

H. W. BELL.
PLASTER BOARD AND BLOCK.
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932,098.

Patented Aug. 24, 1909.

Fig. 1.

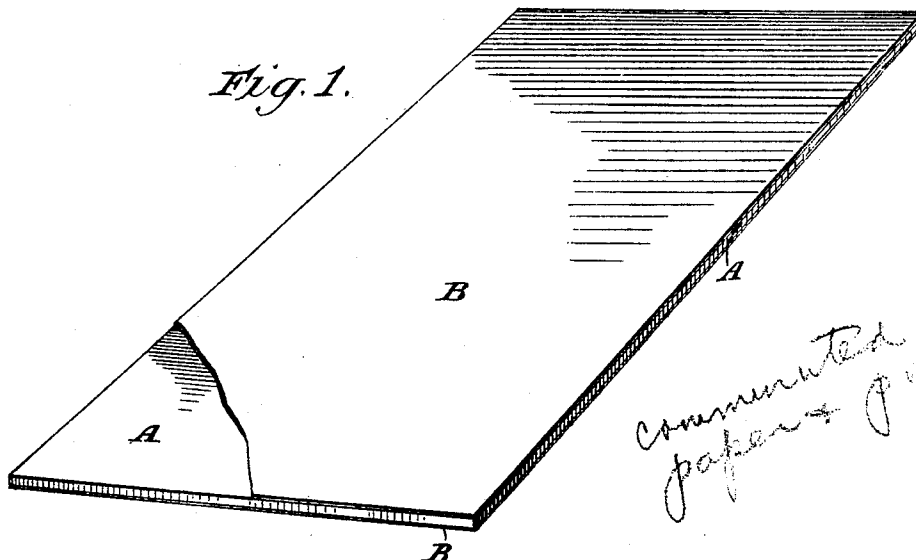
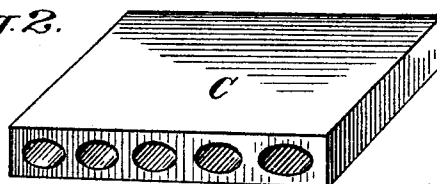


Fig. 2.



Witnesses:

O. P. Mahoe

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Inventor:

Harry W. Bell

by his Atlys.

Philip Lawrence Rice & Kennedy

UNITED STATES PATENT OFFICE.

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PLASTER BOARD AND BLOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY W. BELL, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Plaster Boards and Blocks, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to provide an improved composition for plaster boards to be used in place of lath and plaster, and for plaster building blocks such as partition blocks, sound deadeners, furring and the like.

I secure the desired result by a composition composed of plaster of paris and paper, the latter being reduced to a finely divided or comminuted condition in a suitable cutting or comminuting machine so as to form a light, loose mass. Any suitable paper may be used, such as newspaper, wrapping paper, card-board, or other waste paper material that can be cut dry to the finely divided, light, loose material desired.

The proportions of plaster and paper may be varied and will vary somewhat according to the character of board or block desired, the quantity of the paper required being such as to form the proper filler and bond for the plaster. For ordinary partition blocks I usually employ from 30 to 45 pounds of plaster to a cubic foot of block, with about four pounds of the comminuted paper. For extra strong blocks more plaster and less paper is used, and for blocks where little strength is required less plaster and more paper may be used, the amount of paper varying for the different classes of blocks desired from about three to about six pounds of paper. The quantity of plaster used may vary from fifteen to sixty pounds of plaster per cubic foot according to the strength and character of block desired. With the plaster and paper a small quantity of suitable fiber, such as excelsior or similar fiber, may be used as a binder, if desired in any case, but generally this will not be desirable.

The preferred method of making the blocks is to mix the water and plaster as in the ordinary processes, then put in the paper and thoroughly mix it with the thin plaster composition, and then pour into the molds quickly and before setting of the

plaster. The plaster will then set in the molds quickly with the paper distributed through the block, so as to form a light, porous block.

My plaster boards or blocks may be made without any layer of paper or other material on either side but a specific feature of the invention consists in a plaster board formed of my improved composition with a layer of paper on one or both sides, or a plurality of layers of my plaster composition with intermediate layers of paper.

In the accompanying drawings forming a part of this specification I have illustrated the invention in some of its preferred forms, and this construction will now be described in detail and the features forming the invention then specifically pointed out in the claims.

In the drawing Figure 1 shows a plaster board consisting of a single layer of my composition with a layer of paper on each side. Fig. 2 shows a hollow plaster partition block of common form embodying the broader features of the invention.

Referring to the drawing in Fig. 1, A is the plaster board proper formed of plaster and the comminuted paper, and B the layers of paper on opposite sides of the board.

In Fig. 2, C is the partition block formed of plaster and the comminuted paper. The block, also, may have layers of paper or other material applied to some or all of its opposite sides.

Among the important advantages of my improved plaster board or block are the following: its cheapness, in that any ordinary waste paper may be used; the extreme lightness of the comminuted paper, which produces a very light board or block, enabling them to be used in many cases where the weight of other fireproof boards or blocks is prohibitive; the paper forms an excellent bond, making a very strong article; the composition may be poured to form the blocks, so that pressing into molds by skilled labor is not necessary as in the case of fiber blocks. An important advantage of the paper, in pouring to form the blocks, is that the finely divided paper forms an excellent filler in the mold so that the fine plaster will not run off with the water leaking from the mold. The extreme lightness of the plaster composition secures a special result in connection with layers of paper outside the block or alternating with the plaster composition, in

that these layers of paper may be very light, as the weight to be supported by the adhesion between the plaster and paper layer is much less than in previous boards embodying such paper layers.

What I claim is:—

1. A plaster board or block formed of a mixture of plaster and loose comminuted paper distributed through the plaster to form a porous composition, substantially as and in the proportions set forth.

2. A plaster board or block formed of a mixture of plaster and loose comminuted paper distributed through the plaster to form a porous composition and having one

or more layers of paper combined with the material, substantially as and in the proportions set forth.

3. The new plaster board or block composition consisting of plaster and loose comminuted paper distributed through the plaster to form a porous composition, substantially as and in the proportions set forth.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

HARRY W. BELL.

Witnesses:

J. A. GRAVES,

W. H. KENNEDY.

B. H. patents to

Stene, 1334, 5/30/64 (106-34)

Kroymann, 1370, 1/22/94 "

Friezer, 7855, 4/20/94 "

Schweitzer, 5520, 3/4/93 "

J. S. patents to

Clayton, 369,099, 8/30/87 (106-20)

Mowry, 513,710, 1/30/94 (72-124)

Holmes, 858,601, 7/2/07 "