D. LINDSAY.

NAP RESTORING MEANS.

APPLICATION FILED FEB. 19, 1919.

1,318,778. Patented Oct. 14, 1919.

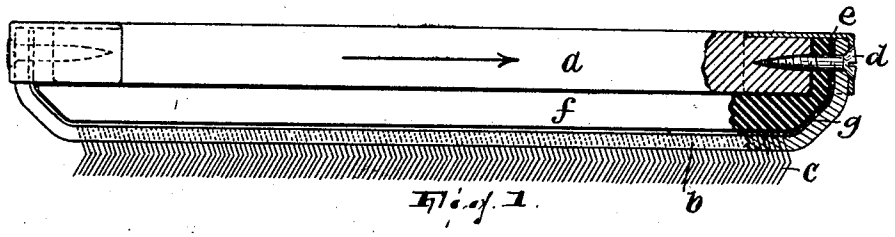


Fig. 1.

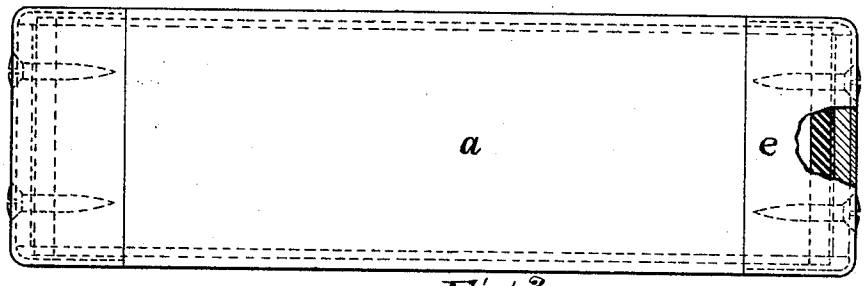


Fig. 2.

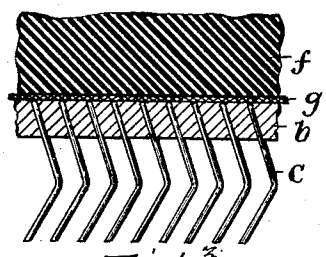


Fig. 3.

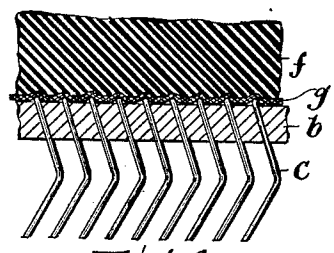


Fig. 4.

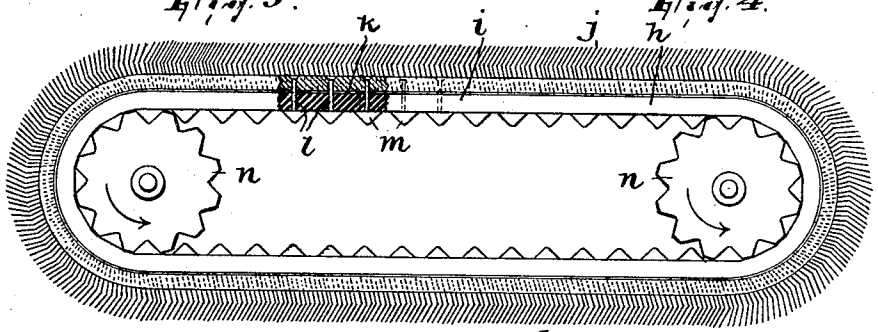


Fig. 5.

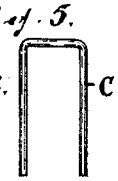


Fig. 6.

WITNESS

Wm. D. Bell.

INVENTOR,

David Lindsay,

BY

Johnson, Stewart,

ATTORNEYS.

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID LINDSAY, OF PATERSON, NEW JERSEY.

NAP-RESTORING MEANS.

1,318,778. Specification of Letters Patent. Patented Oct. 14, 1919.

Application filed February 19, 1919. Serial No. 278,093.

To all whom it may concern:

Be it known that I, DAVID LINDSAY, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Nap-Restoring Means, of which the following is a specification.

This invention relates to means for restoring nap to cloth and it consists in the combination, with a suitable back or holder, of a sheet-like bristle support and individually yieldable bristles arranged in and penetrating said support and an impressionable cushion (as a sheet of elastic rubber) backing said support and adapted to assume the pressure of the bristles, the cushion and support being suitably attached to the back or holder. Preferably the bristles are formed and arranged so that their free end portions are all parallel to a plane oblique to that of the bristle support. The invention may either be used as a hand implement or in the form of a belt or the like and adapted to be power-driven, as will appear. It is not new to provide for yielding in a nap restoring device having bristles. But so far as I am aware it is new to provide an impressionable cushion back of the bristles and arrange them to be cushioned thereon and yield individually. This is a very important feature of my invention, and by experience I have found it indispensable in order to raise the nap on the cloth so that the gloss disappears without damaging the surface or at least giving a too-woolly appearance in contrast with the portion of the surface not rubbed; particularly is this true if, as is preferable, the free end portions of the bristles are oblique to the plane of the bristle support and the appliance is moved over the cloth in the direction of the arrow in Figure 1.

In the drawing,

Fig. 1 shows in side elevation, partly in section, a hand implement embodying the invention;

Fig. 2 is a top plan view thereof;

Figs. 3 and 4 are enlarged sectional views, illustrating by contrast the positions of the bristles in absence and presence of pressure, respectively;

Fig. 5 shows the invention when employed in a power-driven arrangement; and

Fig. 6 is an elevation of one of the bristles.

Referring to Figs. 1 to 4: *a* is a suitable back or holder and *b* a strap or sheet in which are arranged the bristles *c*, the ends of the strap being secured to the ends of the block or plate forming the holder *a* by screws *d*, which preferably are passed through cap pieces *e* fitted over the ends of said block or plate.

Interposed between the block or plate and the strap is an impressionable elastic cushion whose ends are bent up and are clamped between the ends of the block or plate and of the strap *b*, being penetrated by the screws *d*. In the present instance this cushion is in the form of a rather thick sheet of rubber *f*, and for a purpose to be explained it has secured to its relatively outer face (or at least interposed between the same and the strap *b*) a thin and pliable but tough sheet *g*, as of fabric.

The bristles *c* are arranged in the strap *b* so that they are individually yieldable; for example, if the strap *b* is composed of leather, each bristle is capable of sliding therein longitudinally; compare Figs. 3 and 4, from which it will be apparent that the bristles in Fig. 4 appear as having receded in the strap. The bristles are preferably inverted U-shaped (see Fig. 6). In side elevation they have their free end portions parallel to a plane oblique to that of the strap *b*. They bear against the aforesaid cushion, in the actual construction shown against the sheet *g*.

When the implement is used it is moved over the cloth in the direction of the arrow in Fig. 1. The pressure applied causes the bristles to yield, each effecting a localized compression of the cushion which backs it—see Fig. 4. The consequence is that the nap can be raised on the cloth without injuring the cloth or giving it a too-woolly appearance at the particular portion thereof treated; and especially is this the case if the end portions of the bristles are inclined or oblique to the plane of the strap *b* in the manner stated and the implement is advanced over the cloth in the direction of the arrow in Fig. 1. It will be understod that the bristles are of metal or some other stiff material. The purpose of the sheet *g* is to protect the rubber against the wear of the bristles. This element may be omitted, if desired.

In Fig. 6 the bristle support and the cushion are endless straps *h* and *i* whose functions with respect to the bristles *j* are

substantially the same as already described; there may be an endless sheet of protecting material *k* between the element *h* and *i*, as well, the same serving for the same purpose as the sheet *g*. A belt is thus formed by these several parts, the outer circumference of which is formed by the bristles, and by means of rivets *l* or the like transverse strips *m* are secured to the inner face of said belt. These are adapted to engage between the teeth of two sprocket wheels or drums *n* which hold the belt taut and may be journaled in any suitable frame (not shown). The belt is intended to be employed as a part of a power-driven means in which one of the sprocket wheels is in any suitable way kept rotating. So far as the coaction of the element *h*, *i* and *k* is concerned, this form of the device is in every way identical to that first described.

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

1. A sheet-like bristle-support and individually yieldable bristles arranged in and penetrating said support and an impressionable cushion backing said support and the bristles and adapted to assume the pressure of the yielding bristles, in combination with means to hold the support and cushion.

2. A sheet-like bristle-support and individually yieldable bristles arranged in and penetrating said support and an impressionable cushion backing said support and the bristles and adapted to assume the pressure of the yielding bristles, in combination with means to hold the support and cushion, said cushion consisting of elastic plastic material and a sheet of protecting material between said material and the bristles.

3. A sheet-like bristle-support and individually yieldable bristles arranged in and penetrating said support and an impressionable cushion backing said support and the bristles and adapted to assume the pressure of the yielding bristles, in combination with means to hold the support and cushion, the bristles having their free end portions all parallel to a plane oblique to that of the support.

In testimony whereof I affix my signature.

DAVID LINDSAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."