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LOG HOUSE CONSTRUCTION

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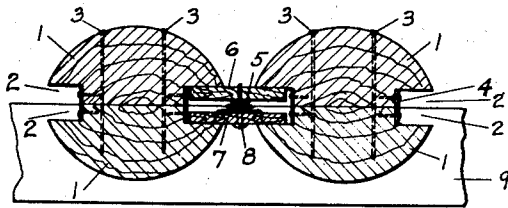


Fig. III

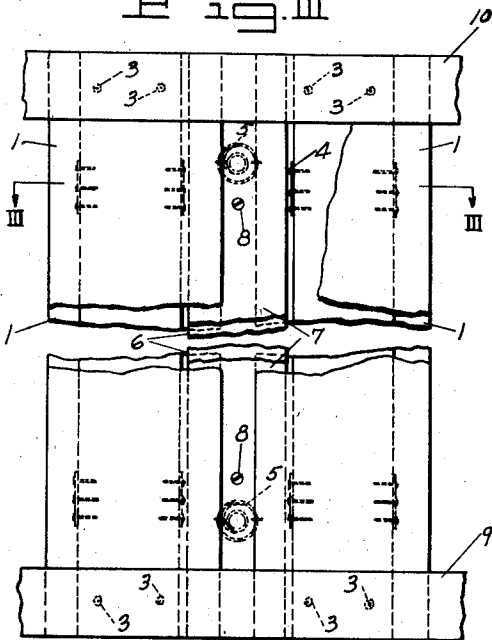


Fig. II

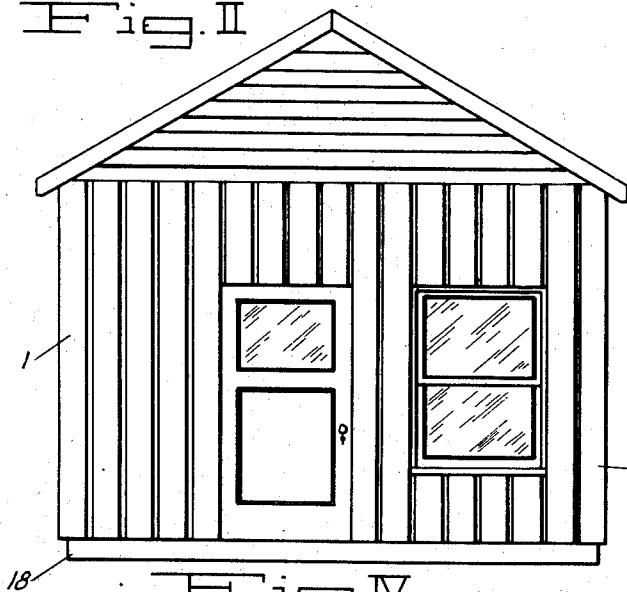


Fig. IV

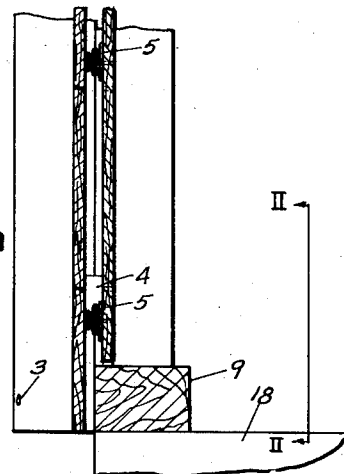
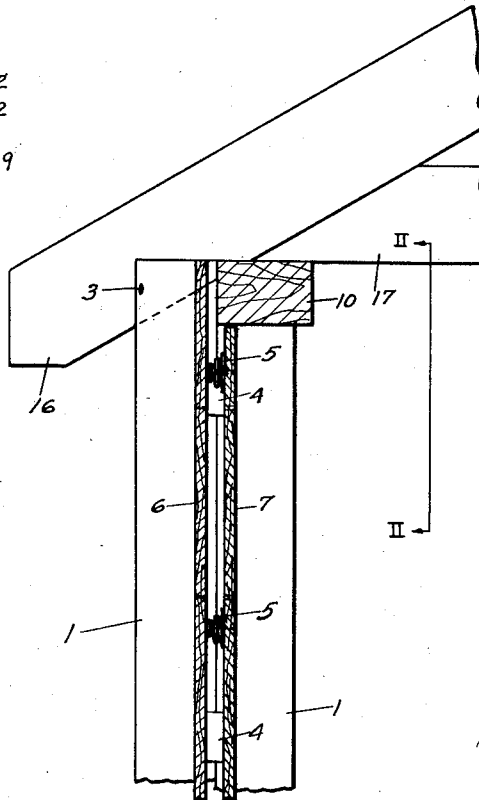


Fig. I

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## UNITED STATES PATENT OFFICE

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## LOG HOUSE CONSTRUCTION

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5 Claims. (Cl. 20—4)

This invention relates to building construction and more specifically to a shrink proof log house wall.

Rustic houses in mountain areas are preferably and economically of log construction, but the very nature of the forests in such areas precludes the use of heavy house-logs in most cases, since small timber is the rule. It is an object of the present invention to provide a plan for utilizing the small tree trunks in constructing a highly satisfactory wall.

Since the greatest handicap of log construction is the fact that shrinkage continues for several years after construction, continually opening slits and cracks, it is another object of the present invention to devise a low cost yet completely satisfactory plan for making a log house wall shrink-proof.

The foregoing and other objects that will be apparent from this specification, constitute the purposes of the present invention.

A drawing accompanies and forms a part hereof, in which—

Fig. I is a foreshortened section of a side-wall of a house according to the present invention;

Fig. II is a section taken at II—II, Fig. I;

Fig. III is a section at III—III, Fig. II; and

Fig. IV is an end view of a house to show the general appearance. This figure may be considered as an end view at smaller scale of the log house from which the section of Fig. I is taken.

In the drawings:

Numeral 1 represents a small log which has been sawn lengthwise into two parts, with naturally rounded exteriors, the bark having been removed. The full half-log may be used, but I prefer to remove a pair of relatively thin boards from the center, leaving the log sections something less than a semi-circle, as shown in Fig. III. The house will have a more attractive appearance to most eyes and the boards removed are useful as will be explained.

After lengthwise sawing, with or without removal of a part of the center, I put the half logs on a carriage and run them under a rabbeting tool, cutting the half-channels 2. The half logs are then rejoined as shown in Fig. III and fastened together. This figure shows the preferred means for rejoining the two log parts, thin metal plates 4, nailed to both parts in the bottoms of the channels formed by placing two half-logs together. The spikes 3 are the means

for securing the logs in spaced relationship to the plates.

I next take two relatively thin and narrow boards, 6 and 7, which may well be those removed in longitudinally sawing the log, and staple a plurality of helical coil springs 5, along the centerline of one as shown in Figs. I and III, lay the mating board on top and secure the boards in proper relationship, each to the other, by temporary screws 8, compressing the springs by setting the screws up well so that the assembled pair of boards will easily slide into opposing half-channels of assembled vertical logs, as shown in Figs. III and I. These logs, as shown in Figs. I to III inclusive, will have previously been assembled in properly spaced relationship and secured to bottom and top plates 9 and 10 by spikes 3, or by any other preferred secure fastening means. 16 represents a rafter, 17 a ceiling joist, and 18 a floor joist.

With the assembly of boards as previously described, springs between them well compressed and properly cut to length as indicated in Fig. I, it is a simple matter to place a pair of boards 6 and 7 with springs between them in the position shown in Fig. I before placing the top plates 10. Afterwards the screws 8 are removed, the springs assert their resiliency and no amount of shrinkage to be expected will ever result in a crack that will admit insects, dust and drafts, heretofore the prime disadvantage of log house construction. Since wood does not appreciably shrink lengthwise, no cracks will develop at the ends of the boards.

It will be noted also that there is considerable lap of board surface within the respective channels as shown in Fig. III; hence side shrinkage is adequately provided for.

Fig. IV is shown to indicate the facility with which window and door openings may be provided for, simply by making the panels of the house wall shorter to form wall surfaces over a door or above and below a window. A conventional gable and closure is shown, but the log construction is quite easily adaptable, if desired.

It will be seen at once that there is a minimum amount of mill work in preparing the logs for use in this construction and a minimum number of power tools required. Also, it will be observed that house walls may be fabricated at a mill located conveniently near to timber supply, and what amounts to a partly fabricated house hauled to a site and erected.

It will be seen at once that a log need not

necessarily be split lengthwise by sawing, but that the complete longitudinal grooves may be rabbeted in. However, I do not believe this method of construction to be as low in cost as the method I have described and illustrated, particularly since it does not work well if the logs have the expected taper found in trees of this size. Ordinarily, no exterior painting will be employed and the screw holes resulting from the use of the screws 8 will be plugged. Creosoting will protect the house if ants exist in the area.

Having fully described my new shrink proof log house construction so that anyone familiar with the building construction arts may make use of it, what I claim as new and desire to secure by Letters Patent is:

1. In log building wall construction, a plurality of logs in laterally spaced relationship, said logs being provided with longitudinal channels so positioned that channels in adjacent logs are opposite, a pair of boards filling the space between the logs with their edges in the respective channels, a plurality of coiled springs between the boards effective to keep the outsides of the boards in contact with the sides of the channels, and means other than the boards for holding the wall rigid.

2. In log building construction, a building wall constructed of vertical logs secured in spaced relationship, said logs provided with longitudinal channels in opposed position, a pair of spring separated board fillers with opposite edges in the opposed channels, a resilient spring between each pair of boards and means for holding the separated logs in vertical position independently of the board fillers.

3. In a building wall construction, a base plate member, a top plate member, vertically grooved logs secured between the plates in spaced relationship, the said grooves being opposed in adjacent logs, pairs of filler boards closing the space between the logs and engaging the grooves with their lateral boundaries and resilient means between the boards effective to keep them in frictional contact with the sides of the grooves.

4. In a log type rustic building wall, a pair of longitudinal plate members spaced to define the height of said wall, vertical log members in spaced relationship with their ends secured to said plates and provided with vertical channels in their opposed surfaces, said channels being in the same plane, double board filler strips between each adjacent vertical log with the edges of said filler strips within the channels, and coil springs disposed between the two boards of the filler strips effective to maintain frictional contact of the boards with the sides of the channels.

5. In building wall construction, vertical composite log members composed of two longitudinal parts each of which is less than half of a log joined together, the said log members provided with opposite vertical channels of generally rectangular section, means securing the logs in vertical spaced relationship with channels in adjacent log surfaces in the same plane, double board filler means resting within the channels of adjacent logs and resilient means effective to hold the boards in contact with the sidewalls of the channels.

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