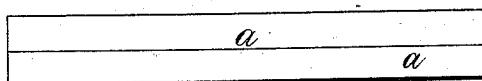


F. H. & J. E. UNDERWOOD, C. A. HAWKINS &  
G. F. UHLER.  
Round-Belting.

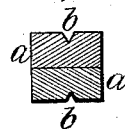
No. 216,916.

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*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*

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*Att'y*

# UNITED STATES PATENT OFFICE.

FRANK H. UNDERWOOD, JAMES E. UNDERWOOD, CHARLES A. HAWKINS,  
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## IMPROVEMENT IN ROUND BELTING.

Specification forming part of Letters Patent No. **216,916**, dated June 24, 1879; application filed April 23, 1879.

*To all whom it may concern:*

Be it known that we, FRANK H. UNDERWOOD, JAMES E. UNDERWOOD, CHARLES A. HAWKINS, and G. FRANK UHLER, of Tolland, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Round Belting, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view, and Fig. 2 an end view, of two thicknesses of leather as shaped and laid together preparatory to their union by cement and sewing according to the manner of carrying this invention into practice. Figs. 3 and 4 are similar side and end views of the same parts joined and rounded into a belt.

The common modes of constructing round belting are two. For belts of small diameter the belts are cut from a single thickness of leather; for belts of larger diameter thicknesses are laid together, twisted, and sewed.

In making belts of a single thickness there is great difficulty in finding a hide which will permit the cutting of a belt of any useful size, and then only at high cost, for extra thick hides have a high market-value. Moreover, when made, one side of the belt is composed of the "grain side" of the leather and the other the "flesh side," which, being of different densities and strength, tend to cut unevenly in the making, to wear unevenly on the pulleys, and to run untruly.

In making belts from different thicknesses, twisted and sewed, there is always the tendency to untwist, the openings to admit air and moisture, and all the before-mentioned disadvantages incident to strata of different densities and strength.

Our plan is to take two thicknesses of leather,

(denoted by the letters *a a* in the drawings,) lay the grain sides together face to face, cement them together, groove them with channels *b b* for a blind or sunken stitch, sew them together, the threads running from channel to channel, and then, after the usual wetting, draw it through the cutting-dies to make it round, closing the channels together above the stitch, (which we have denoted in Fig. 4 by the waved line *c*,) and leaving the flesh sides of the leather on the surface of the belt.

It is desirable that sides of the same kind—*i. e.*, grain or flesh—be faced together, that textures of the same kind be brought to the surface of the belt, that it may wear and run truly and evenly. Furthermore, it is desirable that the flesh sides be brought to the surface, because they are of greater density and strength than the grain sides.

It is desirable to use the sunken stitch to prevent its being worn and cut by contact with the pulleys.

When it is desired to make round belts of a greater diameter than two thicknesses are adequate for, the center may be filled or built up with another or other thicknesses of leather.

We claim as our invention—

As an improved article of manufacture, round leather belting made of layers of leather united by a line of stitching sunken below the outer surface, all arranged and constructed substantially as set forth.

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Witnesses:

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