(No Model.)

R. H. MARTIN.

ASBESTUS SHEET.

No. 354,158. Patented Dec. 14, 1886.

Fig. 1.

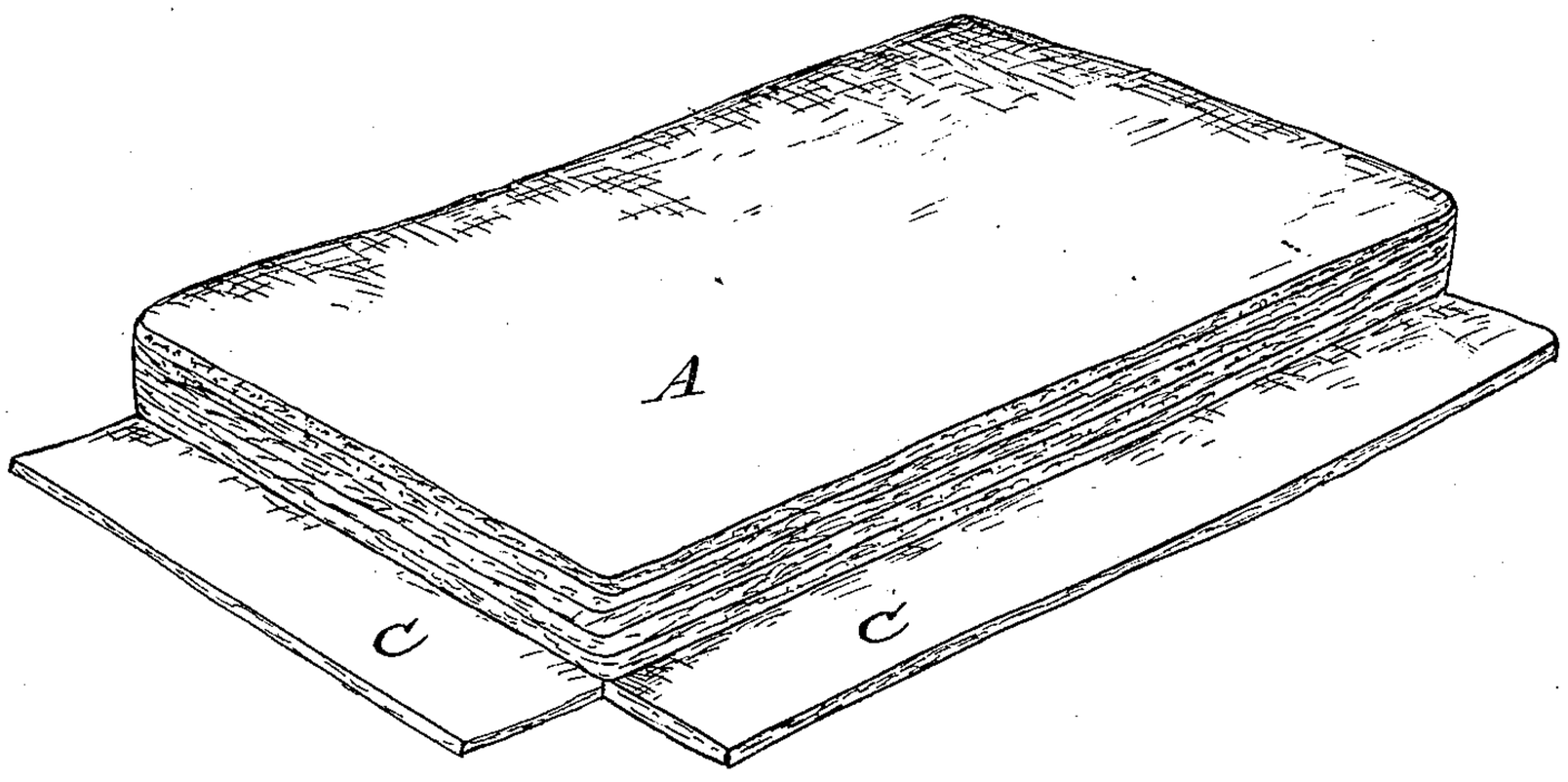


Fig. 2.

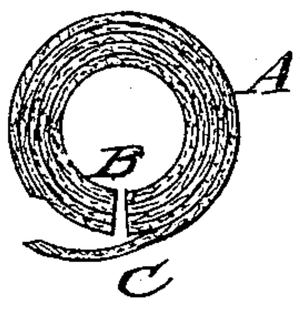


Fig. 3.

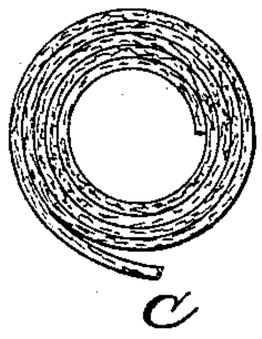
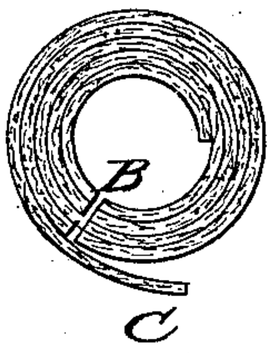


Fig. 4.



Witnesses.

James A. Tennant

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UNITED STATES PATENT OFFICE.

ROBERT H. MARTIN, OF BROOKLYN, NEW YORK.

ASBESTUS SHEET.

SPECIFICATION forming part of Letters Patent No. 354,158, dated December 14, 1886.

Application filed September 15, 1886. Serial No. 213,640. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. MARTIN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Asbestus Sheets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a perspective of my non-conducting sheet made of superimposed slivers of fiber. Fig. 2 is a cross-section of the same rolled into a pipe-covering. Fig. 3 is a cross-section of my covering when the superimposed slivers are coiled. Fig. 4 is the same as Fig. 3 with the coil cut on one side.

My invention relates to removable non-conducting and incombustible sheets to prevent the radiation and conduction of heat, and for other purposes.

The sheet is or may be flat or cylindrical, and is made of superimposed slivers of asbestus fiber, so constructed as to be applied to any surfaces needed to be covered.

In making this sheet I run from a card or apron a thin sliver of asbestus fiber and deposit it in even layers on a moving apron or table, or coil it upon a revolving cylinder or mandrel, as shown in Fig. 3, until a sufficient thickness of sheet is obtained and of any size desired. The fiber is at some convenient stage between its condition as raw fiber and the deposition of the sliver upon the apron or mandrels, or during such deposition or mandrel, treated with water or sizing material, preferably of a non-combustible character—such as silicate of soda—and also preferably in a wet state. No felting operation is employed; but a pressure regulated by the density required is applied to the bat or sheet being made. This I obtain by a pressure-roller adjustably arranged over the apron or table or against the mandrel. The fiber I use is asbestus in a flocky state, with which, however, may be admixed fibers of hair, wool, mineral wool, &c., as also mineral, clayey, chalky, or infusorial earths in a finely-divided state.

This bat or sheet when dried is a flexible, elastic, and non-combustible covering, resembling felt, of excellent non-conducting character, capable of easy application or removal. It may easily be made water-proof by the application of either of several well-known processes.

The flat sheet A can be applied to flat or slightly-curved or irregular surfaces, or rolled into cylindrical shape, as shown in Fig. 2, and the coiled sheet or cylinder, which may be cut, as shown at B, on one side longitudinally, can be applied to pipes, (shown in Fig. 3,) or opened out to make a flat or curved sheet. The outer slivers of the sheet, flat or coiled, may be so saturated with size as to constitute a hard and strong exterior.

The sheet may be re-enforced on either side by layers of paper (combustible or incombustible) or other material fastened or pasted to it, and may be so applied on the outside as to leave flaps *c c* to cover joints in and between sections or sheets, over the longitudinal cuts in the cylindrical sheets; or the sections may be secured by ties, tacks, staples, or other common devices, and the joints may be covered with pasted strips.

These sheets when used as coverings may also be used in connection with other covering placed inside or outside of it, and may when applied be covered or wrapped with paper or canvas or painted to finish.

It must be understood that the fiber is not pulped, as in the manufacture of paper and mill board, so that it remains intact in its length, and the sheet is not dependent merely on compressure for its strength, as in the case of paper, the fiber not being broken or pulped, as in the latter case. I prefer to use a carding-engine in disintegrating and laying the fibers, as the fiber is opened out more thoroughly and deposited more evenly.

This sheet is adapted for use as packing for joints, fire-proof lining for carpets, and, in fact, for any purpose where fire-proof, insulating, or water-proof qualities are desired.

What I claim to be new, and desire to secure by Letters Patent, is—

A non-conducting sheet composed of thin slivers of asbestus superimposed or coiled upon each other, constructed substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT H. MARTIN.

Witnesses:

JAMES DEMAREST,

E. A. HOLTON.