Nov. 30, 1937. G. H. MEDART 2,100,344

BUFFING HOOD

Filed Jan. 22, 1937

Fig. 1.

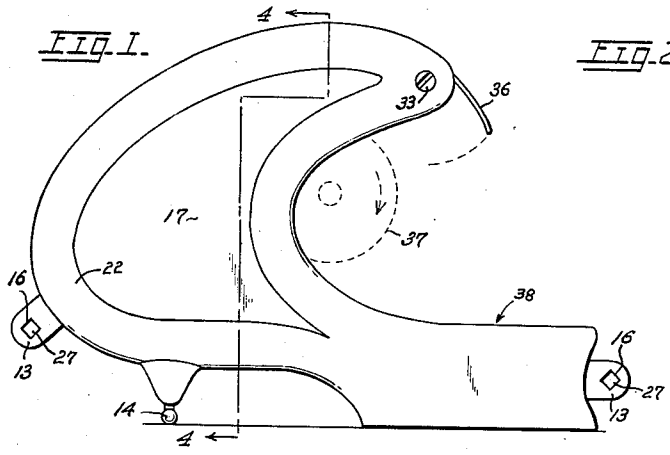


Fig. 2.

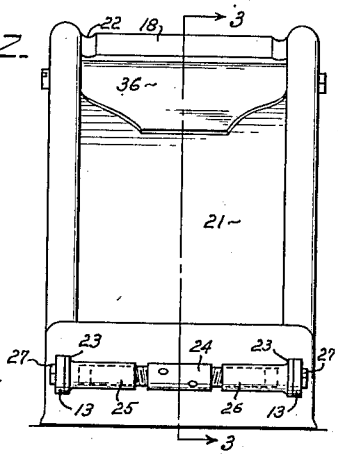


Fig. 3.

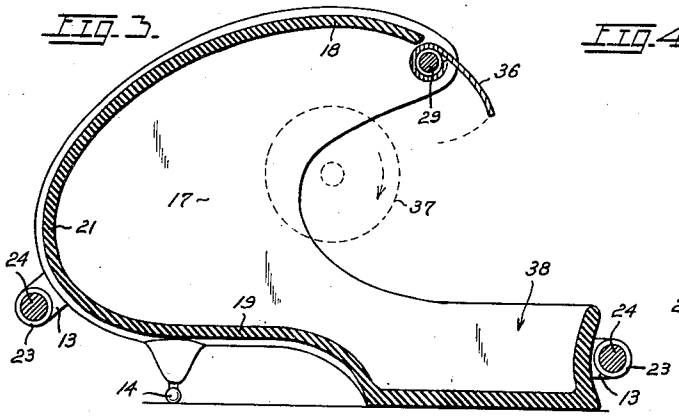


Fig. 4.

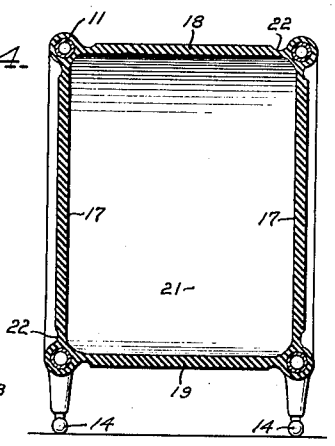


Fig. 5.

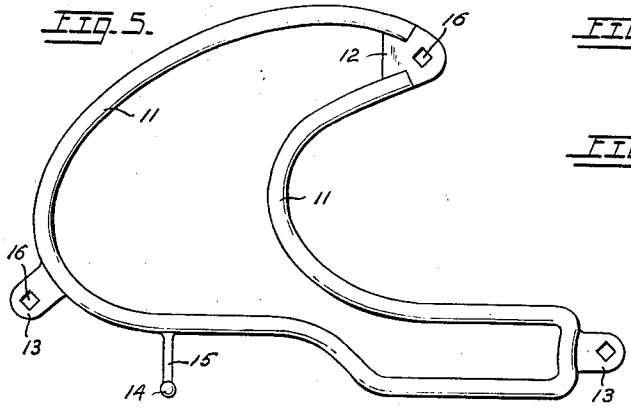


Fig. 6.

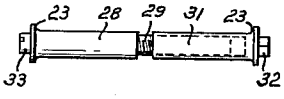


Fig. 7.



Inventor;
Gustav H. Medart, by
Arthur J. Farnsworth.
Attorney.

Patented Nov. 30, 1937

2,100,344

UNITED STATES PATENT OFFICE

2,100,344

BUFFING HOOD

Gustav H. Medart, Los Angeles, Calif.

Application January 22, 1937, Serial No. 121,850

12 Claims. (Cl. 51—270)

My invention relates to buffing hoods; and particularly to such as are used in dental laboratories and like places, where delicate, fragile, and expensive articles are to be polished. Among its salient objects are; first, to provide means for safely catching fragile objects which are thrown by buffing wheels while being polished; second, to furnish a buffing hood in which all the walls are of resilient and readily stretchable material, and wherein there are no unyielding surfaces likely to be struck by flying objects; third, to supply convenient means for maintaining the material of the walls of the hood in a desired degree of tension; fourth, to limit the stretching of the walls of the device chiefly to their marginal edges, where there is the least likelihood of their being struck by flying objects; fifth, to devise improved means for loosening and recovering any solidified polishing material which may be deposited; and, sixth, to accomplish the aforesaid, and related objects, by means of very simple, durable, and dependable construction.

My objects have been attained in the manner illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation of my improved buffing hood;

Figure 2 is a front elevation of said invention;

Figure 3 is a central, longitudinal section of the device, taken on the plane 3—3 of Fig. 2;

Figure 4 is a cross section of the construction taken on stepped planes positioned as indicated by the broken line 4—4 of Fig. 1;

Figure 5 is a side elevation of one of the two side frames of the device, by which the resilient material is supported and maintained in position;

Figure 6 is a front elevation of one form of cross-bar, by means of which the frames of the device may be spaced; and

Figure 7 is a front elevation of an alternate form of cross-bar.

Similar reference numerals refer to similar parts throughout the several views.

It is well known that the polishing of dentures in dental laboratories, as an example of the work for which my device is well suited, is a risky operation. Such objects are delicate, fragile, and often very costly. The high speed buffing wheel is quite likely at times, to pull the work out of the hands of the operator, and to throw it violently against surfaces where, hitherto, it is almost certain to be ruined or greatly damaged. My buffing hood overcomes this danger, by safely catching objects thrown by the wheel, and its use practically assures freedom from damage due to this cause.

Passing to a detailed description of my invention, and referring to the accompanying drawing, I construct the hood entirely of very resilient soft rubber, supported on a pair of opposed spaced frames of the desired configuration, such as shown in Fig. 5. I prefer to construct these frames mostly of tubular material, as indicated at 11. This material is bent to the desired form, and joined at the extremities by a relatively small metallic plate 12. This plate also serves to position one of the necessary cross-bars of the device. Projecting lugs or ears 13, are welded to the outer peripheries of the tubular frames at appropriate points, for positioning the other cross-bars required. In the form of my invention that has been selected by illustration, metallic feet 14 are needed; and these may conveniently take a spherical shape at the ends of rods 15, the latter also being welded to the outer peripheries of the frames at appropriate points. Plate 12 and lugs 13 are suitably perforated, as at 16, for engaging the ends of the cross-bars with which they are to be used.

The frames are completely surrounded by, and imbedded in, soft stretchable rubber, and preferably are vulcanized thereto. This construction is clearly indicated in cross section in Fig. 4; the rubber portions which enclose the tubular frames, being integral with side walls 17, and with the curved top, bottom, and back cross-walls 18, 19 and 21 respectively. All of these walls are made thinner adjacent their peripheries as indicated at 22; so that, when they are subjected to tension, the stretching will take place chiefly at these thinned points adjacent the margins of the walls.

For spacing the two metallic frames, subjecting the cross-walls to tension, and completing the assembly of the device, I employ three cross-bars of adjustable length. These may be of any suitable form, and three types are illustrated. These bars should be provided with a flange 23 at each end, adapted for seating upon plates 12 and lugs 13; and their extremities should be suitable for engaging the perforations in these plates and lugs.

One such form of cross-bar is shown in Fig. 2, and this type is particularly suitable for use at both the front and rear of the device. This cross-bar takes the form of right and left-hand threaded screws, with a capstan head 24 at the center. These respective screw parts engage right and left-hand threaded flanged sleeves 25 and 26 respectively. These sleeves are provided

with co-axial squared heads 27, adapted to engage the square perforations 16, in plates 12 and lugs 13.

Another form of cross-bar is shown by itself in Fig. 6. This comprises a flanged bar 28 having, at one extremity, a co-axial screw 29 engaging an internally threaded flanged sleeve 31. One extremity of this composite cross-bar is provided with squared head 32, and the other extremity is provided with a cylindrical screw-slotted head 33.

A third form of cross-bar is shown in Fig. 7. This has a flange 23 adjacent each extremity, and co-axial cylindrical ends 34. This form of bar may be used with any desired number or thickness of washers 35, which afford variation of the effective length of the bar. It is used by merely stretching the rubber walls of the device sufficiently to enable ends 34 to be inserted in the perforations of plates 12 and lugs 13. It is immaterial whether these perforations are square or round, since the bar ends will engage the perforations properly in either case.

A variably positionable metallic guard 36 may be used with a cross-bar of the type shown in Fig. 6, and is held by frictional grip in any desired position.

Figs. 1 and 3 indicate how the device may be moved up to, so as partially to enclose, a buffing wheel indicated by dotted lines 37. The buffing is accomplished by holding the work against the lower periphery of the wheel; and if the work should be pulled out of the operator's hands, it will be thrown backwardly against the interior curved back wall 21, or bottom wall 19 of the device. All of these wall surfaces are of resilient rubber in tension, and are spaced from any solid unyielding part. The walls therefore will yield, and stretch in proportion to the impact of the thrown object; and the latter will be caught as though by a resilient bag, without damage. The degree of resiliency of the cross walls, may be regulated by adjusting the length of the three cross-bars.

The forward lower part of the device provides a tray at 38; into which semi-fluid polishing material will drain and collect, so that it may be used repeatedly. This, of course, effects a substantial saving of polishing material. Any polishing material that may collect and become set upon the interior walls of the device, or within tray 38, may be easily removed, without scraping or chipping, by merely breaking it up by flexing the rubber walls against which it is deposited.

Having thus fully disclosed my invention in a manner that will make its construction and use clear to those familiar with the art involved, I claim:

1. A buffing hood comprising; adjustably spaced side walls connected by cross walls under tension; all of said walls being of resilient and easily stretchable material, and adapted to deflect outwardly under internal impacts.

2. A buffing hood comprising; adjustably spaced side walls connected by cross walls under tension; all of said walls being of resilient and easily stretchable material, adapted to deflect outwardly under internal impacts; and the wall portions which are subject to said impacts being relatively thin adjacent their margins.

3. A buffing hood comprising; opposed side walls connected by cross walls under tension; all of said walls being of resilient and easily stretchable material; and cross bars of adjustable length variably spacing the side walls; said bars being outside of, and materially spaced from, the cross walls.

4. A buffing hood comprising; a pair of opposed outline side frames; resilient and easily stretchable material completely enclosing the frames and supported thereby, constituting side walls connected by cross walls integral therewith; and means for variably spacing the frames to put the material of the cross walls under tension.

5. Construction as defined by claim 4, wherein the material of the wall portions which are subject to internal impacts is relatively thin adjacent the wall margins.

6. Construction as defined by claim 4, wherein the material of the wall portions which are subject to internal impacts, is free to deflect outwardly for considerable distances.

7. Construction as defined by claim 4, wherein the spacing means include cross bars of adjustable effective length.

8. Construction as defined by claim 4, wherein the spacing means include cross bars having screw threads for adjusting their effective length.

9. Construction as defined by claim 4, wherein the spacing means include cross bars upon which washers may be variously positioned for adjusting the effective length of the bars.

10. Construction as defined by claim 4, wherein a bottom portion of the device constitutes a tray which extends forwardly from any normal position of the buffing wheel with which the device is adapted to be used.

11. Construction as defined by claim 4, wherein a bottom portion of the device constitutes a tray which extends forwardly from any normal position of the buffing wheel with which the device is adapted to be used; and wherein the bottom cross wall, below and to the rear of said wheel position, is spaced from outside surfaces, and above said tray portion.

12. Construction as defined by claim 4, wherein said resilient material is of the nature of rubber; and wherein the frames are embedded in, and vulcanized to, said material.

GUSTAV H. MEDART.