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2,961,672

SCRUBBING BRUSH FOR SURGEONS

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2 Sheets-Sheet 2

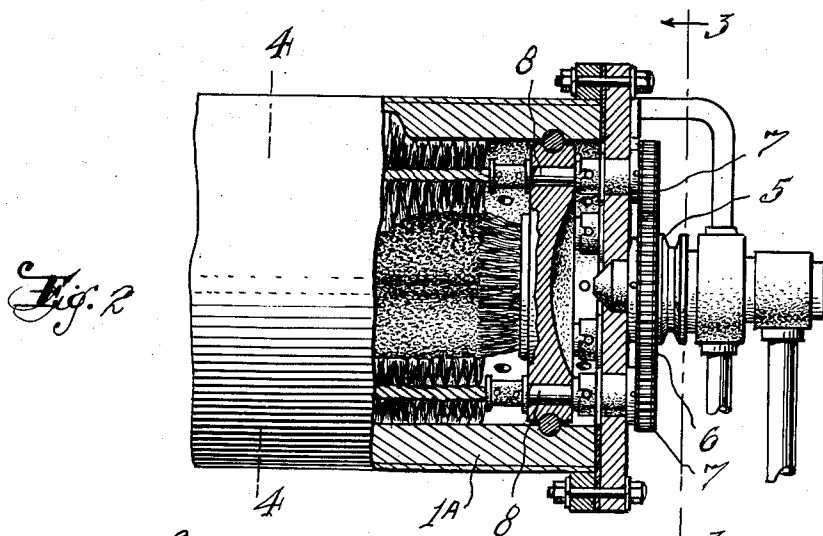


Fig. 3

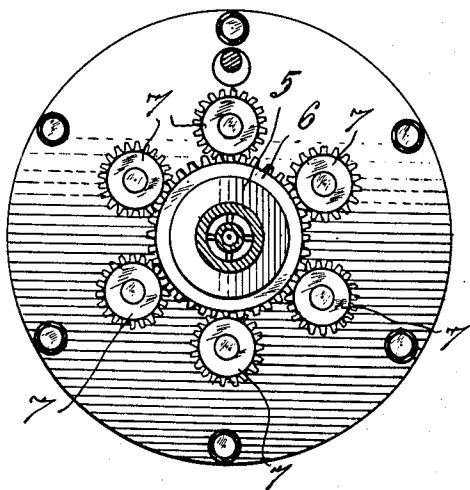
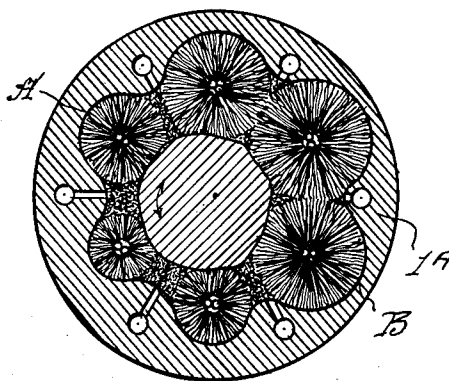


Fig. 4



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SCRUBBING BRUSH FOR SURGEONS

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2 Claims. (Cl. 15—21)

This invention relates to scrubbing means, for pre-operative sterilization of the arms of surgeons and other operating room personnel.

An object of the invention is to provide a more efficient scrubber, that is, one which will provide a higher degree of sterilization in a given time.

Other advantages will be appreciated by those using the new scrubber.

The scrubber to be disclosed is intended to be used in pairs, one for each arm, in a machine of the type disclosed in my copending application, Serial #722,450, filed March 19, 1958, now Patent No. 2,952,859, issued September 20, 1960.

The drawings illustrate the invention, and in these:

Fig. 1 is mostly a longitudinal section through one type of scrubber, showing an arm therein;

Fig. 2 is a fragmentary view partly in side elevation and partly in central vertical section, showing the brushes and casing of Fig. 1 and conventional means for rotating the brushes individually;

Fig. 3 is a view taken on line 3—3 of Fig. 2;

Fig. 4 is a vertical section on line 4—4 of Fig. 3.

Referring to the drawings for a detailed description thereof, and at first to Fig. 1, a hollow cylindrical element or casing 1A is to be inserted into a cylindrical casing shown in the mentioned copending application. Element 1A is internally formed, as along lines 3 and 3' shown, reversely to the shape of an arm, that is, where the arm is relatively of small diameter, as at the wrist, the internal diameter of the said element is relatively large, and is relatively small farther up the arm. Within said element is a circularly arranged group of rotatable brushes, such as those designated A and B in Fig. 1. These brushes conform to the inner surface of element 1A and are preferably all differently formed as to the exterior outlines or surfaces, to provide good contacts with the arms. Each brush comprises a wire core from which the bristles extend, as indicated at 1 and 1' for brushes A and B respectively. The brushes,

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each with bristles of varying length along the core, rotate on their several axes and may also be rotated as a group, by mechanism shown in the said copending application, and six brushes are desirably grouped in the element 1A, the better to contact the contour of the arm. Apertured tubes for spraying the brushes with a cleansing and/or germicidal liquid may be provided between adjacent brushes as also shown in the said application previously filed. A special brush for the hand is intended to be used with the scrubber described, such a brush being also disclosed in the pending application.

Figs. 2 and 3 show means for rotating the brushes individually, said means comprising a pulley 5 adapted to receive a driving belt and to rotate a central gear 6. The latter gear meshes with a circle of gears 7 which are each adapted to rotate one of the mentioned brushes, gears 7 being mounted on the outer ends of shafts 8 which are connected to the axes of the brushes.

What is claimed is:

1. A preoperative scrubber for use in a machine, said scrubber comprising an elongate hollow casing and a plurality of elongate, rotatable, axially straight bristle brushes circularly arranged axially within said casing to provide a longitudinally varying arm space between the brushes, the brushes comprising bristles extending radially from the axes of the several brushes, and the bristles along the axis of each brush varying in length substantially inversely with the longitudinal variation of the arm space.
2. A pre-operative scrubber for use in a machine, said scrubber comprising an elongate hollow casing and a plurality of elongate, rotatable, axially straight bristle brushes circularly arranged axially within said casing to provide a longitudinally varying arm space between the brushes, the brushes comprising bristles extending radially from the axes of the several brushes, and the bristles along the axis of each brush varying in length substantially inversely with the longitudinal variation of the arm space, the interior surface of said casing corresponding to the peripheral contour of the bristles of the brushes and being adjacent the ends of the bristles.

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