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# UNITED STATES PATENT OFFICE.

FRANK TUCHFARBER, OF CINCINNATI, OHIO.

IMPROVEMENT IN THE METHOD OF PRODUCING IMITATION-PEARL SURFACES.

Specification forming part of Letters Patent No. **198,758**, dated January 1, 1878; application filed July 16, 1877.

*To all whom it may concern:*

Be it known that I, FRANK TUCHFARBER, a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Mode of Producing Imitation-Pearl Letters on Metallic Signs or Show-Cards, of which the following is a specification:

Heretofore, in providing signs with pearl letters or pearl surfaces for any purpose, it has been customary to employ a very expensive article, viz., pearl-veneer—that is, thin sheets of real mother-of-pearl. These veneers, cut into the desired shape, are glued or otherwise affixed to the rear side of a piece of glass forming the foundation of the sign. All painting and ornamentation are also done on the rear side of the glass, the transparency of the latter being the means employed to display the sign. Such signs are very costly, and, owing to their brittle nature, are very perishable.

The substitution of sheet metal for glass as the foundation to receive the letters and ornamentation of signs is a valuable improvement. Such metal signs are durable, and can be made more rapidly and cheaper than the glass signs aforementioned.

Heretofore it has been impossible to produce a good pearl letter or pearl surface on metallic signs—first, because the use of pearl-veneer is objectionable, inasmuch as, when affixed to the metal, the veneer projected out from and above the rest of the lettering, &c., of the sign, and thus imparted to the latter a rough and unsightly appearance; and, secondly, because it has been impossible to produce a good imitation of the pearl surface.

My invention enables the artisan to produce on the metallic base a lustrous, handsome, and perfect imitation of the real pearl with great celerity and at a trifling expense, the surface of the imitation of pearl being substantially even with the rest of the face-work of the sign, the whole producing a new, beautiful, and desirable article of manufacture.

My invention consists, first, in providing the face of the metallic base of the sign with a bright, lustrous surface, preferably crystallized; and, secondly, in shading such surface where the pearl surface is to appear with those tints which characterize the mother-of-pearl.

Another portion of my invention has particularly to do with the production of a pearl surface on metallic signs where the sign is made by first printing the design upon paper or a like material, and then transferring the same to the face of the metallic base; and consists of certain details more particularly hereinafter described.

As the foundation for the sign, I take a sheet of metal. That side of the latter which is to be the face of the sign must be bright, and is preferably so prepared as to be termed in the art “crystallized.” If the sign is to be painted by hand, all of the painting and ornamentation may be done except those portions of the surface of the metal base where the imitation of pearl is to appear, which is left unpainted, so that the surface of the metal shall show through. These unpainted surfaces are then skillfully colored with the purple and azure tints characteristic of mother-of-pearl. The sign is then varnished. The crystallized base, in connection with the pearl tints and the luster imparted by the varnish, presents to the eye a beautiful imitation of pearl.

But the principal benefit of my invention accrues in the case where the metallic signs and show-cards are produced by first printing on paper or other suitable material the device or design for the sign, and afterward transferring such device or design from the paper to the metallic base. As this method of transfer is well understood by those employed or engaged in the manufacture of metallic show-cards and signs, it is unnecessary to describe such method here.

In applying my invention in connection with this transfer process I proceed as follows, viz: I employ a sheet of metal (sheet-tin preferred) as the foundation of the sign. That side of the metal which is to receive the design must be bright, and is preferably crystallized. The design to be transferred to the metal surface is printed upon paper, &c., the surface of the latter being left blank wherever the pearly surface is to appear. On these blanks are then printed the shades of colors of the tints which characterize the mother-of-pearl, the shading being so done as to perfectly imitate the shades as they actually appear in the real pearl. In order to prevent the bright or crys-

tallized surface of the metal from showing through at points other than those desired, the paper, after being printed as aforesaid, finally receives a coat of opaque color, applied to those parts of the design where the surface of the metal base is not intended to show through. The design is then transferred to the metal base in the customary manner, and the face of the sign varnished. It will then be apparent that the combination of the bright metallic surface and the mother-of-pearl tints and the luster imparted to the same by the varnish have produced a beautiful and successful imitation of pearl.

The mother-of-pearl tints need not be printed on the transfer-paper, but can be applied directly to the surface of the metal base by a brush or other appropriate instrument. But the more convenient and better method is to apply the tints to the paper, as aforementioned.

When it is considered how rapidly and

cheaply metallic show-cards and signs may be manufactured by means of my transfer process, and how durable they are, the value of my invention will be apparent.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The method of producing imitation mother-of-pearl surfaces, consisting of first treating a metallic surface to produce a crystallized effect, then painting or printing thereon in imitation of mother-of-pearl, and finally varnishing, substantially as described.

2. A sign composed of a crystallized metallic base, having produced thereon the tints peculiar to mother-of-pearl, and varnished, substantially as described.

FRANK TUCHFARBER.

Attest:

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