Oct. 8, 1963 S. R. BELL ETAL 3,105,989

PAD HOLDER

Filed Jan. 30, 1962

Fig. 1.

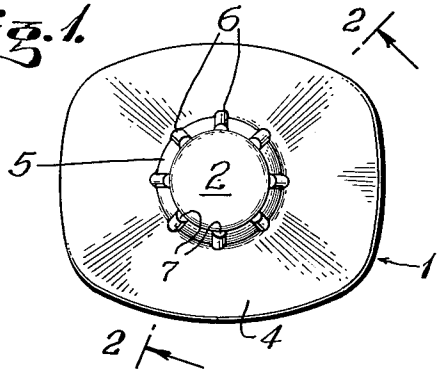


Fig. 5.

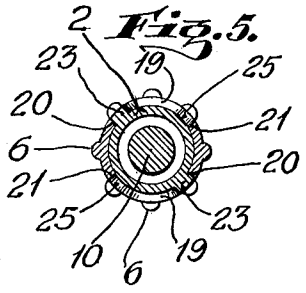
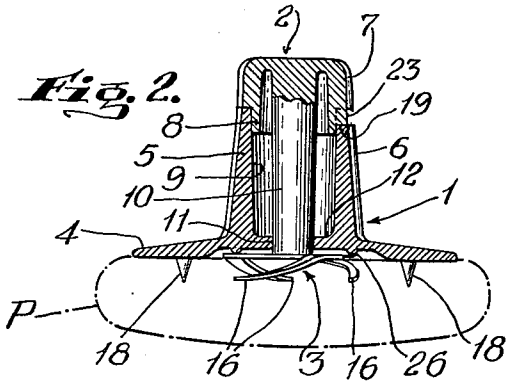


Fig. 2.



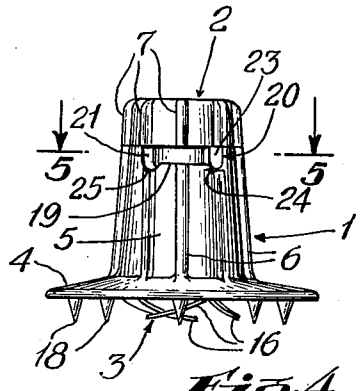


Fig. 4.

Fig. 3.

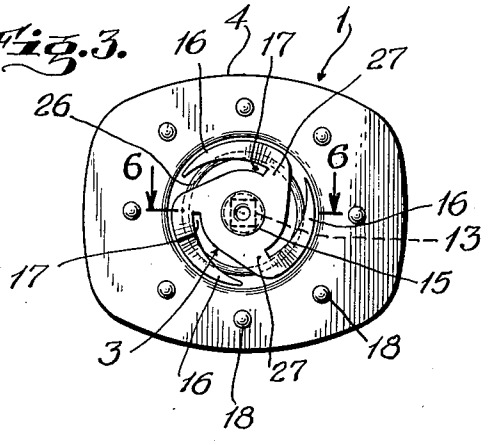
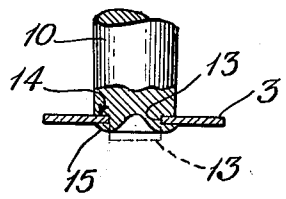


Fig. 6.



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3,105,989
PAD HOLDER

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3 Claims. (Cl. 15—209)

Our invention relates to a holding device for objects which present a hazard and inconvenience in the use of such objects and specifically is adapted to clamp and retain a steel wool scouring pad in such a way that a human hand need never contact such an object while being used.

A further object is to provide a convenient handgrip for the efficient use of such an object and a proper packing surface to enable pressure to be applied to all areas of said object while in use.

A still further object is to provide a device that will be highly efficient with a minimum of expense to produce.

The accompanying drawing illustrates such a device in which:

FIG. 1 is a top plan view.

FIG. 2 is a vertical section on line 2—2 of FIG. 1.

FIG. 3 is a bottom plan view.

FIG. 4 is a side elevation at a right angle to FIG. 2.

FIG. 5 is a section on line 5—5 of FIG. 4; and

FIG. 6 is a partial section on line 6—6 of FIG. 3.

Referring to the drawing, it will be seen that our device consists of only three members, viz., the main body 1, the actuating member 2 and the gripping member 3.

The main body 1 comprises a pressure plate portion 4 having an upstanding tubular extension 5 which functions as a handgrip. We form this tubular portion with ribs or lateral beads 6 to aid in maintaining a firm grip on the handgrip while the holder is in use.

The actuating member or knob 2 for the gripping member 3 likewise has ribs or beads 7 to provide a better grip when oscillating the knob to cause the gripping member 3 to engage and disengage a pad P. The actuating member 2 is further formed with a collar portion 8, which is received in a circular cavity 9, with which the handle extension 5 is provided. In addition, the actuating member 2 is further formed with an integral stem 10 extending downwardly of cavity 9 and projecting through an opening 11 in the bottom 12 of the cavity. The lower extremity of stem 10 is reduced in outside diameter to a square crosssection designated at 13, thus providing a shoulder 14, against which the gripping element 3 abuts, this gripping element being provided with a square hole to fit over the square section 13 at the time of assembly. The square section 13, as indicated by dotted lines in FIG. 6, protrudes beyond gripping member 3 and is flared or riveted over, as at 15, with the aid of heat, for example, to securely lock gripper 3 in positive non-rotating engagement with actuating knob 2.

Gripper member 3 is stamped from a thin flexible material and comprises a plurality of integral arcuate fingers 16, flared downwardly and pointed at their outer extremities, so that, when the holder is pressed upon a scouring pad and rotated in a clockwise direction, as viewed in FIG. 2, these fingers will dig into the pad and draw it upwardly against the underside of pressure plate 4 to wedge the fibers of the pad in the tapered slots 17 between adjacent fingers 16 and clamp the pad against the pressure plate 4. To prevent the pad P from turning when the gripping element is oscillated in engaging and disengaging the pad P, pointed extensions 18 are integrally formed on the bottom of pressure plate 4, these points embedding themselves in the pad when our device is pressed downwardly on top of the pad when first starting to affix said device to the pad.

When it is desired to dispose of a worn out pad, it is only necessary to grasp the tubular extension 5 of the pressure plate with the fingers of one hand and rotate the knob 2 in a counterclockwise direction, allowing the used pad to drop into a waste collector. It will, thus, be seen that the user's hand need not come in contact with the pad while in use and at the time of disposal.

It is necessary that the amount of rotation or oscillation of the gripping member 3 be restricted and to this end we provide two opposite cutaway portions 19 at the upper edge of the tubular extension 5, thus forming limiting stops 20 for the disengaged position and 21 for the pad engaged position, these stops being engaged by oppositely disposed extensions 23, with which the knob 2 is provided.

Furthermore, it is preferably to retain knob 2 in one position or the other, especially in its pad holding position. To this end, we provide a detent effect to the cutaway area 19, as at 24, for the disengaged position and 25 for the pad engaged position to receive the bottom rounded ends of extensions 23.

As aforementioned, gripping member 3 is of a flexible material and being in effect a part of knob 2 will flex when the extensions 23 of the knob move into and out of engagement with the depressed detents 24 and 25. To accentuate this flexing action, we provide a circular bead 26 on the underside of pressure plate 4, which the reduced areas 27 of gripper member 3 will contact in a normal or unflexed condition, such as when knob 2 is in either of the extreme oscillated positions. It will, thus, be obvious that, when knob 2 is being rotated in a clockwise direction to engage a pad, the reduced areas 27 will be flexed because they are riding on the bead, and this flexing will be maintained until the knob is reversed to disengage the pad. Considering FIGS. 2 and 3, it will appear that the lower surface of the plate 4 has a recess, in which the bead 26 is arranged. In considering FIG. 2, it will be seen that the central body portion of the member 3, including the areas 27, are positioned in and operate in said recess.

It is to be understood that changes may be made in the details of construction hereinabove described within the purview of our invention.

What we claim is:

1. A scouring pad holder comprising a pressure plate, a tubular handgrip projecting from one surface of said plate, a knob rotatable in the end of said handgrip, the knob having a stem extending through said handgrip with its end projecting through the other surface of said plate, a thin gripper member fixed and keyed to the end of said stem, said member having offset arcuate pointed fingers at the periphery thereof joining a central body portion of the member in reduced areas, said second surface of the plate having an annular bead engaged by said areas of said member in retaining the knob in position on said handgrip, and interengaging means on the knob and handgrip to limit and check rotary movement of said knob and member and in retaining said knob at each limit of rotary travel on said handgrip.

2. A pad holder as defined in claim 1, wherein said fingers are spaced from the body portion of said member in tapered slots.

3. A pad holder as defined in claim 1, wherein said annular bead is arranged in a recess in the second named surface of said plate, said areas and the body portion of said member operating in said recess, and the second surface of said plate having outwardly of and circumferentially spaced around said recess projecting pointed extensions.

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