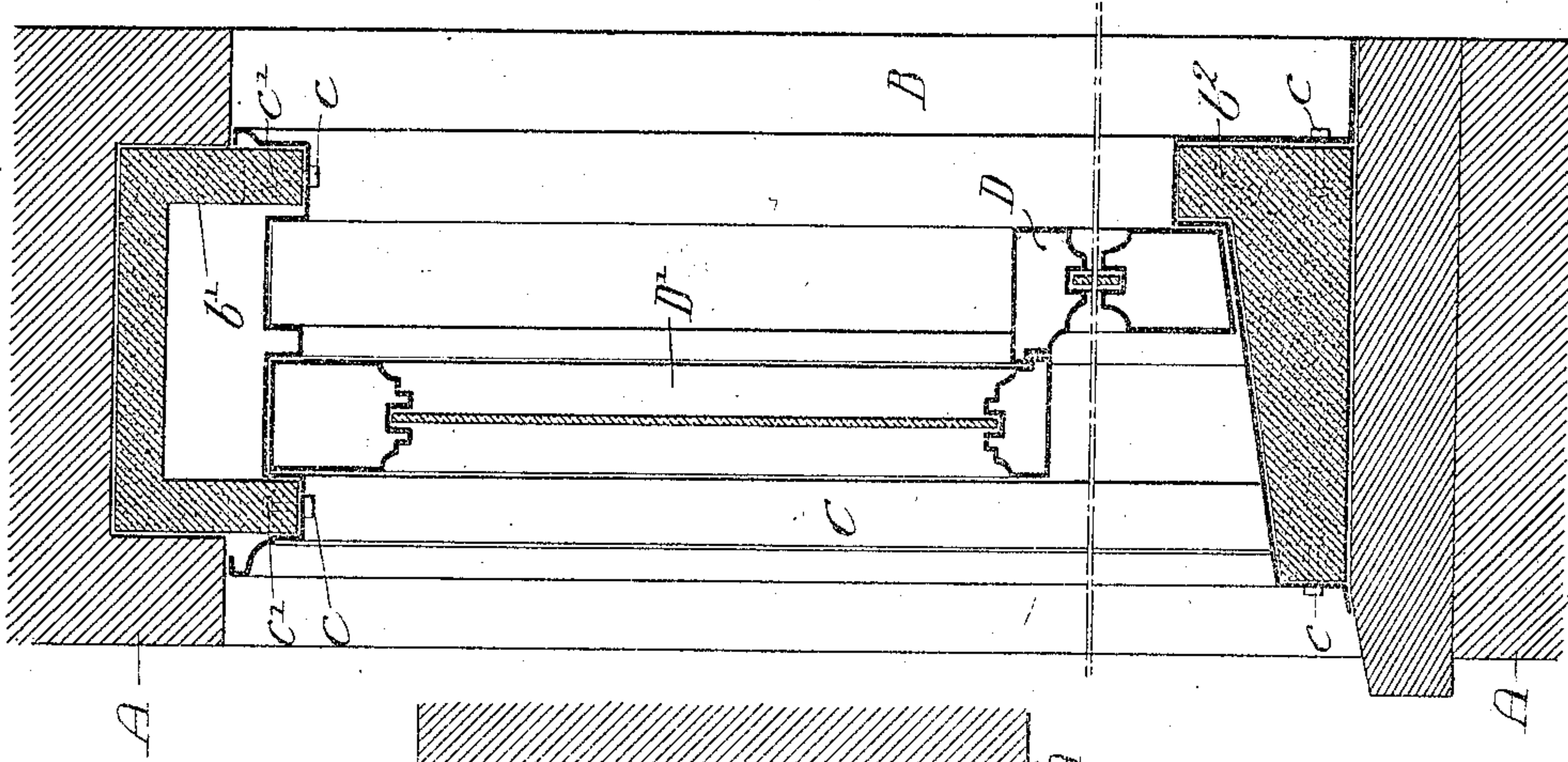


Fig. 1.

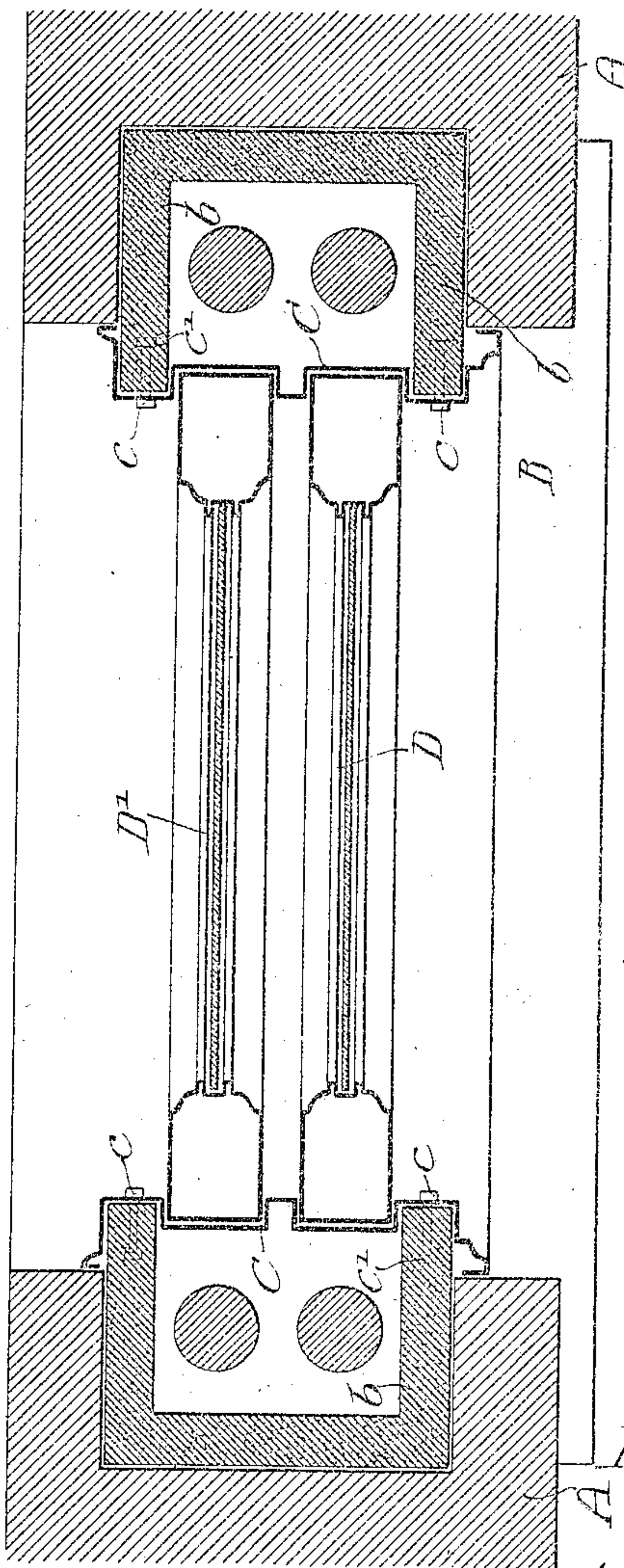


Fig. 2.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

FRANK DUTCHER, OF PHILADELPHIA, PENNSYLVANIA.

## FIREPROOF SASH STRUCTURE.

No. 812,732.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed July 14, 1905. Serial No. 269,701.

*To all whom it may concern:*

Be it known that I, FRANK DUTCHER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Fireproof Sash Structures, of which the following is a specification.

The object of my invention is to provide a window-frame or similar structure of which the parts designed to be embedded in the walls of the structure in which the frame is used shall be of non-corrosive fireproof material, while the parts exposed to the weather or to the direct attack of a fire shall be of sheet metal, it being further desired that the construction shall be such as to permit the convenient removal of the exposed parts to permit the application of paint to their interior surfaces. These objects I attain as herein-after set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a window-frame constructed according to my invention, and Fig. 2 is a horizontal section of the frame shown in Fig. 1.

It has been found that one serious objection to the use of sheet-metal window-frames is due to the fact that after they have once been put in place in the walls of a building it is practically impossible to remove them when it is desired to paint their embedded and interior surfaces. As a consequence rusting takes place upon these inaccessible surfaces and seriously limits the life of the frame. On the other hand, if the entire frame be made of non-corrosive fireproof material this is not only decidedly heavy and unsightly, but is liable to breakage when exposed to fire, since it has none of the fire-resisting qualities which characterize and make desirable the sheet-metal construction. In order, therefore, to avoid the deterioration of the window-frame due to corrosion and at the same time to secure the advantage due to the use of sheet metal, I employ a frame whose embedded portions, jambs, and sills are made of non-corrosive and preferably stone-like material and whose exposed portions are of sheet metal detachably secured to the embedded portion of the frame.

In the above drawings, A represents the walls of the structure to which the window-frame B is applied, and this latter consists of a main body formed of two side boxes or jambs *b*, an upper sill *b'*, and a lower sill *b''*. This body may be formed as a single integral

structure of such material as reinforced concrete or any other desired non-corrosive fireproof material, preferably of a stone-like nature, although it is to be understood that said body may be made in a number of sections, if this be found desirable.

The side sections *b* of the body are preferably box-like in form and embedded in the wall A, being open along their outer faces. Said faces are, however, covered with a sheet-metal jamb C, which also completely covers the projecting portions of the upper and lower sills, as shown in Fig. 1, being adjustably secured to these parts by any desired means—for example, bolts *c*, having screw-threaded nuts *c'*, embedded in the interior of the parts *b'* and *b''*. Said jambs are formed with the necessary grooves or guide-ways for the sheet-metal sashes D and D', which may be of any desired construction, while the sash-weights are carried within the box-like side members of the body portion of the frame B.

The sheet-metal jamb is made in sections, so that it may be easily detached from the non-corrosive body portions in order that its inner surface may be painted when desired, and, as a result, it will be seen that there is practically no limit to the durability of the frame as a whole, for the non-corrosive body cannot deteriorate, since it is not exposed to the weather nor to the effects of any fire which may occur in its vicinity, while, on the other hand, the metallic portions of the frame may be conveniently removed for inspection or painting as often as desired.

While I have shown my invention as applied to a window-frame, it will be understood that the frames of doors and similar structures may be similarly made without departing from the main idea of said invention.

I claim as my invention—

1. The combination with a wall, of a window-frame having a body portion of non-metallic, fireproof material embedded in said wall, the side members of said body portion being hollow and open along their inner or opposing faces, a metallic jamb portion for the frame removably attached to said body portion and closing the open faces of the side members thereof, sashes for the frame, and weights for said sashes operative in said hollow body portions, substantially as described.

2. A frame consisting of top and bottom sills, and box-like side members open on their

inner or opposing faces, said parts all made  
of fireproof, non-metallic material, with a  
removable metallic covering for said inner or  
opposing faces of said non-metallic parts, a  
5 metallic sash or sashes for the frame, and  
counterbalance-weights for said sash or  
sashes, operative in the box-like side mem-  
bers, substantially as described.

In testimony whereof I have signed my  
name to this specification in the presence of 10  
two subscribing witnesses.

FRANK DUTCHER.

Witnesses:

WM. E. SHUPE,  
JOS. H. KLEIN.