Jan. 4, 1949. F. H. STAGGS 2,458,217

DRUM SANDER

Filed April 12, 1946

Fig. 1.

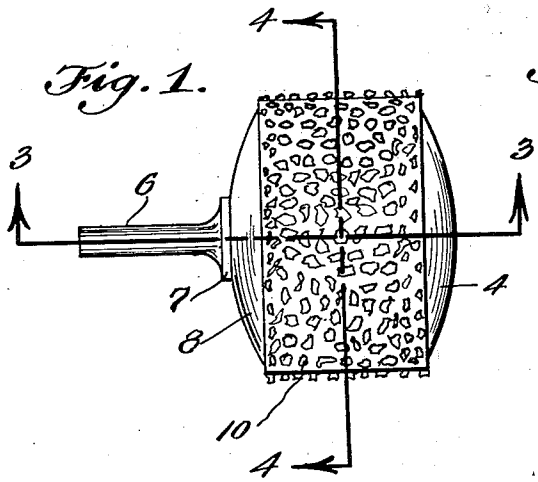


Fig. 2.

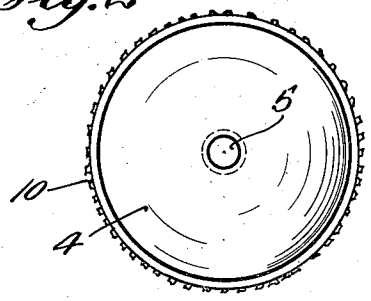


Fig. 3.

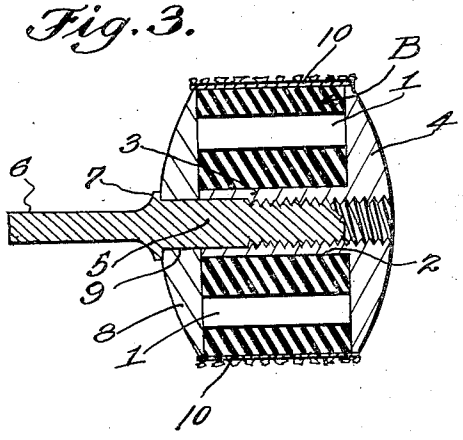
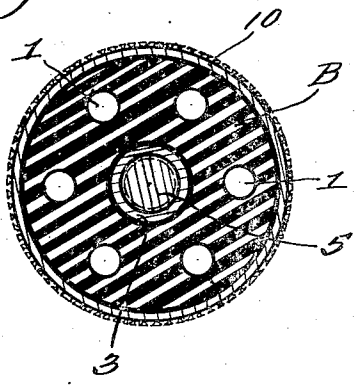


Fig. 4.



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DRUM SANDER

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Application April 12, 1946, Serial No. 661,789

3 Claims. (Cl. 51—190)

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This invention relates to a drum sander and it is an object of the invention to provide a device of this kind of a character whereby is eliminated the use of tools to install or remove the sanding band.

It is also an object of the invention to provide a device of this kind wherein the sanding band is disposed around an elastic drum whereby is assured an even outward expansion on the sanding band and thus provide a much truer rotation of the band.

Furthermore, it is an object of the invention to provide a device of this kind wherein the sanding band is continuous and the structure of the device otherwise is such to readily allow for the application or removal of the band.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved drum sander whereby certain important advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in elevation of a drum sander constructed in accordance with an embodiment of the invention;

Figure 2 is a view in end elevation of the device as illustrated in Figure 1;

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 1;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 1.

In the embodiment of the invention as illustrated in the accompanying drawings, the drum sander comprises a cylindrical body or drum B of requisite dimensions and formed of rubber or a rubber composition. This body or drum B has disposed therearound in its outer portion peripherally spaced openings 1 to increase its elasticity.

Disposed axially through the body or drum B is a bore 2 which has snugly engaged therethrough the tubular stem 3 carried by the axial center of an end support or disk 4. This stem 3 is of a length substantially equal to the length of the body or drum B and the major portion of the bore 2 of this stem 3 is threaded and with which threaded portion is engaged the major outer portion of the mandrel 5. One end portion 6 of this mandrel 5 is so formed as to be readily engaged with a drill chuck or otherwise as may be preferred.

This mandrel 5 at a desired point intermediate its ends is provided with the outstanding surrounding flange 7 for direct contact from without with the outer face of a second end support or disk 8. This end support or disk 8 at its axial center is provided with an opening 9 through which the mandrel 5 is readily directed.

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The end supports or disks 4 and 8 are each of a radius substantially equal to the normal or contracted radius of the body B.

Disposed peripherally around the body or drum B is a continuous sanding band 10 and by proper threading of the mandrel 5 into the bore 2 of the stem 3, the body or drum B under the action of the end supports or disks 4 and 8 may be caused to expand in a manner to assure an even outward expansion at all points on the sanding band 10.

It is also to be stated that in practice the body or drum B has a press feed on the stem 3 and it is to be particularly pointed out that the end supports or disks 4 and 8 will prevent the body or drum B from squeezing over the outer edges of such supports or disks.

It is also to be noted that the outer faces of the supports or disks 4 and 8 are convex, with the peripheral edges thereof extremely fine.

It is believed to be obvious that by holding the sander as a unit in one hand, the mandrel 5 can be turned by the other hand to either tighten or loosen the sanding band 10 as may be desired.

From the foregoing description it is thought to be obvious that a drum sander constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. A drum sander comprising an elastic cylindrical body having an axial bore therethrough, end plates, one of said end plates having an axial tubular stem extending through the bore of the body, the second plate having an axial opening, a mandrel extending through the opening of the second plate and extending through and threadably secured in the bore of the stem, said mandrel having a flange for contact with the outer face of the second end plate, and a continuous sander band snugly fitted around the body.

2. A drum sander of the character stated in claim 1, wherein said plates have opposing flat parallel faces each pressing against an end of the cylindrical body, and the remote faces of the plates being convex and joining the adja-

cent flat face to form a thin edge, the diameters of the plates being substantially equal to the diameter of the body.

3. The drum sander comprising an elastic cylindrical body having an axial bore therethrough, a pair of end plates between which the cylindrical body is positioned, said end plates having flat opposing faces each contacting the adjacent end of the body, one of said end plates having an axial tubular stem extending from the flat face thereof through the bore of the body, said tubular stem being of a length substantially equal to the length of the bore and opposing the flat face of the other plate, the said other plate having an axial opening, said tubular stem being interiorly screw threaded, a mandrel extending through the opening of the said other plate and through the tubular stem, the mandrel being screw threaded for threaded engagement with the interior of the tubular stem, the mandrel having an encircling flange for contact with the outer face of the said other end plate, and a sanding band encircling the cylindrical body.

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