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I. J. OWEN

1,826,432

CARPET SWEEPER BRUSH AND PULLEY

Filed Sept. 18, 1926

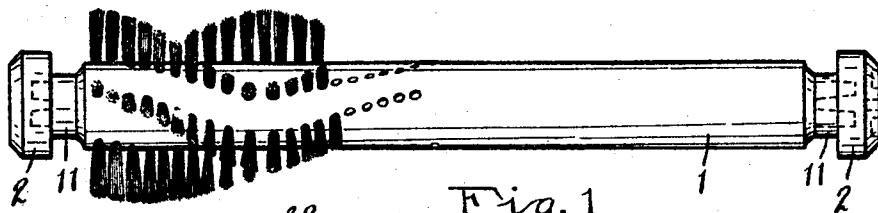


Fig. 1

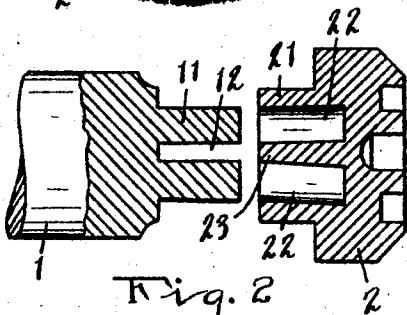


Fig. 2

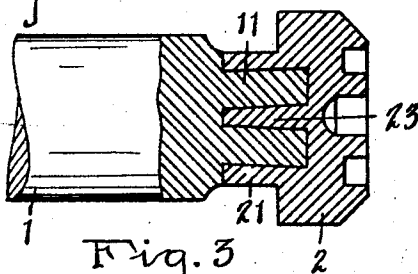


Fig. 3

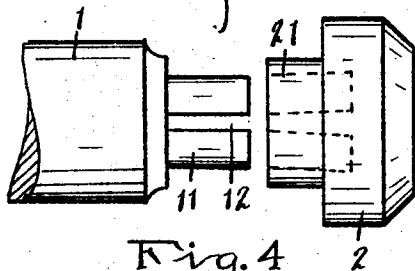


Fig. 4

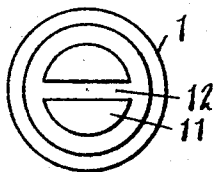


Fig. 5

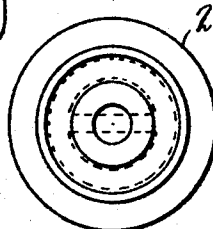


Fig. 6

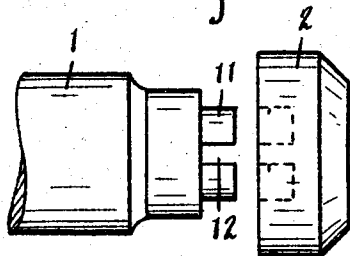


Fig. 7

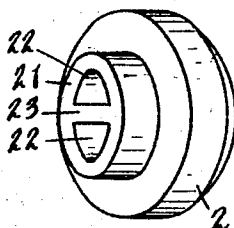


Fig. 8

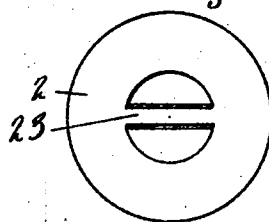


Fig. 9

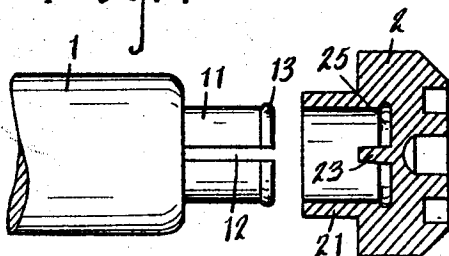


Fig. 10

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CARPET SWEEPER BRUSH AND PULLEY

Application filed September 18, 1926. Serial No. 136,309.

The main object of the invention is to provide in such a carpet sweeper brush and pulley, means whereby the pulley will be retained in position and provide an improved bearing for the brush pivot.

Objects relating to details and economies of construction and operation of my invention, will definitely appear from the detailed description to follow.

The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a side elevation view of a carpet sweeper brush, part of the bristles being omitted, and some details indicated by dotted lines.

Fig. 2 is an enlarged detail longitudinal sectional view of the brush roll and pulley in separated relation.

Fig. 3 is a similar longitudinal detail sectional view of the roll and pulley in assembled relation.

Fig. 4 is a similar detail side elevation view with the parts in full line, the divided socket in the pulley being indicated by dotted lines.

Fig. 5 is an end view of the roll from the right, as seen in Fig. 4.

Fig. 6 is an end view of the pulley and roll, the position of the roll being indicated by dotted lines.

Fig. 7 is a sectional view of a design slightly modified, the hub on the pulley being omitted.

Fig. 8 is a detail perspective view of the pulley appearing in Fig. 4.

Fig. 9 is an end view of the pulley from the left hand side of Fig. 7.

Fig. 10 is a detail view in disassembled relation of a modified form showing a bead engagement on the end of the divided tenon.

The parts will be identified by their numerals of reference which are the same in all views.

1 is the brush roll. The brush roll is provided with tenon 11 divided longitudinally by a slot 12. The pulley 2 of hard rubber is provided with a hub 21 which contains the

divided socket 22, 22 having a wedge-like portion 23 therebetween. The usual brush bearings are provided at the outer side of the pulley. When the tenon 11 is inserted in the hub 21, the wedge-shaped center portion 23 enters between the divided parts and spreads them to the position indicated in Fig. 3.

The pulley 2 is made of a hard rubber composition which can be expanded by heat, making it easy to expand the same and drive the brush roll tenon into place. On cooling the rubber shrinks and the joint is very secure and requires no glue or adhesive of any kind.

It is desirable to have the hub 21 which makes a comparatively deep socket. It has been found, however, that the structure is very good and quite economical to produce in the form seen in Figs. 7, 8 and 9 where the hub 21 is omitted. The wedge may be very small as seen in Fig. 10. Extra security is there accomplished by providing an annular bead 13 on the end of the tenon 11 fitting a corresponding depression 25 in the bottom of the halves of the socket.

The pulley might be made of metal, aluminum being a desirable metal. It would be easy to expand it by heat and make a very effective structure. The rubber composition is much to be preferred as it answers all purposes and affords a very superior traction on the rubber-tired floor wheels of a carpet sweeper.

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

1. A carpet sweeper brush having a roll with a projecting tenon divided longitudinally, and an expansible pulley therefor of rubber composition with a projecting hub in which is formed a divided socket with a wedge-shaped partition shrunk on said tenon, the said wedge shaped partition engaging and expanding the said divided tenon, as specified.

2. A carpet sweeper brush having a roll with a projecting tenon divided longitudinally, and an expansible pulley therefor of rubber composition with a divided socket

with a wedge-shaped partition shrunk on said tenon, the said wedge-shaped partition engaging and expanding the said divided tenon, as specified.

- 5 3. A carpet sweeper brush having a roll with a projecting tenon divided longitudinally, and an expansible pulley therefor with a divided socket with a wedge-shaped partition shrunk as on said tenon, the said wedge-
10 shaped partition engaging and expanding the said divided tenon, as specified.

In witness whereof I have hereunto set my hand.

IRA J. OWEN.

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