May 11, 1943. L. C. SHANNON 2,318,804

HAIRPIN

Filed Aug. 17, 1942

FIG. 1

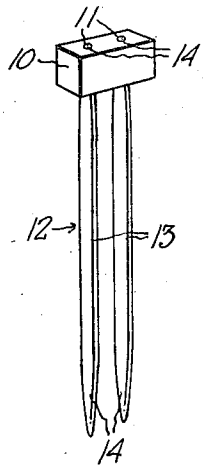


FIG. 2.

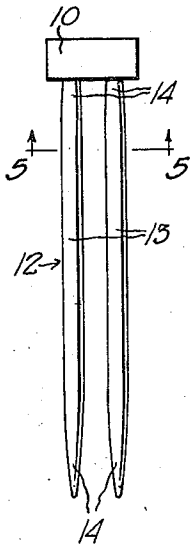


FIG. 3.

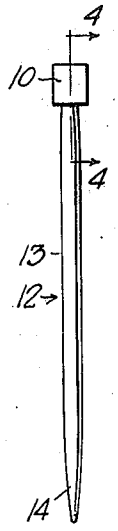


FIG. 4.

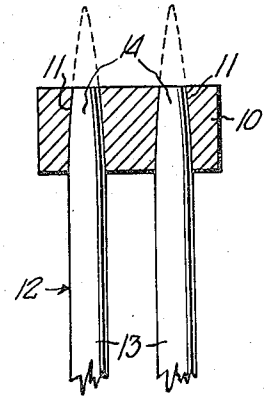
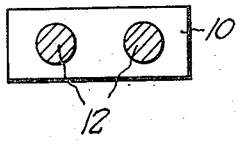


FIG. 5.



INVENTOR.
LEO C. SHANNON.
BY Oltsch & Knoblock
attorneys.

Patented May 11, 1943

2,318,804

UNITED STATES PATENT OFFICE

2,318,804

HAIRPIN

Leo C. Shannon, Knox, Ind.

Application August 17, 1942, Serial No. 455,025

7 Claims. (Cl. 132—50)

This invention relates to improvements in hairpins.

Many women are employed in munitions plants where gunpowder is manufactured and handled. In such plants every precaution is practiced to avoid accidental discharge or firing of the gunpowder. Thus care must be taken to avoid accumulation of static electricity on the persons of the workers, since the discharge thereof while handling gunpowder might result in a serious accident. Among the precautions commonly practiced in such plants is the prohibition of the use of combs and hairpins made of metal, hard rubber, bone or plastic materials, because of the danger of generating and accumulating static electricity incident to their use. This prohibition imposes a hardship on women workers, and reduces their efficiency, because their hair tends to hang in front of their faces to their discomfort and annoyance. This is particularly true in cases where the workers have short hair coiffures which make the use of ribbons ineffective to confine and position all of the hair.

It is the primary object of this invention to provide a hairpin which is formed of wood and hence is not subject to the objection of generating and accumulating static electricity when used.

A further object is to provide a hairpin formed entirely of wood which is simple to manufacture, which is inexpensive, and which is sufficiently strong and sturdy to permit its repeated and long continued use.

Other objects will be apparent from the description and appended claims.

In the drawing:

Fig. 1 is a perspective view of the hairpin.

Fig. 2 is a side view of the hairpin.

Fig. 3 is a side view of the hairpin viewed at right angles to Fig. 2.

Fig. 4 is an enlarged fragmentary longitudinal sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is an enlarged transverse sectional view taken on line 5—5 of Fig. 2.

Referring to the drawing, which illustrates the preferred embodiment of the invention, the numeral 10 designates a small substantially rectangular head or block of wood. Block 10 is preferably formed of soft wood, such as redwood, basswood, pine, maple or the like, and its length is approximately twice its width and depth. I have found that a block of the following approximate dimensions is preferable: length one-half inch, width and depth three-sixteenth inch. It will be understood that these dimensions are illustrative only, and not limiting, since the dimensions of head or block 10 may vary within wide limits. Also, it will be understood that the head may be of any desired shape, as to produce ornamental effects, etc.

Block 10 has a pair of bores 11 formed transversely therein whose centers are preferably spaced apart approximately one-fourth inch. Bores 11 are preferably approximately one-sixteenth inch in diameter, are equi-spaced from opposite side and end edges of the block, and are preferably substantially parallel. The heads may be formed conveniently from larger wood pieces which can be easily handled for the necessary drilling operations, by cutting or splitting the larger piece. For example, a wood bar, one-half inch square in cross section, may have two rows of bores, spaced one-quarter inch longitudinally and transversely formed therein. The bar may then be sawed transversely parallel to and between adjacent transverse sets of bores, and then the sawed parts may be centrally split transversely of the bores. If it is desired to smooth the surfaces of the small individual blocks, they may then be tumbled.

A pair of elongated wood pins 12 fit into the bores 11. These pins are of thin cross-section, and preferably comprise a cylindrical central portion 13 of a length approximately one-half the length of the pin, and opposite end portions 14 which taper to a point. In the preferred embodiment, the major diameter of the pins is approximately $\frac{3}{32}$ inch. A tapered end of each pin is forced into each bore 11 until it seats firmly therein with a substantial wedge or drive fit. A suitable adhesive is applied to the pins which cooperates with the firm mechanical wedge or drive fit, to fixedly secure each pin to block 10.

The pins 12 are preferably formed about two and one-half inches in length and of symmetrical shape at each end. When such pins are used, a portion thereof from one-fourth to three-eighths inch long will project from the face of the block opposite that at which the pins are inserted, as illustrated in dotted lines in Fig. 4, incident to solid seating of the pins within the bores 11. These pointed projections may then be cut off flush with the face of the head from which they project. Alternatively, the pins may be preformed with one end portion tapering to a point and the opposite end portion tapering at the same angle but of shorter length to terminate in a blunt end. In either case, it will be observed that the portion of the pin seating in bore 11 is of sufficient cross-sectional dimension and

strength to effect a firm and sturdy connection with the block.

It will be understood that the dimensions and shape described are illustrative and not limiting, though a sturdy tapered socket-engaging end portion and an opposite tapered and pointed free end portion are preferred. The tapered free end portions are important to press the hair between the pins into a firm bunch whose tendency to separate or expand will insure a firm grip or purchase of the pin on the hair. For this purpose it may also be desirable to so mount the pins in the block that they diverge therefrom very slightly, for example, from one to three degrees. It will be observed that the taper of the pins toward the ends thereof seated in bores 11 results in a slight widening of the space therebetween and adjacent block 10, which further assists the pin to obtain and maintain a firm purchase or anchorage relative to the hair. Pins 12 should preferably be formed of harder wood than head 10, and should be smooth-cut to avoid occurrence of projecting slivers upon or under which the hair might catch when the pin is inserted or removed. The smoothness of the parts and the decorative appearance of the hairpin may be enhanced by a suitable paint or finish, if desired. The pins 12 should be substantially rigid, and should possess a certain amount of resilience to accommodate limited flexing without breaking and subsequent return to normal position.

I claim:

1. A hairpin comprising a head having a pair of spaced substantially parallel bores, and a pair of spaced elongated pins of thin section, each having a tapered end portion firmly seated and adhesively secured in one of said bores, said head and pins being formed from material on which static electricity will not collect.

2. A hairpin comprising a wood head having a pair of spaced substantially parallel bores, and a pair of spaced elongated wood pins of thin section each tapering from its center portion to its ends, one tapered end portion of each pin having an adhesively secured wedge fit in a bore.

3. A wood hairpin comprising a head having a pair of spaced substantially parallel bores, and a pair of spaced elongated pins of thin circular section each having a tapered end portion firmly coaxially seated and adhesively secured in one of said bores.

4. A wood hairpin comprising a head having a pair of spaced substantially parallel bores, and a pair of spaced elongated pins having opposed tapering end portions each extending at approximately the same angle relative to the axis thereof, one of said tapered end portions being shorter than the other and having a tight coaxial adhesive fit in a bore.

5. A hairpin comprising a head formed of soft wood and having a pair of spaced substantially parallel bores, and a pair of spaced, elongated, smooth surfaced pins of thin section, each pin having a tapered end portion fitting tightly and adhesively secured in a bore, said pins being formed of harder wood than said head.

6. A wood hairpin comprising a head having a pair of spaced substantially parallel bores, and a pair of spaced elongated pins of circular section larger than the diameter of said bores, one end of each pin tapering to a diameter substantially equal to the diameter of said bores and having an adhesively secured wedged fit in a bore.

7. A wood hairpin comprising a head having a pair of spaced substantially parallel bores, and a pair of spaced elongated pins, each having an end portion fitting tightly and adhesively secured in a bore, said pins having a longitudinal configuration whereby the space therebetween tapers inwardly from said head and from the free ends of the pins toward the median portion of the pins.

LEO C. SHANNON.