May 6, 1952 C. D. TRUSSELL 2,595,429

HAND SANDER

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Fig. 1.

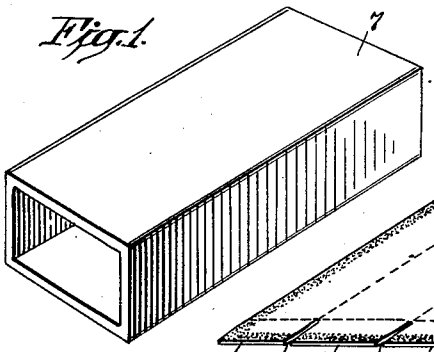


Fig. 2.

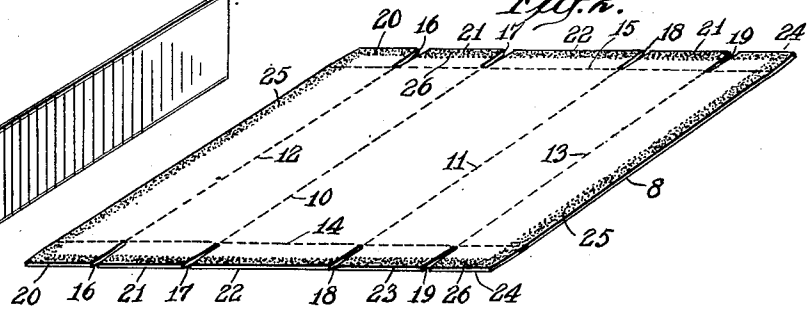


Fig. 3.

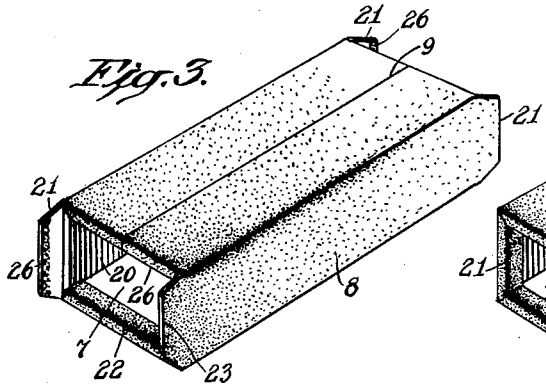


Fig. 4.

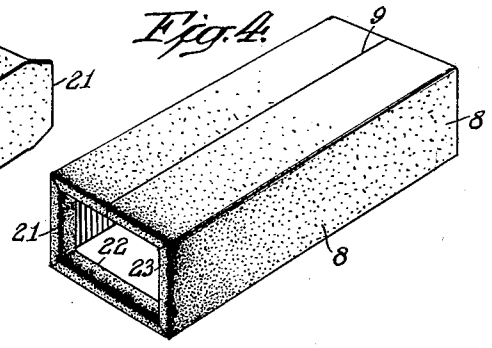
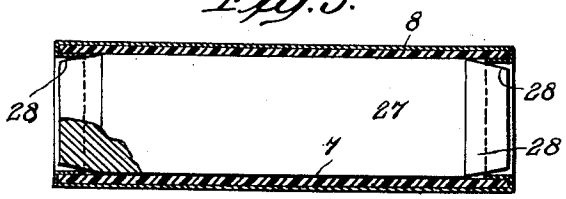


Fig. 5.



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HAND SANDER

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Application August 22, 1950, Serial No. 180,758

2 Claims. (Cl. 51—185)

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The invention disclosed in this patent relates to sanders of the type which are held in the hand.

These consist, usually, of a block of convenient size to be gripped in the hand, about which the sandpaper is wrapped and clamp means of some sort for securing the sandpaper in wrapped condition about the block.

The objects of this invention are to eliminate the need for the clamp construction and to provide a single device which of itself will properly support and securely hold the sandpaper.

Related objects are to reduce cost and to simplify application of the sandpaper to and the securing of the same on the holding block.

Further objects of the invention are to prepare the sandpaper, emery cloth or other rubbing material for quick, easy application to the holder and to accomplish a more or less instant automatic interlocking engagement of the same with the holder.

Other desirable objects attained by the invention are set forth or will appear in the course of the following specification.

The drawing accompanying and forming part of the specification illustrates certain present preferred embodiments of the invention. Construction and arrangement, however, may be modified and changed as regards the present illustration, all within the true intent and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a perspective view of a tubular form of holder for the sandpaper;

Fig. 2 is a perspective view showing a sheet of sandpaper as prepared for folding and interlocking engagement over and with the holder;

Fig. 3 is a perspective view showing the sandpaper folded about the tubular form with the edges in abutment at the top and the extending or overlapping ends at the top and bottom folded inward over the top and bottom edges of the tubular member;

Fig. 4 is a similar view showing the projecting side or end edges of the sandpaper folded inward and interlockingly holding all turned-in edges of the sandpaper;

Fig. 5 is a broken longitudinal sectional view of the sandpaper in place on the tubular form and a block inserted in the form to provide weight and hold the form in shape and to further secure the in-turned ends of the sandpaper.

Fig. 1 shows a form of holder such as contemplated by the invention and which is a tubular shell of rectangular cross section having a greater width than height and of a size to be conveniently gripped and held in the hand.

This tubular form of holding block may be of extruded material such as plastic or metal, or it may be of cardboard, wood or other material and of either solid or continuous, one-piece construction, or made up of several pieces suitably secured together in the rectangular formation such as illustrated.

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In the case of wood, the holder may be made up of a solid block with the ends mortised inward or hollowed out, throughout the full extent of the block, or in any event to produce the tubular ends such as shown in Figs. 1 and 5.

For purposes of reference the tubular block as it may be termed, is designated 7 and the sandpaper, rubbing or covering material which is applied and secured about the same, is designated 8.

The sandpaper is preferably cut in a size to wrap about the block with the edges meeting or substantially meeting, as indicated at 9 in Figs. 3 and 4, and with the ends extending beyond the ends of the block.

Further, the sandpaper is preferably scored, creased or otherwise treated to provide fold lines 10, 11, 12 and 13, which will cause it to break and fold smoothly about the four corners of the box-like holder.

Additionally, the sandpaper may be scored on the inner face at 14, 15, to define lines for bending the projecting end portions of the sheet inward over the end edges of the tubular holder.

Further, it is of advantage to notch the projecting end portions inward on lines 16, 17, 18, 19, in register with corner fold lines 12, 10, 11 and 13, to define tabs 20, 21, 22, 23 and 24, which will fold easily in over the edges of the holding block.

Another step that may be employed in the preparation of the sandpaper, is to apply a narrow strip of tacky, non-hardening adhesive on the underside of the meeting edge portions of the sheet, as indicated at 25, or over the end portions of the folding tabs, as indicated at 26, or both along the edges and on the tabs, as shown.

While other methods or sequence of steps may be employed, it has been found practical to first fold the sandpaper around the four sides of the block, bringing the meeting edges together over the top of the block and then, as shown in Fig. 3, folding inward the top flaps 20 and 26 and the bottom flap 22. With this accomplished the side flaps 21 and 23 may be turned inward, as shown in Fig. 4, to interlock over the edges of the top and bottom flaps and thus secure all five end flaps firmly in place.

The adhesive, if used, assists in holding the sandpaper firmly in place, but is not essential since the end flaps when fully forced into the open ends of the holder will secure the sandpaper for all practical purposes.

While positively and firmly interlocked and held on the block, the sandpaper may nevertheless be quickly and easily removed by simply reaching in and pulling out the end flaps so as

to unlock them and release the sandpaper from the block.

In some instances it may be desirable to reinforce the tubular block to withstand the application of greater pressure. At times, also, it may be desirable to give the holder a greater mass weight.

Accordingly, the arrangement shown in Fig. 5 may be employed, in which a solid block 27 of wood or other material shaped to closely fit inside the tubular holder, is slipped into position therein, preferably with its ends within and not projecting beyond the ends of the holder.

These inset ends of the solid filler block 27 may be beveled as indicated at 28, inwardly at least to the extent and preferably to a greater extent than the length of the in-folded end tabs so as not to strain the tubular holder and so that it can be located in position without having to use undue force.

If the filler block 27 is used, the in-folding of the tabs may be completed at one end of the holder before the block is inserted, and the folds at the second end made after forcing the block further in at this second end to provide clearance for folding in the tabs at this second end. After this the block may be slid back to a substantially centralized location such as shown in Fig. 5, in which position it holds the tabs at both ends against any unfolding or releasing action.

The term "sandpaper" has been used herein in a generic sense to designate rubbing material of this sort which might be used with the holder described.

While the notching of the projecting end portions forming the flaps or tabs is of advantage in facilitating the infolding into the ends of the holder and the interlocking together of such tab

forming end portions, this notching is not in all cases essential.

What is claimed is:

1. A hand sander comprising a tubular holder of substantially rectangular cross section, a sheet of sandpaper wrapped about the same and having projecting end portions tucked into opposite ends of the holder and a filler block slidingly fitting in said holder and having end portions underlying the tucked-in end portions of the sandpaper.

2. A hand sander comprising a block of a size and shape to be gripped in the hand and having tubular open end portions and a sheet of sandpaper wrapped about said block and having integral end tabs projecting beyond the ends of the block and folded back inwardly into said tubular open end portions of the block, the end tabs at each end of the block being interlockingly engaged to firmly secure the sandpaper in position on the block.

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