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M. M. LAHUE.
STRAP, BAND, AND THE LIKE.
APPLICATION FILED JAN. 25, 1905.

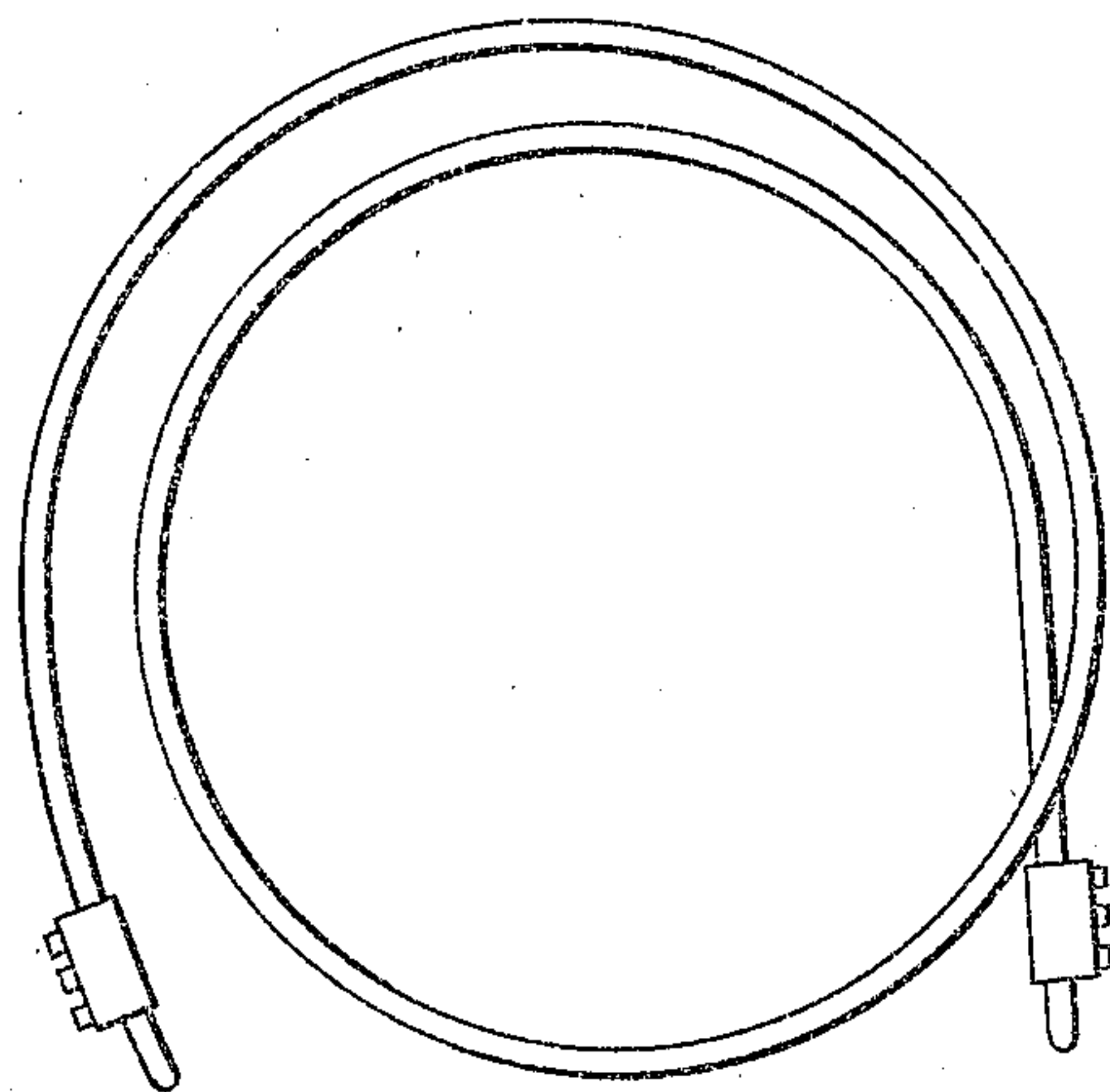


Fig. 1.

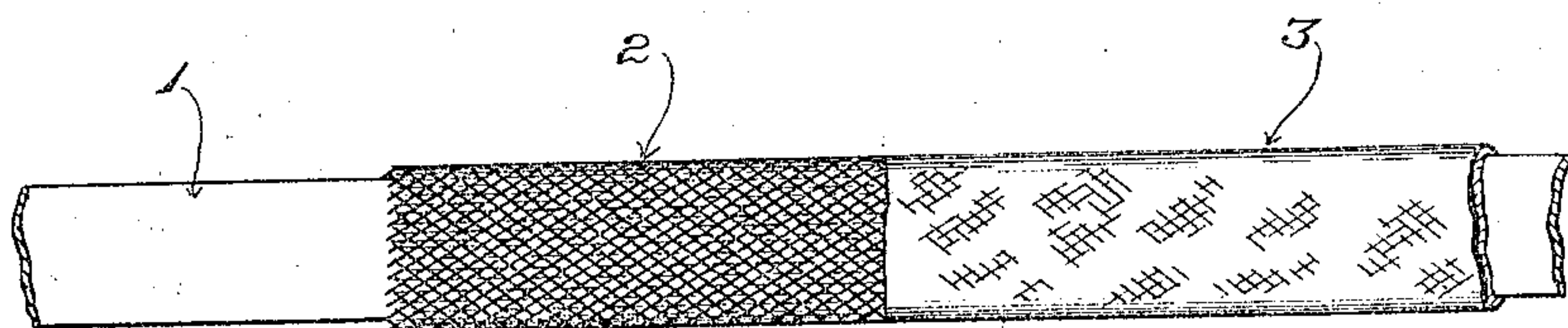


Fig. 2.

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UNITED STATES PATENT OFFICE.

MOSES M. LAHUE, OF LOWELL, MASSACHUSETTS.

STRAP, BAND, AND THE LIKE.

No. 862,403.

Specification of Letters Patent.

Patented Aug. 6, 1907.

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To all whom it may concern:

Be it known that I, MOSES M. LAHUE, a citizen of the United States, residing at Lowell, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Straps, Bands, and the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 of the drawings shows in elevation a drag-band or brake-strap for the warp-beam of a loom. Fig. 2 is a detail view on a larger scale than Fig. 1, showing a portion of a strap-band or the like constructed in conformity with my invention.

The invention has reference, more particularly, to the drag or brake-straps or bands which are employed in connection with the warp-beams of looms for the purpose of controlling the delivery of the warp-yarns as the weaving proceeds, and to other straps, bands, cords and the like which are employed in the textile industry. Straps, bands, cords and the like made of fibrous material are affected by the hygrometric condition of the surrounding atmosphere. When the atmosphere is humid, they absorb moisture and contract in length. This affects their action more or less when employed as drag-bands, straps or the like, and in various other situations, it being necessary in many instances to offset the change of length by a compensating shift or adjustment. At the present time, the practice is general of maintaining the atmosphere within a cotton mill by artificial means in a predetermined state of humidity, inasmuch as the cotton fiber can be worked with better results, especially in the production of yarns of the finer counts. The degree of humidity which is desirable for the latter reason causes difficulty to be experienced in connection with let-off straps or bands, etc.

One general object of the invention is to obviate the difficulty to which reference has been made.

Another general object thereof is to obviate the tendency to stretch which is experienced in connection with straps, etc., composed of fibrous material.

In attaining the general objects aforesaid I make a strap, band, cord or the like with a non-extensible core, 1, of suitable material of a degree of flexibility varying according to the contemplated use of the strap, band, etc. For some purposes I employ a strip or band of sheet-metal, for others a strip or band of vulcanized fiber, and for still others one or a plurality of wires of greater or less softness as the intended use may require. The core-strip or band, wire or wires, etc., I coat with glue, shellac, or the equivalent thereof, for the purpose of causing the fibrous covering, 2, which is applied to the said core to adhere firmly to the latter, so as to obviate tendency of the said covering to slip along the core. The covering is composed of fibrous mate-

rial, usually in the form of yarns, and is woven, braided, wrapped, or otherwise formed thereon or applied thereto. The said covering I treat with paraffin or its equivalent, either alone or combined with one or more additional substances according to the results which it is desired to secure in practice. In Fig. 2, the portion 3 is assumed to have been thus treated.

In practice the fibrous covering will be treated throughout the length of the strap, band, etc. The paraffin or its equivalent renders the fibrous covering non-absorbent of moisture. When the strap, cord, or band is designed for use as a drag-band in connection with the warp-beam of a loom for the purpose of controlling the unwinding of warp-yarns, I combine graphite or other suitable dry lubricant with the paraffin before applying the paraffin to the fibrous covering. For the purpose of making the application of the paraffin to the covering, I melt the former and while the same is in a melted or softened state I mix therewith the graphite or other substance which is used. The strap, band, cord or the like, then is caused to pass through the melted wax or compound, the fibrous covering taking up the desired amount thereof and becoming saturated therewith. The non-hygrometric properties of the strap, band, cord or the like, thus produced cause it to continue unchanged in length, etc., by the conditions as to moisture of the atmosphere in which it is employed. When graphite or the like material having lubricating properties is employed, uniformity of effect in its action in connection with the warp-beam is thereby secured. Straps or bands made in conformity with the invention are excellently adapted for employment for loom-strapping such as lug-straps, jack-straps, etc., and also for belting. For lug-straps and jack-straps, the graphite may be omitted if desired, the fibrous covering being treated with paraffin alone. For belting, the place of the graphite or other dry lubricant will be occupied by powdered resin melted with the paraffin or other wax prior to the saturation of the fibrous covering therewith, the resin or its equivalent being employed to enable the belting to take firm hold of the pulleys over which it passes. A cord or the like made with a center or core of one or more soft wires, with a winding of yarn or cord, and treated with the paraffin and resin, is adapted for use as spindie-banding.

I claim as my invention:

1. A strap, band, or the like, comprising a non-extensible core and a covering of fibrous material treated throughout with paraffin.
2. A strap, band, or the like, comprising a core, and a covering of fibrous material treated throughout with paraffin and graphite.
3. A strap, band, or the like, comprising an inextensible core, and a covering of fibrous material treated throughout with paraffin and graphite.
4. A strap, band, or the like, comprising a core, and a

fibrous covering, bound to said core by glue or shellac, and treated throughout with paraffin and graphite.

5. A strap, band, or the like, comprising a non-extensible core and a fibrous covering which is bound to the said core by glue or shellac and treated throughout with paraffin and graphite.

6. A strap, band, or the like, comprising a non-extensible core and a seamless covering of fibrous material which is bound to the said core by glue or shellac and treated with paraffin and graphite.

7. A strap, band, or the like, comprising a non-extensible core and a seamless covering of fibrous material treated with paraffin and graphite.

8. A strap, band, or the like, comprising a non-extensible core and a seamless covering of fibrous material treated with paraffin.

9. A strap, band, or the like, comprising a core, and a seamless covering of fibrous material treated with paraffin and graphite.

10. A strap, band, or the like, comprising an inextensible core, and a seamless covering of fibrous material treated with paraffin and graphite.

11. A strap, band, or the like, comprising a core, and a seamless fibrous covering, bound to said core by glue or shellac, and treated with paraffin and graphite.

In testimony whereof I affix my signature in presence of two witnesses.

MOSES M. LAHUE.

Witnesses:

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