

(No Model.)

E. W. HARRAL.

MATERIAL FOR COVERING CARRIAGES.

No. 297,257.

Patented Apr. 22, 1884.

Fig. 1.

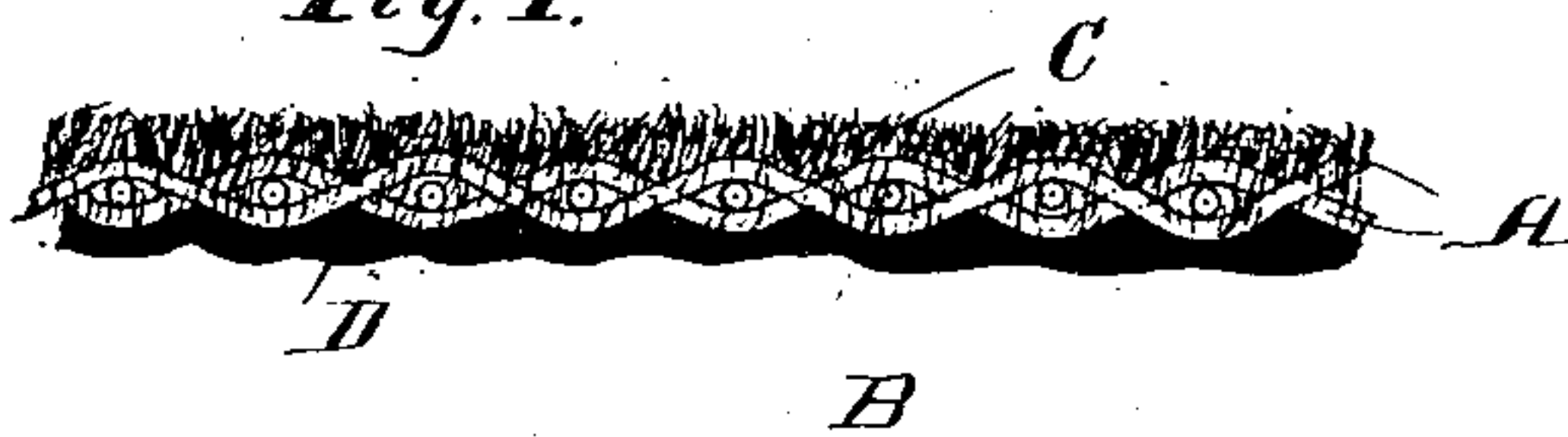


Fig. 2.

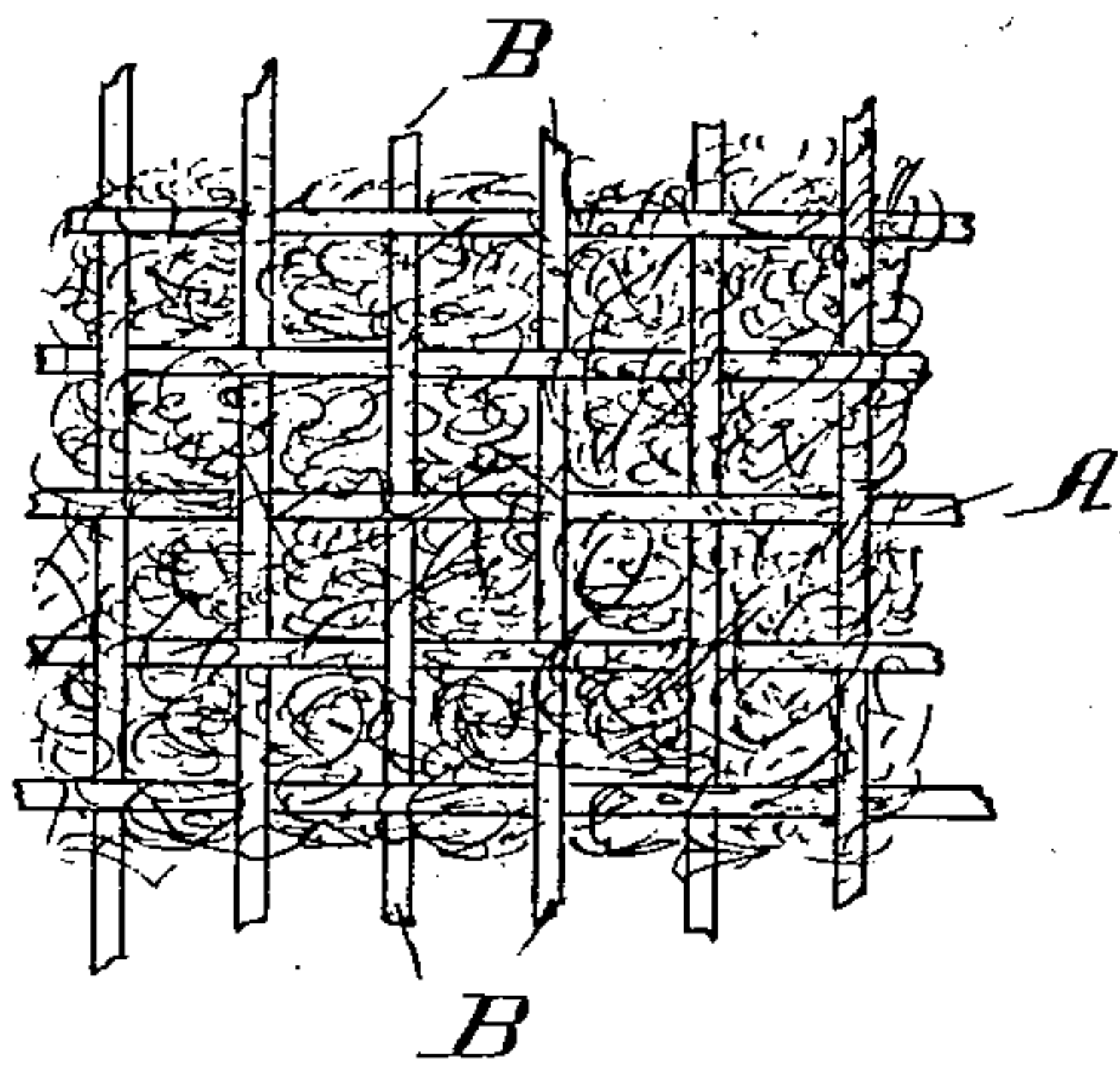
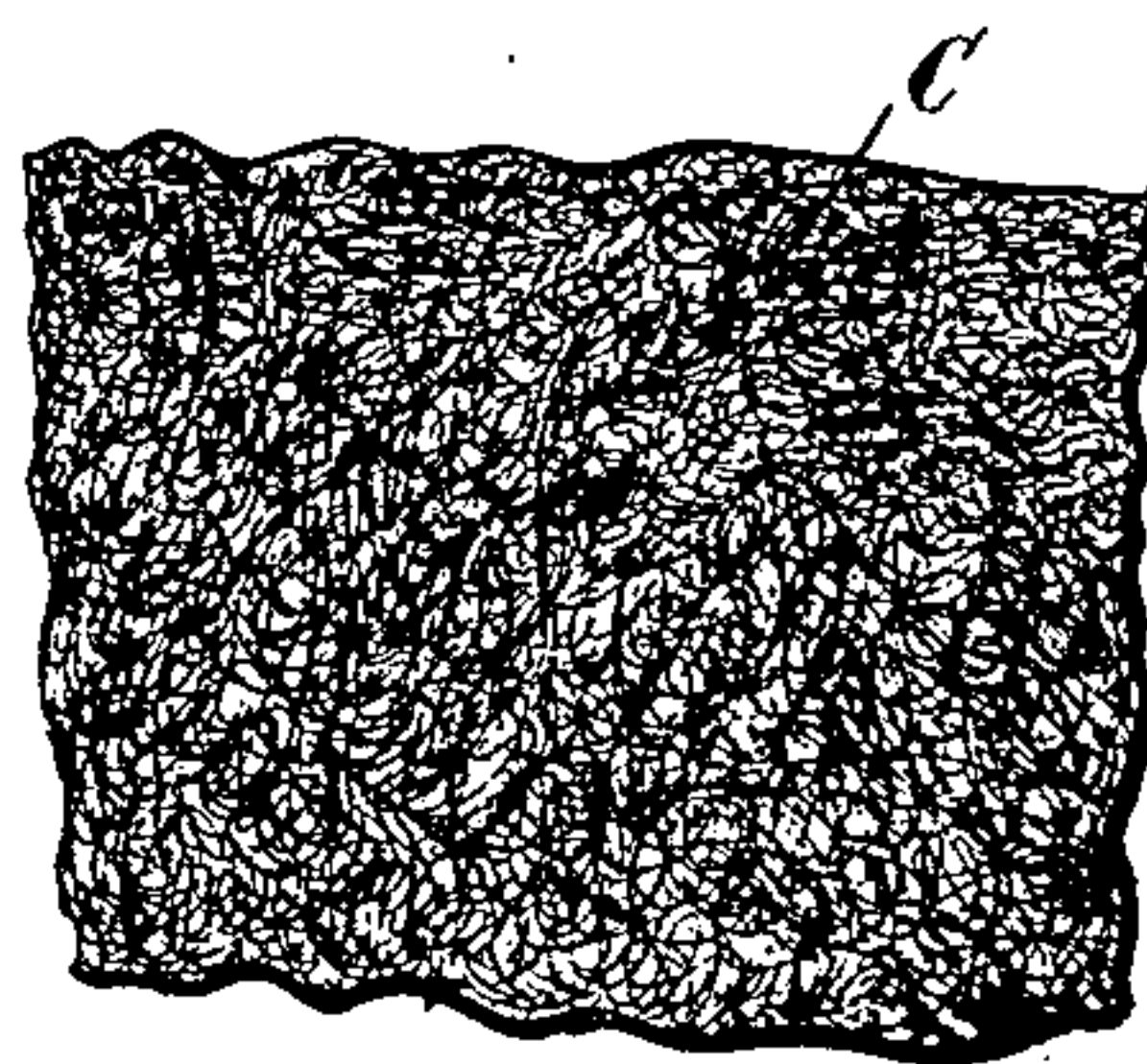


Fig. 3.



Witnesses
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MATERIAL FOR COVERING CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 297,257, dated April 22, 1884.

Application filed March 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD W. HARRAL, a citizen of the United States, residing at Fairfield, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Material for Covering Carriages; 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.

My present invention is an improvement upon the cloth described in my Letters Patent No. 280,309, dated June 26, 1883, and has for its object to provide a material for covering carriage-tops and other analogous purposes, the inner surface of which shall be a woollen fabric and the outer surface a water-proof fabric.

Heretofore in the cheaper grades of carriages it has been common to use an ordinary grade of water-proof cloth, the back of which has been flocked in the ordinary manner—that is to say, the back has been covered with varnish or other adhesive substance, after which shoddy wool has been dusted thereon. In the finer grades of carriages it has been common to line the entire top with a woollen fabric, which has sometimes been stitched or cemented to the covering material and sometimes left loose. This lining fabric (broadcloth) is very expensive, and requires careful hand-finishing at the edges, it being secured to the covering material by a blind-stitch. Moreover, if left loose, the lining soon becomes baggy, while if cemented to the cover it makes it clumsy and stiff, rendering it exceedingly liable to crack, so that in fact the more expensive material is equally unserviceable with the cheaper. By my invention I am able to overcome these objections and to produce a cloth which upon the wrong side is equal in appearance to the finest broadcloth lining, is but slightly more expensive than the flocked goods referred to above, is very much less expensive than a broadcloth lining alone, and is light, flexible, and exceedingly durable, being able to withstand the severest extremes of temperature without being injuriously affected thereby.

In my description I shall refer by letters to

the accompanying drawings, forming part of this specification, in which—

Figure 1 is an edge view of a piece of my improved cloth greatly enlarged. Fig. 2 is a plan view of the back before the water-proof material is applied, and Fig. 3 is a plan view of the wool face thereof.

A represents the warp and B the weft threads of a cotton fabric made without dressing.

C represents a facing of wool, which is applied after the completion of the cotton fabric, the bat of wool being laid upon the surface thereof, after which the bat and cotton fabric are submitted to the action of a series of blunt or finely-barbed needles, the action of which is to force the wool into the interstices of the cotton threads, causing it to take firm hold thereon, so that it becomes mechanically interlaced therewith and forms part of the fabric itself. More or less of the wool is forced between the cotton threads, so as to show on the opposite side of the goods, as indicated in Fig. 2. This, however, is incidental; but the right side of the goods presents a smooth, even wool surface which is as durable as if the fabric were made of wool and a nap raised in the ordinary manner.

To the back of the fabric which I have thus minutely described I apply in any ordinary manner a coating of water-proof material, which sinks into the interstices of the cotton threads, taking firm hold thereon and upon the wool itself, which has been forced in from the opposite side. It will thus be seen that in the completed fabric its separate and dissimilar component parts are thoroughly united and blended together, so that upon one side is presented an even, smooth wool surface and upon the other a water-proof surface, the cotton threads in the center thereof serving to give strength and firmness to the fabric, while at the same time the fabric as a whole is but slightly thicker than ordinary water-proof cloth, or than the lining alone, with which it has been necessary to line the water-proof cloth for use in the better grades of carriages. As compared with other materials for carriage-curtains now in use, my improved cloth is wholly free from the bulkiness and stiffness more or less common to all. It is exceedingly

pliable, so much so that it may be kept rolled
or even folded for considerable time without
suffering injury, and will stand the long-con-
tinued action of alternate sun and rain without
5 showing the slightest tendency to crack or rot.

I claim as my invention—

A new material for covering carriages and
analogous uses, consisting of a cotton fabric
having upon one side a facing of wool, which is
10 forced into the interstices of the threads, and

upon the opposite side a facing of water-proof
material, which enters said interstices, taking
firm hold both on the threads and the back of
the facing, substantially as described.

In testimony whereof I affix my signature in 15
presence of two witnesses.

EDWARD W. HARRAL.

Witnesses:

DANIEL MOLONEY,
JAMES O. BURR.