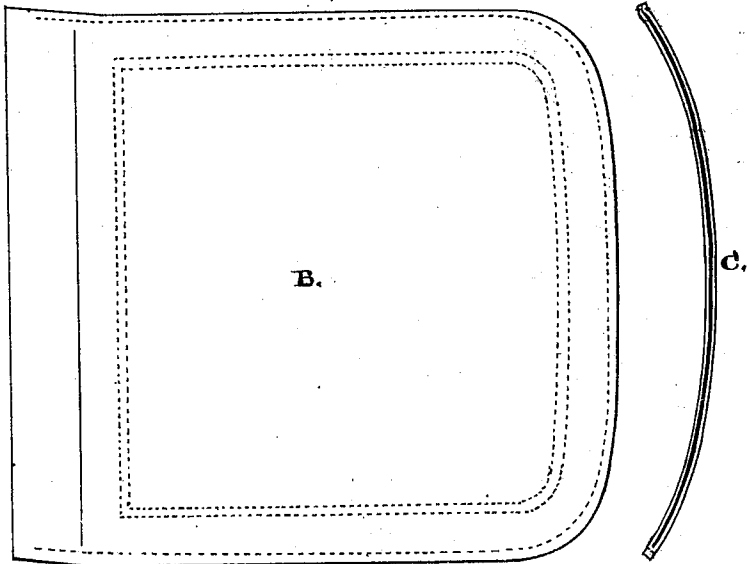
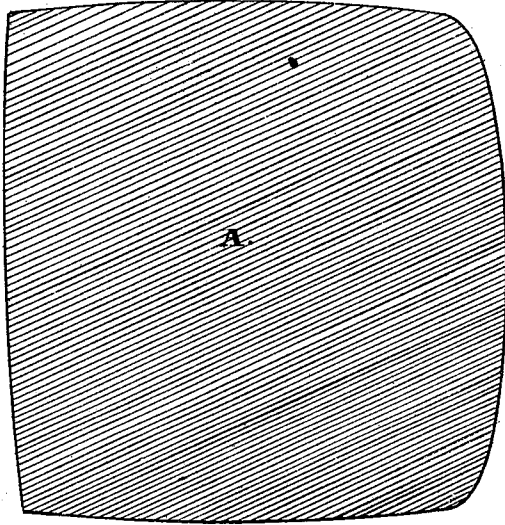


*E. Ward,*

*Manf. Harness Winters*

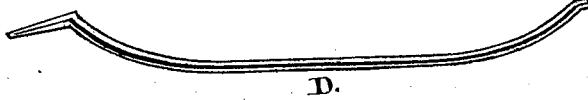
*No. 103530.*

*Patented May 24, 1870.*



*Will M Gooding*  
*Edward Spolevar* } attest

*Inventor:*  
*Eugene Ward*



# United States Patent Office.

EUGENE WARD, OF NEWARK, NEW JERSEY, ASSIGNOR TO HIMSELF, FRANCIS C. BUTLER, AND ELIAS S. WARD.

*Letters Patent No. 103,530, dated May 24, 1870.*

## IMPROVEMENT IN MANUFACTURE OF WINKERS FOR HARNESS-BRIDLES.

The Schedule referred to in these Letters Patent and making part of the same.

I, EUGENE WARD, of the city of Newark, in the county of Essex and State of New Jersey, have made certain Improvements in Manufacture of Winkers or Blinds for Harness-Bridles, of which the following is a specification.

My improvement consists in a new process of manufacturing blinds for harness-bridles, as will be more fully explained hereafter.

In the drawings—

A is a piece of thin sheet metal, or any other preferred material, for the inside lining, to stiffen and preserve the shape of the winker.

B is a winker, stitched, lined, and shaped.

C is a perpendicular section of the middle of the blind, showing its form in that direction.

D is a horizontal section of the same.

The ordinary course in manufacturing winkers has been to shape the lining by one process, then introduce it, covered with paste or mucilage, into the pocket formed by stitching the inside leather lining to the patent-leather outside, and then, with a rubber, manipulating the leather to the shape of the previously-formed inside lining.

As an improved process of manufacture, I introduce the plate A, while still flat, into the prepared pocket, and place it in a die of the desired form, and, by pressure from a drop or screw, give the winker or blind its

form, with superior neatness and solidity, and with great economy in time.

One very decided advantage arising from my process is that, all of the parts being firmly pressed together in giving the desired shape to the blind, they are much less liable to become separated from each other than when made in the usual manner.

Another and a very important advantage is, that the stitching is all done while the blind or winker has a flat, smooth surface, thus doing away with the necessity of stitching through the angles formed in sloping the same, and also avoiding the risk of changing such form by holding the blind in the clamps of the operator.

Having thus described my invention,

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

The within-described process of manufacturing blinds for harness-bridles, it consisting in stitching the leather upon its metal lining before the blind has been formed in the dies, and afterward forming the parts by pressing or swaging them in dies, thus shaping all of the parts at one and the same time, substantially as set forth.

Witnesses:

W. M. GOODING,  
EDWARD COLESER.

EUGENE WARD.