

C. H., H. W. & E. P. ALEXANDER.

Leather-Belting.

No. 164,507.

Patented June 15, 1875.

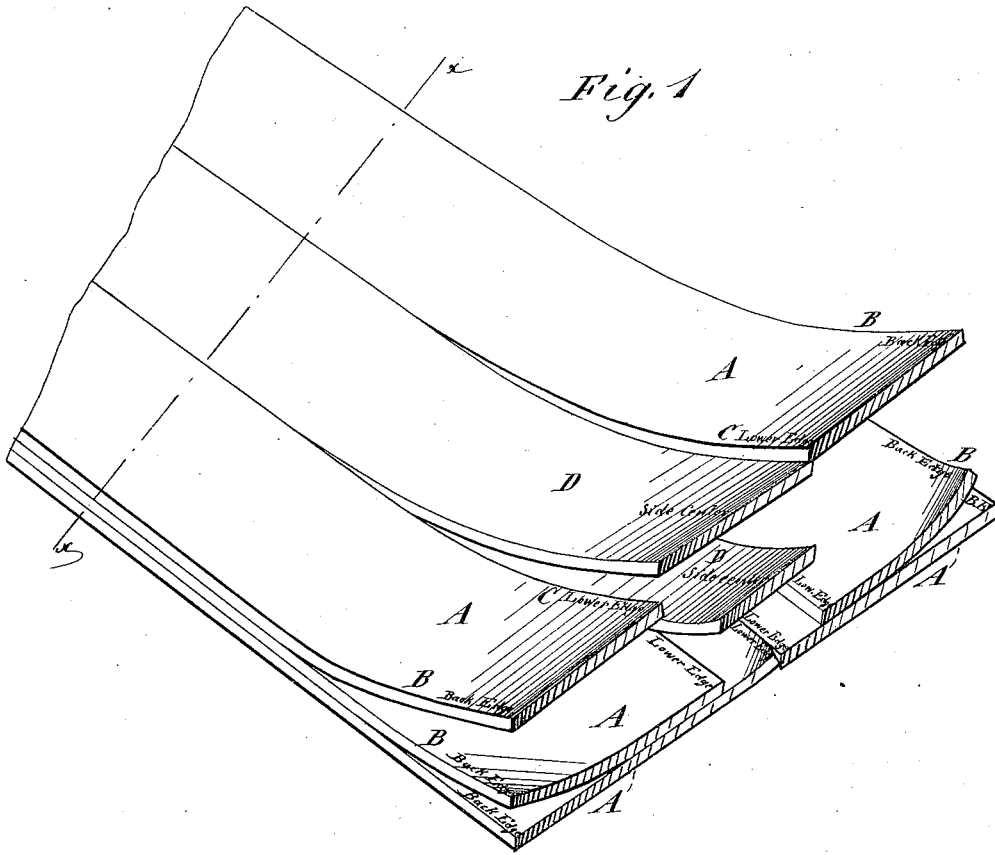
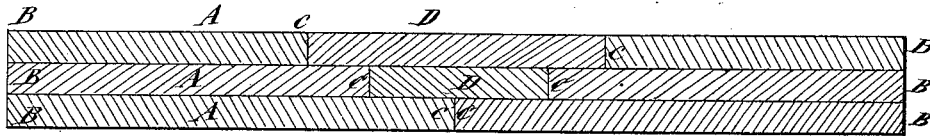


Fig. 2



WITNESSES:

*C. Novice*  
*A. J. Terry*

INVENTORS.

*C. H. Alexander*  
*H. W. Alexander, and*  
*E. P. Alexander*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN LEATHER BELTING.

Specification forming part of Letters Patent No. **164,507**, dated June 15, 1875; application filed...  
May 1, 1875.

*To all whom it may concern:*

Be it known that we, CHARLES H. ALEXANDER, HENRY W. ALEXANDER, and EDWARD P. ALEXANDER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Leather Belting, of which the following is a specification:

In the manufacture of wide leather belting it has been customary to cut a wide strip from the middle of each hide, lengthwise, which brings the middle of the hide in the middle of the belt, while the edges of the belt consist of the side portions more or less distant from the back, according to the width of the belt and the size of the hide. The middle portion of the hide, which comes from over the backbone of the animal, is of much firmer texture than the side portions, and does not stretch as much, and it runs on the middle of the pulley, which is always more or less crowning; the consequence of which is, that after running a little while the edge portions of the belt are found not to draw against the pulley with sufficient force to give their due measure of effect, being stretched so as to run loose, and in some cases not touching at all for a considerable breadth; hence, much of the power of the belt is lost, as only a certain portion of the middle of the belt is operative.

For remedying this defect, we propose to cut the hide along the middle for belts of two or more plies, and turn the back edges—that is, the edges formed by so cutting it—outward, and the side edges inward; and for belts too wide to be made by the two pieces so cut, we will introduce one or more middle pieces, taken from the center of a side. Thus we have the firmest texture at the edges of the belt, and the softer and more yielding texture in the middle, which makes the edges hug the lower portions of the face of the pulley, while the middle stretches over the crown,

and thus the belt acts with due effect throughout its whole breadth.

Figure 1 is a perspective view of a section of three-ply belt in which the pieces are arranged according to our invention, and Fig. 2 is a cross-section.

Similar letters of reference indicate corresponding parts.

A represents the pieces or strips of leather which are cut out of the middle portion of the hide, and also cut apart along the back, and arranged in the belt with the back edge B at the edge of the belt, and the side edges C in the middle portion. D represents the pieces cut from the lower side portions of the hides to fill in the middle portion of the belt when it is too wide to be made by the two pieces A, and to break joints in uniting the different plies.

We are aware that it is not new to make a belt of uniform thickness by reversing strips of hide, so as to bring the back edge of one strip in contact with the belly edge of another; but my object is not to obtain a uniform thickness, but a maximum of contact-surface. This we accomplish by placing on the outer edges of belt the firmer part of the leather, while the yielding part is brought into the middle. Thus we conform to the curved face of a crowning pulley, and prevent the edges of belt from being stretched.

Having thus described our invention, what we claim as new is—

A belt made of middle hide-strips, having the firm edges B on the outside, and the yielding ones C on the inside, as and for the purpose specified.

CHARLES H. ALEXANDER.  
HENRY W. ALEXANDER.  
EDWARD P. ALEXANDER.

Witnesses:

JAMES C. LYON,  
CHAS. M. TORBOSS.