A. J. COHEN.

ROOFING MATERIAL.

APPLICATION FILED MAY 17, 1907.

917,543. Patented Apr. 6, 1909.

Fig. 1.

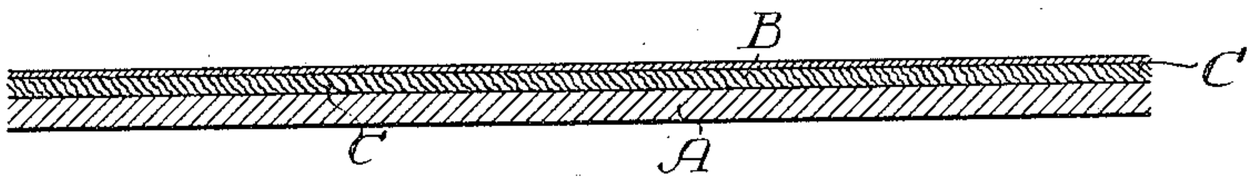


Fig. 2.

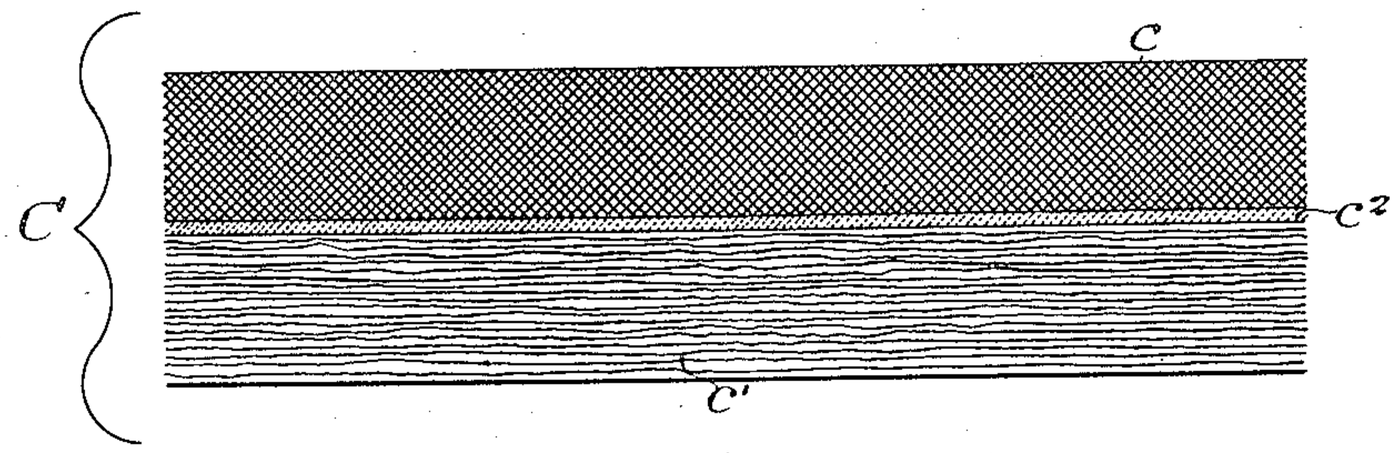
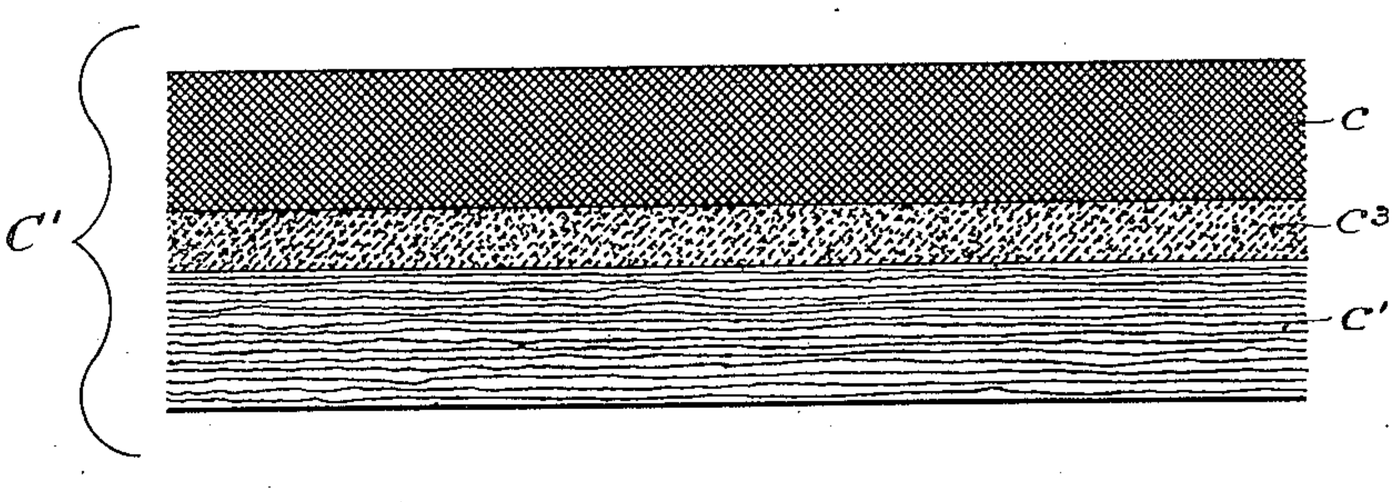


Fig. 3.



Witnesses:
Walter Chism
Augustus B. Coppes

Inventor:
Andrew J. Cohen.
by his Attorneys,
Howson & Howson

UNITED STATES PATENT OFFICE.

ANDREW J. COHEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO MERCHANT & EVANS COMPANY, OF CAMDEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ROOFING MATERIAL.

No. 917,543. Specification of Letters Patent. Patented April 6, 1909.

Application filed May 17, 1907. Serial No. 374,216.

To all whom it may concern:

Be it known that I, ANDREW J. COHEN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Roofing Materials, of which the following is a specification.

One object of my invention is to provide a roofing material in a form particularly adapted to be used between the wooden sheathing and the tin of a roof, which shall in itself be fire and also water proof in order to prevent the transmission of heat from the tin to the wooden sheathing, as well as to prevent the rusting of the tin.

Another object of my invention is to provide a roofing material composed on one side of felt paper or other equivalent water proof material, and on the other side of asbestos.

I further desire to provide a roofing material of the general character above noted with a form of cement for holding together its constituent layers, either with or without an interposed layer of some material capable of generating when heated, a gas such as carbon dioxid, capable of extinguishing a fire or at least tending to retard combustion.

These and other advantageous ends I attain as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1, is a vertical section of a body of roofing, illustrating my invention as applied thereto; Fig. 2, is a vertical section on an enlarged scale, of the simplest form of my improved roofing material; Fig. 3, is a vertical section also on an enlarged scale illustrating a form of roofing material in which a layer of gas generating material is placed between the two main layers of the sheet.

In the above drawings A represents the wooden sheathing of a roof having a covering sheet B of tin. Between these two is placed a layer C of my improved roofing material which consists of a sheet of felt paper *c* and a sheet *c'* of asbestos united, so as to constitute in effect a single sheet, by means of a body of adhesive material c^2, such as silicate of soda. While this latter substance is preferably employed by me, as the cementing material, it will be understood that other adhesives may be used without departing from my invention; it being essential that the felt and asbestos sheets or their equivalents be so combined that they may be sold and used as a single sheet.

In use, the sheet C is spread upon the sheathing of the roof with its asbestos face down, the tin being therefore spread over the roof with its face in contact with the felt paper portion of the sheet C. As a result, the under side of the tin is kept dry, for the felt paper is water proof and does not absorb or hold water of condensation, while in addition, it is of such a nature and composition as to constitute what is known as "slow burning" material. If the cementing material employed be silicate of soda, this of itself adds to the fire resisting qualities of the structure and with the asbestos sheet very effectually prevents the transmission of the heat from the tin roof to the wooden sheathing.

In some forms of my invention, I may provide between the portions *c* and *c'* of the sheet a body of some chemical substance, such as sal soda, as indicated at c^3 in Fig. 3, which when heated will generate a gas of a nature capable of extinguishing a fire. In such case, this substance would preferably be mixed with the adhesive material, and the composite sheets C' having it between their felt and asbestos layers are subjected to heavy pressure, as is also done with the layers of the sheet C shown in Fig. 2; so that the resulting structure consists of a single sheet capable of being handled and used as such. In the event of a piece of heated or burning material falling upon a roof having such a sheet as that illustrated at C' interposed between the tin and the wooden sheathing, a possible fire starting in the sheathing by reason of heat transmitted would be extinguished by the gas generated from the layer c^3. Such gas would also tend to prevent the charring or combustion of the felt paper *c*.

I claim as my invention:

1. A roofing material, consisting of a single sheet composed of two layers having adhesive material for holding together, one of said layers being composed of asbestos and the other of felt paper, substantially as described.

2. A roofing material consisting of a sheet of felt paper and a sheet of asbestos held together by silicate of soda, substantially as described.

3. As a new article of manufacture, a roofing material consisting of two layers of sheet material having between them a layer of sal soda, with an adhesive for holding together said two layers substantially as described.

4. As a new article of manufacture, a roofing material consisting of two layers of sheet material having between them a chemical substance capable of generating, when heated, a gas incapable of supporting combustion, substantially as described.

5. A roofing material consisting of a sheet of water proof material, a sheet of fire proof material, with a substance between said sheets capable of generation, when heated, of a gas incapable of supporting combustion, with means for holding said sheets together to form a unitary structure, substantially as described.

6. As a new article of manufacture, a sheet of roofing material containing a substance capable of generating when heated, a gas incapable of supporting combustion, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ANDREW J. COHEN.

Witnesses:
WM. E. SHUPE,
JOS. H. KLEIN.