

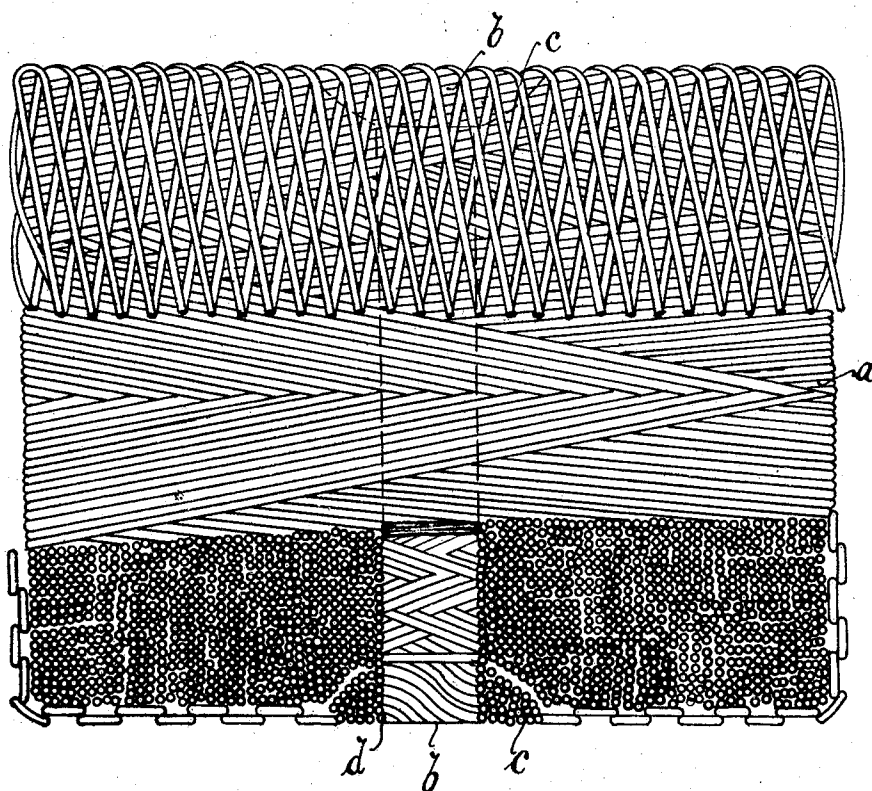
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L. P. WEIDEMANN

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BALL OF THREAD WITH PROTECTING WINDING FOR SHEAF BINDERS

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Inventor.

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UNITED STATES PATENT OFFICE

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BALL OF THREAD WITH PROTECTING WINDING FOR SHEAF BINDERS

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In the hitherto used balls of thread with protecting winding the main portion of the ball could not be completely covered with the protecting winding without being lengthened thereby. At the ends of the ball unprotected portions remained, which, when the ball was exposed to side pressure, bulged out and destroyed the correct position of the thread windings in the main portion. To the windings of the thread for the protecting winding a too small angle was given, whereby the hold of the winding was impaired and thick pads formed at the ends, whereby the ball of thread was lengthened, owing to the strongly conical ends. In order to avoid this inconvenience the main body of the ball of thread is wound according to the invention, so that at the central opening cavities are produced slowly ascending from the central opening in outward direction and designed to accommodate the pads of the protecting winding so that the ball of thread with the protecting winding forms a body with flat ends.

An embodiment of the invention is illustrated by way of example in elevation partly in section in the only figure of the accompanying drawing.

According to the invention the main body *a* of the ball of thread is wound in the well known universal winding with the difference however that the ends of the main body are not wound flat as usual but concave towards the centre *b* so that a cavity *c* is produced. This cavity is formed by winding shorter the inner cylindrical layers than the outer cylindrical layers the latter being wound gradually wider, so that the cavity can accommodate the pad *d* of the protecting winding.

Owing to this arrangement the ball contains as much thread as possible on the smallest space, the windings of the main body forming a steeper angle than the windings of the protecting winding, in order that the correct winding be obtained.

I claim:—
A ball of thread for sheaf binders with protecting winding, in which the main body is wound in such a manner that at the central opening cavities are produced gradually ascending from the central opening towards the outer side, said cavities adapted to accommodate the protecting winding so that the whole ball, including the protecting winding, forms a body with flat ends.

In testimony whereof I affix my signature.
LUDWIG PETERSEN WEIDEMANN.

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