

(No Model.)

S. CABOT.

SOUND DEADENING PACKING FOR BUILDERS' USE.

No. 511,584.

Patented Dec. 26, 1893.

Fig. 1.

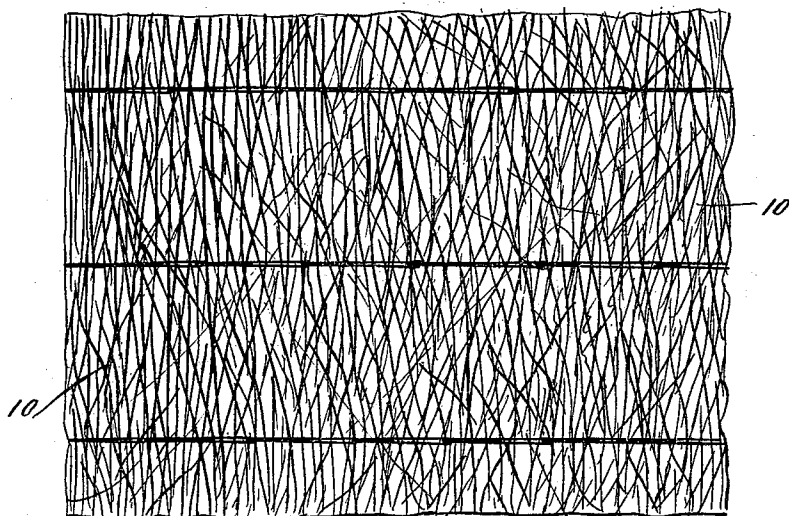


Fig. 2.

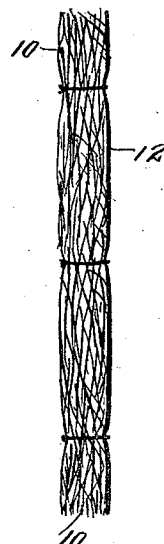


Fig. 3.

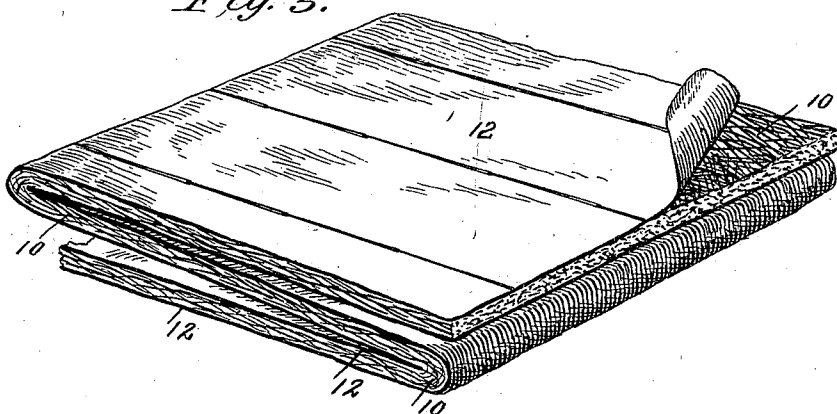
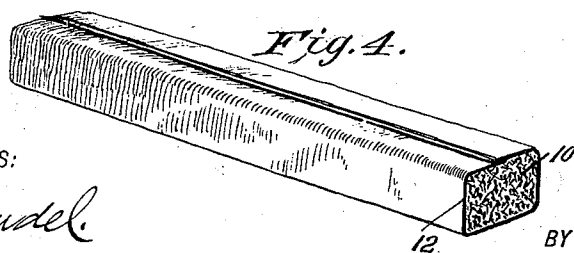


Fig. 4.



WITNESSES:

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SOUND-DEADENING PACKING FOR BUILDERS' USE.

SPECIFICATION forming part of Letters Patent No. 511,584, dated December 26, 1893.

Application filed September 26, 1893. Serial No. 486,530. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL CABOT, a citizen of the United States, and a resident of Brookline, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Sound-Deadening Packing for Builders' Use, of which the following is a specification.

My invention is related to the class of manufactured packings, used by builders for filling in walls and placing under clap-boards and linings to deaden sounds and hinder their transmission from room to room, and to maintain an equable temperature within a building.

My invention is designed to accomplish these results in an especially efficient manner and at little cost.

Hitherto, fibrous substances have been employed for these purposes, frequently in the form of paper. Disintegrated fiber, such as hay, cotton, &c., gives good results, except that its liability to catch and rapidly to convey fire makes it to some extent dangerous. A United States patent, No. 488,869, dated December 27, 1892, was granted to me for a manufactured packing of this sort in which the danger from fire was overcome by subjecting the disintegrated fibrous substance used, such as hay, straw, &c., to a fire-proofing process particularly adapted for retarding the combustion of such substances. This method of protecting the packing material involved its treatment with chemicals, and added to the cost of the finished article; as also to its weight and in some degree to the difficulty of handling it agreeably.

In the present invention, by substituting for the fire-proofed hay, or salt-hay, &c., a material which without chemical treatment of any kind is sufficiently slow to take fire and to propagate it, I make a great saving. Such a material I have discovered in sea-weed and salt water plants, especially those of laminated structure such as sea-grass and many flat leaved algæ.

I have found that sea-weeds of every kind when dried and compacted together are very slow to burn as compared with hay and similar round fibers, and that not only is this pre-eminently true of the flat and leaf-like forms, but that such kinds are at the same time exceedingly well qualified to deaden sound and

to act as non-conductors of heat. These characteristics are in part due to the laminated character of a compacted layer made with such material and the thin air strata stagnated between the leaves, but also because the sheathing made therefrom is elastic and at the same time soft, and therefore badly adapted for conveying heat or sound vibrations.

For convenience in transportation and use and for other reasons, I make from dried sea-weed, and preferably from the grass-like forms thereof, pieces of packing constructed by attaching the same to sheets of paper or cloth and like flexible substances.

The drawings which form part of this specification illustrate these products, showing in Figure 1, a sheet so made in plan. Fig. 2, is an edge elevation of the same sheet. Fig. 3, is a perspective view of several folds of my packing in which the elastic material is held between two sheets. Fig. 4, shows packing put into the form of narrow strips for special purposes.

In Figs. 1 and 2, the dried sea-weed is first distributed on a flexible base, and then stitched or tacked through by ordinary sewing devices, so as to hold both together. In Fig. 3, the material is compressed and held by stitching between two sheets of paper of coarse quality, the drawing representing part of a bale in which the sheathing is folded upon itself, made in this case by using paper in the form of long webs. Fig. 4, shows a piece of packing of square cross section inclosed in paper or cloth adapted for filling special cavities.

This packing may be nailed in place and one, two, or three thicknesses can of course be used. Its slowness to burn is in part due to the laminated character of the compressed sea-grass, but also to its composition, for in sea-weeds growing at the bottom of the salt water, silica seems in part to take the place of carbon as found in land plants, while all sea-weeds contain sodium and magnesium chlorides (the latter giving a useful hygroscopic character to the dried product), which with other mineral salts tend to retard combustion very greatly. Apart from the salts present I have found the organic constitution of sea-weed to be generally very unfavorable

to its quick combustion, and that after decomposition has been in great part accomplished there remains a charred mass which occupies nearly the original bulk of the seaweed, which it is very difficult to consume, but which continues to act as a non-conductor of heat so long as it holds its position. By availing myself of these properties of dried seaweed I have invented a sheathing well adapted for the objects specified, without subjecting the material therein to chemical treatment of any kind and thereby adding to its cost.

I do not wish it understood that I limit myself to the precise details herein given, for they clearly admit of modification and change without affecting the principle underlying my invention. I have, for instance, recommended the process of sewing as the best means for attaching the fibrous matter to the base that carries it, but it is also feasible to use a cement for this purpose; or metallic staples may also be applied, and wire in stapling

machines made to take the place of the thread or twine I recommend in sewing machines of suitable construction.

What I claim is—

1. As an article of manufacture; an elastic sheet packing for builders' use, consisting of a layer of dried sea-weed fastened to a base of flexible material; substantially as described. 30
2. An elastic packing for builders' use, consisting of laminated sea-weed which has been dried, inclosed and held within a covering of coarse paper; substantially as described.
3. As an article of manufacture; an elastic sheet packing for builders' use, consisting of a layer of dried sea-weed stitched between sheets of thin flexible material; substantially as described. 35

SAM. CABOT.

Witnesses:

GUSTAV F. H. KIECKEBUSCH,
MARCH G. BENNETT.