

March 28, 1939.

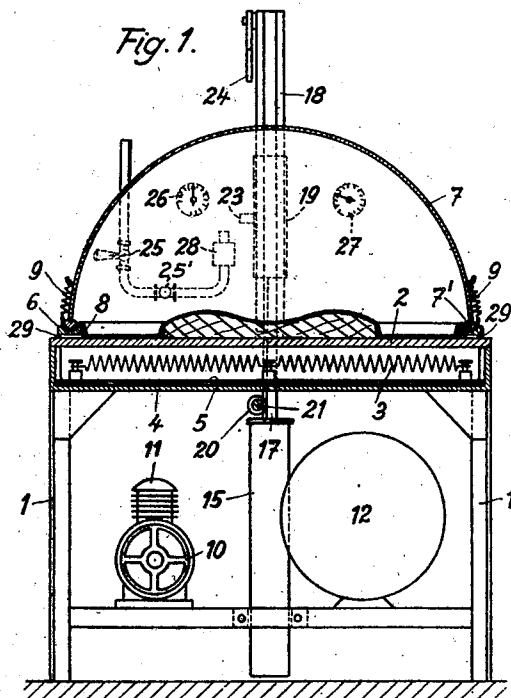
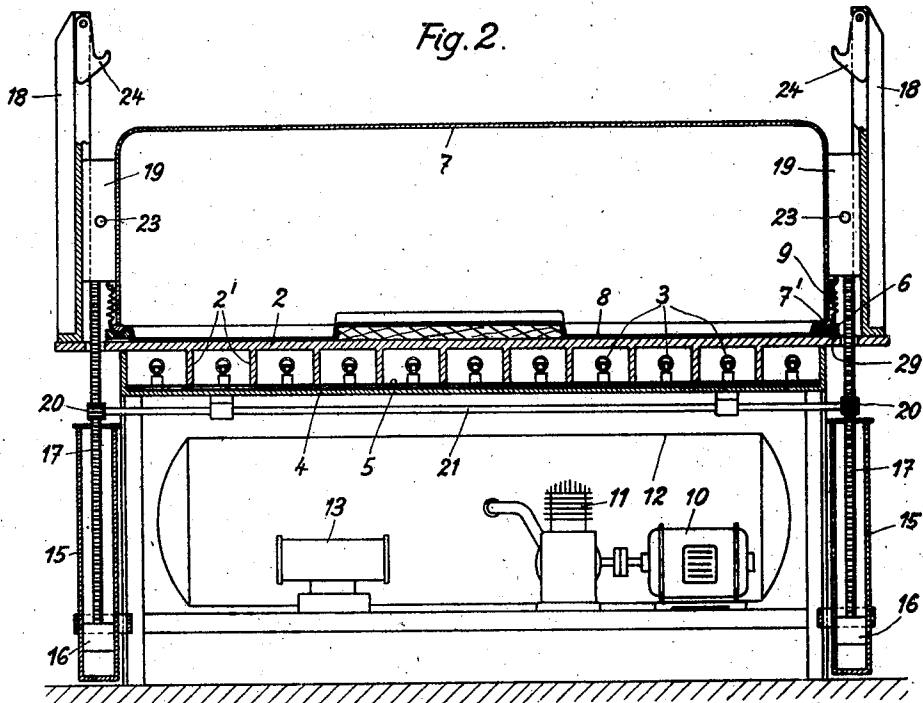
H. WIEDERKEHR

2,151,880

VENEERING PRESS

Filed March 23, 1937

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

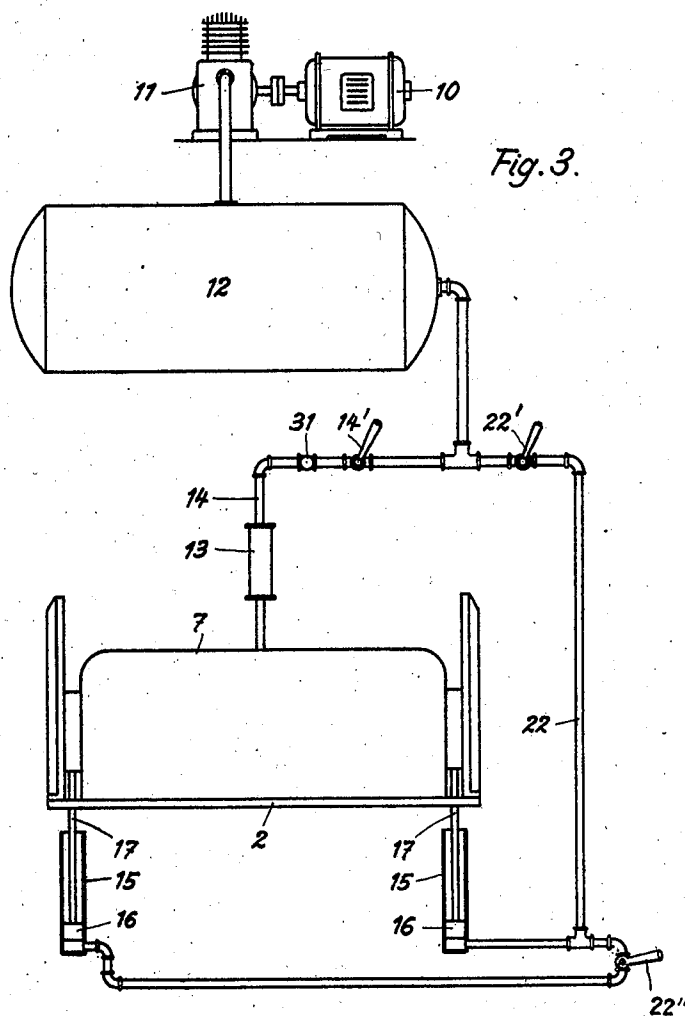


Fig. 3.

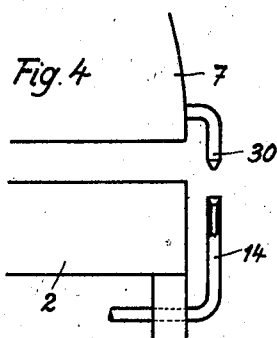


Fig. 4

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UNITED STATES PATENT OFFICE

2,151,880

VENEERING PRESS

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Application March 23, 1937, Serial No. 132,650
In Switzerland July 31, 1936

1 Claim. (Cl. 144—281)

The present invention relates to a veneering press particularly for irregular surfaces and relates to that kind of presses, where the veneer is applied by means of a flexible, impermeable cover put under hydraulic or pneumatic pressure contained in a hood covering the work piece.

The invention consists in mechanical means for lifting off said hood and in means for heating the table receiving the work piece.

The annexed drawings represent one embodiment of the invention. There is:

Fig. 1 a cross section,

Fig. 2 a longitudinal section,

Fig. 3 a diagram of the pressure gas conduit and

Fig. 4 a detail of the connection between pressure gas conduit and inlet of the hood.

According to Figures 1 and 2 a rectangular stand 1 supports a plate 4 having upright border walls forming a box which is covered by the table plate 2 carrying the work piece. This table plate is provided on its bottom side with partition walls 2' projecting into said box and forming cells enclosing heating bodies 3 which may be connected to a power current system. Plate 4 is coated on its upper side with a heat insulating layer 5 and table plate 2 has a grooved ledge 6 running all around its borders into which fit the bulbed edges of a hood 7 of semi-circular cross section clamping fast thereby a flexible impermeable cloth 8, preferably of rubber, which closes the open bottom of said hood. The edges of the cloth projected to the outside of the hood are suspended there by means of helical springs 9.

As means for lifting the hood from the table plate guide pieces 19 are attached to its two ends. Said guide pieces are guided in vertical guide rails 18 fast to the table plate and are controlled by piston rods 17 the pistons 16 of which are fitted to vertical cylinders 15 attached to the stand 1. The piston rods are formed as racks meshing with pinions 20 fast to rail 21 for the purpose of securing the parallel displacing of said guide pieces. Pins 23 secured to these guide pieces are adapted to be caught by hooks 24 hinged to the ends of said guide rails when the hood has been lifted into its uppermost position. This prevents any accident to the workmen. Before lowering the hood again said hooks must be pushed aside by hand.

In the hollow space of the stand and underneath plate 4 a device for producing compressed and heated air is arranged on a bracket of said stand.

An electro-motor 10 is coupled to an air com-

pressor 11 and feeds the air into a collecting tank 12 for the purpose of providing the hood 7 and the cylinders 15 with compressed air. The conduit from the tank to the hood passes through a heating device 13 as is shown in Fig. 3 and is controlled by a cut off valve 14' and by a non-return valve 31 preventing an escape of compressed air from the hood into the tank. Another cut off valve 22' controls the feeding of the cylinders 15 with compressed air and an air relieve valve 22'' controls the outlet of the air enclosed between the pistons 16 and the cut off valve 22', when the hood has to be lowered.

Since hood 7 is movable, while tank 12 remains stationary, the compressed air conduit between the two cannot be rigidly connected. The connection is only established in the operative position. According to Fig. 4 the inlet pipe 30 of the hood fits in the working position of the hood with a conical fit into the funnel shaped end of the delivery pipe 14 of the tank.

According to Fig. 1 the hood possesses also the ordinary safety devices. These are all arranged on one of the end faces of the hood, to wit, a T-fitting 25' communicating on one side with a vent controlled by a cut off valve 25 and on the other side with a safety valve 28 and a manometer 26 and a thermometer 27. Also the air tank 12 possesses a safety valve not shown.

Besides there are vents 29 provided in the ledge 6 for the escape of the evaporated humidity of the glue and for the air remaining between the rubber cloth and work piece.

The press is operated as follows:

The hood 7 having the rubber cloth 8 attached to it by means of the springs 9 is suspended in the hooks 24. Then the form piece with the veneer plate put on and having adhesive disposed between them is placed upon the table plate and the hood is lowered by pushing the hooks 24 aside and cautiously opening the air relieve valve 22''. The hood is lowered until its edge rests within the grooves of the ledge and pipes 30 and 14 have become joined. Now the compressed air collected in tank 12 and heated in device 13 is admitted by opening the valve 14' and the pressure inside the hood increased until the veneer plate, softened by the heat, has been fully applied tightly to the form piece. In this state the press is left until the glue has been hardened. This hardening will be accelerated by heating the table plate 2. After the hardening of the glue the hood is removed again by opening first valve 25 and closing valve 24' to let escape the pressure within the hood, whereupon valve 22' may be opened to lift off

the hood from the work piece and restore again the starting position.

What I claim is:

In a veneering press particularly for irregular
5 surfaces and in combination, a stand, a plate
with upright border walls carried by said stand,
a table plate supported by said border walls and
provided with heating cells, a grooved ledge sur-
rounding the borders of said table and forming
10 vents between it and the plate, a hood having its

edges fitting into said ledge, a flexible imperme-
able cloth held fast between said edges and the
ledge, and means for raising and lowering said
hood, said means comprising vertical guide rails,
fast to the table plate, guide pieces fitting said
guide rails and fast to the hood, vertical pneu-
matic cylinders open at the top and cooperating
5 pistons with rods attached to said guide pieces.

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