March 3, 1953 J. P. LACELLE 2,630,150

BEARING ADJUSTING MEANS FOR CYLINDRICAL CUTTERS

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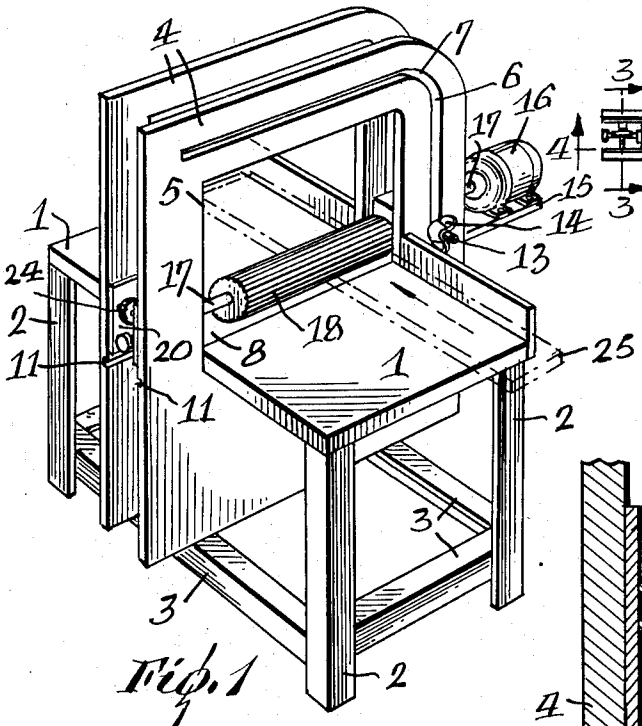


Fig. 1

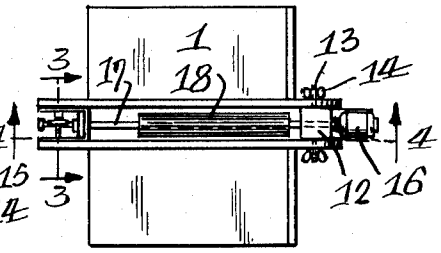


Fig. 2

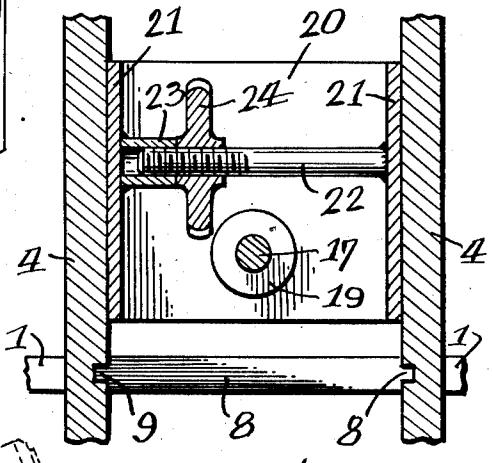


Fig. 3

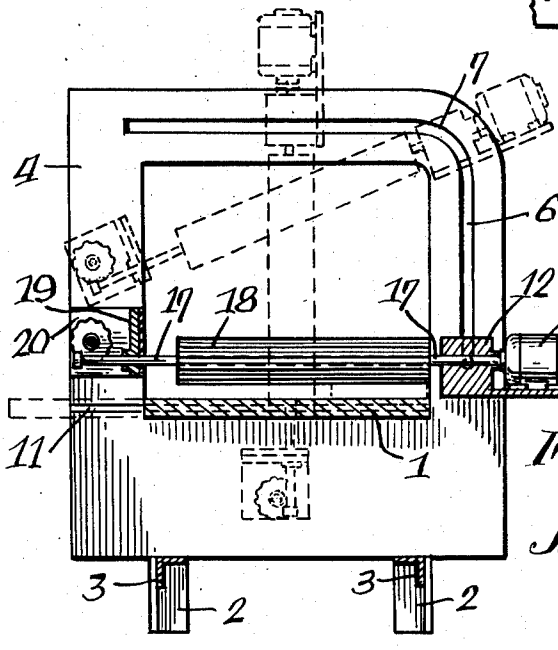


Fig. 4

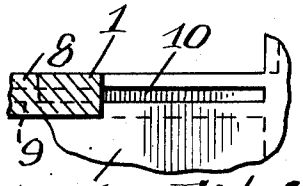


Fig. 5

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BEARING ADJUSTING MEANS FOR CYLINDRICAL CUTTERS

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3 Claims. (Cl. 144—130)

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The present invention pertains to a novel planer in which the tool can be adjusted to any angle corresponding to the surface to be dressed. The invention is moreover applicable to other surfacing machines when a smooth out surface is needed.

The principal object of the invention, as indicated, is to provide a planer having an angularly adjustable tool shaft. Another object is to provide a simple and practical means for fixing the ends of the arbor.

A further object is to provide a planer having the described properties and constructed in a simple and economical manner.

In the accomplishment of these objects, the device includes a rectangular table carrying a pair of uprights laid transversely at the center and spaced a small distance apart. Each upright has a large square opening and a groove or slot in the frame thus formed. Each such slot extends along one side and the top of the frame, and the opposed slots receive slide screws which are carried by a block or spacer. The screws are secured by wing nuts at both ends. The block receives the shaft of a portable driving motor, and the shaft in turn carries the working tool.

The opposite end of the shaft is mounted in a bearing carried by an angle iron which is secured to one of the uprights by another screw means.

The table top has a central transverse removable strip to permit removal of the uprights when desired.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a perspective view of the device;

Figure 2 is a plan view;

Figure 3 is a section on the line 3—3 of Figure 2;

Figure 4 is a section on the line 4—4 of Figure 2; and

Figure 5 is a detail section.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 1 is shown a table having a horizontal top 1 supported on four corner legs 2. The lower ends of the legs are joined by stretchers 3 which serve to support a pair of uprights 4. The latter extend above the top 1 and lie transversely at the center thereof and spaced apart a short distance. These members are in the form of plates having each a large square opening 5 above and receiving the table top. The opening 5

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leaves a frame, and each frame is formed with a slot 6 along one vertical side and the top thereof, with a bend 7 between the side and top portions.

At the uprights 4 the table top has a separable transverse strip 8. The strip is formed with tenons 9 receivable in grooves 10 formed in the adjacent parts of the table top. The grooves are extended at 11 into the uprights 4.

Between the uprights 4 and at the slots 6 is mounted a block 12 having screw studs 13 extending from its sides into the respective slots. A wing or other nut 14 is carried by each screw 13 at the outer surface of the adjacent upright for adjustably securing the block between the uprights.

The block 12 is extended at its base by a plate 15 which supports an electric motor 16 outside the uprights. The block is actually a bearing for the motor shaft 17 which carries a cylindrical planing tool 18 lying within the openings 5. The free end of the shaft is received in a bearing 19 formed in a U-shaped plate 20 lying between the respective sides of the opposed frames. The sides 21 of the U-member 20 are secured against the sides of the frame by the device shown in Figure 3. A screw 22 extends from one of the sides 21 loosely into a tube 23 on the other side. A lock nut 24 on the threads of the screw bears against the end of the tube 23 whereby to spread the sides 21 against the sides of the uprights. For easier manipulation, the lock nut is formed as a hand wheel as illustrated.

In the use of the device, if a single plank is to be planed, as shown in Figure 1, the shaft 17 is mounted horizontally. In this position the nuts 14 are tightened to secure the bearing block 12. Next, the nut 24 is turned to secure the bearing 19 between the frames 4 as described.

For thicker plank or for forming angular surfaces, the bearing 12 and 19 are individually adjusted to the desired positions and secured therein as already set forth.

The removable strip 8 permits removal of the frames or adjustment of the shaft 17 to a steep angle, as shown in dotted lines in Figure 4.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. A planer comprising a table having a top, a pair of hollow frames mounted transversely

thereof in spaced parallel relation, a tool shaft lying between said frames, bearings for the ends of said shaft, one of said bearings comprising a U-member having its sides engaging said frames, screw means for spreading said sides against said frames, means for individually adjusting said bearings vertically in said frames, and a motor for driving said shaft.

2. A planer comprising a table having a top, a pair of hollow frames mounted transversely thereof in spaced parallel relation, a tool shaft lying between said frames, bearings for the ends of said shaft, slots in opposed vertical sides of said frames, screw studs extending from one of said bearings through said slots, nuts on said studs, the other bearing comprising a U-member having its sides engaging said frames, screw means for spreading said sides against said frames, and a motor for driving said shaft.

3. A planer comprising a table having a top, a pair of hollow frames mounted transversely thereof in spaced parallel relation, a tool shaft lying between said frames, bearings for the ends

of said shaft, means for individually adjusting said bearings vertically in said frames, and a motor for driving said shaft, said table top having a separable transverse strip positioned between said frames, to form an opening in which an end of said shaft may be inserted.

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