

E. D. TILLYER & F. M. BISHOP.

GOLD FILM.

APPLICATION FILED MAY 5, 1917.

1,287,793.

Patented Dec. 17, 1918.

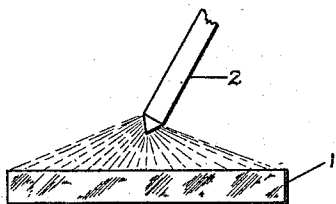


Fig. I.

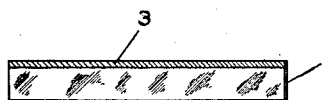


Fig. II.



Fig. III.

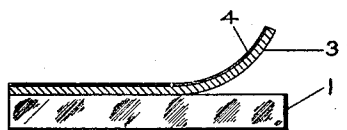


Fig. IV.

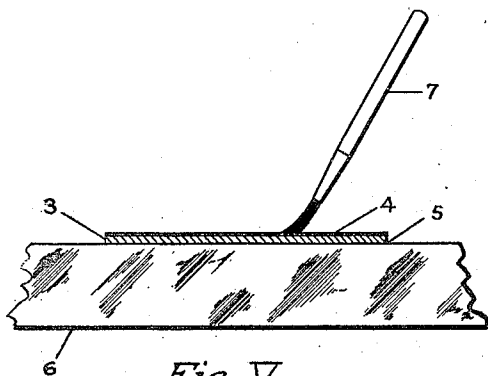


Fig. V.

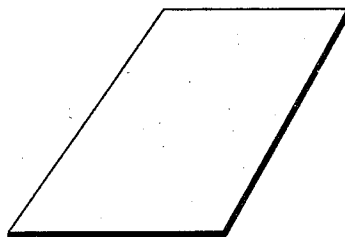


Fig. VI.

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UNITED STATES PATENT OFFICE.

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GOLD-FILM.

1,287,793.

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To all whom it may concern:

Be it known that we, EDGAR D. TILLYER and FRED M. BISHOP, citizens of the United States, residing at Southbridge, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Gold-Films, of which the following is a specification.

This invention relates to improvements in gold films and in the process of formation and handling of said films.

One of the leading objects of the present invention is the provision of a novel and improved process of inexpensive construction of thin gold film such as is generally known as gold leaf.

A further object of the present invention is the provision of an improved gold film or leaf which shall be much more firm in texture and durable in structure than the present rolled or beaten films.

Another object of the present invention is the provision of an improved process of constructing a gold film or leaf which will facilitate the handling of said film and lessening the liability of crumpling or tearing of the said gold leaf during the handling and using thereof.

Other objects and advantages of our process and the method of producing the same should be readily apparent by reference to the following specification taken in connection with the accompanying drawings, and it will be understood that we may make any modifications in the specific details of construction shown and described within the scope of the appended claims without departing from or exceeding the spirit of our invention.

Figure I represents a diagrammatic view illustrating one of the initial steps in the formation of our improved gold leaf.

Fig. II represents a sectional view illustrating the completion of the formation of the gold leaf or film.

Fig. III represents a similar view of the application of the protecting or carrying member thereto.

Fig. IV represents a view of the detachment of the gold leaf and protecting member from their original base.

Fig. V represents diagrammatically one way which can be employed to remove the

protecting or carrying film from the gold leaf proper.

Fig. VI represents an enlarged perspective view of the final leaf.

In the drawings, the numeral 1 denotes the glass or other basic slab on which we initially form our gold film or leaf, preferably by cathodic deposition, as from the gold bar 2, this cathodic deposition producing on the smooth surface of the block 1 a gold film 3 of any desired thickness or thinness, but substantially uniform in thickness and of very fine texture, not having the usual holes, thin weak portions and the like present in ordinary beaten gold leaf.

The film of desired thickness and size having thus been formed on the base 1, we preferably apply to said film a supplemental film of lacquer, liquid celluloid or the like 4, and allow it to securely unite and harden to the gold film. After this hardening process it is possible to peel off the gold film 3 with the lacquer or carrying film 4, as is illustrated in connection with Fig. IV. In this connection it is, of course, to be understood that if preferred we may form the gold film 3 directly on the celluloid or other member 4 as a base in place of employing the base block 1, although in practice we believe it more desirable for most perfect results to employ the base block 1, though a very satisfactory commercial product can be formed by forming the gold film direct onto the celluloid or other base.

The parts being now in the form of the combined gold and lacquer film may be readily employed as desired, cut to suitable size, satisfactorily handled without danger of breaking or injuring the gold film or danger of crumpling up of the film, and may be applied to any desired article.

In Fig. V we have shown the gold film 3 as secured to a suitable piece of glass as by the adhesive 5, as in the case of sign lettering or the like. After the combined film has thus been affixed to the member 6 on which it is to remain, we may then, as by a brush or other suitable instrument 7 previously dipped in acetone or other suitable solvent for the lacquer or film 4, dissolve away or remove the film 4, leaving only the original gold film or gold leaf 3 in place.

It will, of course, be understood that the

lacquer may be removed at any time after the initial removing of the combined gold leaf and carrying film from the base 1 on which it was formed, but we preferably delay this removal as long as possible so that the film may have the support of the supplemental lacquer or film during its several handling operations.

Fig. VI has illustrated in perspective the completed gold leaf as formed by our process, in which the film 4 was removed to leave only the leaf and before application of the leaf itself to any other article.

We claim:

15 The process of applying a metallic film to

an article, consisting in forming a thin film on a suitable base, uniting a carrying member with the film, removing the parts from the base, securing the film to the member with which it is to be united, and subsequently removing the carrying member therefrom.

In testimony whereof we affix our signatures in the presence of two witnesses.

EDGAR D. TILLYER.
FRED M. BISHOP.

Witnesses:

E. M. HALVORSEN,
E. M. LAFLE.