Oct. 8, 1946. E. A. SEWARD 2,408,815

SANDING BLOCK

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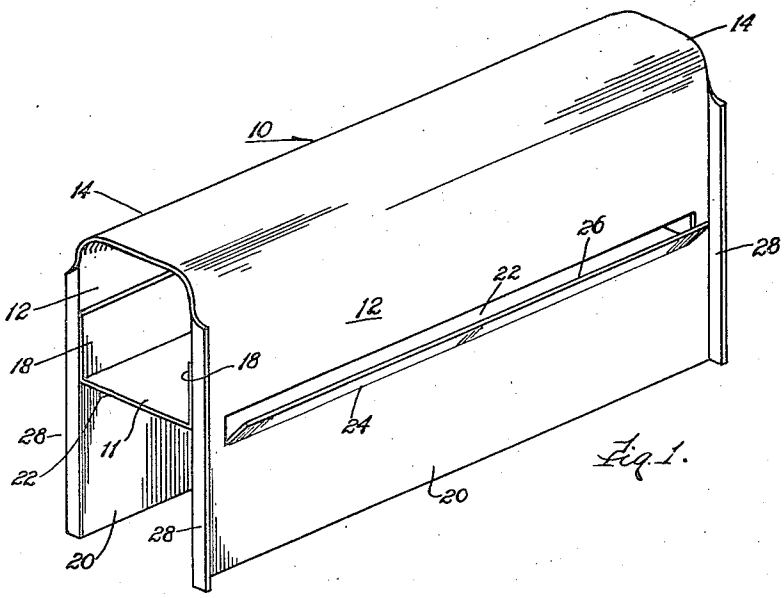


Fig. 1.

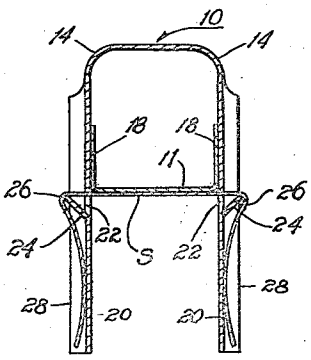


Fig. 2

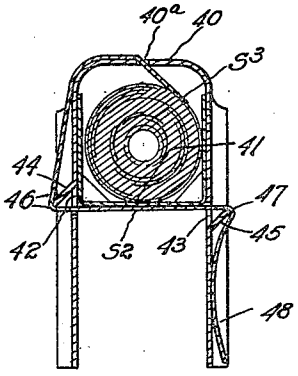


Fig. 4.

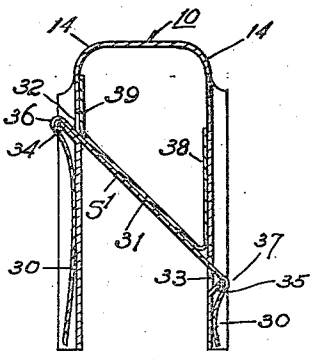


Fig. 3.

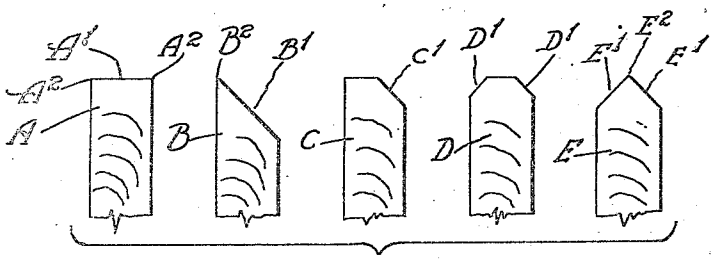


Fig. 5.

Inventor:
Emory A. Seward.
by Burdett & Burdett
Attorneys.

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SANDING BLOCK

Emory A. Seward, Evanston, Ill.

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9 Claims. (Cl. 51—187)

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This invention relates to a sanding block or holder for sand paper or like abrasive sheet material, and one object of the invention is to provide a convenient holder of this character which includes means for guiding the movement thereof over the work to insure an accurate result.

Another object of the invention is to provide supporting means in the holder over which the abrasive sheet material can be stretched and held in a manner which will avoid rounding the corners or edges of the work.

It is also an object of the invention to provide a sanding block adapted to be made economically of sheet metal so that it shall be both light and durable.

A further object of the invention is to provide sanding blocks of various forms adapted for producing square edges and beveled or oblique edges, respectively, by means of abrasive sheet material secured in the blocks in accordance with the principles of this invention; and in one form herein disclosed the invention includes means for accommodating within the device itself a magazine roll of abrasive sheet material from which fresh abrasive can be supplied as needed.

Other objects and advantages of the invention will appear from the following description taken in connection with the drawing in which:

Fig. 1 is a perspective view of a sanding block constructed in accordance with this invention.

Fig. 2 is a transverse vertical sectional view of the block shown in Fig. 1.

Fig. 3 is a similar transverse sectional view of a modified form of sanding block designed for producing an oblique or beveled edge.

Fig. 4 is also a transverse sectional view of a similar sanding block modified, however, to carry a magazine roll of abrasive sheet material.

Fig. 5 is a group of sectional views of boards or similar work-pieces showing specimens of the type of work produced by sanding blocks made in accordance with this invention.

The device to which this invention relates is intended for holding and firmly supporting a piece of sand paper or like abrasive so that the abrasive may be moved manually back and forth over a piece of work, as, for example, in smoothing the narrow edge of a board. Such a workpiece is shown at A in Fig. 5, and the edge A^1 may be understood as a surface worked upon by the abrasive.

The sanding block itself is shown in Fig. 1 as constructed principally from a single piece of sheet metal providing a top wall 10 with side walls 12, 12 bent at right angles thereto and parallel to each other, but preferably joined to the top wall 10 by the smoothly rounded portions 14 so that the block may be comfortably gripped in the hand with the palm resting upon the top wall 10. A bridge piece 11 is formed as a sheet metal channel having side flanges 18, 18 which are

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welded or otherwise permanently secured to the inner faces of the side walls 12, 12 so that the bridging portion 11 extends at right angles to the lower depending portions 20, 20 of the side walls.

Substantially at the level of the bridge 11 each side wall is formed with a slot 22 of substantial width. The sheet material representing the area of the slot 22 is severed at three sides and folded outwardly as an obliquely disposed wing 24, with its upper edge 26 lying just below the plane of the under side of the bridge 16 and spaced therefrom by not more than the thickness of a sheet of sand paper. Thus when a piece of sand paper is passed through the slots 22, 22 and folded downwardly about the edges 26 of the wings 24, it will be pressed against the surface A^1 only by the flat bridge 11. When a flexible piece of sand paper is merely held in the hand of the workman and pressed against a surface such as the edge A^1 of the board A, there is a tendency for the edges of the piece represented by the corners A^2, A^2 in the sectional view to be worn away first and to be left rounded instead of sharply squared; but with the sand paper shown at S in Fig. 2 stretched between the edges 26, 26 of the supporting wings 24 in the device of this invention, this tendency is eliminated. The portions of the sand paper folded around the edges 26 of the wings 24 will be gripped against the lower portions 20, 20 of the side walls by the thumb on one side and the fingers at the other side of the device as it is moved back and forth over the surface A^1, and the inner faces of these depending side wall portions 20, 20 will serve as guides against one side or the other of the piece A. To stiffen the side walls they may be reinforced at the ends by flanges 28 extending outwardly from each side of the device, as shown.

Fig. 3 shows a sanding block of the same general character but design for producing a beveled edge such as that shown at B^1 on the workpiece in Fig. 5. In this case the bridge member 31 extends at the desired angle to the depending side walls 30, 30, and its flanges 38 and 39 are welded or otherwise secured to the inner faces of the side walls of the sheet metal body of the block. The side walls are formed with slots 32 and 33 with a wing 34 extending obliquely outward from the wall 32 and a wing 35 extending obliquely outward from the slot 33, these wings being dimensioned and arranged so that their outer edges 36 and 37 respectively, lie just below the plane of the under face of the bridge 31. The sand paper shown at S^1 is folded around these edges 36 and 37 so that an area of the sand paper intermediate these edges is held flatly against the face B^1 of the work by pressure applied through the flat bridge member 31 at the desired angle.

As shown in Fig. 3 the face of the bridge mem-

ber 31 is disposed at 45 degrees to the vertical, but a similar structure may be supplied, if desired, for producing a bevel of any other angle. It will also be recognized that instead of beveling a work-piece to a sharp edge, as shown at B^2, a block such as that shown at C may be beveled merely at one side, as at C^1, or a block or board D may be given beveled edges D^1, D^1 at both sides. Fig. 5 also shows a work-piece E in which the two beveled edges E^1, E^1 meet along an apex E^2. It is evident that this form can be readily produced by the use of a sanding block such as that shown in Fig. 3 applied first to one edge and then to the adjacent edge of the board or work-piece E.

In the modified structure illustrated in Fig. 4 the top wall 40 is formed with a longitudinal slot 40^a which may extend throughout the length of the device or may stop short near both ends thereof so that this slot will be of the same length as the slots 42 and 43 in the side walls of the device. In this structure the wing 44 extends obliquely downward while the wing 45 extends obliquely upward so that their outer edges 46 and 47, respectively, are disposed to support the sand paper S^2 in a plane closely adjacent the under surface of the bridge member 41. The supply roll S^3 is disposed in the space formed under the top wall 40 and above the bridge 41, and the end of the roll is fed therefrom through the slot 40^a and across one half of the top 40 down to the edge 46 of the wing 44 around which it is sharply bent to extend through the slots 42 and 43 and directly under the bridge 41. The end portion of the paper is then folded downwardly over the edge 47 of the wing 45 so as to be gripped against the depending side wall 43 by the thumb or fingers of the hand of the user. The palm of the hand resting upon the upper side of the structure will grip the portion of the sand paper emerging from the slot 40^a, or the thumb or fingers may be used to press the paper against the side wall just above the wing 44. In either case the working surface at S^2 will be held flatly in position under the bridge 41 for use in the same manner as the structure shown in Fig. 2.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the invention, and that the same is not limited to the particular form herein shown and described, except in so far as indicated by the appended claims.

I claim as my invention:

1. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge.

2. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots aligned with the bridge, the lower edges of said slots being disposed below the bottom plane of said bridge, and wings extending obliquely outward and upward from said lower edges of the slots, the upper edges of said wings lying in a plane closely adjacent the bottom plane of said bridge.

3. In a sanding block as defined in claim 1, said bridge including upwardly extending side flanges secured flatly and rigidly to the inner faces of the side walls respectively.

4. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge, said side walls having outwardly projecting reinforcing flanges at their ends.

5. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge, the side walls being joined to the top wall by smoothly rounded portions integral with said top wall.

6. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge, the top wall having a longitudinal slot to feed a sheet of abrasive material from a supply roll housed between the top wall and the bridge.

7. In a sanding block as defined in claim 6, one of said wings extending obliquely outward and downward from the upper edge of the slot in the side wall and the other wing extending obliquely outward and upward from the lower edge of the slot in the other side wall.

8. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge, said bottom plane of the bridge being perpendicular to the inner faces of the side walls.

9. A sanding block comprising a sheet metal body having a top wall and parallel side walls with a bridge member disposed between the side walls intermediate the top wall and the lower edges of said side walls, the side walls having slots adjacent the bottom plane of said bridge and wings extending outwardly from said slots with the outer edges of said wings spaced laterally from the side walls in a plane closely adjacent said bottom plane of the bridge, the bottom surface of the bridge being flat and inclined to the inner faces of the side walls.

EMORY A. SEWARD.