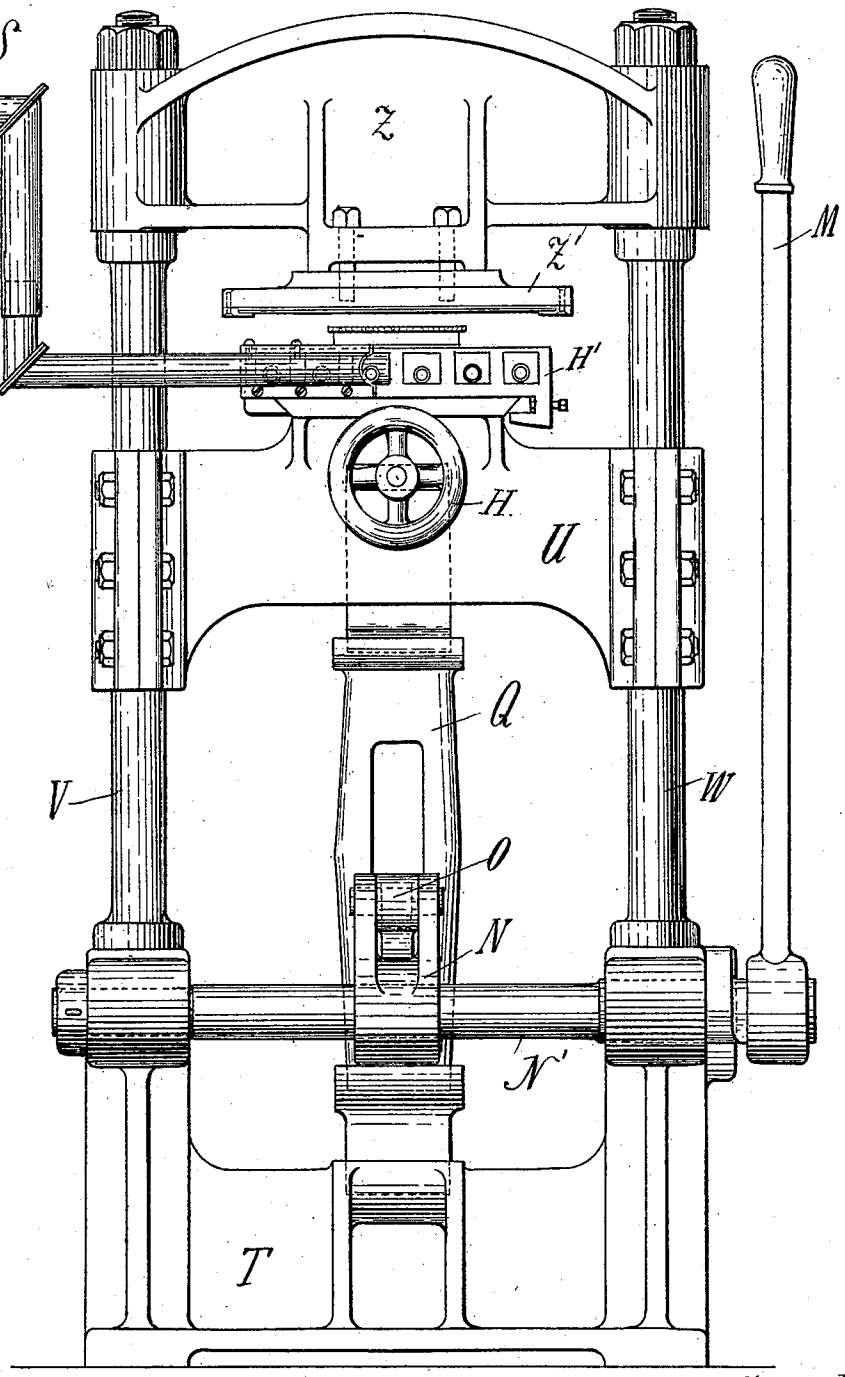
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R. HIMMEL.

METHOD OF PRODUCING FANCY FIGURED WOODEN PLATES.

No. 400,085. Patented Mar. 26, 1889.

Fig. 1.



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Fig. 2.

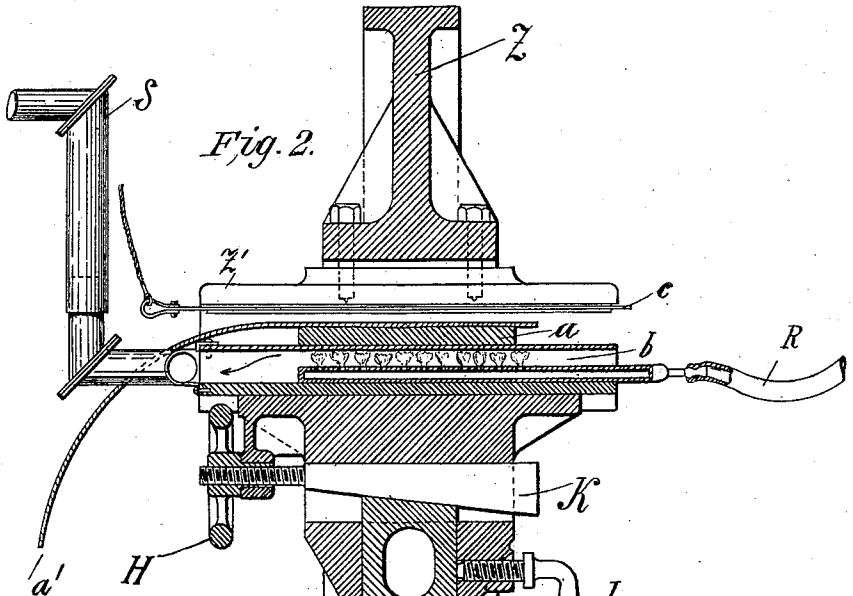


Fig. 5.

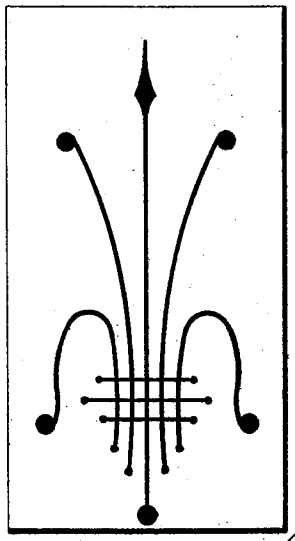


Fig. 6.



Fig. 7.



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Fig. 3.

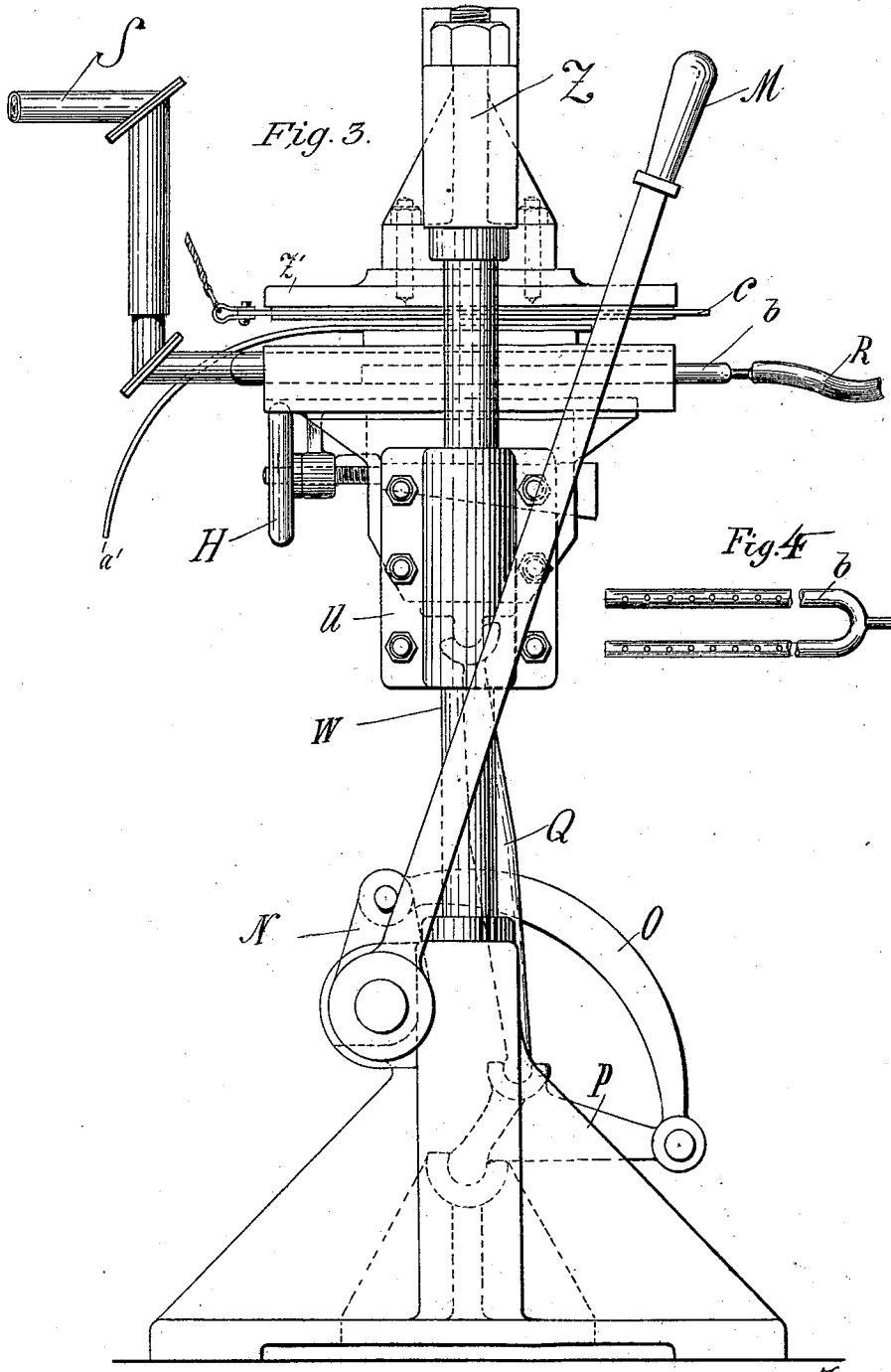


Fig. 4

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UNITED STATES PATENT OFFICE.

ROBERT HIMMEL, OF BERLIN, GERMANY, ASSIGNOR TO LEO SELIGSOHN, OF SAME PLACE.

METHOD OF PRODUCING FANCY FIGURED WOODEN PLATES.

SPECIFICATION forming part of Letters Patent No. 400,085, dated March 26, 1889.

Application filed April 23, 1888. Serial No. 271,625. (No model.) Patented in England September 14, 1887, No. 12,444.

To all whom it may concern:

Be it known that I, ROBERT HIMMEL, manufacturer, of Berlin, in the Kingdom of Prussia, and German Empire, have invented a new and useful Improvement in Producing Fancy Figured Wooden Plates, (for which I have received Letters Patent in England, No. 12,444, dated September 14, 1887;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved method of producing fancy figured wooden plates; and it has for its object to provide a method which, on account of the cheapness and durability of its product, will do away with the expensive inlaid-work used in furniture, doors-panels, &c.; and it consists in first burning and pressing the wooden plate between heated metallic surfaces having the patterns cut into or projecting therefrom, and then subsequently smoothing and polishing the embossed surface of the plate by means of rolls or other suitable pressure, thus producing a wooden plate having the appearance of genuine inlaid-work.

In the accompanying drawings, in which is illustrated a machine for carrying out my invention, Figure 1 shows a front view of the machine. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a side view. Fig. 4 is a plan view of the heating device, and Fig. 5 is a view of the finished plate. Fig. 6 is a sectional view of the plate after burning, but before pressing and polishing. Fig. 7 is a sectional view of plate after pressing and polishing.

In constructing a machine for carrying my method into effect I employ the upright standards V W, which are secured at the bottom to a suitable base, T, and connected at the top by the cross-piece Z. At about the middle portions of the uprights V W is loosely secured the cross-bar U, adapted to slide vertically on the uprights, and carrying upon its upper surface the table H′, to which is attached the metallic figured pattern-plate *a*. The table H′ is made hollow and carries within it a suitable heating device, *b*—a gas-burner similar to that shown in Fig. 4 being preferred. To carry off the products of combustion, I arrange the escape-pipe S at one end of the table H′.

The pattern or printing plate *a* has formed upon its upper surface the desired design, which is cut into or projects from said surface, and to the under side of the top connecting-piece, Z, is secured the pressing-plate Z′, which may also be provided with a printing-plate, *c;* but usually this plate is perfectly smooth. The printing-plate *a* being heated to the desired degree, the wooden plate *a′* is placed between the two pressing-surfaces and the cross-bar moved upward by suitable mechanism, thus impressing the wooden plate with the desired design.

In order to provide a means for actuating the cross-piece U, I journal the shaft N′ in the upright sides of the base-piece T, and attached to one end of said shaft is the hand-lever M. About the middle of the shaft N′ is keyed the arm N, which is connected to the link O, said link passing through a mortise in the plunger-lever Q, and is secured to lever P, which rests in a suitable bearing in the base-piece T. The lever P is formed with a projection adapted to receive the plunger Q, as shown. The plunger Q, resting in the socket in the lever P, bears at its upper end against the block K′, secured within the cross-piece U by the set-screw *d*. Upon the upper side of the block K′ is a wedge, K, which passes through the cross-piece U and terminates at its smaller end in a screw-thread, which works through a suitable bearing and engages with a hand-wheel or nut, H. By this arrangement it will be seen that an adjustment is to be had by which different thicknesses of wooden plates can be accommodated.

If desired, the plates *a* and *c* may be dispensed with and rollers bearing the design substituted, one of the rollers being heated the same as the table H′.

In carrying out my method by means of the above-described machine I proceed as follows: The figured metallic plate *a*, having the desired design cut into or projecting from its upper surface, is heated to the desired extent by the gas-burner carried within the table H′,

to which the printing-plate is secured. If necessary, the plate *c* is also provided with a design; but usually this plate is smooth, serving simply as a platen. The wood to be treated is placed between the two metallic surfaces, and the same are then pressed together by the means shown, or any other suitable means. Instead of the metallic plates *a* and *c*, rollers may be used, one of such rollers being heated and figured as the plate *a*. As the wooden plate is pressed between the plates *a* and *c*, or passed between the rollers, it will, according to the temperature of the pattern-plate *a*, be scorched yellow or burned brown or black at the parts where the projecting portions of the printing-plate have been pressed into the wooden plate. When the plate is passed slowly between the printing-surfaces, a black figured plate is obtained, and by passing it through faster a brown or yellow figured plate is produced. I may also regulate the color by means of the gas-burner, as already stated. As the plate comes from the press, the burned or charred portions are depressed, while the projecting parts keep their natural color. The plates as thus prepared may be used for panels of doors and office furniture; but in order to make a finer article and one which will closely resemble genuine inlaid-work, I pass the burned plates through pressing and polishing rolls, whereby the embossed surface is again made perfectly smooth and a polish put upon the same, so as to give it the appearance of real inlaid-work, thus producing a figured plate which is cheaper, but one which is as durable and ornamental as the more expensive style of wood-work.

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

1. The herein-described method of producing fancy figured wooden plates, which consists in first pressing the wooden plates between two metallic surfaces, one of which is figured and heated, and then passing the burned plate between pressing-rolls, substantially as and for the purpose described.

2. The herein-described method of producing fancy figured wooden plates, which consists in pressing the wooden plates between two metallic surfaces, one of which is figured and heated, then passing the burned plate through pressing-rolls to smooth the embossed plate, and subsequently polishing the smoothed burned plate by rolls or other suitable means, substantially as described, whereby a figured plate is produced closely resembling genuine inlaid-work.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ROBERT HIMMEL.

Witnesses:
PAUL FISCHER,
B. ROI.