

(No Model.)

J. F. BROWN.  
BELTING.

No. 577,378.

Patented Feb. 16, 1897.

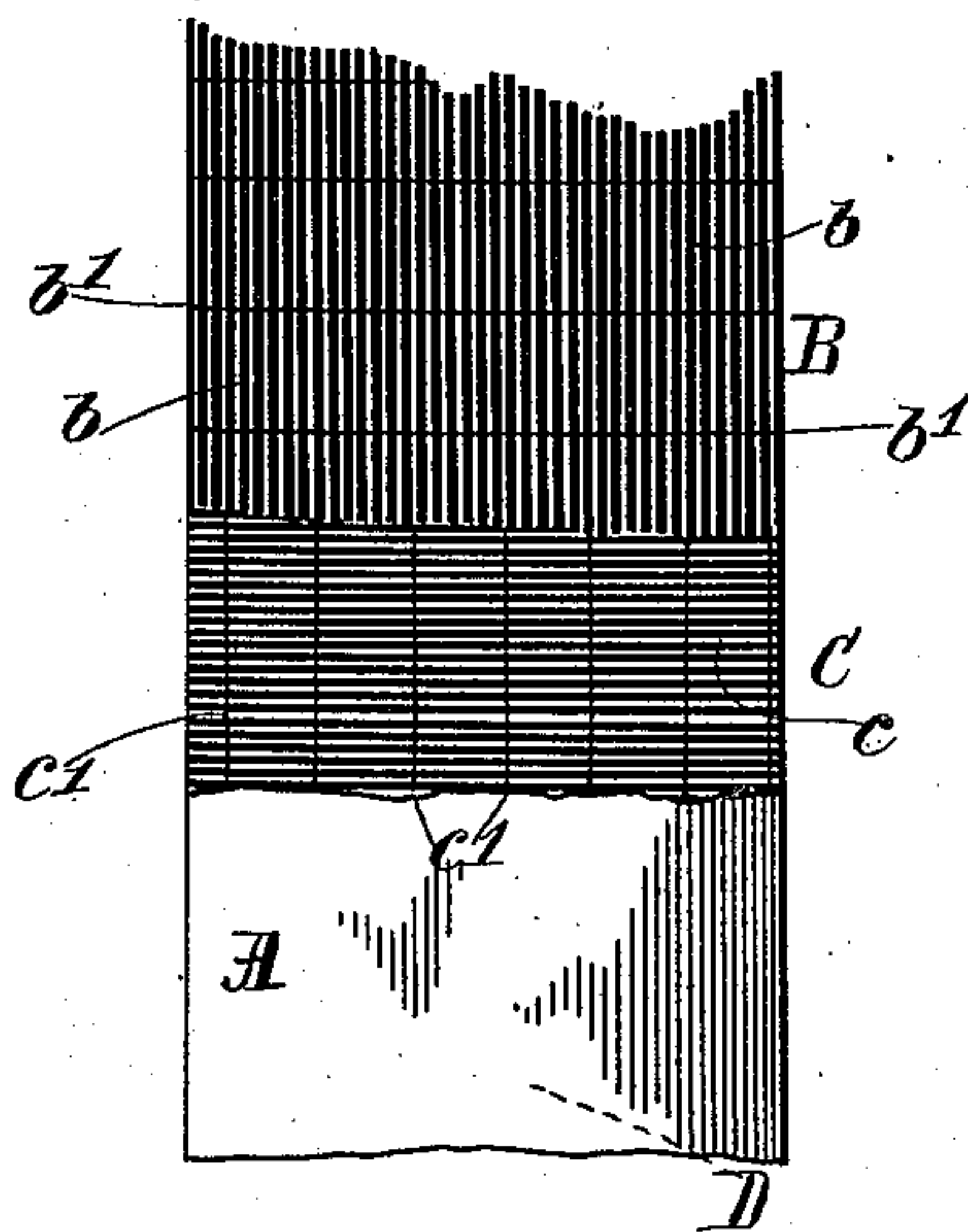


Fig. 1.

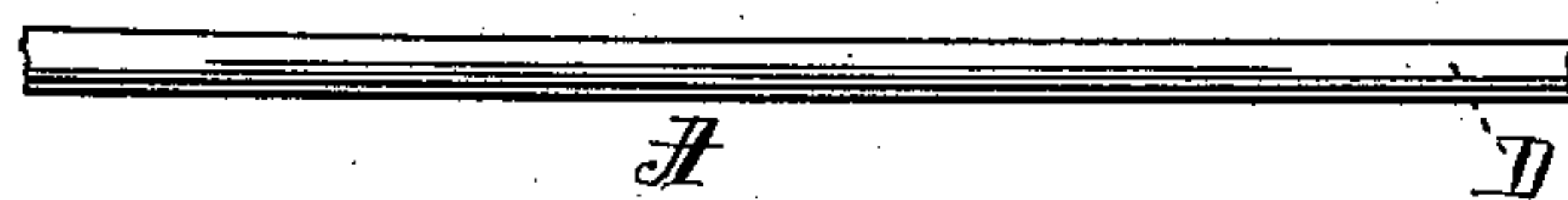


Fig. 2.

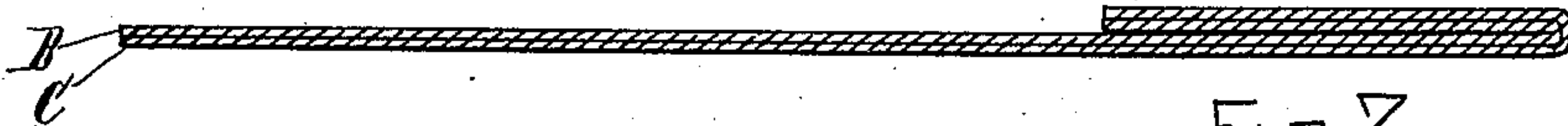


Fig. 3.

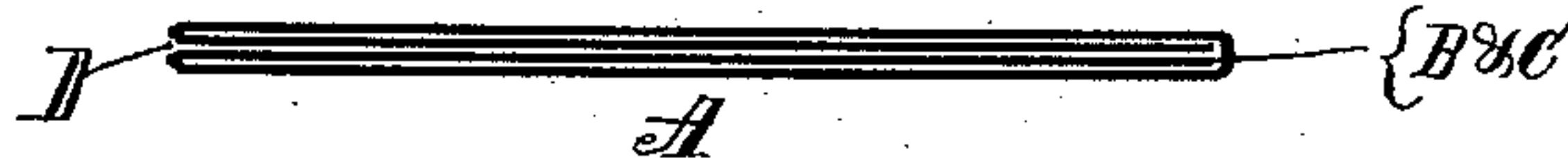


Fig. 4.

WITNESSES

*F. Rockwood Hall*  
*C. A. Prest*

INVENTOR

*James Freeman Brown.*

By,

*Thomas M. Hobday*  
Attorney.

# UNITED STATES PATENT OFFICE.

JAMES FREEMAN BROWN, OF NEEDHAM, MASSACHUSETTS.

## BELTING.

SPECIFICATION forming part of Letters Patent No. 577,378, dated February 16, 1897.

Application filed May 25, 1895. Renewed December 1, 1896. Serial No. 614,154. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES FREEMAN BROWN, of Needham, in the county of Norfolk, State of Massachusetts, have invented a new and efficient Belting, of which the following is a specification.

The essence of this invention consists of two materials or textile fabrics, one consisting of warp-threads or longitudinal cords having associated therewith woof-threads or transverse cords, as few as possible, simply for the purpose of keeping the warp-threads or longitudinal cords in their relative position, and the other material or textile fabric consisting of woof-threads or transverse cords having associated therewith warp-threads or longitudinal cords, as few as possible, simply for the purpose of keeping the woof-threads or transverse cords in their relative position. These two materials are so associated together and treated with rubber or any other suitable substance, compound, or material, or stitched together and folded, as to produce a belting of great durability and strength, and, above all, of very slight stretch, if any.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is an edge view of Fig. 1. Fig. 3 is a transverse section of the materials which comprise my invention, showing that such may be folded for the purpose hereinafter pointed out. Fig. 4 is a view similar to Fig. 3, showing the folds complete.

A represents my belting, the nature of which will appear in detail in the following subject-matter.

B denotes one of the textile fabrics, which is one of the essential parts of my invention, and C is the other textile fabric or material, the other essential part of my invention.

The former is in nature as follows: *b* represents warp-threads or longitudinal cords, and *b'* woof-threads or transverse cords. In this material or fabric the association of these woof-threads with the warp-threads is simply for the purpose of keeping the warp-threads or longitudinal cords in their relative position; and the use of these woof-threads is as limited as possible, so as to attain as much as possible a straightness of the longitudinal cords without curves or crimps caused by the association of the transverse cords with the

longitudinal cords in the ordinary manner of weaving.

The latter fabric is in nature as follows: *c* represents woof-threads or transverse cords, and *c'* warp-threads or longitudinal cords. In this material or fabric the association of these warp-threads or longitudinal cords with the woof-threads or transverse cords is simply for the purpose of keeping the woof-threads or transverse cords in their relative position, for should there be a number of these warp-threads greater than the number used for the purpose just mentioned they would have no function to perform in a longitudinal direction, owing to the greater number of curves or crimps in excess of those to which the longitudinal cords of the material B are subjected, for the cords comprising the material B being straight, with the exception of a very few curves or crimps caused by the woof-threads, the cords will resist a stretch in a longitudinal direction, while the longitudinal cords used in the fabric or material C will permit a stretch of the belt in a longitudinal direction, owing to the great number of curves or crimps, which, when a longitudinal strain is applied, will tend to become straight, thus subjecting the belt to a longitudinal stretch, which the material B is designed to prevent.

The material C is employed solely for the purpose of preventing longitudinal tear or ripping of the belting, which would be caused by connecting the two ends of the belt together either by lacing or by any other means and by an excess of strain upon the belt. These two materials I place together and treat with rubber or any other suitable substance, compound, or material, (represented by D,) or stitch together and fold so as to effect an entirety or whole. The views 3 and 4 illustrate folding of these two materials. The former shows the materials partly folded and the latter fully folded. By folding these materials any desired strength can be attained, according to the number of folds or according to the thickness or nature of the threads or cords employed.

I desire to say that the respective warp and woof threads employed to keep the respective warp and woof threads in their relative position, as heretofore stated, are so employed as



to dispense with mechanisms to attain the same result—that is to say, where a peculiar mechanism would be necessary to keep the longitudinal cords or warp-threads in their relative position and the transverse cords or woof-threads in their relative position to effect treatment with rubber, &c., these positioning warp and woof threads dispense with such positioning mechanisms, for by the use of these positioning warp and woof threads all that is required is to sufficiently stretch the respective materials heretofore described and manipulate them into a belt or belting.

Having described my invention, I claim—  
1. A belt or belting made of two materials or textile fabrics, one consisting of warp-threads or longitudinal cords, having associated therewith, woof-threads or transverse cords as few as possible simply for the purpose of keeping the warp-threads or longitudinal cords in their relative position, and the other material or textile fabric consisting of woof-threads or transverse cords, having associated therewith warp-threads or longitudinal cords as few as possible simply for the purpose of keeping the woof-threads or trans-

verse cords in their relative position; associated together and treated with rubber or any other suitable substance, compound, or material, and stitched together and folded, substantially as and for the purpose described.

2. In a belt or belting, two materials or textile fabrics, one consisting of warp-threads, or longitudinal cords, having associated therewith, woof-threads or transverse cords as few as possible simply for the purpose of keeping the warp-threads or longitudinal cords in their relative position, and the other material or textile fabric consisting of woof-threads or transverse cords, having associated therewith warp-threads or longitudinal cords as few as possible simply for the purpose of keeping the woof-threads or transverse cords in their relative position, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. FREEMAN BROWN.

Witnesses:

THOMAS W. HOBDAY,  
H. J. EDWARDS.