Nov. 12, 1929. J. J. DENSTEN 1,735,639

GUN WAD MATERIAL

Filed Feb. 8, 1928

Fig. 1.

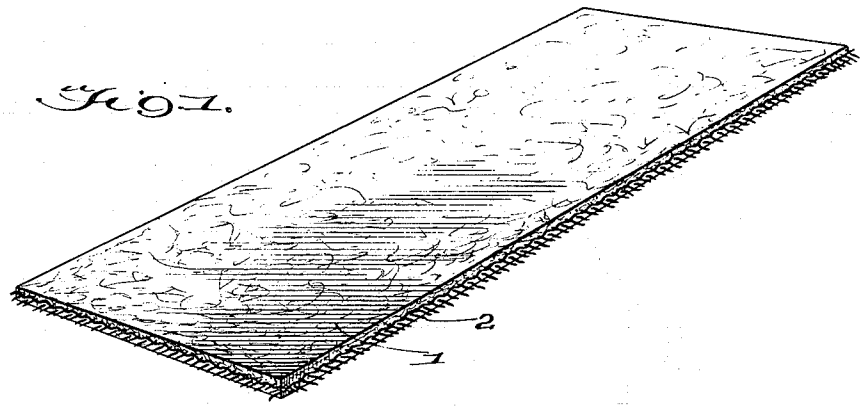
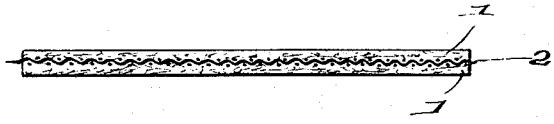


Fig. 2.



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UNITED STATES PATENT OFFICE

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GUN-WAD MATERIAL

Application filed February 8, 1928. Serial No. 252,899.

This invention relates to an improvement in gun wad materials.

The object of the invention is to provide a material which may be substituted for cork to be used as gun wadding in loading shot shells. It has been found by experience that a felting material may be used successfully instead of cork or other materials usually employed in shells for gun wad purposes. This material is prepared of properly treated hair which is suitably carded and is then punched onto open-meshed jute bagging, first on one side and then the other, locking the fibres to the burlap, after which the felt and fibres are hardened and sized and then dried under pressure. The material is prepared in sheets pressed to a desired thickness and is ready for the cartridge manufacturer, who may cut it out in the desired sizes for loading into the different gauge shot shells.

In the accompanying drawing:

Fig. 1 is a perspective view of the material; and Fig. 2 is a sectional view therethrough.

In preparing the gun wad material for use in shot shells, clean, washed, brown cattle hair is used and thoroughly machined, eliminating the dust, dirt and hide-pieces and any other foreign matter that may be contained therein. This cattle hair is next processed by carding and lapping and is then punched onto open-meshed jute bagging or burlap by a needle loom, first on one side of the burlap and then on the other, thereby securely locking the fibres to the burlap. By this needle loom process the fibres are interlaced transversely with the burlap in this locking engagement. The burlap with the hairs interlocked therewith is next given a hardening process to felt the fibres together and is then submerged into a bath of glue and flour combined for sizing purposes, after which it is put on tenter bars, commonly known as stretching bars, and the material is dried out under pressure.

As the burlap or jute is in sheets the material in its interlaced state will be likewise in sheets, which may be cut up into proper sizes and pressed to the proper thickness in a hydraulic press, which may have a pressure of one hundred and fifty tons to the square inch, thus bringing the material to uniform thickness in the usual manner.

The material is then in the hardened state, such as shown in the drawings, in sheets and is ready for the cartridge manufacturer, who may use it as desired for gun wadding. In such use it is customary for the manufacturer to put thin paper onto the sheets of material by gluing and pressing it, and the material is then died out to the desired size for loading into the different gauge shot shells.

The cattle hair which is used and interwoven with the burlap or jute is designated by the numeral 1 in the drawings and the burlap itself is designated by the numeral 2. It will be noted that the hairs or fibres extend entirely through the open course weave burlap or jute, so as to completely cover it on both sides to make the material suitable for gun wadding purposes.

This gun wadding material has been found to be very successful in use by the large cartridge manufacturers and is replacing the cork usually employed in shot shells.

By the use of the term "interlaced" or its equivalent as applied to the hairs or other fibres which may be used, is meant the interlacing of the hairs transversely through the fabric, or its equivalent.

I claim:

1. The method of preparing gun wadding material comprising interlacing fibers with a textile fabric, and sizing the interlaced material and pressing it into sheets of uniform thickness.

2. The method of preparing gun wadding material comprising cleaning cattle hair to remove foreign matter therefrom, punching the hair onto opposite sides of open-meshed textile fabric, hardening the material to felt the fibres together, submerging the material into a gluing bath for sizing purposes, and drying the material under pressure to uniform and proper thickness.

3. The method of preparing gun wadding material comprising interlacing fibres with a coarse textile fabric, and treating and pressing the material to form the same into relatively hard sheets.

4. The method of preparing gun wadding material comprising interlacing hairs with a coarse textile fabric, hardening and sizing and drying the material, and applying pressure thereto sufficient to press the same into relatively hard sheets.

5. A gun wad material, comprising a coarse textile fabric interlaced with fibers, said material being sized and relatively hard.

In testimony whereof I affix my signature.

JOHN J. DENSTEN.