

H. P. DUNBAR & T. C. LOTHROP.

RUBBER ARTICLES.

No. 170,941.

Patented Dec. 14, 1875.

Fig. 1.

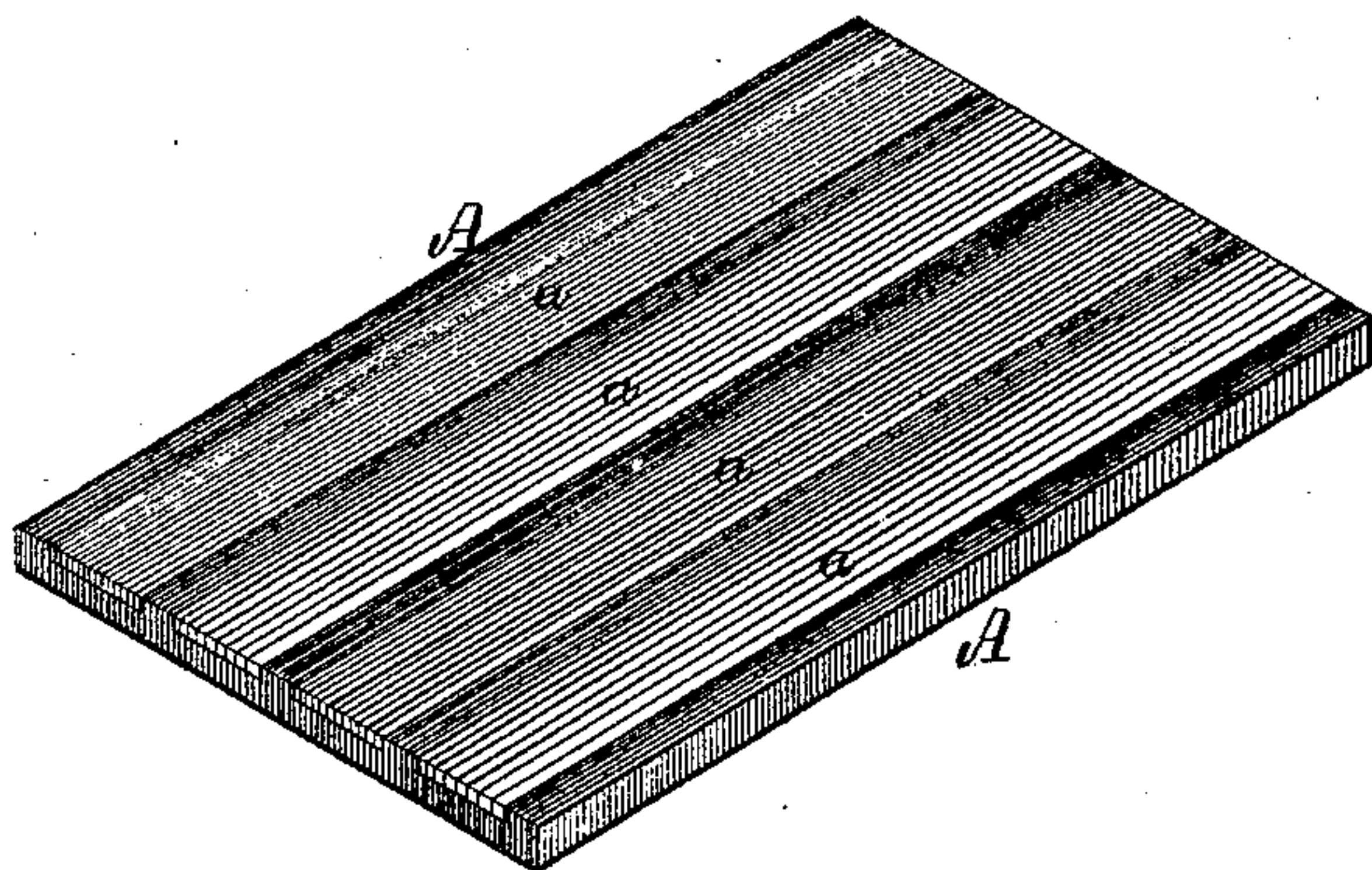


Fig. 2.



Witnesses.
J. Hunnwell.
W. E. Boardman.

H. P. Dunbar & T. C. Lothrop.
J. Curtis, Atty.

UNITED STATES PATENT OFFICE.

HIRAM P. DUNBAR AND THOMAS C. LOTHROP, OF BOSTON, MASS.

IMPROVEMENT IN RUBBER ARTICLES.

Specification forming part of Letters Patent No. **170,941**, dated December 14, 1875; application filed November 9, 1875.

To all whom it may concern:

Be it known that we, HIRAM P. DUNBAR and THOMAS C. LOTHROP, of Boston, Suffolk county, Massachusetts, have invented an Improved Manufacture of Articles from Vulcanized Rubber, of which the following is a specification:

This invention relates to the manufacture of floor-cloths, and numerous other articles of a useful and ornamental nature, from vulcanized india-rubber, whereby we are enabled to produce figures or designs varying in extent and character with the use to which they are to be put, and obtain a product which shall withstand a great amount of wear; and the invention consists of a product composed of a base or foundation of cheap compound of rubber, overlaid or inlaid with a series of strips, figures, or characters of a thin and more expensive material, which is capable of receiving any desired color or tint, these strips or figures being, in the final stage of the vulcanizing process, embedded in the foundation, so that a uniformly even surface exists over the whole.

The drawings accompanying this specification represent, in Figure 1, a perspective view, and Fig. 2 a cross-section, of a piece of floor-cloth or carpeting embodying our invention.

In carrying our invention into practice in the production of floor-cloths, which is one of the many articles we design manufacturing, we provide a base or foundation, A, of a compound of india-rubber and other ingredients, substantially similar to the packing material of commerce now generally in use, which is a comparatively cheap product, containing a small percentage of fine rubber, with the exception that we add to the material of this base a very small percentage of fine rubber, to cause the strips or figures hereinafter alluded to to unite or become incorporated with said base. We further provide a series, *a a*, &c., of comparatively narrow strips or ribbons of a compound containing a much larger percentage of rubber, and incorporate in this compound a substance which shall impart the desired color or tint. These strips are laid in parallel rows upon the top of the base A, in such colors or tints and in such or-

der as may be requisite to obtain the desired effect, and the whole subjected to the action of rollers or other pressure, it being understood that both the base or backing A and the strips *a a*, &c., are in the plastic semipulpy condition incident to the manufacture of rubber goods at this stage. The pressure of the rolls causes the ribbons *a a*, &c., to embed themselves in the body of the backing A, so that a uniformly plane surface, common to all, results, and in this condition the whole is subjected to the vulcanizing process.

By this method—that is, the employment of a body of cheap material, not susceptible of being colored, covered in part with a comparatively thin surface of a much finer preparation or compound which is susceptible of receiving and retaining brilliant colors—we are enabled to supply, at comparatively low cost, a very durable and ornamental product, and to make available, and adapt to many uses in the arts, a product which has heretofore been in comparatively small demand, and employed mainly for packing.

To manufacture the entire product from a compound sufficiently fine, or containing the requisite amount of pure rubber, to receive and retain distinct or vivid colors would be impracticable, owing to its high cost.

By our method we obtain all the desirable effects, as regards ornamental appearance and durability, of a fine material, at a cost but little in excess of a cheap material.

We do not confine ourselves to the form, character, or extent of the outer surfacing of fine material which we employ, as this may be varied greatly without departing from the spirit and intent of our invention—as, for instance, in many ornamental objects, figures or characters, in any elaborate designs, may be provided. We have shown, in the present instance, a floor-cloth, as being the representation of one valuable result of our invention.

We claim—

1. The improved process for the manufacture of rubber products, substantially as herein described—that is, the uniting, with a base or foundation of cheap material, a facing or series of strips or designs of finer material,

susceptible of receiving colors and incorporated with the foundation, substantially as and for purposes stated.

2. The improved rubber product herein shown and explained, being a floor-cloth composed of a body of cheap material, with a series of parallel strips in colors or neutral tints composed of a finer quality of rubber com-

pound, substantially as and for the purposes stated.

HIRAM P. DUNBAR.
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Witnesses:

FRED. CURTIS,
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