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W. HERTZBERG

MOP MOUNTING

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1,669,937

Fig. 1.

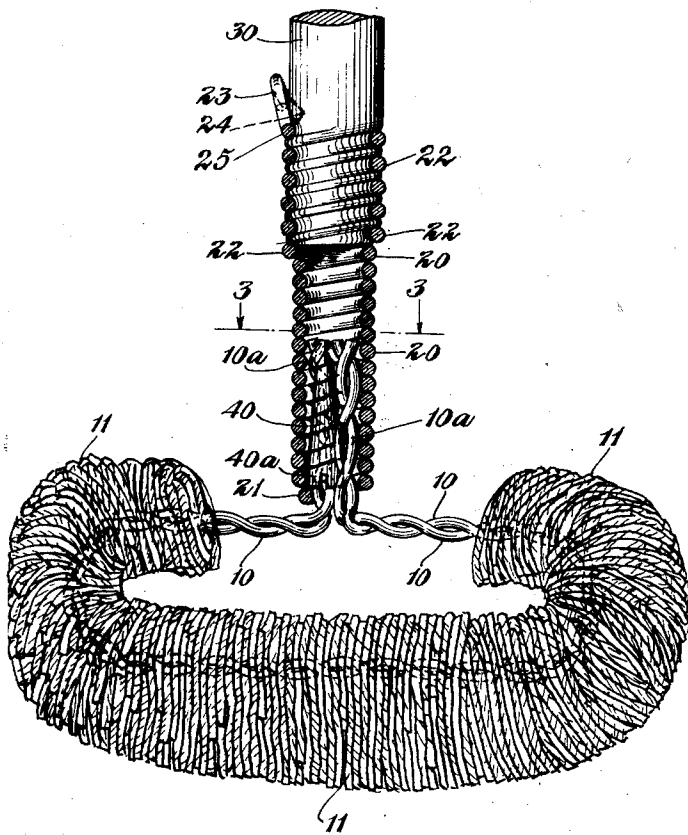


Fig. 2.

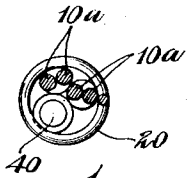
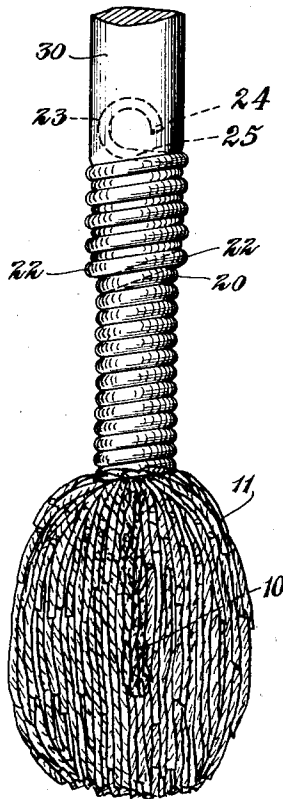


Fig. 3

Inventor

William Hertzberg.

By his Attorney

Martin Joachimson

UNITED STATES PATENT OFFICE.

WILLIAM HERTZBERG, OF BROOKLYN, NEW YORK.

MOP MOUNTING.

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This invention relates to brooms, mops and brushes in which mop or broom material is held between two wires twisted about each other and it is the object of this invention to provide means for a resilient connection of brooms, mops or brushes of this type to a mop-stick.

Another object of this invention is to provide a rigid and durable connection of the twisted wires which form a part of the broom or mop to the resilient connector.

Another object of the invention is to provide by means of the resilient connecting means a standard socket for a commercial broom-stick.

In the accompanying drawing which forms a material part of this disclosure

Fig. 1 is a front elevation of a mop connected to a mop-stick by means of my improved connector. The connector is shown in section on a plane through the vertical axis of Fig. 2

Fig. 2 is a side elevation of Fig. 1.

Fig. 3 is a sectional plan on line 3—3 of Fig. 1.

The illustrations in the drawing show a mop-head comprising a wire frame consisting preferably of a pair of wire rods which hold the mop or broom material between each other being twisted together in the manner shown. These wire-rods form a loop to produce the mop head and their end portions 10^a are bent to lie parallel and adjacent to each other as shown in Fig. 1. The parallel portions 10^a of the twisted wire-rods are inserted into a helical coil preferably made of spring steel wire, the turns 20 of the helix lying close against each other, form a tube of uniform diameter surrounding the twisted wires 10^a.

To hold these rods 10^a rigidly and practically irremovably within the tubular helix 20, a conical metallic screw having the thread of a wood or lag screw 40 is screwed into the helix. The pitch of this screw is the same as that of the helix so that its threads come between each two adjacent turns of the helix. Screw 40 is driven into the tubular coil so far that its lower end or stem 40^a is above the lowest turn 21 of the helical coil. The screw 40, being forced in between the two wire couples 10^a and the rings 20 as shown in Fig. 3, widens out the diameter of the helix slightly and its threads bite into the wires 10^a. The lowest turn 21 of the helix however, which is below the stem 40^a of

screw 40 contracts as soon as the stem has passed it in its upward movement. As this turn contracts by its resiliency it locks screw 40 permanently in the position shown in Fig. 1 and also the twisted wires against any longitudinal or rotary movement within the coil 20.

A distance above the ends of 10^a the pitch of the helix and its diameter are enlarged from the turn marked 22 on the drawing to the upper end of the helix, where a ring 23 is formed for convenient fastening to and removal from mop-stick 30. Commercial mop sticks are obtainable in the trade provided with a coarse screw-thread at the lower end, sometimes covered by a threaded metallic ferrule similar to an Edison lamp base. The upper part of my resilient mop connector forms a socket for a mop stick of this kind as the pitch and diameter of the helix are made to accommodate the afore-described thread. The bottom end of the mop stick 30 when inserted into the socket portion of the holder is limited in its downward movement by the uppermost turn 20 of the close wound helix, which is of smaller diameter and forms a shoulder or socket-bottom. When mop sticks are screwed too deep in coils of this kind, they widen the diameter of the helix which soon becomes so enlarged that it will not hold the stick or break under the excessive strain. This is prevented by the shoulder formed at 22. At the upper end of the socket-forming turns 22 a loop 23 is formed which leans against the cylindrical outside of mop stick 30 the end of the loop-forming wire is bent inwardly toward the axis of the mop stick at 24 forming a sharp edge which digs into the wood of the stick, holds the stick tightly in the socket and prevents it from getting loose. To remove the mop stick a slight pull outward on 23 is sufficient to release the interference of edge 24 with mop stick 30 on account of the resiliency of the wire at point 25.

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

1. In a device of the kind described, a helical coil, a plurality of wire strands within the hollow part of said coil, means to fasten said strands to said coil against rotation, the turns of said coil being close to each other at the lower end of said coil and separated from each other near its up-

per end, the uppermost of said closely wound turns projecting into the interior of said coil to form a seat for the bottom of a mop stick.

2. In a device of the kind described a helical coil, a plurality of wire strands within the hollow part of said coil, means to fasten said strands to said coil against rotation, the turns of said coil forming a cylindrical tube of relatively small diameter in the lower part of said coil and a socket of larger diameter having spaced threads in the upper part of said coil and a projection at the bottom of said socket to form a stop for the bottom of a mop stick.

3. In a device of the kind described a helical coil, a plurality of wire strands within the hollow part of said coil, the turns of said coil being close to each other and of relatively small diameter in the lower part of said coil and of larger diameter spaced apart from each other in the upper part thereof, forming a socket adapted to hold a threaded broom stick, and a projection within said socket at its lower end formed by the first turn of small diameter to form a stop for the bottom of the broom stick.

4. A mop mounting comprising a helical coil, a pair of wire rods extending longitudinally into the hollow part of said coil and a screw within said coil, in engagement with the turns of said helix and with said wire rods forming means to expand said coil and to press said rods against the turns of said coil.

5. A mop mounting comprising a helical coil, a pair of twisted wires in the hollow part of said coil, and a screw within said coil parallel to said wires, forming common means to wedge them against the turns of said coil and to anchor them against longitudinal movement.

6. A mop mounting comprising a helical coil, a pair of wire rods entering said coil through one of its open ends, and wedging means within said coil parallel to said wires

to secure said wires therein and means formed by one turn of said coil to secure said wedging means against removal therefrom.

7. A mop mounting comprising a helical coil a pair of wire rods within said coil at its lower end surrounded by closely wound turns of said helix, spaced turns at the upper end forming a socket adapted to hold a standard mop stick and a screw within the lower part of said coil cutting into said rods and engaging the turns of said coil to prevent movement of said rods in said coil.

8. A mop mounting comprising a helical coil having closely wound turns in its lower part and spaced turns of larger diameter in its upper part to form a shoulder at the middle portion of said coil, a pair of wire rods in the hollow part of said coil surrounded by its closely wound turns and a screw having the same pitch as said turns adapted to press said rods against the inside of said coil anchoring them therein.

9. A mop connector comprising a helical coil of wire adapted to hold a mop stick at its upper end and mop-holding wires at its lower end, a ring formed by the wire of said coil at its upper end and a tooth on said ring extending toward the axis of said coil to press into the wood of a mop-stick held by said connector, for preventing its removal, said ring forming means to release the pressure of said tooth for removal of said connector.

10. In a device of the kind described a helical coil having spaced turns in its upper portion forming a threaded socket for a mop stick, a plurality of closely wound turns forming the lower portion of said coil and a projection within said coil to form a stop for the bottom of a mop stick.

In testimony whereof, I have signed my name to this specification this 17th day of January 1927.

WILLIAM HERTZBERG.