(No Model.)

R. B. JONES & J. HUGHES.

DRIVING BELT.

No. 302,204. Patented July 15, 1884.

Fig. 1.

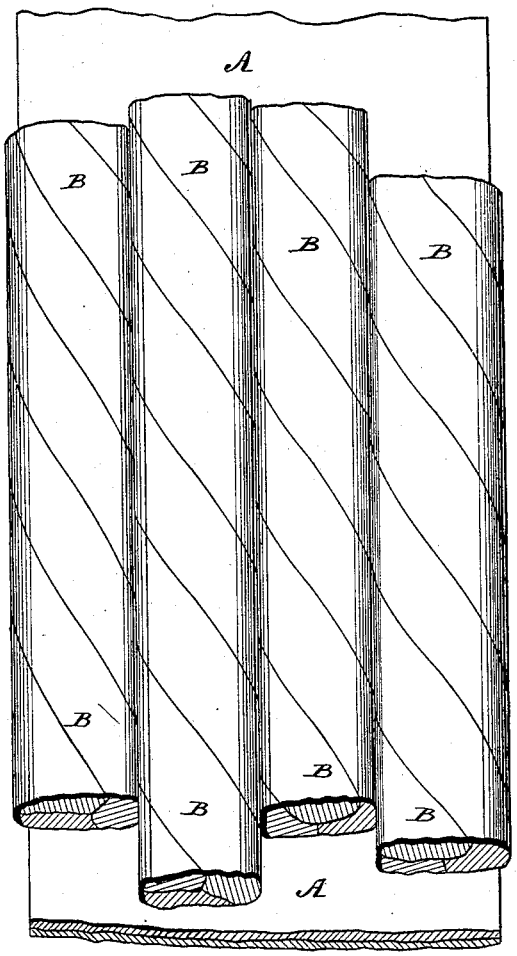
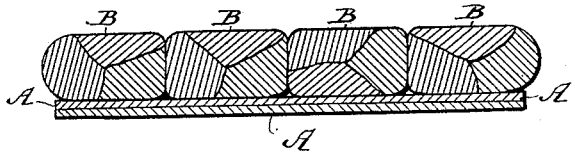


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROBERT BIBBY JONES AND JAMES HUGHES, OF LIVERPOOL, COUNTY OF LANCASTER, ENGLAND, ASSIGNORS TO GARNOCK, BIBBY & CO., OF SAME PLACE.

DRIVING-BELT.

SPECIFICATION forming part of Letters Patent No. 302,204, dated July 15, 1884.

Application filed May 14, 1884. (No model.) Patented in England January 4, 1884, No. 643.

To all whom it may concern:

Be it known that we, ROBERT BIBBY JONES, of the firm of GARNOCK, BIBBY & Co., rope and belt manufacturers, and JAMES HUGHES, in the employ of the said firm, subjects of the Queen of Great Britain, residing at Liverpool, in the county of Lancaster and Kingdom of England, have invented certain new and useful Improvements in Machine-Driving Belts, (for which we have received Letters Patent in England, dated January 4, 1884, No. 643,) of which the following is a specification.

This invention has for its object an improvement in machine-belting which will enable the belt to withstand frictional wear to a wonderful degree, which will give greater pliability, and thus allow the use of pulleys of smaller circumference than could be economically employed with leather or canvas belting of equal thickness, and, lastly, which gives the belt an increased weight, and thus enables it to do its work with an amount of slackness that would be impracticable with ordinary belting. We obtain this result by a combination of rope with ordinary belting.

Hitherto flat ropes or rope belts have been made in two ways: first, the strands have been platted or braided into a flat rope at outset; second, a series of ordinary ropes have been sewed together side by side. Now, rope belts will last much longer than canvas ones, if properly constructed, as they stand friction much better. Canvas belting, however, when shielded from directly fraying action, is immensely strong and durable.

Our invention is designed to give the durability of rope belts with the tenacity of canvas, and is best described by aid of the accompanying drawings, in which—

Figure 1 shows a plan of the belt; Fig. 2, a section.

A is a strong backing, of any tough, strong material suitable for belting. We prefer canvas, one or more thicknesses well sewed together. When sewing the canvas, we sew on the back thereof ropes B B, stretched straight and sewed side by side longitudinally. The ropes can be with twists all one way, as shown, or alternately—namely, a rope with twists one way and the next with twists the opposite way. After the ropes, which are preferably well tarred, are sewed on, the whole is put between rolls and powerfully compressed, so as to flatten the ropes out, and then, if desirable, beeswax and tallow, or other suitable adhesive material, according to the use required, is rubbed in, if required, to fill up the interstices.

In place of canvas, other good strong backing can be used; and if the rope side be used as the wearing side a comparatively light backing will maintain the flat rope intact. In this way strong, durable rope belts, or, as they are oftener called "flat ropes," can be made, instead of making them by the present very expensive and difficult method of sewing them the one to the other. This belting is applicable for machine-driving, for creepers, for carrier-belts, and the like.

In some cases we may sew rope on both sides of the canvas; but for nearly all purposes a single layer of ropes on one side is best.

We claim as our invention—

1. As an improved article of manufacture, a belt formed of ropes stretched straight, placed side by side, and stitched in that position to a backing of ordinary belting material, substantially as described.

2. A belt formed of ropes stretched straight, stitched side by side longitudinally to a backing of ordinary belting material, and pressed flat, substantially as described.

3. A belt formed of ropes stitched longitudinally to a backing of ordinary belting material, a filling-up of beeswax and tallow, by which means a flexible, solid, and greasy belt is formed, very durable and biting firmly on the pulleys.

4. The process of manufacturing belting, which consists in sewing ropes stretched straight and placed side by side to a backing of ordinary belting material, rolling the same flat between rollers, and rubbing in with adhesive material, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ROBERT BIBBY JONES.
JAMES HUGHES.

Witnesses:
WM. P. THOMPSON,
J. O. O'BRIEN.