

H. Tucker.

Composite Roofing.

N^o 26,868.

Patented Jan. 17, 1860.

Fig. 1

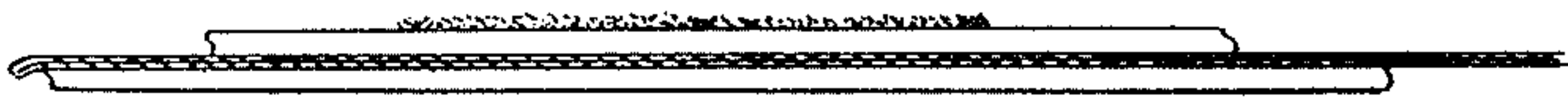
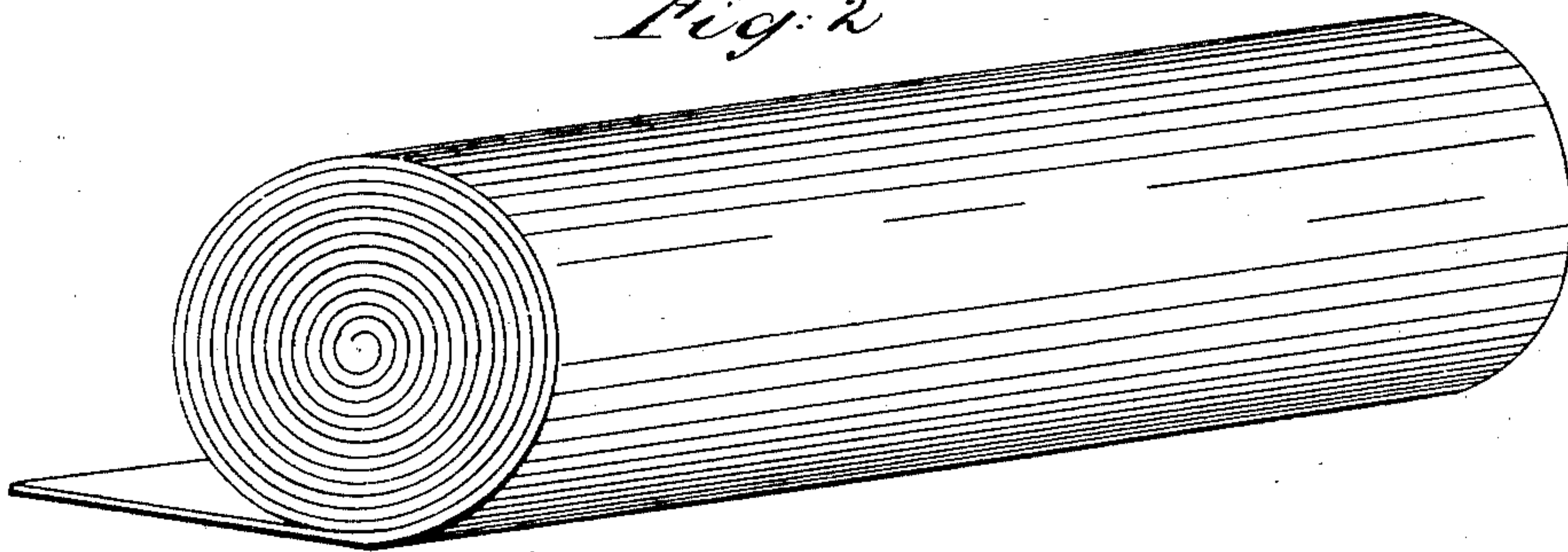


Fig. 2



Witnesses

J. B. Cowley.

W. B. Gleason

Inventor

Hiram Tucker.

UNITED STATES PATENT OFFICE.

HIRAM TUCKER, OF CAMBRIDGEPORT, MASSACHUSETTS.

PORTABLE ROOF-COVERING.

Specification of Letters Patent No. 26,868, dated January 17, 1860.

To all whom it may concern:

Be it known that I, HIRAM TUCKER, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented an
5 Improved Portable Composite Roof-Covering; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description thereof so full
10 and exact as to enable those skilled in the art to practice my invention.

My roof covering is an improvement upon those portable coverings now in public use, among which may be mentioned that patented to C. C. Hoff, Feb. 1st 1856, and those
15 known as A. Robinson's, and G. H. Mellen's, roof-covering, and also that patented to Dyar and Kendrick May 3d 1859. In those roof coverings of which the three first mentioned are samples, it is intended that the powdered or granulated substances spread
20 over the layers of water-proof material should prevent their adhesion to each other when the roof covering is made into rolls for transportation. Such substances as are used in these roof coverings for this purpose (among which may be mentioned sand soapstone dust plumbago, &c.) do not compass the said desired end, for it is found that
30 while in low temperatures and for short times the convolutions of the rolls do not adhere to each other, yet when exposed to the ordinary atmospheric influences and the weight and pressure incident to transportation the layers adhere to each other and the whole roll becomes welded into a solid mass. This is caused by the water proofing becoming plastic, when the powdered or crystallized layer embeds in the layers of the cement
40 which by this means come into contact and adhere. The layers of sand, &c., are objectionable also on account of their weight which adds to the cost of freight without any corresponding advantage. Dyar and Kendrick's roofing is not liable to the objections named, the paper used by them being light and practically prevents, in connection with the sand used, the adhesion of the convolutions of the roll. This desirable result
50 however is obtained by them at a comparatively large cost which it is the object of my invention to diminish while I preserve the folds of the roll from adhering together.

I am enabled to accomplish my object by
55 covering one or both of the layers of the water proof material adhering to the cloth,

which forms the foundation of the roof covering, with a fluid wash, so compounded that when the fluid portion of the wash shall have evaporated the matter held in solution
60 or suspension shall form a continuous film over the cement, which while it adheres thereto will not embed therein like substance in fine particles, and which will also prevent adhesion as well as the paper mentioned but at a much less cost.

In the drawings Figure 1 represents a section through the composite roofing, (a) being the cloth or its equivalent, (b, b) the water proof layers; the wash is represented
70 on one of these layers by a blue line, while upon the other layer a coating of sand is represented. Fig. 2 represents the article made, rolled up for transportation or storage.

The wash I have used with success is made of common lime dissolved in water in which a small quantity of glue or gum-arabic is held in solution and colored with lamp black mixed in alcohol.

At the joinings upon the roof of the edges and ends of the sheets of the roof covering, where it is desired to lay bare the water proof composition, the film is re-dissolved by spirits of turpentine which also softens
85 the water proofing so that the solid particles which formed the film can embed into it, and so that the overlapping and underlying parts thereof so treated will adhere to each other when pressed together. The
90 whole of the roof covering may be made to adhere to the roof boards by re-dissolving the wash and softening the composition as before stated.

While sand may be used to cover one layer
95 of composition and a wash the other, I prefer to cover both with the wash, as the sand can be spread in excess over the roof covering when laid, when sufficient will adhere for all practical purposes, and in this way
100 the bulk of the article, its first cost, and the cost of freight will be reduced to the minimum.

While I have described the wash which I have used with success I do not by any
105 means wish to be understood as confining myself to that specified.

In the formation of a water proof covering, such as before mentioned, having a cloth or its equivalent for a base to which
110 on each side water proof mixtures are made to adhere, defects are liable to occur by non-

adherence of the mixture to the cloth, or
holes may exist in the cloth which are not
filled by the mixture. These defects may
and do cause leakage in the roofs covered
5 with the article so manufactured, as the
powdered or granular materials, or paper,
or both, are applied to the water proof lay-
ers while they are in a hot and plastic state
and cover up and conceal the defects which
10 afterward cause leakage. As the wash
(which by evaporation forms the covering
film of my roofing) can be applied at any
time after the cloth is drawn through the
water proofing opportunity is given for in-

spection and for the remedy of defects be- 15
fore the wash is applied.

I claim, as a new article of manufacture,
The composite water proof roof covering
described; the same consisting of a central
web, and layers of water proof mixture ad- 20
hering to both sides thereof, one or both of
which layers are covered with a film formed
by the evaporation of a wash, substantially
as described.

HIRAM TUCKER.

Witnesses:

J. B. CROSBY,
W. B. GLEASON.