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L. R. SWANK

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SANDER ATTACHMENT

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SANDER ATTACHMENT

Lewis R. Swank, Lewiston, Idaho

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5 Claims. (Cl. 51-170)

This invention relates to an attachment for a portable sanding machine and while capable of use generally it is primarily adapted for feather edging paint wherever spot jobs are made and for conditioning metal which has been sanded with a coarse, disc sander or the equivalent.

It is aimed to provide a novel means preferably readily attachable to and detachable from the sander which includes an arm carrying the abrading element and to which arm an eccentric motion is imparted from the power-take-off shaft of the sander.

It is also an object to provide such a construction wherein said arm has a ball connection with a novel handle provided with means for gripping the handle of the sander.

The more specific objects and advantages will in part be pointed out and will otherwise become apparent as the description of one operative form is hereinafter described with relation to accompanying drawings.

In said drawings:

Figure 1 is a side elevation showing my improvement applied to a sander;

Figure 2 is a bottom or inverted plan view of the parts of Figure 1;

Figure 3 is a vertical section taken on the line 3-3 of Figure 1;

Figure 4 is a horizontal section taken on the line of 4-4 of Figure 1;

Figure 5 is a vertical section taken on the line 5-5 of Fig. 2;

Figure 6 is a vertical section taken on the line 6-6 of Figure 4; and,

Figure 7 is a plan view of the eccentric drive element.

Referring specifically to the drawings wherein like reference characters designate like or similar parts, a sander is shown generally at A. Said sander is to be taken as conventional. Specifically, it has a casing 10 within which an electric motor, to operate the same, is carried and which receives electric current from any suitable source through conductor means 11 entering through a handle at 12. The motor is geared to drive a vertical power take-off shaft at 13 to which a disc means 14 is removably fastened and which is adapted for mounting an abrading element thereagainst. Such shaft 13 at its lower end has a screw threaded socket 15 usually entered by screw means to secure the disc means 14 in place.

My improvements with the sander described are of such a nature that they be readily attached thereto or detached therefrom so that

the sander is not impaired for normal use as well as use in accordance with my invention.

In carrying out or practicing the invention, an arm or body 16 of wood, steel, aluminum or any other desired metal or material is provided. Adjacent one end, arm 16 carries an abrading element 17 which may be a block of sponge rubber throughout which the abrading material is dispersed, or it may be of any other material or character. This element is gripped or detachably held in place between jaws 18 and 19. Jaws 18 and 19 are pivotally connected together and to the arm 16 by means of an endless frame 20. Pivoted on the frame 20 is a lever 22 which is adapted for cam or binding engagement with a notch 23 in the jaw 19 to fasten the jaws in gripping engagement with the abrading element.

Adjacent the other end, the arm 16 is anchored in a ball 24 which in turn has bearing in a bracket or socket 25 which is adjustably connected by means of a bolt 26 or equivalent, to an open or endless handle 27. Said handle 27 depends from a clasp or grip 28, for instance, of U-shape, as shown, and it is fastened to the latter by rivets or any equivalent means at 29. Clasp 28 is resilient and readily clips on and off the handle 12 as shown.

An eccentric drive connection for the arm 16 is provided between the same and the shaft 13 at a point between the bearing ball 24 and the abrading element 17. This eccentric connection consists of an eccentric or cam generally designated 30 and consisting of a counterweight disc 31 and a disc bearing 32 integral therewith but offset therefrom. An anchoring stud 33 projects from the disc 31 and is screw threaded into the socket 15 so that the eccentric element will be rotated through the rotation of the power take-off shaft 13. The offset disc 32 is journaled in a bushing or cup 34 fastened to the arm 16. This bushing 34, may have a pair of pins 35 which removably engage recesses 36 in the arm. A stud screw 37 has an enlarged or bearing portion 38 journaled in an opening in the arm 16 at 39 and a screw threaded shank 40 extends loosely through the bottom wall of the cup and is screw threaded in a recess 41 of the disc 32. Thrust discs 42 may be interposed between the discs 32 and bottom of the bushing 34 according to the adjustment desired and it will be realized that the bolt 26 also permits adjustment.

Attention is called to the fact that the eccentric connection may be provided in various ways and in connection therewith that any suitable

anti-friction ball bearing or other means may be used in connection therewith.

In the use of the device, the sander may be held as usual or it may be gripped by the handle 27 and that the operation of its motor rotates the power take-off shaft 13 which in turn imparts an eccentric movement to the arm 16 so that an abrading motion is given to the abrading element 17, the arm moving on the ball at 24.

Various changes may be resorted to provided they fall within the spirit and scope of the invention as defined by the appended claims.

I claim as my invention:

1. In combination with a sander and its power take-off shaft, an abradant-carrying arm, a grip attachable to the sander, a means pivoting the arm to the grip, a frame extending from the grip, a bracket attached to the frame, said arm extending through a ball, said ball being journaled on said bracket, and an eccentric drive from the power take-off shaft to said arm.

2. In combination with a sander and its power take-off shaft, an abradant-carrying arm, a grip attachable to the sander, a means pivoting the arm to the grip, a frame extending from the grip, a bracket attached to the frame, said arm extending through a ball, said ball being journaled on said bracket, an eccentric drive from the power take-off shaft to said arm comprising an eccentric element having a stud attachable in a socket on said shaft, an offset disc on said element, a bushing on said arm, and a fastening journaled in the arm and bushing connected to the offset element.

3. In combination with a sander and its power take-off shaft, an abradant-carrying arm, means pivoting the arm to the sander, said shaft having a screw threaded opening, an eccentric element having a stud secured in said opening, a counter-weight disc on said element, an offset disc on said element, a bushing on said arm in which the second mentioned disc is journaled, and a fastening passing loosely through the arm and connected to the second mentioned disc.

4. In combination with a sander and its power take-off shaft, an abradant-carrying arm, means pivoting the arm to the sander, said shaft having a screw threaded opening, an eccentric element having a stud secured in said opening, a counter-weight disc on said element, an offset disc on said element, a bushing on said arm in which the second mentioned disc is journaled, and a fastening passing loosely through the arm and connected to the second mentioned disc, means to hold the bushing against turning relatively to the arm.

5. In combination with a sander having a power take-off shaft, an abradant-carrying arm, means pivoting the arm to the sander, an eccentric element, means to attach said element to said shaft, said element having a counter-weight disc, an offset bearing disc attached to the first disc, a bushing carried by the arm against movement relatively thereto, the second mentioned disc being journaled in the bushing, and a securing element passing loosely through the arm into the second mentioned disc.

LEWIS R. SWANK.