

No. 612,366.

Patented Oct. 11, 1898.

W. T. SEARS.
CONSTRUCTION OF PANEL WORK.

(Application filed Apr. 11, 1898.)

(No Model.)

Fig. 1.

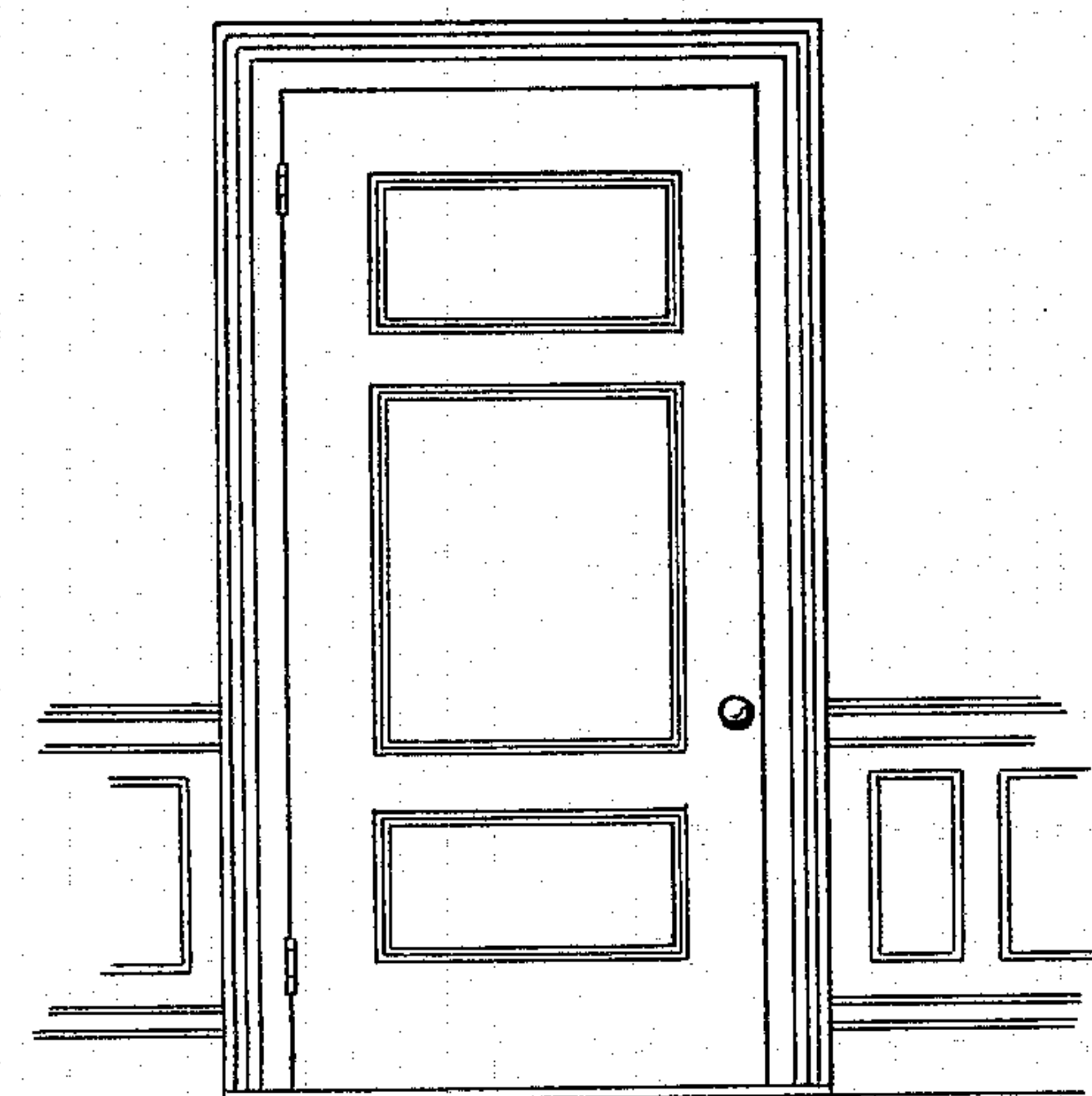


Fig. 2.

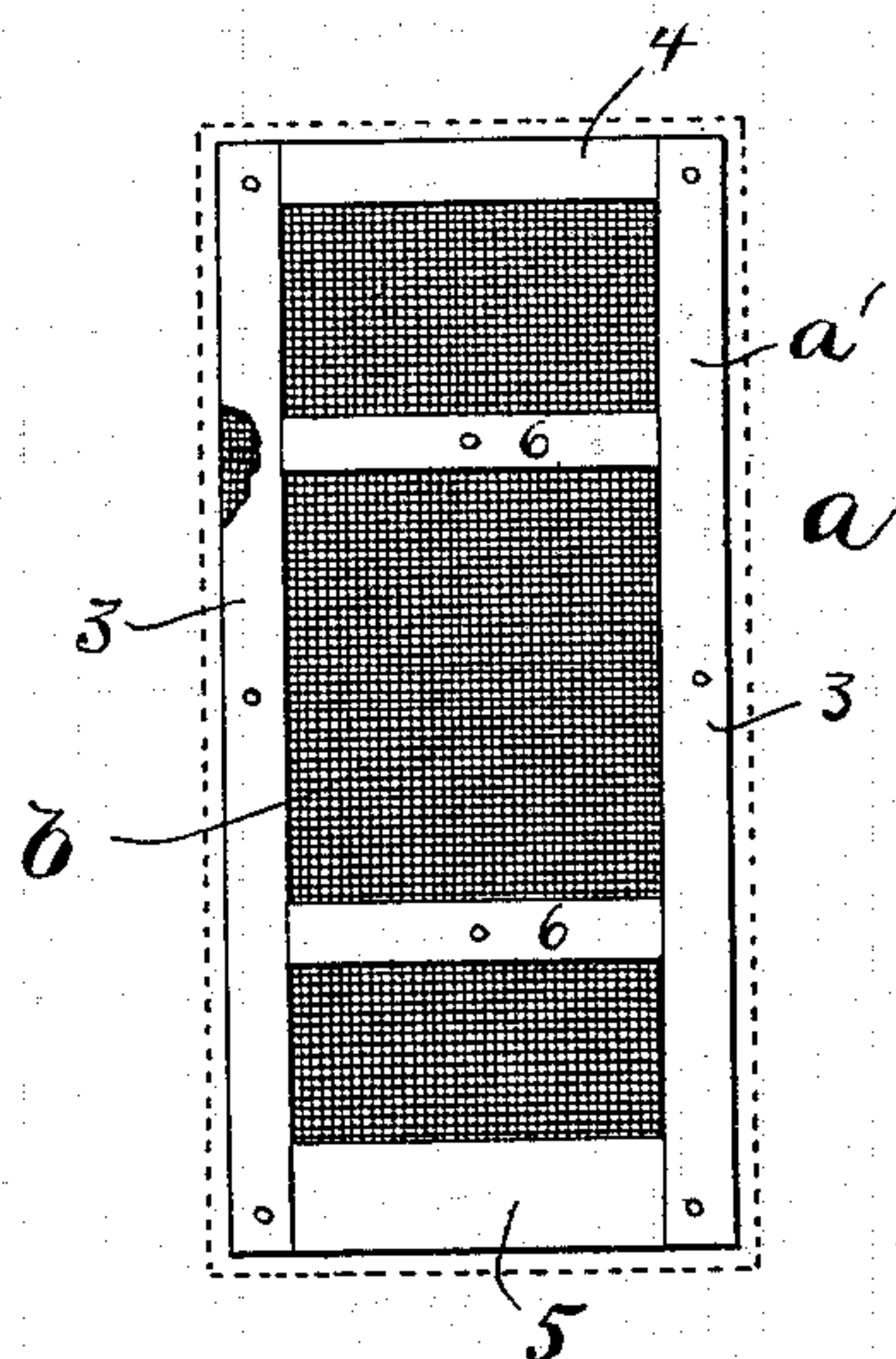
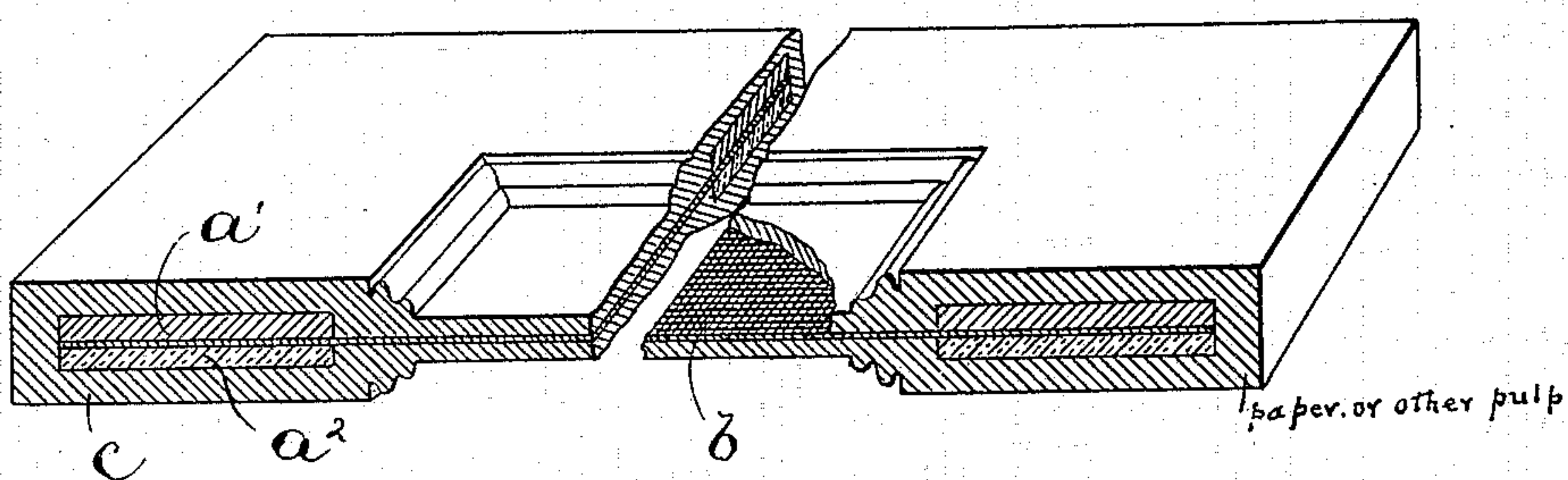


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLARD T. SEARS, OF BOSTON, MASSACHUSETTS.

CONSTRUCTION OF PANEL-WORK.

SPECIFICATION forming part of Letters Patent No. 612,366, dated October 11, 1898.

Application filed April 11, 1898. Serial No. 677,169. (No model.)

To all whom it may concern:

Be it known that I, WILLARD T. SEARS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Construction of Panel-Work, of which the following is a specification.

This invention has for its object to provide certain improvements in the construction of panel-work, including doors, shutters, and other articles of manufacture for building purposes, by means of which they may be rendered substantially fireproof or slow in burning and practically proof against the attacks of burglars.

Another object of the invention is to provide articles of the character mentioned which may be easily constructed and handled by carpenters and other ordinary mechanics and which will not require the employment of metal-workers, such as blacksmiths or machinists.

To these ends the invention consists of panel-work, such as a door or shutter, comprising in its construction a skeleton frame provided with a relatively thin filling, such as fiber or wire-gauze or other foraminous material, and a continuous coating or outer layer of such slow-burning material as paper or other pulp molded or shaped so as to give any external configuration.

Reference is to be had to the accompanying drawings, and to the letters and figures marked thereon, forming a part of this specification, the same letters and figures designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 shows in front elevation a door embodying the said invention. Fig. 2 represents the skeleton frame and the filling. Fig. 3 represents a transverse section on the line 3 3 of Fig. 1.

Referring to the drawings, upon which is illustrated panel-work in the form of a door, *a* indicates, as a whole, the skeleton frame. This may be made of wood or other suitable material, and consists of two frames *a'* *a''*, each formed of longitudinal strips or uprights 3, top and bottom pieces 4 5, and intermediate cross-braces 6. The uprights and top and bottom pieces of the two frames "break joint," so that the top and bottom pieces of

one of the frames overlap the uprights of the other frames, and vice versa.

Between the two parts of the skeleton frame is placed a strip of wire-gauze *b* or any other suitable perforated or foraminous material *c*, and it is secured to the two said parts by passing nails or screws through them. This provides a rigid strong core or base, comprising the two-part skeleton frame and the filling upon which the plastic material may be secured. The said plastic material is preferably wood or other pulp treated with silicate of soda or other chemical solution for rendering it fire and water proof, and it may be put upon the skeleton frame or core in a plastic or other condition, whereby it firmly unites with it, entering the cracks or interstices of the core and becoming to all intents and purposes a part of the frame.

As illustrated, the door has a large central panel and two smaller panels, all of which may be surrounded by beadings or moldings, but it will be understood that the number of panels may be increased or diminished, as desired, and that the door may be otherwise changed without affecting the spirit and scope of the invention.

Panel-work, such as a door, formed in accordance with the foregoing description is very light, and it may be constructed and worked by carpenters and does not require special knowledge on the part of the artisan. The paper-pulp does not burn readily, whereby it does not aid combustion or tend to spread a fire started in a room in which the panel-work is located.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. Panel-work such as a door or other equivalent article of manufacture, comprising a core or backing and a covering or outer layer of chemically-treated fireproof paper-pulp or other plastic material placed upon the backing in a plastic condition and thoroughly united therewith.

2. Panel-work such as a door or other equivalent article of manufacture, comprising a two-part skeleton frame having a filling of

suitable thin material extending between the two parts of the frame, and a coating or outer layer of paper-pulp or other plastic material molded and compressed and firmly inter-
5 locked with the filling.

3. A door or other equivalent article of manufacture comprising a wooden two-part skeleton frame having a filling of foraminous material extending between the two parts of the
10 frame, the whole being entirely covered with

a layer of paper-pulp or other plastic material molded or compressed, and placed upon the skeleton frame in a plastic condition whereby it firmly adheres thereto.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLARD T. SEARS.

Witnesses:

E. BATCHELDER,
A. D. HARRISON.