

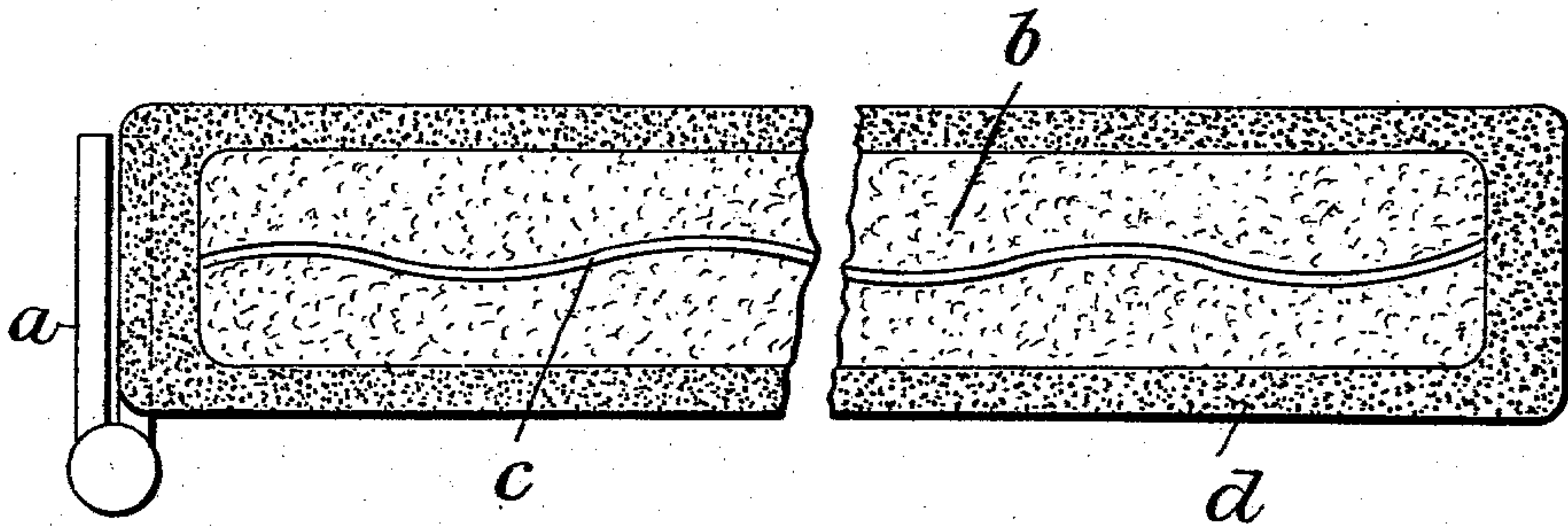
No. 753,208.

PATENTED FEB. 23, 1904.

N. POULSON.
FIREPROOF STRUCTURE.

APPLICATION FILED MAR. 1, 1902. RENEWED JAN. 23, 1904.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

NIELS POULSON, OF BROOKLYN, NEW YORK.

FIREPROOF STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 753,208, dated February 23, 1904.

Application filed March 1, 1902. Renewed January 23, 1904. Serial No. 190,364. (No model.)

To all whom it may concern:

Be it known that I, NIELS POULSON, whose residence and post-office address is 118 North Eleventh street, Brooklyn, New York, have invented certain new and useful Improvements in Fireproof Structures, of which the following is a specification, accompanied by a drawing.

My invention relates, primarily, to fireproof structures for building purposes, but more particularly to fireproof slabs adapted especially for doors for buildings. Its object is to improve upon such doors heretofore devised and provide a door which is simple and strong in construction and one that may readily be made ornamental, while capable of withstanding heat and water without cracking or warping.

In the drawing the figure is a sectional plan view of a door embodying my invention.

The fireproof structure when a door is provided with suitable attachments by which to hang the door, is illustrated by the hinge shown at *a*. The slab constituting the door comprises a core *b* and an outer casing or coating *d*. The core *b* is formed of a composition consisting of fibrous material, as excelsior, mineral wool, cocoanut fiber, or the like, mixed with oxid of manganese and chlorid of manganese in desired proportions to make a paste with water which will set and harden. This composition of which the core is made is known as "lignolith," and will hereinafter be so referred to, and as thus constituted the core is tough, stiff, and strong, but not hard enough to take a polish. In some instances, if desired, a strengthening grid or spider *c* may be embedded in the material of the core. To the core is applied a mixture comprising oxid and chlorid of manganese and finely-comminuted vegetable material, as sawdust or pulp, which when set is harder and denser than the core mixture containing the fibrous material. The outer coating *d* is necessarily

hard, in order to resist wear and acquire a suitable finish, while, as described, the core is tougher and of less expensive material. The core and its casing, as described, form a slab which is fireproof, strong, stiff, durable, capable of a fine surface finish, and inexpensive.

The fireproof material described, known as "lignolith," is of such a character that it affords a good hold for screw-threads, and the screws will be as secure as if screwed into ordinary wood. This feature is of great value in composite structures of this kind, since bolts and rivets are unnecessary, and it is not necessary to connect metal plates to the slab in order to make any attachments thereto.

It will be evident that the slabs described may be used as panels for doors and for other purposes.

Without limiting myself to the precise construction shown and described, I claim and desire to obtain by Letters Patent—

1. As a new article of manufacture, a fireproof door-slab adapted to receive and retain screws and consisting of a tough core strengthened by a grid embedded therein, and hard facing capable of being polished, substantially as described.

2. As a new article of manufacture, a fireproof door-slab adapted to receive and retain screws and consisting of composition, and having a core and a facing, each containing a mixture of earthy material the core also containing fiber, tougher than the facing, and the facing being harder than the core and capable of being polished, substantially as set forth.

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

NIELS POULSON.

Witnesses:

H. G. OGDEN, Jr.,

HENRY C. GARRETSON.