(No Model.)

# W. C. & C. EDGE.

## COMPOUND BELTING.

No. 419,650. Patented Jan. 21, 1890.

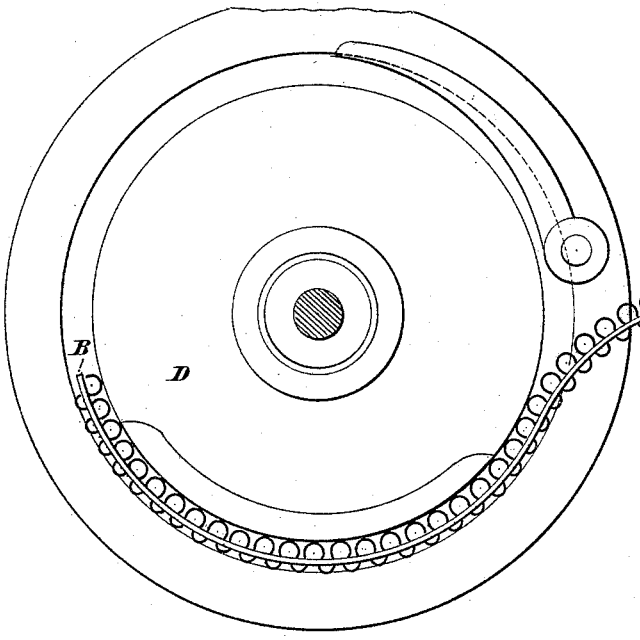



Fig. 1.

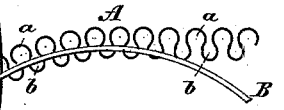



Fig. 5.

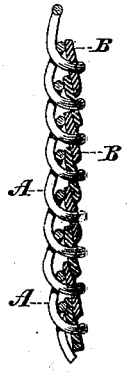



Fig. 6.

Fig. 2.

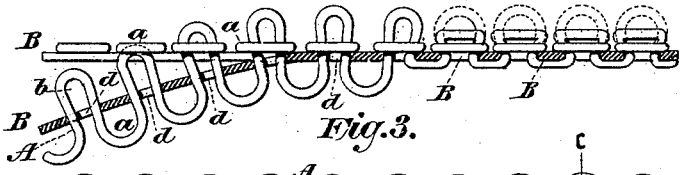



Fig. 3.

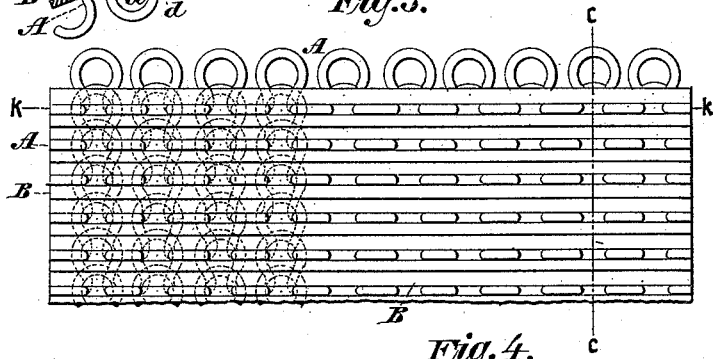
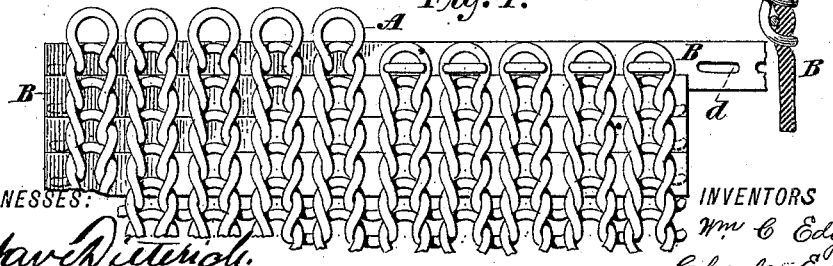



Fig. 4.




WITNESSES:

Gustave Wittenbeck

Theo. F. Bourne.

INVENTORS

Wm. C. Edge, and

Charles Edge.

BY

Briesen, Steele & Knauth

ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIAM C. EDGE AND CHARLES EDGE, OF NEWARK, NEW JERSEY.

## COMPOUND BELTING.

SPECIFICATION forming part of Letters Patent No. 419,650, dated January 21, 1890.

Application filed April 26, 1889. Serial No. 308,593. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM C. EDGE and CHARLES EDGE, both of Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Compound Belting, of which the following is a specification.

This invention relates to the class of belting that is made of knitted wire, and it has for its object to produce a friction-surface on the wearing side of the belting.

The invention consists in a knitted-wire belt having a facing of perforated leather or other fabric on the wearing side interwoven with the meshes of the belting, as will be more fully hereinafter set forth, and finally pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail face view of a portion of a machine that is adapted to construct our improved compound belting, showing also the manner in which the leather is united with the wire of the belting. Fig. 2 is a cross-section on the plane of the line *c c*, Fig. 3, showing in detail the manner of interweaving the leather friction-facing with the belting. Fig. 3 is a face view of a piece of the finished belting. Fig. 4 is a similar view of the opposite side of the belting. Fig. 5 is a vertical section on the plane of the line *c c*, Fig. 3, and Fig. 6 is a similar view of a modification.

The wire fabric shown in the drawings consists, primarily, of rows of crimped wire A, having wide loops *a* and narrower loops *b*, as indicated in Fig. 1.

To construct a piece of fabric the narrow loops *b* of one row are passed through the wide loops *a* of another row, and then the projecting parts of the narrow loops *b* are spread or widened, so as to form a wide loop and prevent said loop being withdrawn from the other. The loops are then pressed down flat.

The United States Patent to William C. Edge, No. 242,616, dated June 7, 1881, shows a machine by which the above-described fabric can be made, as well as showing some of the fabric, to which patent we refer for a more detailed description for constructing the wire portion of our compound belting.

In Fig. 1 the letter D indicates the part of said machine that causes the loops to be interlocked.

Our compound belting is composed of the wire fabric A A, interwoven with strips or sheets B of leather or analogous material.

When in this specification we mention leather for the friction-producing surface, we wish to be understood as meaning any analogous substance that will answer the purpose.

Our preferred mode of constructing the compound belting consists in using narrow strips B of leather, as clearly shown in Figs. 2 and 5, which strips are perforated with a series of holes *d*, through which the narrow loops *b* of the crimped wires A are passed, so that the leather B shall come into the bottoms of the loops *a*. (See Fig. 2.) The narrow loops *b* of one row A are then passed through the side loops *a* of another row A and spread or widened, as before indicated, whereby the strips B are held in position between the loops *a b* of two rows A.

By the above construction one side of the wire belting A A is faced with leather B, that is held in position by the meshes of the belting. As shown in Fig. 5, one edge of each strip B is overlapped by the contiguous edge of the next strip B.

Instead of using separate narrow strips B for the friction-surface a continuous sheet B may be used, having rows of perforations at the proper distances apart to receive the loops *b* of the crimped rows A.

By having the leather facing B a knitted-wire belt may be used with great advantage in many instances, because the belt is prevented from slipping on the pulleys, &c., on account of the friction between the facing B and the pulley.

Of course it will be understood that we do not confine ourselves to the particular kind of knitted-wire fabric herein shown, as

other kinds of wire fabric having the friction-facing B will answer.

Having now described our invention, what we claim is—

1. As an improved article of manufacture, the knit-wire belting A, combined with the friction-facing B of fabric that is secured on one side of the belting, substantially as described.

2. The knit-wire fabric A A, having loops *a b*, combined with the facing B, having holes *d* that receive the loops *b*, substantially as herein shown and described.

WILLIAM C. EDGE.
CHARLES EDGE.

Witnesses as to Wm. C. Edge:
HARRY M. TURK,
JOHN M. SPEER.
Witnesses as to Chas. Edge:
W. B. ADAMS,
F. N. JOHNSON.