## J. H. MURPHY.

ENDLESS BAND OR CORD. (Application filed Mar. 16, 1897. Renewed June 8, 1898.) (No Model.) 2 Sheets—Sheet I. J. 86. Marphy. WITNESSES:

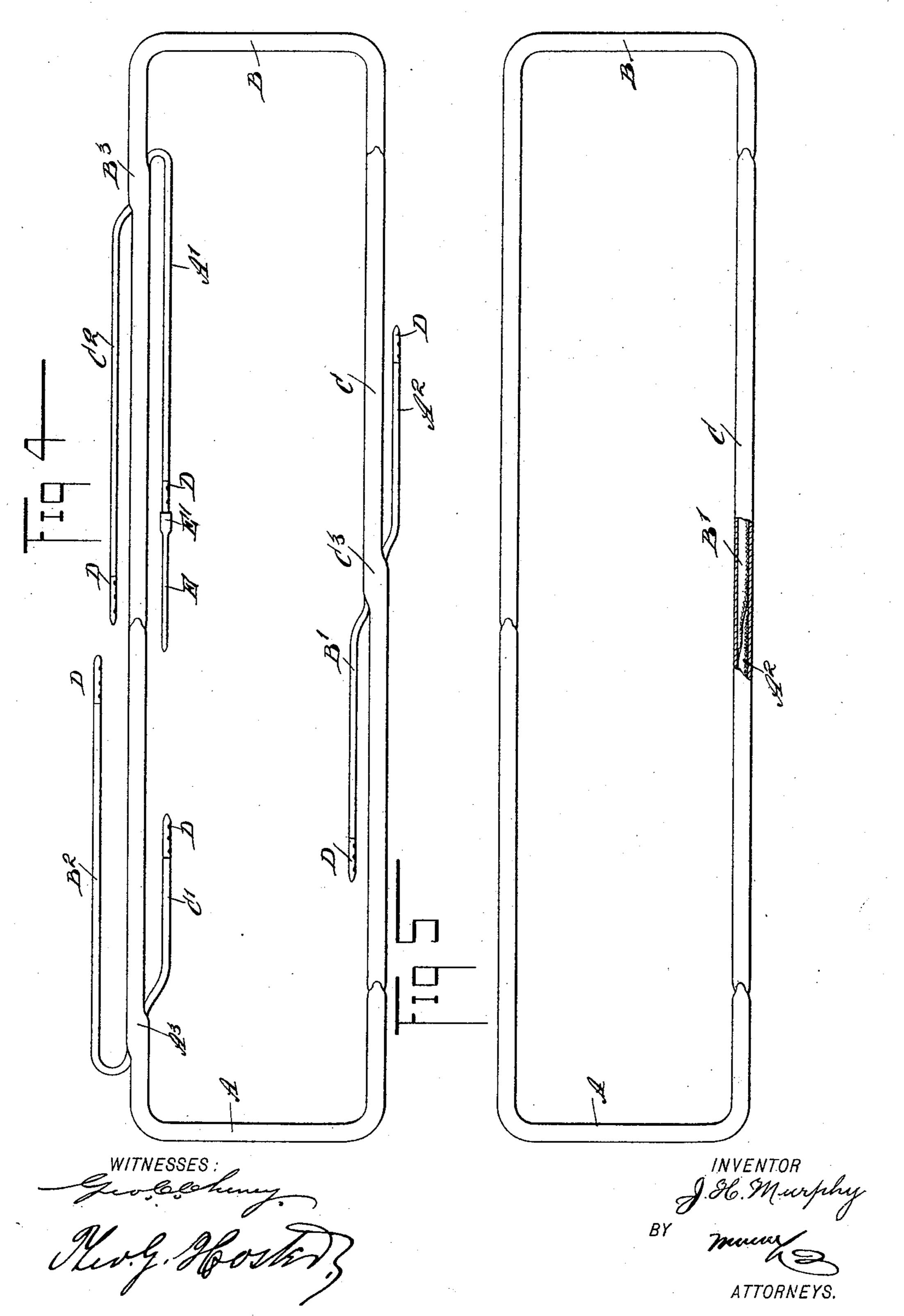
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2 Sheets—Sheet 2.



# United States Patent Office.

JEREMIAH H. MURPHY, OF FLATONIA, TEXAS.

### ENDLESS BAND OR CORD.

SPECIFICATION forming part of Letters Patent No. 606,933, dated July 5, 1898.

Application filed March 16, 1897. Renewed June 8, 1898. Serial No. 682,960. (No model.)

To all whom it may concern:

Be it known that I, Jeremiah H. Murphy, of Flatonia, in the county of Fayette and State of Texas, have invented a new and Improved Endless Band or Cord, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved endless band or cord, more especially designed for use as a driving-belt for small machinery, for spindles, &c., the band being arranged to combine great strength and durability, to prevent undue friction by having smooth joints, to reduce shrinkage or expansion to a minimum, and to prevent slipping or breaking of the belt when in use.

The invention consists principally of a plurality of tubular bands, each filled in substantially its entire exposed or visible length with the order of its adiacent bands.

with the ends of its adjacent bands.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts in section and showing the several tubular parts partly inserted one in the other. Figs. 2, 3, and 4 are side elevations of the improvement, showing different steps in the construction of the band; and 3° Fig. 5 is a side elevation of the finished arti-

cle with parts in section. As illustrated in the drawings, three tubular bands A, B, and C are employed to form the endless band or belt; but it is evident that 35 any desired number of such tubular bands may be used to form a belt of any desired length. The tubular bands are preferably of plaited fabric and each is provided at its ends with metallic tips D, adapted to be inserted 40 in the split socket E' of a needle E, employed in drawing the ends of each band into the adjacent one, so as to fill the several bands in such a manner that each band contains the ends of its adjacent two bands. Thus, 45 as shown in the drawings, the band A is filled to half its length with the end B<sup>2</sup> of the band

of the band C. The band B is filled to half of its length with the end A' of the band A and with the end C' of the band C. The third band C is filled to half its distance with the end A' of the band A, and the other half is filled with the end B' of the band B.

B, and the other half is filled with the end C'

In manufacturing the endless band or belt each band is marked at or near its middle, as 55 at A³, B³, or C³, so as to indicate the points at which the different ends are drawn through the corresponding tubular band, it being understood that the projecting ends, as shown in Fig. 4, are cut off at the points A³ B³ C³, so 60 that on pulling on the corresponding band in opposite directions the cut-off ends disappear within the tubular band to lie close to each other, as indicated in the broken-out portion in Fig. 5.

When constructing the bands as shown, for instance, in Fig. 1, the needle E carries at its socket the metallic tip D at the end A' of the tubular band A, and this needle is now inserted at about one-fourth the length of the 70 band B, so as to draw the end A' into the band B at the point B<sup>3</sup>, after which the needle is pushed through the band B at one side thereof to draw the tip and a short portion of the end A' through the side of the band B, 75 as illustrated in Fig. 2.

The same operation is repeated with all the different ends of the tubular bands A, B, and C, as progressively illustrated in Figs. 2, 3, and 4, so that each band is filled to one-half 80 of its visible length by the ends of the adjacent bands, as before mentioned.

Now it will be seen that by the arrangement described a very durable band or belt is obtained, as each is filled with the ends 85 of the adjacent bands, and consequently the band is not liable to stretch or to shrink when in use.

Having thus fully described my invention, I claim as new and desire to secure by Letters 90 Patent—

1. An endless band or cord, consisting of a plurality of tubular bands, each filled in substantially its entire exposed or visible length with the ends of its adjacent tubular bands, 95 substantially as shown and described.

2. A band or cord, consisting of a plurality of tubular bands, each band inclosing in its central portion the ends of the adjacent bands, said inclosed ends meeting, substantially as 100 described.

### JEREMIAH H. MURPHY.

Witnesses:

E. A. ARNIM, WM. ARBUCKLE.