

(No Model.)

P. M. BRUNER.
FIREPROOF STUDDING.

No. 573,839.

Patented Dec. 22, 1896.

Fig. 1.

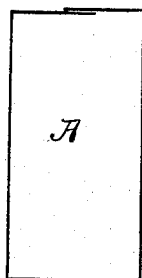


Fig. 2.

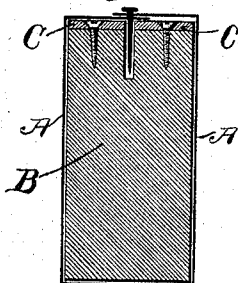


Fig. 3.

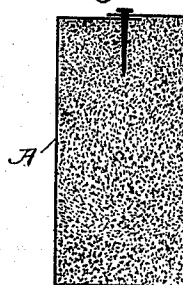


Fig. 4.

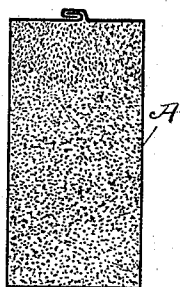
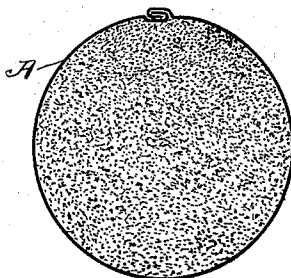


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

PRESTON M. BRUNER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE P. M. BRUNER GRANITOID COMPANY, OF SAME PLACE.

FIREPROOF STUDDING.

SPECIFICATION forming part of Letters Patent No. 573,839, dated December 22, 1896.

Application filed March 16, 1896. Serial No. 583,384. (No model.)

To all whom it may concern:

Be it known that I, PRESTON M. BRUNER, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Fireproof Studding, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein—
Figure 1 is a cross-sectional view through the shell or casing of my improved studding. Fig. 2 is a cross-sectional view showing the manner of securing the edges of shell or casing. Fig. 3 is a cross-sectional view showing the composition or material within the shell or casing, and Figs. 4 and 5 are modified forms of seams in the shell or casing.

This invention relates to a new and useful improvement in fireproof studding; and it consists, generally stated, in molding within an inclosing shell or casing a fireproof material of such composition that it will retain and hold nails, screws, or other forms of attachment generally used in connection with wooden studding.

The object of this invention is to form a fireproof studding for use in connection with metallic lathing in fireproof buildings, and my studding is of such nature that it can be manipulated with almost the same facility that wooden studding may be used and with more facility than the sheet-angle studding of metal, and, furthermore, will receive and retain staples, nails, or screws with a grasping power equal to hard wood.

In the drawings, A indicates a suitable shell or casing of thin sheet metal or other pliable material which can be formed temporarily in the shape desired. This shell or casing may be seamed, as shown in Figs. 4 and 5, but a simpler manner of connection of the overlapping edges of the shell is shown in Figs. 2 and 3, wherein B indicates a mandrel or former around which the shell is shaped, the overlapping edges of the same alining with a groove in the mandrel. A nail is passed through these overlapping edges into the groove and the mandrel withdrawn. This temporary fastening of the ends of the shell or casing may be of any form, but I have illustrated the nail as the simplest. In order that

the groove will not be widened by the frequent reception of nails and their impingement against the sides of the groove, I prefer to face the mandrel on each side of the groove with metal plates C, as shown.

After the shell or casing has been formed as above described and the mandrel withdrawn I prefer to stand the same on end, close the lower end and pour into the mold formed by the casing a composition core which entirely fills the shell, grasps the nails, and upon setting holds them in place and forms a solid body of which the shell is but a non-abrasive skin. This core I prefer to form of cinders and cement in about the proportion of one part cement to four parts crushed cinders, the same being mixed with a suitable quantity of water to enable the cement to set. I do not wish to be understood, however, as limiting myself to the exact proportions of these ingredients, nor the ingredients themselves, as there are many well-known equivalents which could be used with more or less success. The core having been introduced and packed, if necessary, is allowed time to set, when the studding is ready for use. The nature of the core is such that it can be easily cut with a saw and nailed in position. The lathing can also be nailed to the studding with the same facility that it could be attached to wood. The nails or screws entering through the outer skin will easily crush through the cinders and cement, and once in position are grasped firmly and are not liable to work loose. The crushed cinders predominating in the mixture composing the core renders the finished studding as flexible as wood, while the cement gives to it the necessary rigidity.

I am aware that many changes in the construction, arrangement, and combination of the several parts of my invention can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described method of making fireproof studding, which consists in forming a shell or casing into the shape desired, pass-

ing suitable fastening devices through the lapping edges of said shell to hold the same in proper shape while the core is being introduced, and finally introducing the core in a plastic state; substantially as described.

2. The herein-described fireproof studding comprising a shell or casing made of some thin metal or non-combustible material, fastenings which pass through the lapping edges of said shell into the interior to hold the same in place and retain the shape of the shell while it is receiving its core or filling, and a

core or filling which is introduced into the shell in a plastic state, which core, when set, binding the fastenings so that the edges of the shell are permanently secured; substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 3d day of March, 1896.

PRESTON M. BRUNER.

Witnesses:

HUGH K. WAGNER,
F. R. CORNWALL.