Feb. 16, 1932. E. E. WALKER 1,844,996

SANDPAPER HOLDER

Filed Jan. 27, 1930

FIG. 1.

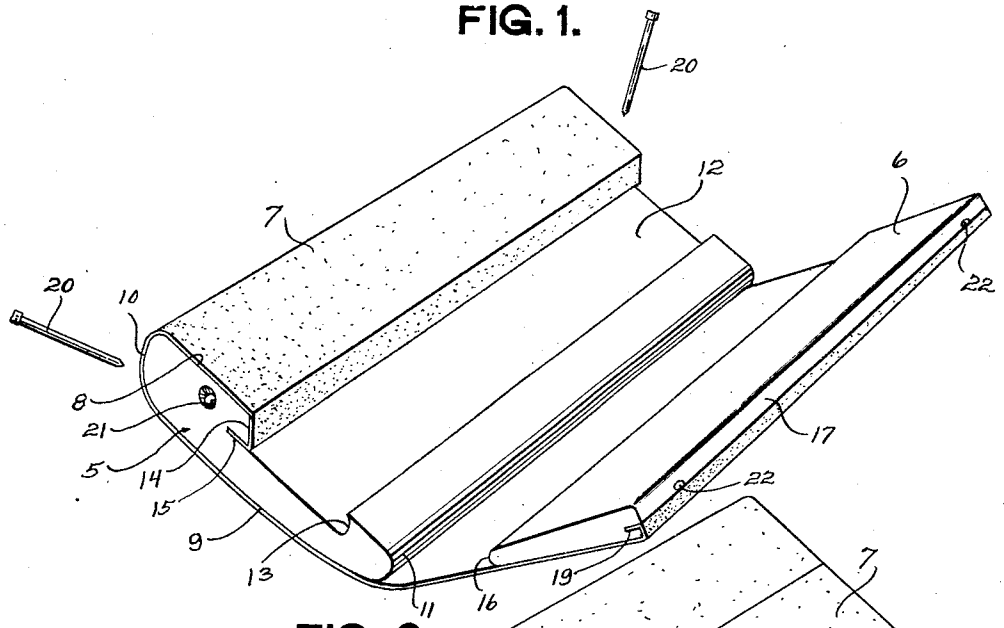


FIG. 2.

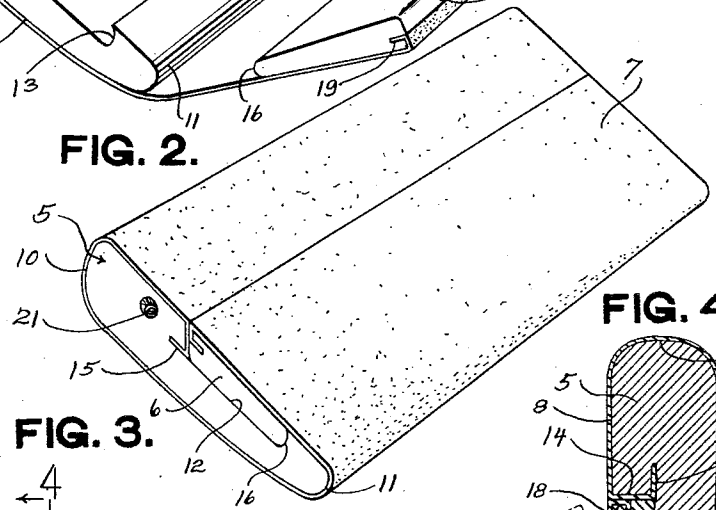


FIG. 3.

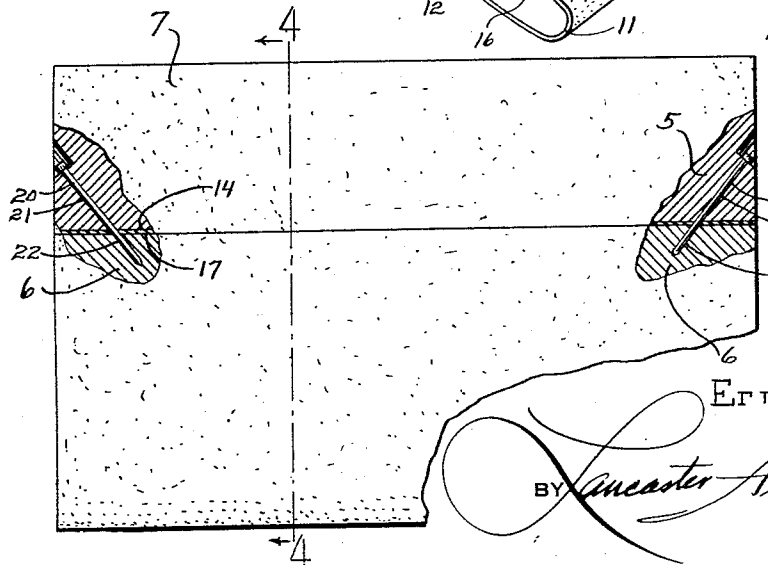
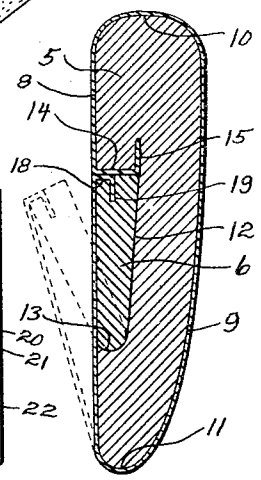


FIG. 4.



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UNITED STATES PATENT OFFICE

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SANDPAPER HOLDER

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The present invention relates to abrading devices and the primary object of the invention is to provide a holder adapted to removably receive strips of sand paper, emery cloth or other similar abrading sheets in a manner to permit ready and easy renewing of the sheets.

A further object of the invention is to provide an improved sand paper holder embodying novel means for securing the sand paper in a taut condition about the block.

A further object of the invention is to provide a sand paper holding block having a configuration permitting use of the block for smoothing either flat or concaved surfaces.

A further object of the invention resides in the provision of an improved sand paper holder or block embodying major and minor sections having an interlocking engagement one with the other for retaining a sheet of sand paper in a taut condition extending entirely about the block.

Other objects and advantages of the invention will be apparent during the course of the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification and in which drawings:

Figure 1 is a perspective view of the device showing the sections opened and the manner in which the sand paper is applied to the sections prior to interlocking of the block sections.

Figure 2 is a perspective view of the device showing the sand paper applied to the block and ready for use.

Figure 3 is an enlarged plan view looking at the flat surface side of the block and showing the manner in which the block sections may be secured together along one edge of the minor section.

Figure 4 is a section on line 4—4 of Figure 3 and showing in dotted lines the position of the minor block section or tongue prior to movement into the receiving channel of the major block section.

In the drawings, and wherein similar reference characters designate corresponding parts through out the several views, the improved holder block has been shown embodying a major section 5 and a minor separable tongue section 6, said sections 5 and 6 to receive and hold a sheet of sand paper or other sheets of abrasive material 7.

The major block section 5 may be of any preferred size and is substantially flat. The section 5 is preferably made from wood and is formed with a flat surface 8 at one side and at its opposite side is formed with a convex surface 9 which connects with the side edges of the flat surface 8 in rounded side edges 10 and 11. As will be observed, the block section 5 is of less thickness adjacent the rounded edge 11 than at the rounded edge 10 so that the side edges of the block may be used for smoothing concaved surfaces of different radii. The end surfaces of the block are preferably flat as shown.

Formed longitudinally thruout the length of the major block section 5 at its flat surface 8 and spaced inwardly of the rounded side edges 10 and 11, is a broad shallow channel 12 for receiving the minor block section 6. This broad shallow channel 12 increases in depth from one edge toward the blunt rounded edge 10 and at its shallow side adjacent the rounded edge 11 of the block section 5 is formed with the concave side edge 13 forming a pocket extending thruout the length of the channel. The wall 14 along the deeper side of the channel 12 is preferably formed straight and at a right angle to the surface 8. Formed in the block section 5 along the lower edge of the wall 14 on a line with the bottom surface of the channel 12, is a groove 15 of a size to receive one edge of the sand paper 7.

The minor or tongue section 6 is also formed of wood and is of substantially wedge-

shape in cross section and of a length equal to the length of the major section 5. The thin edge of the minor section 6 is rounded as at 16 and this rounded edge 16 is intended to have a sliding hinge fit in the concavity 13 of the channel 12. The section 6 is of slightly less thickness than the depth of the channel 12 to compensate for the thickness of the sand paper 7 when the sections 5 and 6 are assembled so that the abrasive side of the sand paper will extend in a flat condition over the flat side of the holder. At the thicker edge of the wedge section 6 the substantially straight edge 17 is formed with a rabbet 18 of a depth equal to the thickness of the paper 7. At the inner edge of the rabbet 18 is formed a groove or slot 19 which is adapted to receive one edge of the paper 7.

While the abrasive sheet 7 may be held in position upon the holder thru a frictional gripping action between the end portions of the sheet when the sections 5 and 6 are in assembled relation, it is preferred that removable dowel pins 20 be provided for more effectively retaining the section 6 in position in the channel 12 to eliminate all possibility of shifting of the section 6. It is preferred that one dowel pin 20 be provided for each end of the holder and these dowel pins are intended to be inserted into suitable openings 21 provided in each end of the block section 5 between the surface 8 and groove 15. These openings or ways 21 extend diagonally to the flat end of the holder and at their inner ends open thru the straight wall 14. The straight edge 17 of the minor section 6 is also provided with openings 22 which align with the ways 21 when the section is assembled in the channel 12. After the sections 5 and 6 are assembled the dowel pins 20 may be readily inserted thru the ways 21 and pierce the paper 7 so as to extend into the openings 22. The outer ends of the ways 21 are preferably counter-bored for receiving the heads of the dowel pins 20. As will be observed in Figure 3, these dowel pins 20 will effectively prevent longitudinal shifting of the sections 5 and 6 with respect to one another and will also prevent upward swinging of the section 6 out of the channel 12.

In placing the sand paper upon the holder, one edge of the paper is first inserted into the groove 15 and then drawn about the major section 5 as shown in Figure 1. The opposite edge of the paper is then inserted into the slot 19 and the tongue section 6 bent over the inner surface of the paper so that the paper is disposed in the rabbet 18. The arcuate hinge edge 16 is then inserted in the groove 13 as shown in dotted lines in Figure 4 so that the edge 16 acts as a sliding hinge edge permitting the section 6 to be swung into the channel 12. This movement of the straight edge 17 of the tongue section into confronting relation with the wall 14 causes two abrasive surfaces of the paper to frictionally contact between the wall 14 and rabbet 18 so that the tongue section is held in the channel 12. The pointed dowel pins 20 may then be inserted thru the aligning ways 21 and 22 and pierce the paper along the wall 14 whereby the tongue section is locked in position along its straight edge 17. The interfitting of the rounded edge 15 in the channel 12 will retain the opposite edge of the tongue section in the channel 12. When replacing the abrasive sheets, the dowel pins 20 are first removed and then by gripping the exposed ends of the tongue section 6 the section may be readily swung out of the channel about the point 15.

The particular type of the holder will permit use of the holder for smoothing either flat or concaved surfaces of different radii. It will be noted that when the sections 5 and 6 are assembled that the abrasive sheets present a perfectly flat surface at one side of the holder.

Thus it will be seen that a novel and improved construction for holders of this character has been disclosed permitting of ready and quick renewing of the abrasive sheet. It will also be apparent that an arrangement has been shown whereby the paper will be firmly held in position upon the holder and that the sand paper extends entirely about the holder so that no space is formed between the meeting ends of the paper.

Changes in detail may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. A holder for abrading sheets comprising a major section having a broad shallow channel provided in one side thereof, said channel along one side wall thereof having a concaved pocket extending thruout the length of the channel, a substantially flat tongue section having one side edge rounded for fitting in said pocket when the tongue is disposed in said channel, and dowel pins extending diagonally thru each end of the major section for releasably connecting the opposite edge of the tongue section to the major section.

2. An abrading device comprising a holder embodying a substantially flat major section having a channel formed in one side thereof thruout the length of the section, a tongue section having an interlocking fit along one edge with the major section along one edge of said channel, an abrading sheet, means connecting one edge of the sheet to the major holder section along one side of the channel, and means connecting the opposite edge of the sheet to one edge of the tongue section, said sheet to encircle the holder with portions of the attached ends

thereof in juxtaposition to each other below the surface of the holder when the tongue section is disposed in said channel.

3. An abrading device comprising a holder embodying a substantially flat major section having a channel formed in one side thereof thruout the length of the section, a tongue section having an interlocking fit along one edge with the major section along one edge of said channel, an abrading sheet, means connecting one edge of the sheet to the major holder section along one side of the channel, means connecting the opposite edge of the sheet to one edge of the tongue section, said sheet to encircle the holder and have portions of its abrasive surface at the attached ends thereof in frictional contact when the tongue section is disposed in said channel, and means for connecting the non-interlocking edge of the tongue section to the major section.

4. A holder for abrading sheets comprising a substantially flat major section having a broad shallow channel provided in one side thereof having a straight wall along one side and a concaved wall along its opposite side forming a pocket extending thruout the length of the channel, a groove formed in the section along the lower edge of the straight channel wall for receiving one edge of an abrading sheet adapted to extend about the section, a tongue section for fitting in said channel and having one rounded edge and one straight edge, said rounded edge to have an interlocking fit in said pocket, a groove formed in the straight edge of the tongue for receiving the opposite end of the abrading sheet, and removable dowel pins connecting the tongue to the major section along the straight edge side of the tongue.

5. A holder for abrading sheets comprising a major section having a channel formed in one side thereof, said channel being deeper at one side than at the other with a straight wall along the deep side of the channel and a concaved wall along the shallow side of the channel defining a pocket extending thruout the length of the channel, a groove coextensive with the bottom surface of the channel at the deep side thereof for receiving one edge of an abrading sheet, a tongue section of wedge-shape in cross section having a rounded edge along its thinner portion for interlocking engagement in said pocket, a slot formed along the opposite edge of the tongue section for receiving the opposite edge of the abrading sheet, and means for connecting the non-interlocking edge of the tongue to the major section with the tongue section concealed beneath the sheet in said channel.

6. A holder for abrading sheets comprising a substantially flat major section having a flat surface at one side, a convex surface at its other side and rounded side edges of different radii, a channel formed in the flat surface side of the major section parallel to the side edges thereof, a separable tongue section having an interlocking fit along one edge with one edge of said channel, and means connecting the opposite or free edge of the tongue section to the major section, said tongue section when in the channel retaining a sheet of abrading material about the holder with the end edges thereof extending inwardly in binding engagement between the free edge of the tongue and adjacent side wall of the channel.

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