March 8, 1927. 1,620,459

L. H. GRAY

SURFACING MACHINE

Filed Feb. 28, 1925 2 Sheets-Sheet 1

Fig. 1.

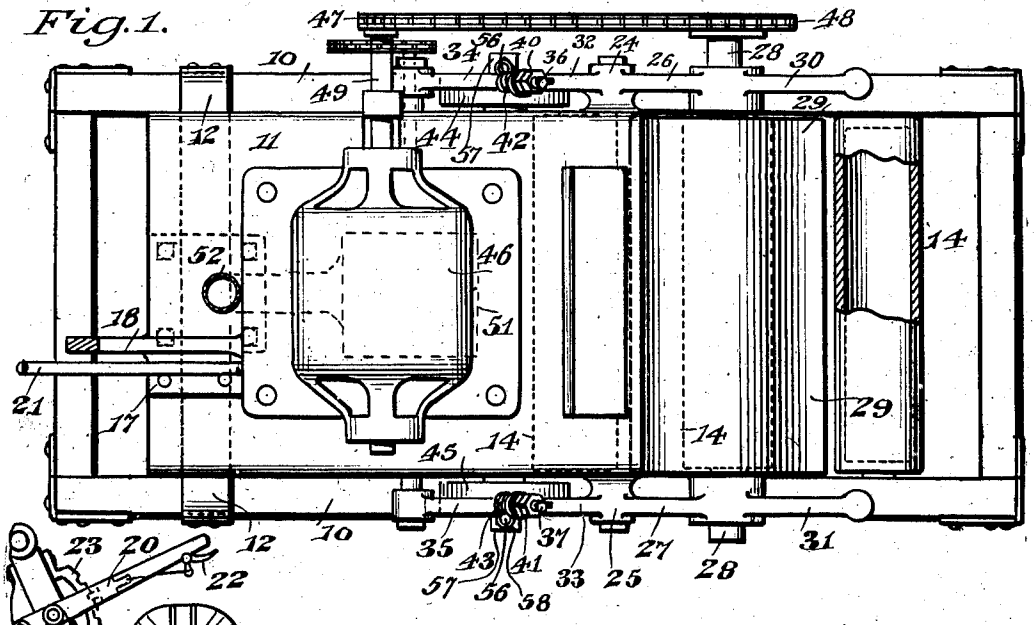
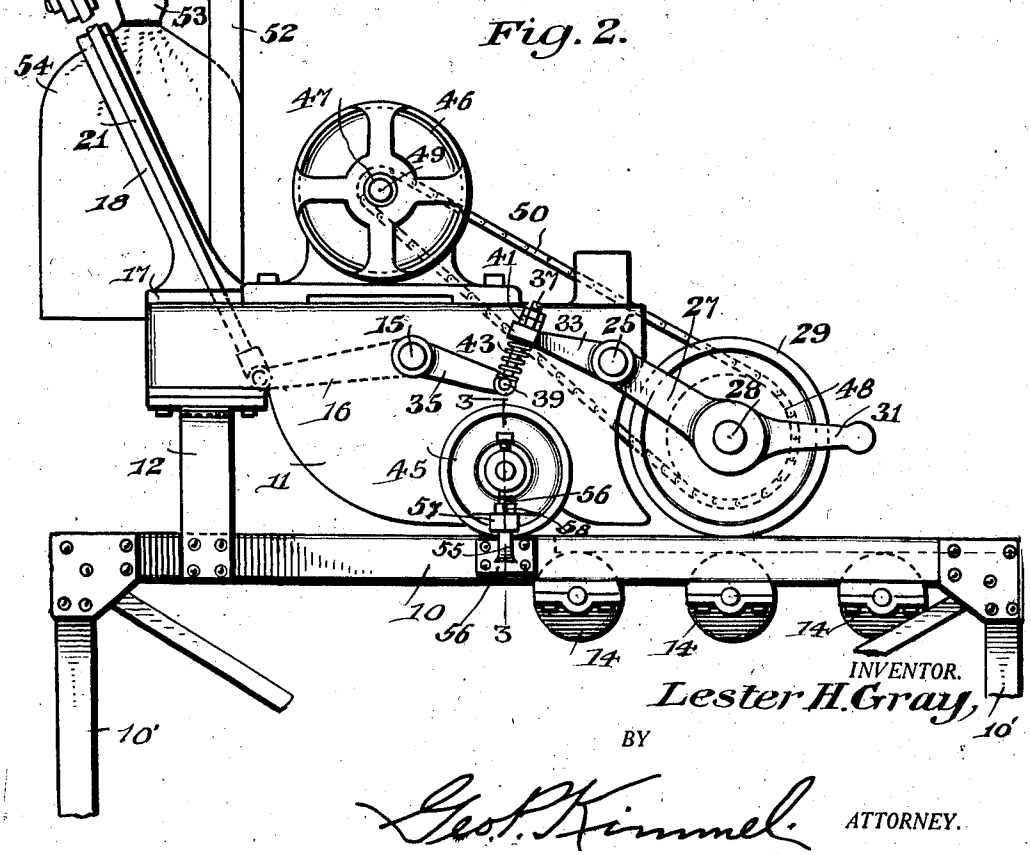


Fig. 2.



INVENTOR.
Lester H. Gray,
BY
Geo. P. Kimmel.
ATTORNEY.

March 8, 1927. 1.620,459

L. H. GRAY

SURFACING MACHINE

Filed Feb. 28, 1925 2 Sheets-Sheet 2

Fig. 3.

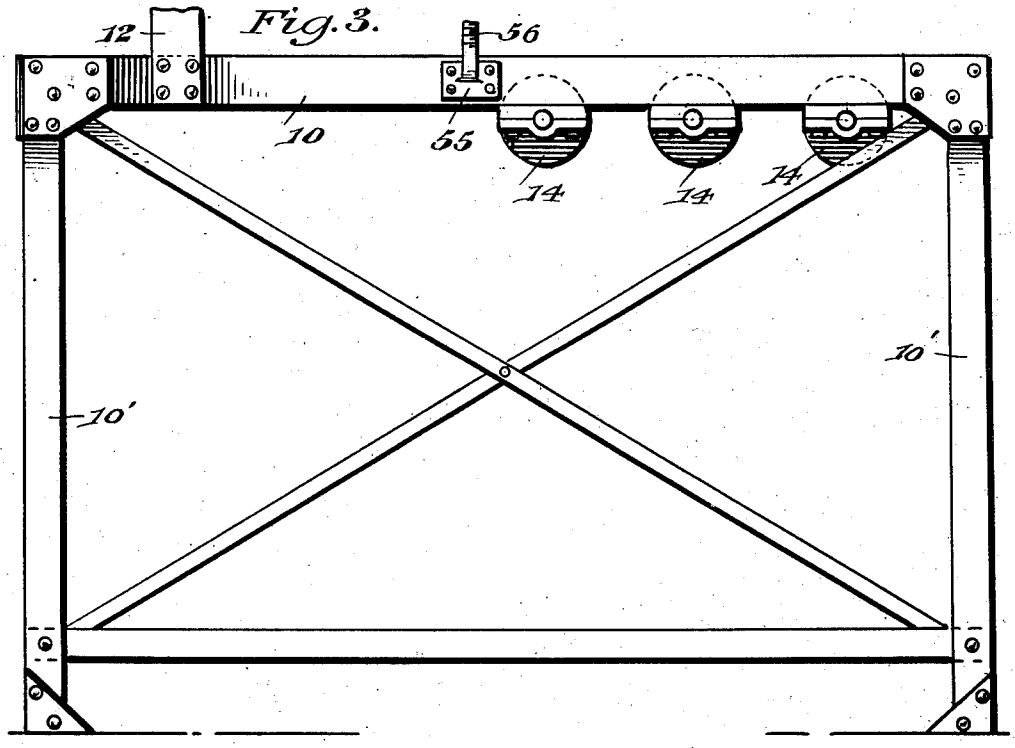


Fig. 4.

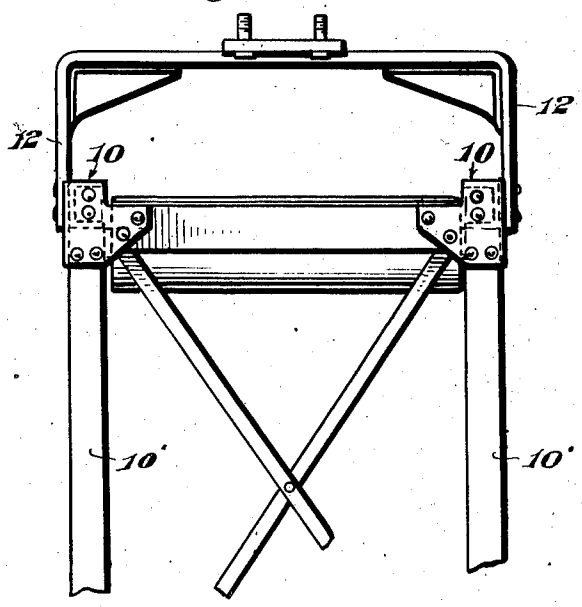
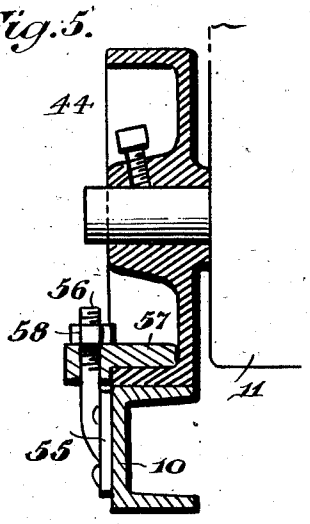


Fig. 5.



INVENTOR.

Lester H. Gray,

BY

Geo. F. Kimmel. ATTORNEY.

Patented Mar. 8, 1927. 1,620,459

UNITED STATES PATENT OFFICE.

LESTER H. GRAY, OF PORTAGE, PENNSYLVANIA.

SURFACING MACHINE.

Application filed February 28, 1925. Serial No. 12,406.

This invention relates to surfacing machines for wood material and the like, and has for one of its objects to provide a simply constructed support for the material while being operated on by the surfacing machine.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described, and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a plan view, partly in section.

Figure 2 is a side elevation.

Figure 3 is a side elevation of the supporting frame and the bearing rollers.

Figure 4 is an end elevation of the upper portion of the supporting frame and the bearing rollers.

Figure 5 is an enlarged sectional detail on the line 5—5 of Figure 2.

The improved device comprises a supporting frame including spaced longitudinal upper side members or rails 10 and supporting standards or posts 10'.

Mounted for rotation upon the frame members 10, are a plurality of spaced bearing rollers 14, preferably of metal and hollow as indicated in Figure 1, to decrease the weight.

The frame members are designed to support a surfacing apparatus of any suitable construction so long as it includes a surfacing drum, or the like, and for the purpose of illustration a conventional surfacing apparatus is shown which includes a shell or casing 11. Attached to the frame members 10 near the end farthest from the rollers 14 is a bracket device 12 arranged to support one end of the shell 11.

The shell 11 is supported at the sides by wheels 44 and 45 which bear upon the frame members 10, and attached to the frame members opposite each of the wheels is a bracket, one of which is represented at 55 in Figures 2, 3 and 5, and each bracket provided with an upstanding stud 56.

Engaging each of the studs 56 is a clamp member 57 extending into the interior of the adjacent wheels 44 and 45, and secured in place by clamp nuts 58, as shown more clearly in Figure 5.

By this means the wheels may be firmly clamped to the frame members 10, together with the shell 11 associated therewith.

Extending through the housing 11 is a shaft 15, and connected to the shaft within the housing is an arm 16.

Mounted on the housing at 17 is a standard 18, and pivoted at 19 to the standard is a shipper lever 20, and connecting the shipper lever 20 and the arm 16 is a rod 21. The shipper lever 20 is provided with a pawl device indicated at 22 and coacting with a notched segment 23 on the standard 18 to hold the shipper lever 20, rod 21 and arm 16 in adjusted position. Pivoted at 24—25 to the side faces of the housing 11 are lever arms 26 and 27, the latter supporting a shaft 28 on which a surfacing drum 29 is mounted, the latter covered with the usual abrading material, such as sand paper or the like.

Extensions 30 and 31 are directed forwardly from the arms 26 and 27 and operative as lifting handles to enable the surfacing roller to be manually adjusted, if required.

Directed rearwardly from the arms 26 and 27 are extensions 32 and 33, and supported on the shaft 15 externally of the housing 11 are lever arms 34 and 35.

Rods 36 and 37 are pivoted at one end respectively to the lever arms as shown at 38 and 39, and extend slidably through the free ends of the members 32 and 33, and are provided with holding nuts 40 and 41 externally of the latter and with springs 42 and 43 between the members 34—35 and 32—33.

By this arrangement, the surfacing drum is yieldably supported, and can be adjusted to control the depth of action of the drum, or elevate it free of the material on which it operates.

Any means may be employed to operate the surfacing drum, for instance, an electric motor illustrated conventionally at 46, and with chain wheels 47 and 48 mounted respectively on the motor shaft 49 and the drum shaft 28, and carrying an endless chain 50.

Means are preferably provided for inducing artificial air currents through the housing 11, for instance, a fan device indicated at 51 and having an elongated wind trunk 52 connected at its discharge end at 53 into a suitable receptacle represented conventionally at 54.

The improved device is designed more particularly for surfacing lumber of various

sizes, such as flooring, window and door casing, base boards, stair risers and treads, and the like, the material to be treated being forced between the rollers 14 and the drum 29 as the latter is rapidly rotated in the direction of the arrow, the fine material released by the drum being drawn into the housing by the suction of the fan and carried through the wind trunk 52 and into the receptacle 54.

While a conventional surfacing apparatus is shown, for illustration, the supporting frame and its rollers may be employed with any construction of surfacing apparatus, for instance, the usual construction of floor surfacing machines.

The improved device is simple in construction, can be of any required size or capacity, and of any suitable material, or combination of materials.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that modifications within the scope of the claimed invention may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention what is claimed as new is:

The combination with a surfacing element having a housing and carrier wheels, of a support comprising a frame having legs, brackets on the top of said frame, clamps on a pair of said brackets and adapted to embrace the treads of the carrier wheels to fasten the same to the top of said frame, a bearing plate on the other bracket for supporting the rear of said surfacing element and a series of idler rollers positioned on said frame to co-act with the surfacing element.

In testimony whereof, I affix my signature hereto.

LESTER H. GRAY.