Feb. 28, 1933. J. G. MATTHEWS 1,899,204

BUTCHER'S BLOCK PLANER AND CLEANER

Filed Oct. 29, 1931 3 Sheets-Sheet 1

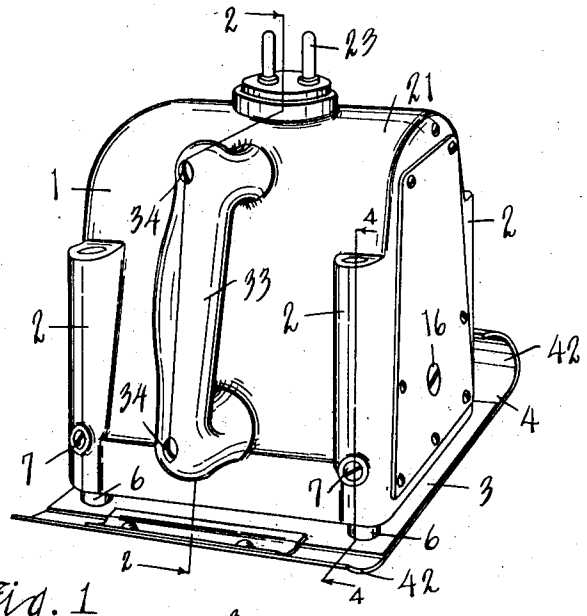


Fig. 1

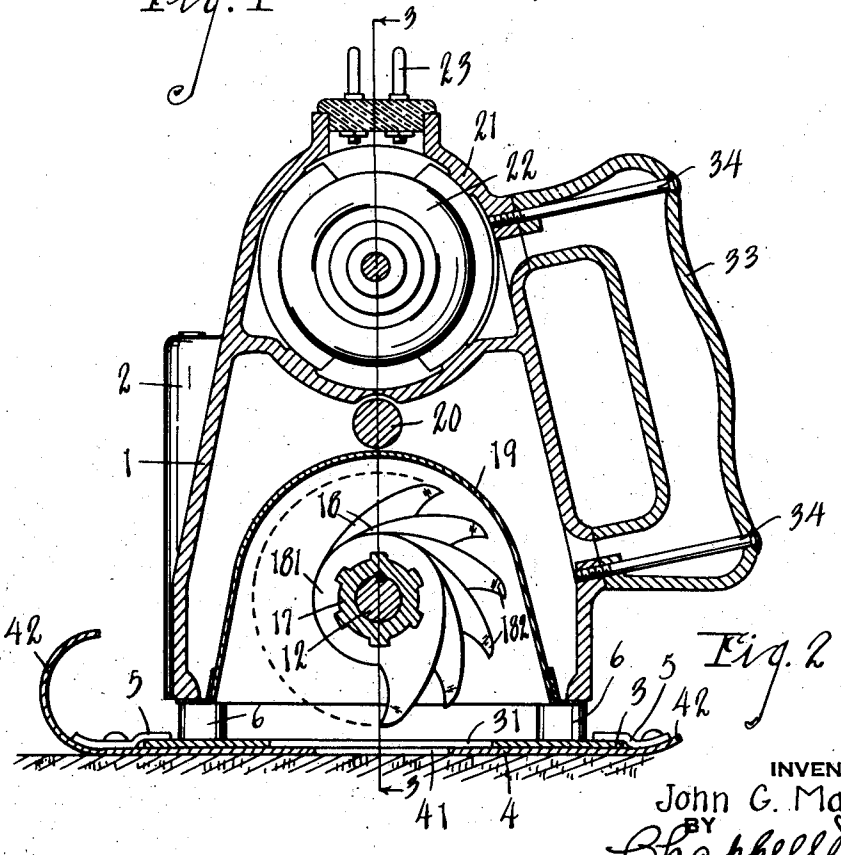


Fig. 2

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BUTCHER'S BLOCK PLANER AND CLEANER

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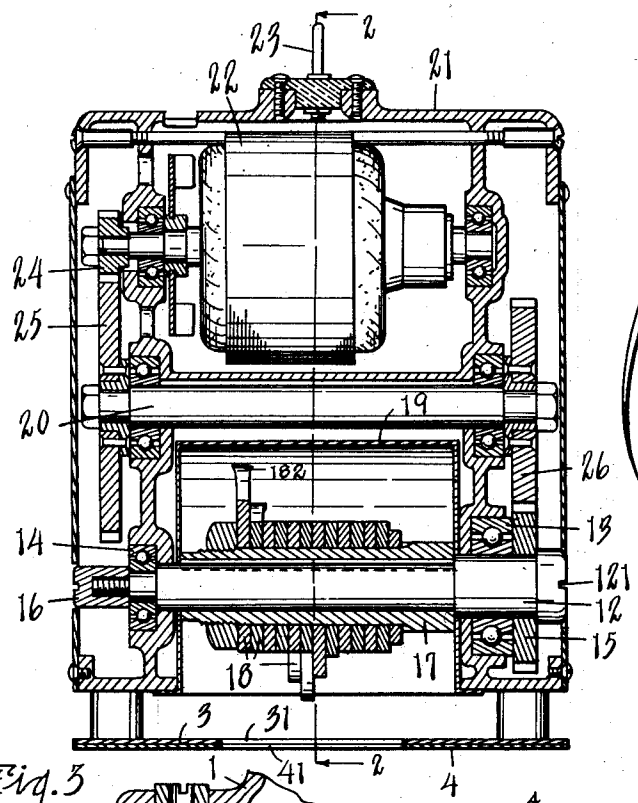


Fig. 3

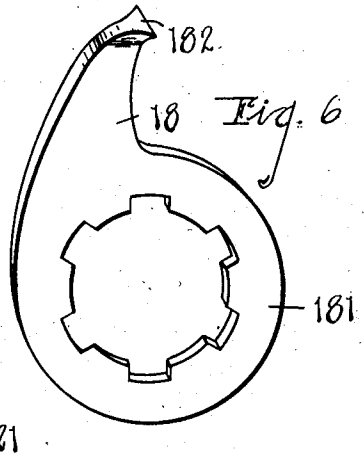


Fig. 6

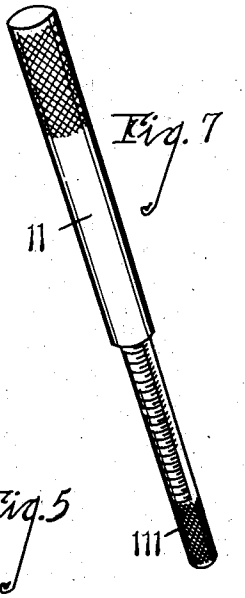


Fig. 7

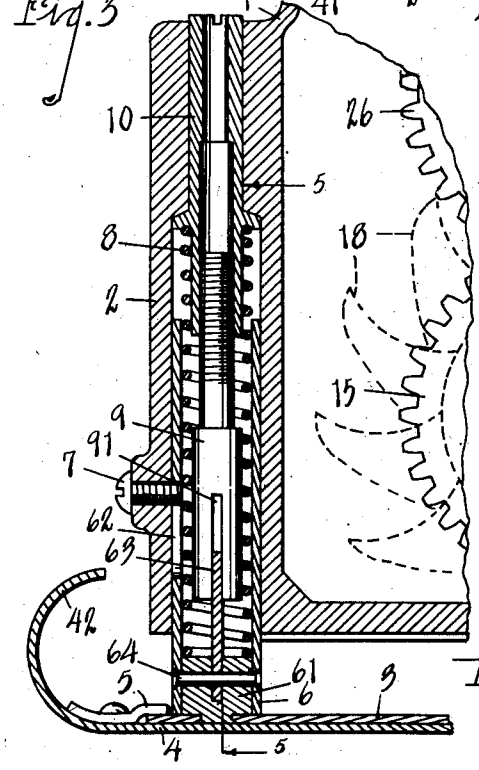


Fig. 4

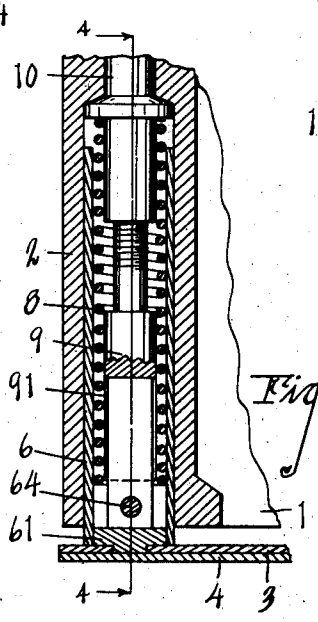


Fig. 5

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BUTCHER'S BLOCK PLANER AND CLEANER

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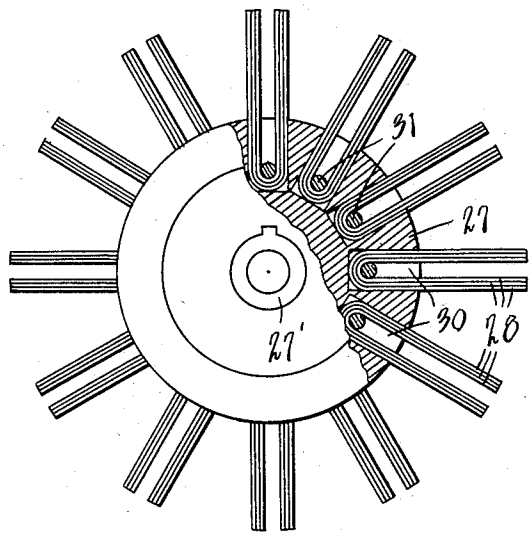


Fig. 9

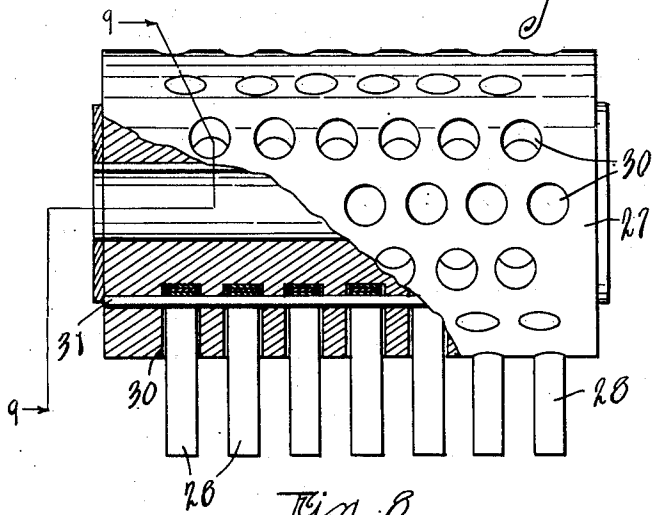


Fig. 8

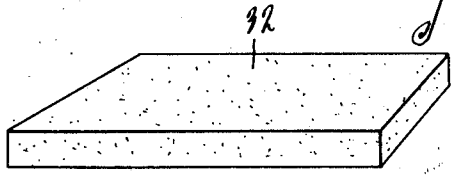


Fig. 10

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UNITED STATES PATENT OFFICE

JOHN G. MATTHEWS, OF BEREA, OHIO

BUTCHER'S BLOCK PLANER AND CLEANER

Application filed October 29, 1931. Serial No. 571,794.

The objects of the invention are:

First, to provide an improved power driven butcher block cleaner which is effective in operation, requiring a minimum of manual labor for operation.

Second, to provide an improved driving mechanism for such a structure.

Third, to provide an improved planer for removing and dressing the surface of such a block.

Objects pertaining to details and economies of the invention will appear from the description to follow. A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of my improved butcher block planer and cleaner.

Fig. 2 is a central sectional elevation taken on line 2—2 of Figs. 1 and 3, the motor appearing in full lines.

Fig. 3 is a transverse sectional elevation, the motor and certain parts being shown in full lines for clearness, taken on line 3—3 of Fig. 2.

Fig. 4 is an enlarged detail sectional elevation of one of the corner sockets and adjustable yielding posts, taken on line 4—4 of Figs. 1 and 5, showing the machine in elevated position.

Fig. 5 is a similar enlarged detail sectional view at right angles to Fig. 4 taken on line 5—5 of Fig. 4, showing the position of the parts when the body of the machine is pressed down when the cutter or brush is at work.

Fig. 6 is an enlarged detail perspective view of one of the cutter blades of the planer device.

Fig. 7 is an enlarged detail perspective view of the adjustable gauge used in setting the adjustable stops for limiting the downward movement of the planer head.

Fig. 8 is an enlarged elevation, partly in longitudinal section, of a planer head in the form of a cleaner brush which may be used.

Fig. 9 is an enlarged detail transverse sectional view taken on line 9—9 of Fig. 8, of the brush head showing details of the steel brush elements and their attachment to the cylinder.

Fig. 10 is a detail view of the carborundum sharpener stone on which the metallic bristle blades for the steel brush are sharpened.

The parts will be identified by their numerals of reference which are the same in all the views.

1 is the main casing, open on its under side, adapted to rise and fall in the operation of the machine. 2 are the vertical open bottom corner sockets. 3 is the bottom plate apertured at 31 for the planer head or brush, and to this is secured a sheet metal shoe 4 with a corresponding narrower aperture at 41, and with upturned ends 42 curved to slide readily and also collect chips or dust from the cleaner cutter or brush. The shoe is held in place on the bottom plate 3 by clips 5, which slidably engage the bottom plate 3. At each corner is a supporting post and socket structure, one of which will be described. At each corner of the plate 3 is an upright hollow tubular post 6, connected by plug 61 to the said bottom plate 3 by cross pin 64. On the hollow post reciprocates the corresponding corner socket 2 of the casing 1. The up position of the socket and casing is in each instance controlled by the stop pin 7 in the wall of the socket projecting into the slot 62 in each hollow post 6.

A coiled spring 8 is within the hollow post and bottoms in the bottom of the post and reacts against the bottom of the inverted socket. An adjustable screw 9 is centrally disposed within the post and within the spring 8. The screw is slotted at 91 and engages the central vertical stop key 63 which is retained in the plug 61 by the said cross rivet 64, which connects the post 6 to the said plug 61.

The elevation of the screw 9 is controlled by the rotatable adjusting sleeve 10 which is internally screw-threaded onto the upper end of the said screw 9. This is shouldered and rotatable in the upper end of the socket 2. The sleeve 10 is slotted into the upper end and is adjustable by a screw driver or wrench, as desired. It will be seen by inspection that the screw 9 is held against rotation by the key 63 and consequently is adjustable up and down by the adjusting of the sleeve 10, and this adjustably regulates the height or level

to which the machine may be pressed downwardly in operation. So that this may be uniformly done I provide a gauge 11 with an adjustable member 111, screw threaded therein, to reach down through the sleeve 10 to determine the exact height of the adjustable screw 9.

In the lower part of the casing is transversely disposed the planer or cleaner mandrel 12 which is disposed through ball bearings 13 and 14, and is provided with a driven gear 15. The mandrel is retained within the bearings by the cap nut 16, the opposite end being slotted at 121 for wrench or screw driver. The planer head with the sleeve 17 is keyed to the mandrel or shaft 12. The sleeve 17 is splined, having six splines as illustrated in Fig. 2. A series of cutters 18 (see Figs. 2 and 6) with hubs 181 are cut to fit the splined sleeve. However, the cutting blades 182 are formed to be distributed at one-twelfth the circumference of the head, twelve of them being provided for the complete circle as seen in Fig. 3, so that the cutter blades 182 strikes one at a time. These being broadened and chisel formed, cut a very limited amount of the wood of the block. This permits the cutter to be driven at a high rate of speed because the amount cut at each contact is very small.

The planer head is housed by the housing 19. The countershaft 20 is disposed above the planer and in the upper part of the casing there is the motor housing 21. The motor 22 is preferably a reversible motor, with usual plug connection 23 above. The driving gear 24 is on the motor arbor and drives gear 25 on the countershaft 20 which at its opposite end has gear 26 meshing with the gear 15 of the planer sleeve 17. One or more of these gears is of rawhide or fiber.

The plane sleeve 17 can be very readily removed and a brush-like planer head 27 with a sleeve 27′ can be substituted. This brush head is provided with steel blade-like bristles 28 which are folded upon themselves like hairpins (see Fig. 9) and inserted in the bristle sockets 30 which are slightly enlarged at one side to receive the same (see Fig. 9) and are retained by cross pins 31 disposed longitudinally of the sleeve, therethrough. These blades are flexible with chisel ends and when pushed down into operation clean a block surface vigorously. The blades are sharpened for operating them with the motor reversed and in contact with a carborundum stone 32 (see Fig. 10). Of course instead of reversing the motor, the brush could be turned end for end to sharpen.

The handle 33 for manipulating the cleaner is secured to the casing by screws 34.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a power driven butcher block dresser and cleaner, the combination of a suitable main casing open on its under side, with vertical downwardly-opening shouldered sockets at each corner, a base frame with open center to carry the said dresser, upright tubular posts on each corner of said base frame corresponding to the sockets in said casing, a slidable shoe with central aperture secured to said base frame, stop keys supported in said hollow posts and extending upwardly and centrally of said posts, transverse stop screws in the said sockets to engage slots formed in the sides of said posts to limit their upward movement, springs in the said hollow posts reacting upwardly against the bottom of the said sockets and downwardly against said posts, adjusting screws with slotted ends disposed centrally of said posts and embracing the upwardly-projecting stop keys, an adjustable shouldered nut sleeve rotatable in the upper part of said sockets and meshing with said screw for adjusting the same to regulate the height to which the said casing can be lowered, a planer head, and a countershaft between the said motor and said planer head, with trains of gears connecting the motor to said planer head through said countershaft.

2. In a power driven butcher block dresser and cleaner, the combination of a suitable main casing open on its under side, with vertical downwardly-opening shouldered sockets at each corner, a base frame with open center to carry the said dresser, upright tubular posts on each corner of said base frame corresponding to the sockets in said casing, a slidable shoe with central aperture secured to said base frame, stop keys supported in said hollow posts and extending upwardly and centrally of said posts, transverse stop screws in the said sockets to engage slots formed in the sides of said posts to limit their upward movement, springs in the said hollow posts reacting upwardly against the bottom of the said sockets and downwardly against said posts, adjusting screws with slotted ends disposed centrally of said posts and embracing the upwardly-projecting stop keys, an adjustable shouldered nut sleeve rotatable in the upper part of said sockets and meshing with said screw for adjusting the same to regulate the height to which the said casing can be lowered, a planer head on a suitable mandrel carried by said casing, an electric motor to drive the same, and a countershaft between the said motor and said planer, with trains of gears connecting the motor through said countershaft.

3. In a power driven butcher block dresser and cleaner, the combination of a suitable main casing open on its under side, with vertical downwardly-opening shouldered sockets at each corner, a base frame with open center to carry the said dresser, upright tubular posts on each corner of said base frame corresponding to the sockets in said casing, a

slidable shoe with central aperture secured to said base frame, plugs in the bottom of said posts for connecting the same to said base frame, stop keys supported by said plugs in said hollow posts and extending upwardly and centrally of said posts, transverse stop screws in the said sockets to engage slots formed in the sides of said posts to limit their upward movement, springs in the said hollow posts reacting upwardly against the bottom of the said sockets and downwardly against said posts, adjusting screws with slotted ends disposed centrally of said posts and embracing the upwardly-projecting stop keys, an adjustable shouldered nut sleeve rotatable in the upper part of said sockets and meshing with said screw for adjusting the same to regulate the height to which the said casing can be lowered, a planer head on a suitable mandrel carried by said casing, an electric motor to drive the same, and a countershaft between the said motor and said planer, with trains of gears connecting the motor through said countershaft.

4. In a power driven butcher block dresser and cleaner, the combination of a suitable main casing open on its under side, with vertical downwardly-opening shouldered sockets at each corner, a base frame with open center to carry the said dresser, upright tubular posts on each corner of said base frame corresponding to the sockets in said casing, a slidable shoe with central aperture secured to said base frame, springs in the said hollow posts reacting upwardly against the bottom of the said sockets and downwardly against said posts, an adjustable shouldered nut sleeve rotatable in the upper part of said sockets and meshing with said screw for adjusting the same to regulate the height to which the said casing can be lowered, a planer head on a suitable mandrel carried by said casing, an electric motor to drive the same, and trains of gears connecting the motor to said planer head.

5. In a power driven butcher block dresser and cleaner, the combination of a suitable main casing open on its under side, with vertical downwardly-opening shouldered sockets at each corner, a base frame with open center to carry the said dresser, upright tubular posts on each corner of said base frame corresponding to the sockets in said casing, a slidable shoe with central aperture secured to said base frame, springs in the said hollow posts reacting upwardly against the bottom of the said sockets and downwardly against said posts, a planer head on a suitable mandrel carried by said casing, and an electric motor connected to drive the said planer head.

In witness whereof I have hereunto set my hand.

JOHN G. MATTHEWS.

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