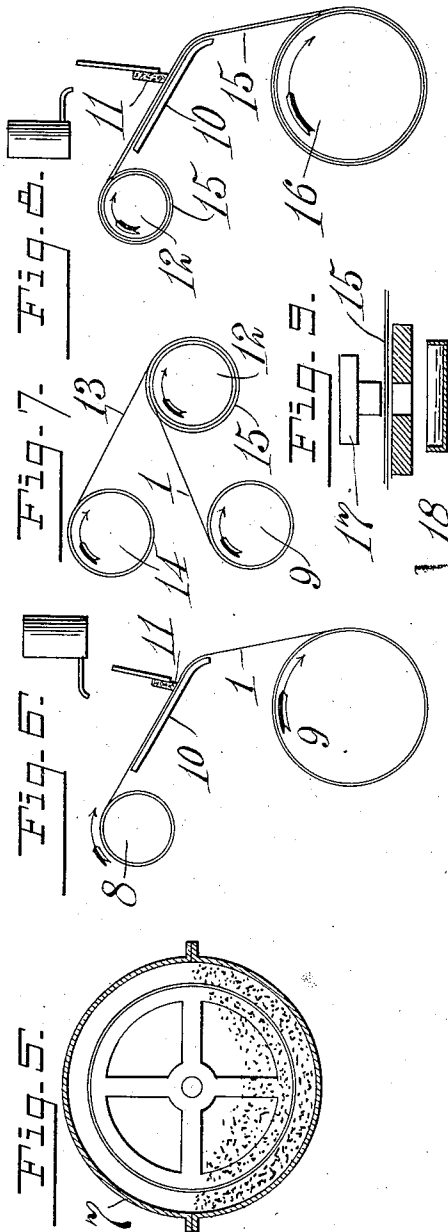
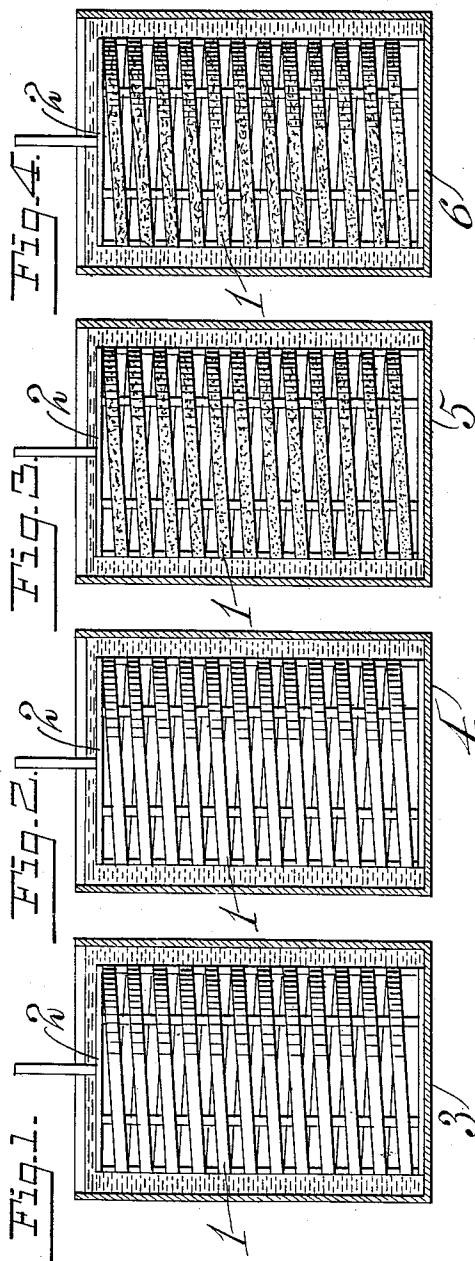


N. M. STANLEY.
 PROCESS OF MAKING METALLIC LETTERS.
 APPLICATION FILED OCT. 2, 1911.

1,018,138.

Patented Feb. 20, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

NATHAN M. STANLEY, OF DAYTON, OHIO.

PROCESS OF MAKING METALLIC LETTERS.

1,018,138.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed October 2, 1911. Serial No. 652,436.

To all whom it may concern:

Be it known that I, NATHAN M. STANLEY, a subject of the King of Great Britain, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Processes of Making Metallic Letters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to a process for making metallic letters, figures, etc., which are attachable to other materials, such as leather, felt, etc.

The object of the invention is to provide letters or designs of the above character, which may be attached to a variety of articles such as spectacle cases, hats, etc. for marking the same.

The present invention is an improvement of the process described in my former Patent, No. 961,550, granted June 14, 1910.

In the accompanying drawings:—Figure 1 is a plan view of a receptacle designed to contain a solution of alkali into which a metallic ribbon is immersed in the first step of the process. Fig. 2 is a similar view of a receptacle containing water into which the said ribbon is next immersed to cleanse it of the alkali solution. Fig. 3 is a similar view of a receptacle containing an acid solution into which the ribbon is next placed to give the same a suitable roughened surface for the subsequent treatment, and Fig. 4 is a similar view showing a receptacle containing water into which said ribbon is submerged to cleanse it of the acid. Fig. 5 is an end elevation of a drier into which the ribbon is placed from the water bath shown in Fig. 4, and is dried. Fig. 6 is a diagrammatic view illustrative of the application of an adhesive substance to one side of the ribbon. Fig. 7 is a similar view illustrative of the application of a non-metallic ribbon, such as paper, or a thin quality of textile fabric, to the glued side of the metallic ribbon. Fig. 8 is a similar view showing the application of adhesive substance to the exposed surface of the paper, and Fig. 9 is a view illustrating means for stamping the letters or figures

from the ribbon thus prepared and consisting of the two elements.

The metallic ribbon 1 may be of any metal such as copper, brass, etc. In my former process, this ribbon was prepared with an adhesive surface for direct attachment to the article which it was desired to mark.

My present improvement consists, in addition to other details, in the application of a paper ribbon or other non-metallic ribbon to the metal ribbon. It has been found that such a surface is more susceptible of a permanent adherence to certain other materials to which the letters are attachable.

The metallic ribbon 1 is contained upon an open reel 2, during its subjection to the several baths. The first step in the process is the immersion of the ribbon so contained in a bath 3 of an alkaline solution for the purpose of cleansing the same and preparing the ribbon for the subsequent steps in the process. After this treatment of the metallic ribbon and while so contained upon the open reel it is submerged in a water bath 4 to cleanse it of the alkali substance. From the latter bath the reeled ribbon is next submerged in an acid bath 5 to impart thereto a roughened or mat-like surface. From this acid bath the ribbon is next treated to a water bath 6 to cleanse it of the acid previously applied. A further treatment consists of drying the metallic ribbon which may be expeditiously done by placing the reeled ribbon in a suitable drier 7. At this point the metallic ribbon may be unwound from the original reel which was passed through the several baths in the operation of gluing one side thereof, or it may be re-wound from said original reel onto a smaller one 8, as may be more convenient. In the diagram, Fig. 6, the metallic ribbon is shown in the act of unwinding from a smaller cylinder 8 spirally onto a larger cylinder 9 during the application of the adhesive substance or glue. In this step of applying the glue to the ribbon, it is conveniently unwound over a support 10 above which is maintained in contact with the ribbon a felt pad 11. The glue may be fed to the ribbon from a reservoir and spread evenly on the ribbon as the latter passes under the pad or spreader 11. From the cylinder 9 the metallic ribbon is spirally wound onto a cylinder 12 upon which a nonmetallic ribbon 13 or a ribbon of fibrous material is also wound

from a cylinder 14. The non-metallic ribbon is thus secured to the metal ribbon and the two thus become to all intents and purposes a single ribbon 15 one side of which
5 presents a metallic surface and the other side, a fibrous surface. To this latter surface adhesive substance is applied, which adapts the resulting letters or figures for attachment to the article to be marked or inscribed. In this last named step in the process,
10 the united metal and fibrous ribbon 15, is unwound from the cylinder 14 to a cylinder 16 over and under gluing devices similar to those shown in Fig. 6, and the
15 fibrous or non-metallic side of the ribbon is coated with suitable adhesive substance and is permitted to dry. The final step in the process consists in stamping the letters or figures from the ribbon by means of suitable
20 dies 17 from which they drop into a suitable receptacle 18.

It will be apparent that the details described may be varied more or less without

departing from the essential steps in carrying out the process, I therefore, do not wish
25 to limit myself to unessentials.

Having described my invention, I claim:

The herein described process of making metallic letters or figures for attachment to non-metallic surfaces, consisting in impart-
30 ing to a metallic ribbon a roughened surface, in applying an adhesive substance to one side of said metallic ribbon, in applying a non-metallic ribbon to the side of said metallic ribbon, thus coated with adhesive
35 substance, in applying adhesive substance to the side of the resulting ribbon containing the non-metallic surface, and in drying said adhesive substance and stamping the desired figures or letters from said ribbon.
40

In testimony whereof I affix my signature, in presence of two witnesses.

NATHAN M. STANLEY.

Witnesses:

R. J. McCARTY,
MATTHEW SEIBLER.