No. 823,892. PATENTED JUNE 19, 1906.

G. W. PARKES.

DRIVING BELT.

APPLICATION FILED DEC. 30, 1903.

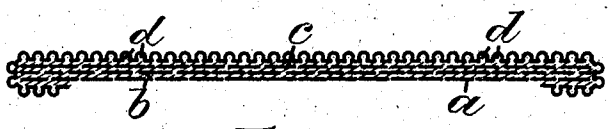


Fig. 1.

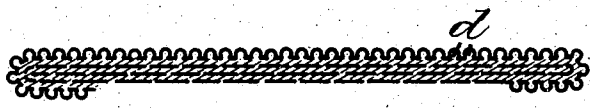


Fig. 2.

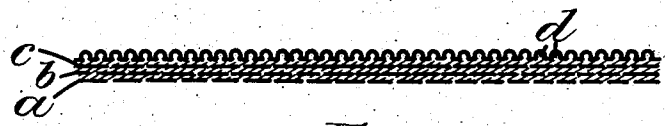


Fig. 3.

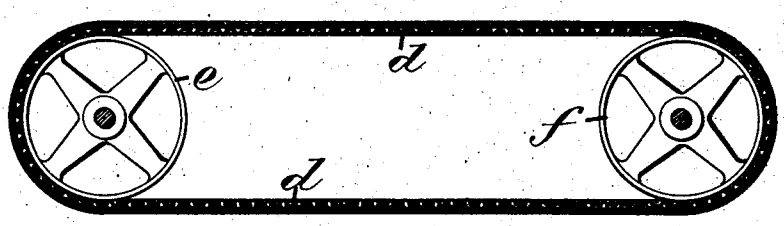


Fig. 4.



Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE W PARKES, OF MANCHESTER, ENGLAND.

DRIVING-BELT.

No. 823,892. Specification of Letters Patent. Patented June 19, 1906.

Application filed December 30, 1903. Serial No. 187,226.

To all whom it may concern:

Be it known that I, GEORGE WILLIAM PARKES, a subject of the King of Great Britain and Ireland, and a resident of Manchester, in the county of Lancaster, England, have invented new and useful Improvements in and Relating to Driving-Belts or the Like, of which the following is a specification.

This invention relates to woven or similar driving belts or bands and the like or to a belt or the like formed or provided with a surface composed of a woven fabric; and its object is to so construct them that the faces, edges, or other parts exposed to wear on any one or more of such parts may be protected, and incidentally to obtain a better grip upon the pulley.

In carrying these improvements into effect that part or those parts of a belt which comes or which come into contact with the pulleys or are otherwise exposed to wear is or are formed with loops or with a pile which may be cut or not, as desired. These loops may be produced during the process of weaving by any of the well-known or usual methods common in the manufacture of piled fabrics. This piled or looped part of a belt may be woven with or be integral with the body of the belt, or it may consist of a separately-formed piece of fabric which covers or partially covers the belt. In a belt composed of canvas or other fabric folded upon itself several times that part of the fabric which will be outside when the belt is made may be woven with the loops or pile, the remainder of the fabric being woven in the usual manner. Any convenient number of threads may be utilized for forming the loops or pile. The loops or the pile may be produced in any of the well-known ways and either in the warp or in the weft.

Figure 1 shows in cross-section a belt composed of several plies or layers *a b c*, the outer one of which, *c*, has loops formed upon its surface and is disposed upon the others in such a manner that its looped face is the one which comes against the pulley or the like. The loops are indicated at *d*. The looped surface may merely extend across the face of the belt or it may extend to some extent around the edges, as shown in the drawings. Fig. 2 is a similar section of a like belt formed from a fabric which is folded upon itself several times, that part which is to form a face of the complete belt having the loops *d* produced in it. As before explained, the looped part may be of width only sufficient to extend across the belt or it may be of greater width, so that the edges and a slight part of the back of the belt are furnished with looped faces. Fig. 3 represents a longitudinal section of a belt having a looped driving-surface, the loops *d* being formed in the warp in this case. In all these cases the different plies or layers may be secured together by stitching, cement, or by other convenient means or devices. Fig. 4 shows a belt provided with a looped driving-face disposed around two pulleys *e* and *f* and illustrates the contact of the looped or piled surface *d* with the faces of the pulley. Fig. 5 shows in section a solid woven driving-belt having loops *d* produced upon one of its faces.

It will be understood, of course, that instead of the belt being wholly composed of textile or woven material it may be partially composed of leather or other suitable substance covered on one face at least with a fabric having a pile or loops formed thereon, the leather or the like being thus substituted for either or both the plies *a b* shown in Fig. 1.

In the example illustrated the belt is only shown with a pile or with loops produced on one face; but for certain uses, when the belt is destined to run with both faces on pulleys, or, when desired, the belt may be produced with both its surfaces formed with loops or the like. Such a belt would of course be reversible.

A belt constructed according to this invention may consist of or may contain two different fibers, as cotton and hair, one of them—for example, the cotton—being used to form the loops.

A belt formed as described may have any known and suitable protective edge combined with it. A belt so formed obtains a perfect grip on the pulley or pulleys and does not slip, so that the life of a belt and its efficiency are greatly increased. Furthermore, an additional advantage is obtained by the fact that the loops or the pile act as a pad or elastic cushion between the belt and the pulley, and thus relieve them both from jars and certain strains. For better cushioning and with a built-up textile belt one or more of the internal parts may also be piled or in loops. The loops may be left as loops, as indicated in the drawings, or they may be cut in the well-known manner to form a pile.

In a modified form of belt instead of producing loops which may afterward be cut to

form a pile, the pile may be produced by "raising" the textile surface of the belt by cards or equivalent devices in a nap-raising or like machine.

I claim as my invention—

A driving band or belt comprising a body portion of solidly-woven fabric, said fabric having loose, comparatively flat textile loops projecting from its pulley-engaging surface, and engaging the pulley whereby said loops are flattened down in use so as to form a flat even pulley-engaging surface upon the belt.

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

GEO. W. PARKES.

Witnesses:
WILLIAM GEO. HEYS,
FRANK A. HEYS.