

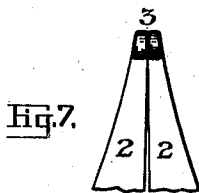
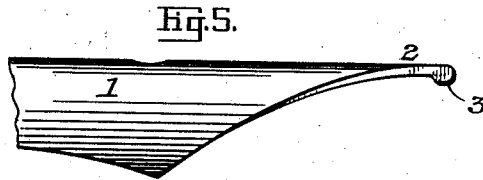
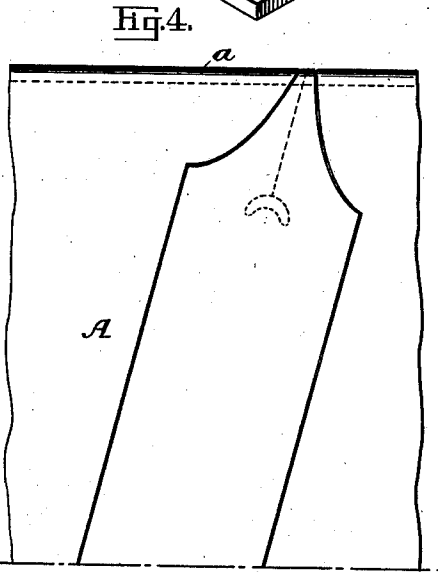
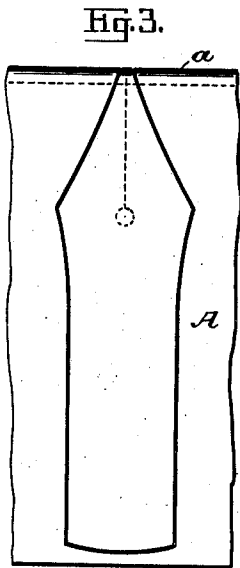
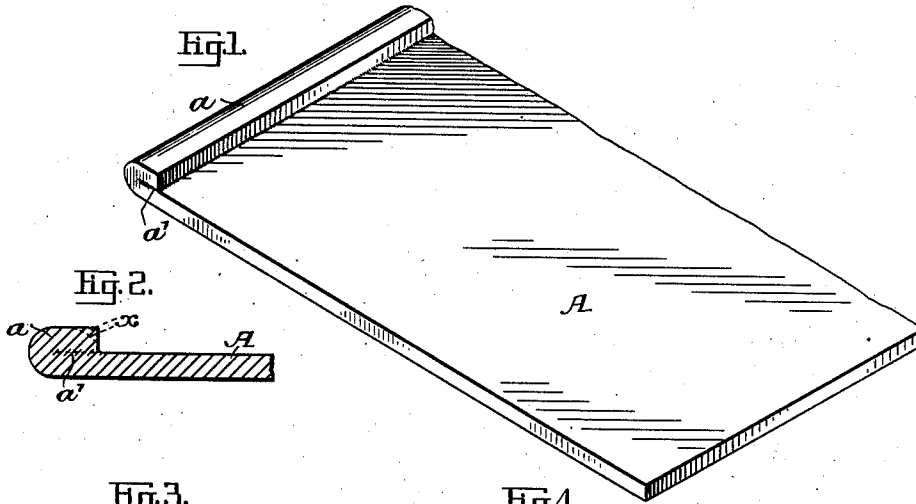
Jan. 14, 1941.

L. H. ASHMORE

2,228,250

MANUFACTURE OF WRITING PENS

Original Filed Aug. 27, 1935



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# UNITED STATES PATENT OFFICE

2,228,250

## MANUFACTURE OF WRITING PENS

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Application August 27, 1935, Serial No. 38,024  
Renewed April 12, 1940

3 Claims. (Cl. 113—32)

My invention relates to the manufacture of metal writing pens, and one object of my invention is to produce pen stock metal with a turned over or folded edge from which blanks to subsequently form pens and/or pen points may be stamped or cut.

A further object of my invention is to permanently connect the turned over or folded edge portion with the body of the stock.

And a still further object of my invention is to create a hardness in the turned over or folded and permanently secured edge of the metal pen stock.

My invention comprises certain improvements in the pen stock; the method of making the same; the blanks cut or stamped from such stock and subsequently formed into pens and/or pen points, and the method of making such pens and/or pen points.

Other features of my invention will be pointed out hereinafter in connection with the accompanying drawing, more or less diagrammatic in character, in which:

Figure 1 is a fragmentary perspective view of pen stock with a turned over or folded edge, within the scope of my invention.

Fig. 2 is an enlarged sectional view of such turned over or folded edge.

Figs. 3 and 4 illustrate one manner of cutting blanks from my improved pen stock.

Fig. 5 is a side elevation of a pen made from stock of the character shown in Fig. 1, and

Figs. 6 and 7 represent a front elevation and an inverted plan view, respectively, of the writing tip end of a pen or pen point made from such stock.

It is desirable that writing pens of many kinds, including those employed with fountain pens, shall have a thickened and, in large measure, wear-resisting writing tip end. In my application for patent filed July 27, 1934, Serial No. 737,307, I have described and claimed a pen made from a blank produced from stock having a turned-over or folded edge.

This folded part is in close engagement with the body of the stock, but it is not permanently connected therewith; hence, excessive wear may strip the turned over or folded portion from such body. I propose to overcome this difficulty by permanently securing, as by welding, brazing, soldering, or otherwise, the turned over or folded edge portion to the body of the stock and subjecting it to such treatment, which may be a heat treatment, simultaneously with or subsequently to the welding or other securing operation, as will

effect a hardening of the turned over or folded portion. It will be understood, of course, that the metal employed may be of a nature permitting hardening by heat treatment or otherwise.

In Fig. 1, I have shown a perspective view of a portion of pen stock within the scope of my invention, the main body thereof being indicated at A, and the turned over or folded edge being indicated at a. This turned over or folded edge is permanently secured to the main body of the stock as by welding, brazing, soldering, or the like, and such welding or other securing operation may take place simultaneously with the last step in the operation which effects the close contact of such turned edge with the body of the stock or at some time subsequently to the completion of such turned-over edge. By such welding or other securing operation, the turned over and/or folded edge becomes an integral part of the stock, the line of union being indicated at a'.

The operation of permanently fastening the turned over or folded edge portion of the pen stock may include some treatment, such as a hammering or rolling operation, that will tend to harden the turned over or folded edge; thereby increasing the wearing qualities of the pen. This work-hardening effect is concentrated at the point of greatest wear, the portions of the nibs formed from such turned or folded edge of the stock which contact with the paper.

The blanks from which my improved pens are made may be cut from pen stock of the character illustrated in Fig. 1, in the manner shown in Figs. 3 and 4, wherein the turned or folded edge is shown as being at the underside of the stock while being blanked; blanks for the production of straight pens being shown in Fig. 3, and blanks for the production of stub pens, whose writing tip points are at an angle to their longitudinal axes, being shown in Fig. 4.

It will be understood that the amount of metal turned over and permanently secured in place may be of any width desirable for the writing tip end of the pen and/or pen point, and that it may be slightly beveled at its rear edge portion, as indicated by the dotted line x, Figs. 1 and 2. It will also be understood that, within certain limits, depending upon the character of the metal employed, the contour of the turned over or folded edge may be modified as desired, during or subsequent to the rolling or other operation to produce the same, or after the operation of permanently securing the turned over or folded edge portion to the body of the pen stock.

The blanks may be stamped from this prepared metal in any usual way and subsequently pierced, slit, and raised to finished pens in the manner, for instance, set forth in my pending application; such treatment including a finishing operation designed to smooth angularities, but which does not affect in any way any hardening step that may have been applied to the folded and permanently secured edge which subsequently becomes the writing tip portion of the pen.

Pens and/or pen points made from stock of this type will have a writing tip end such as that illustrated in Figs. 5, 6, and 7, wherein the body of the pen is indicated at 1, the nibs at 2, and the thickened and permanently secured edge portion of the stock, which is at the nib ends of said pen, at 3.

Inasmuch as the work incidental to the permanent fastening of the turned over or folded edge may include a step that will harden the thickened edge thus produced, the manufacture of pens and/or pen points of this particular character from stainless steel stock with a folded edge so prepared and permanently secured in place is an important feature of my invention, since such material will provide a pen and/or pen point with a writing tip end highly resistant to wear.

Modifications may be made in the foregoing embodiment of my invention without departing from the spirit and scope of the same as set forth in the appended claims.

I claim:

1. The method of producing blanks for the manufacture of pens and/or pen points which comprises preparing sheet metal pen stock by

folding a narrow edge of the stock into close contact with its body; thereafter permanently securing such folded edge in close engagement with such body under a heat treatment sufficient to produce a hardened zone coterminous with such folded edge, and cutting pen blanks from such stock with the folded edge portion at the end which becomes the writing tip of the pen or pen point.

2. The method of producing blanks for the manufacture of pens and/or pen points which comprises providing stainless ferrous metal stock in strip form; folding a narrow edge of such stock over against its body; thereafter permanently securing such folded edge in close engagement with such body under a heat treatment sufficient to produce a hardened zone coterminous with such folded edge, and cutting blanks from such stock with the folded portion at the end which becomes the writing tip of the pen or pen point.

3. The method of producing blanks for the manufacture of writing pens or pen points which comprises preparing stainless metal stock in strip form; folding a narrow edge of the stock; pressing such folded edge in contact with its body by a combined rolling and drawing operation; thereafter permanently securing such folded edge into integral engagement with such body under a heat treatment sufficient to produce a hardened zone coterminous with such folded edge, and cutting blanks from such stock with the folded portion at the end which becomes the writing tip of the pen or pen point.

LEON HEHL ASHMORE.