

B. Y. STEWART.
PAPER BOARD.
APPLICATION FILED MAR. 15, 1915.

1,185,142.

Patented May 30, 1916.

Fig. 1

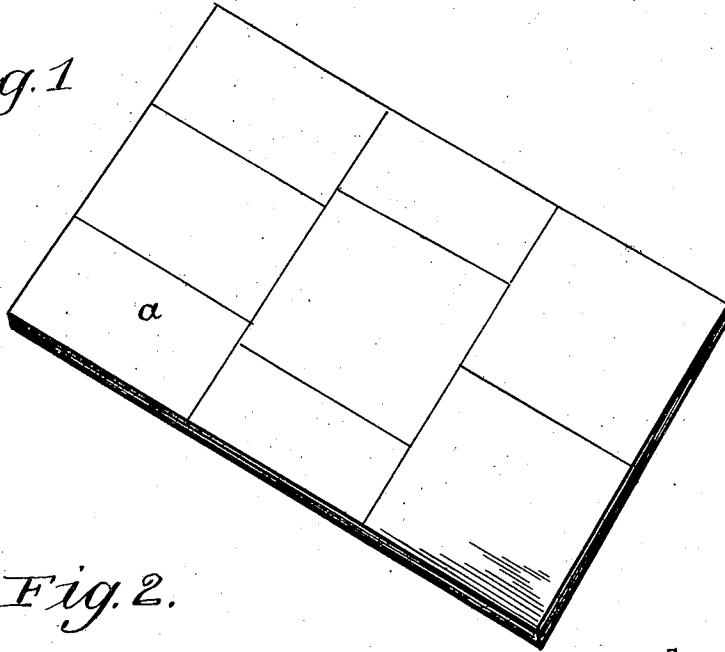


Fig. 2.

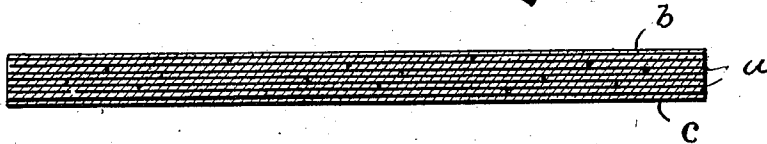
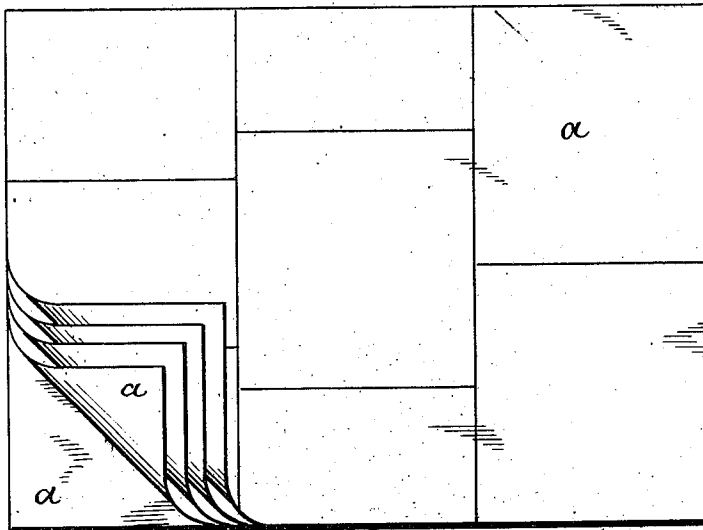


Fig. 3.



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BENJAMIN YOUNG STEWART, OF BRIDGEPORT, CONNECTICUT.

PAPER-BOARD.

1,185,142.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed March 15, 1915. Serial No. 14,493.

To all whom it may concern:

Be it known that I, BENJAMIN YOUNG STEWART, a subject of the King of Great Britain, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Paper-Board, of which the following is a specification.

My invention relates to new and useful improvements in paper board such as is used for building purposes, and is particularly employed for forming the inside walls of the rooms of houses in somewhat the same manner as plaster board and so called beaver board and other forms of prepared inside covering materials are used.

The purpose of the invention is to provide a building board of the class specified which may readily be produced in sheets of any desired size and thickness from old waste papers as for instance newspapers; to assemble and unite the same into one solid and rigid sheet which may be sawed or cut and fitted so that the adjacent edges may be closely fitted to form a smooth surface; to design the board so that it may be made inexpensively and yet when finished will represent a substantial and durable article.

With these and other objects in view the invention resides and consists in the novel arrangement, formation and manner of uniting the scrap papers as will hereinafter be more fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

Similar characters of reference will be found to designate like or corresponding parts throughout the several figures of the accompanying drawings forming a part of this specification and upon which—

Figure 1 shows a perspective view of a sheet of my improved form of paper board, the outer surface covering being omitted. Fig. 2 is a central vertical longitudinal section through the sheet of paper board shown in Fig. 1, but including the outer finishing layers of paper, and Fig. 3 is a plan view of a series of sheets of newspapers stacked together as in the method of forming my paper board, the corner portions of a few of the sheets being turned up to more clearly illustrate the manner of assembling the same.

As previously intimated my improved paper board is made from old newspapers.

While other kinds of paper are as desirable, yet in as much as the newspapers are usually of uniform size they can be more quickly assembled in the art of forming my paper board than would be possible with miscellaneous size papers. I have therefore attempted to indicate in the drawings a pile of newspapers assembled in the manner of my invention and with special reference to the breaking of the joints when laying the several sheets of paper together.

In practice the paper board is made in large sheets and of thirty or forty layers of newspapers. Each layer includes several sheets, possibly from six to ten. The number of layers can be varied as required to give the desired thickness of paper board.

In the drawings *a* represents the several layers of newspaper. *b* and *c* the top and bottom layers of finishing paper, not newspaper, but special prepared sheets of white or colored paper as may be desired to form the surface or finish of the paper board. In practice one of these finishing sheets is spread out upon a tray and then brushed over with a suitable paste or binder after which a number of sheets of newspapers are laid thereon and likewise brushed down. After this another layer of newspapers is laid upon the first mentioned layer of newspapers in a manner to cover all joints. This second layer like the first is brushed and struck down to the first layer and then again coated over with a binder preparatory to receiving the third layer of newspapers. This third layer is laid upon the second layer of papers in a way to also break all joints of the second layer, and so on, the numerous layers are stacked one upon the other and each time glued together and also each time arranged so that all joints are broken and likewise so that the joints of the alternate sections will not register. When the desired number of newspapers are laid together in the manner desired then the large top sheet of finished or surface paper is brushed down upon the last layer of newspapers. After the pile is thus assembled and arranged upon a tray the latter, together with several like piles, are placed under a press which is brought down upon the several piles in a way to exert an enormous pressure upon the assembled sheets. This naturally flattens out and sticks together tightly the numerous sheets of each pile. The press is preferably allowed to remain closed upon the assembled papers for some

little time, possibly over night, so as to insure the sheets properly sticking and hardening together. After the paper boards are thus formed the large sheets are removed
5 from the press and sawed into the desired commercial sizes of sheets of paper board.

While the formation of paper board in this way requires considerable hand labor, yet the stock is inexpensive and a single person can lay together a very considerable
10 quantity of it in a day, thus producing not only a very good paper board, but doing it in an inexpensive and economical manner.

Having thus described my invention what
15 I claim and desire to secure by Letters Patent is:—

1. A paper board of the class described, the same comprising a series of layers of papers each layer of which includes a number of sheets irregularly arranged with respect to the other layers so that the joints of the several sheets of each layer will be covered by the sheets of the adjoining layers, a sheet of finishing paper applied to
20 each side of the pile to form a finished surface for the paper board, a binder applied between the sheets and all of the said sheets being tightly squeezed together.

2. A paper board of the class described, the same formed of a series of layers of papers arranged upon each other each layer including a number of sheets irregularly arranged with respect to the other layer so that the joints of the several sheets comprising each layer will not register with the joints of the sheets of the adjoining layers, a large unbroken sheet of finishing paper applied to each of the two outer sides of the pile to form a finished covering for the paper board, and a binder applied between the sheets to hold the bulk together when pressed.
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Signed at Bridgeport in the county of Fairfield and State of Connecticut this 20th day of February, A. D., 1915.

BENJAMIN YOUNG STEWART.

Witnesses:

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RUTH M. W. KOGER.