

(No Model.)

W. S. INGRAHAM.

MARBLEIZED WOOD.

No. 387,977.

Patented Aug. 14, 1888.

Fig. 1

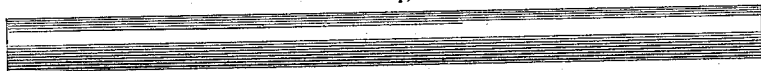


Fig. 2

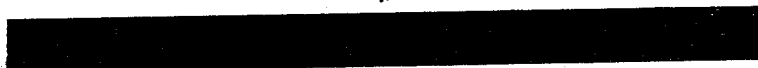


Fig. 3

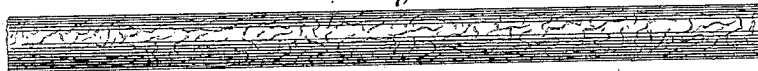


Fig. 4



Fig. 5



Fig. 8

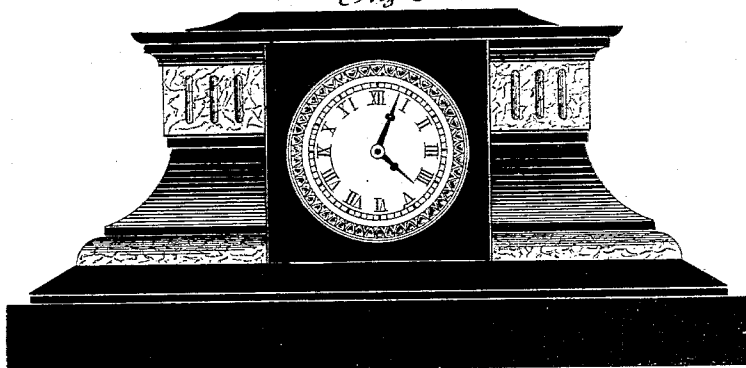


Fig. 7

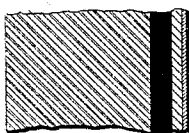
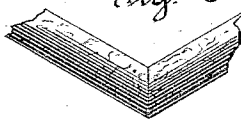


Fig. 6



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## MARBLEIZED WOOD.

SPECIFICATION forming part of Letters Patent No. 387,977, dated August 14, 1888.

Application filed April 6, 1888. Serial No. 269,827. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. INGRAHAM, residing at Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Wood Finished in Imitation of Marble; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in marbled wood, the object being to produce an article closely reproducing in its finish the sharp and delicate veinings of the stone, having a tough, elastic, and hard, and hence durable, finish and a deep and strong tone, adapted to be worked up with the facility of plain wood and retaining in age its faithfulness as an imitation.

With these ends in view my invention consists of marbled wood in which the finish consists of a body of hard japan or its equivalent applied to the wood, marbling-paints applied directly to such body when the same is hard, and hence not blending therewith, and a coating of varnish applied over the marbling-paints.

In carrying out my invention the lumber or stock is got out in suitable blank forms containing surfaces such as are to be used in the composition of a structure containing the product. An economy of time, labor, and material is effected by shaping the individual blanks so as to contain corresponding parts of a number of similar structures. These blanks, or the pieces of lumber from which they are made, are sandpapered or otherwise treated to secure a smooth surface for them. They are then submitted to one or more, and preferably several, coats of japan applied by immersing them in a bath of the material, which is hardened, and preferably each coat independently, by subjection to intense heat in an oven. After being baked and hardened, the successive coats of japan are rubbed down to a smooth surface; or, if desired, only the final coat may be so treated. Then after a heavy body of hard japan of uniform texture and smooth surface has been secured upon each blank they are independently marbled by immersion, when dry, in a bath of water upon which marbling-paints

have been floated and agitated with each other to produce that confusion of coloring securing the required variegations and veining in the final effect. The marbling paints may be prepared so as to entirely obscure the japan, as would be the case in representing light marbles, or to only partially obscure the same, as in the darker or black marbles. By properly preparing and blending the paints the japan may be made to largely contribute to the final effect. The marbled blanks are then allowed to dry, after which they are coated with varnish, which not only holds or fixes the paints, but also finishes the surface. It is to be particularly noted that the blanks are dry when they are immersed in the marbling-bath, so that the marbling-paints are not incorporated with the japan, but remain entirely distinct from and above it. When finished, the blanks are worked up into the forms in which the marbled stock is to be used. In working up the pieces their ends are removed, and with them the accumulations of superfluous japan and varnish which always collect at such points, and which are added to by each immersion of the stock in the baths and by each coat of varnish. The japan, being very tough and elastic, cuts without chipping or flaking, and the stock may be mitered and fitted with perfectly sharp and clean joints and with the facility of working unfinished wood. The marbled parts so made are assembled with glue, and if the grain of the wood is anywhere exposed it is preferably painted over. The application of the japan by immersion in a bath of the material has been described. This is the preferred method of applying it, although it may be put on with a brush or in any other way. It may also be remarked that simple structures or assemblages of parts may be put through the process described; but the marbling of the wood in the form of blanks is much preferred.

By immersing the blanks in baths of japan, as described, their entire surfaces are coated with it and their pores effectually sealed against the absorption of water when they are submerged in the marbling-bath, in which the wood is completely protected by the japan. Moreover, this effectual sealing of the pores not only protects the blanks throughout

their treatment in being marbled, but also in a large measure protects the marbled parts against atmospheric changes after they have been finally assembled, when most of their cut surfaces will be sealed with glue, and if not, with a paint or other filler. When applied and baked, as described, the japan is not absorbed by the wood, nor is it affected by changes therein, if any occur, but always retains its perfect integrity as a strong, continuous, permanent, and impermeable envelope therefor. With these characteristics it is apparent that it must form an adequate groundwork for the marbling-paints and secure for the marbling a strong and deep tone, a fine and close texture, and permanence. Being intensely hard, also, and permitting no blending of the marbling-paints after their application to it, it favors a distinct and natural re-production of those sharp and delicate veinings peculiar to some fancy marbles. Being tough and elastic, as well as hard, it endures wear admirably, and does not mar and scratch under ordinary usage, nor does it readily take the impression of a blow.

My marbled finish retains its color under ordinary conditions, and such is the stability of the japan groundwork that in age it retains its faithfulness as a representation of marble, whereas wood marbled by applying paint to a filler fades and bleaches, and in age takes on a fibrous cast, wholly destroying its value as an imitation of stone.

The accompanying drawings will illustrate the process described above and the application of the product to the manufacture of clock-cases.

Figure 1 of such drawings shows a blank of plain wood having a smooth surface and designed to be formed into four marble parts, to be ultimately worked into a clock-case. Fig. 2 of the drawings represents this same blank after it has been incased in a heavy envelope of japan, and showing the accumulations of japan upon its ends. Fig. 3 represents the blank after marbling-paints have been applied over the japan enamel. Fig. 4 is a diagram of the end of the blank, showing how the blank is cut up into four pieces. Fig. 5 shows the case part worked out from one of such pieces. Fig. 6 is a broken view showing a mitered joint made from such case part. Fig. 7 is a broken view in section, showing the lines of demarkation between the japan, paint, and varnish; and Fig. 8 shows a clock the case whereof is composed of parts formed from blanks independently finished, worked up, and then assembled, a portion of the parts being finished simply in japan and a portion being

marbled, the lower marbled molding of the case being composed of parts like that of which the manufacture is illustrated by the first four figures of the drawings.

Although the clock-case herein shown is made only in part of marbled wood, it is apparent that, if desired, the cases may be made wholly of marbled wood, which may be produced and arranged in many beautiful combinations.

It will thus be seen that my invention opens the way not only to the production of an infinite variety of fancy clocks in original designs, but also to the production, at a comparatively low cost, of all the high-priced fancy marble French clocks, which will not surpass them in sharpness and elegance of outline or in variety and stability of color. My marbled wood is also applicable for use in interior finish, and particularly in the construction of chimney-pieces and in building furniture.

I would have it understood that I do not limit myself to the use of japan, but hold myself at liberty to use in its stead any material of the same general characteristics for the coating of the blanks.

I am aware that surfaces characterized by a mottled or clouded appearance—such as tortoise-shell or horn—have been produced by daubing, patching, spotting, spattering, or dropping paints upon a fluent surface of japan or varnish, and then moving or agitating the fluent materials so as to incorporate and ultimately commingle them. These processes produce the mottled and clouded effects characteristic of tortoise-shell or horn, and are inadequate to the production of imitations of delicately-veined marbles, wherein the veining must be sharply defined from the groundwork. I do not therefore, broadly, claim the application of paints to japan; but,

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

Marbled wood consisting of a form or base of wood and a coating composed of a body of japan hardened by heat after its application to the wood, a superimposed coat of marbling-colors which are not blended with the said coating of japan, and an exterior coat of transparent varnish.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM S. INGRAHAM.

Witnesses:

F. L. FAIRBANKS,  
HENRY W. HUNGERFORD.