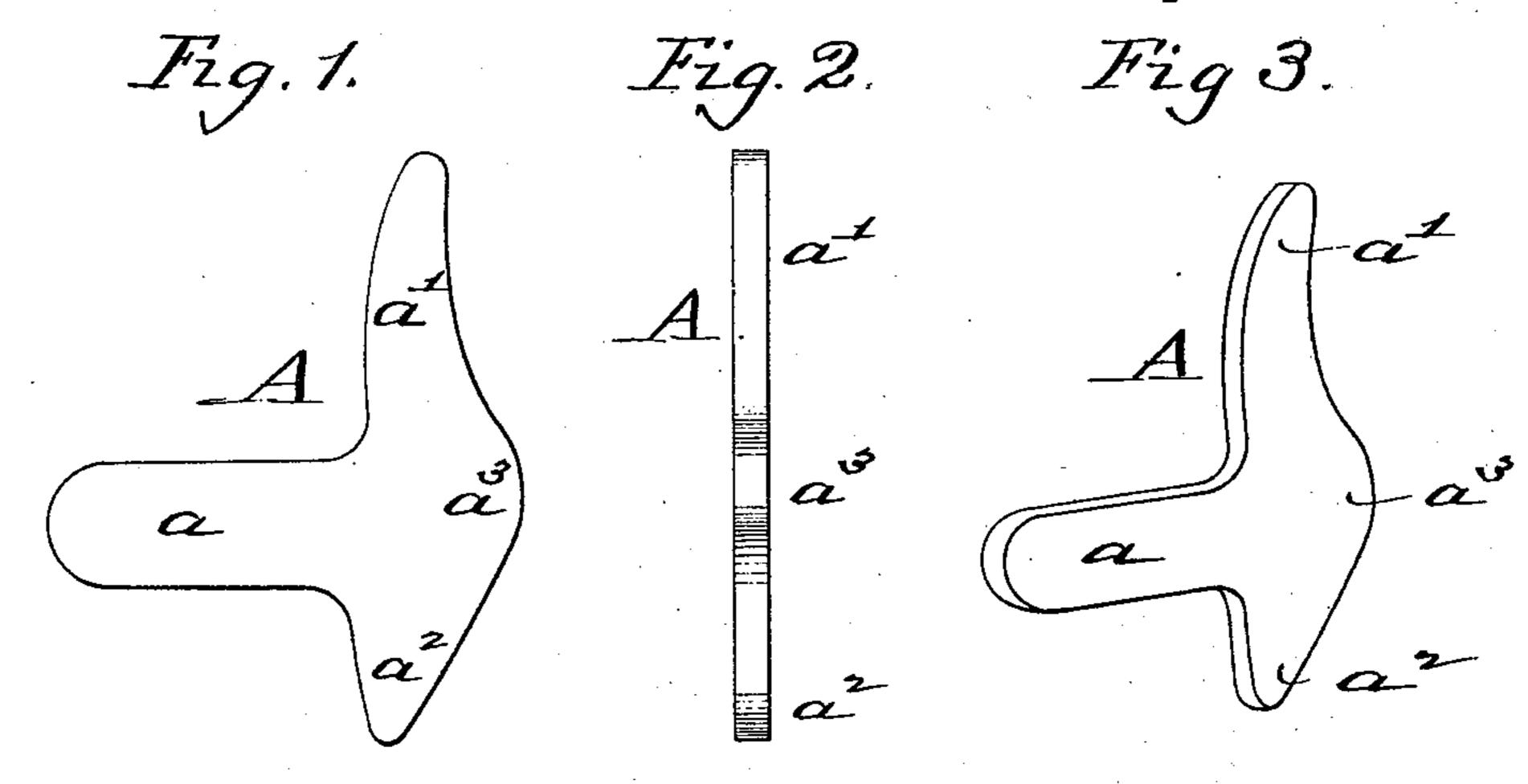
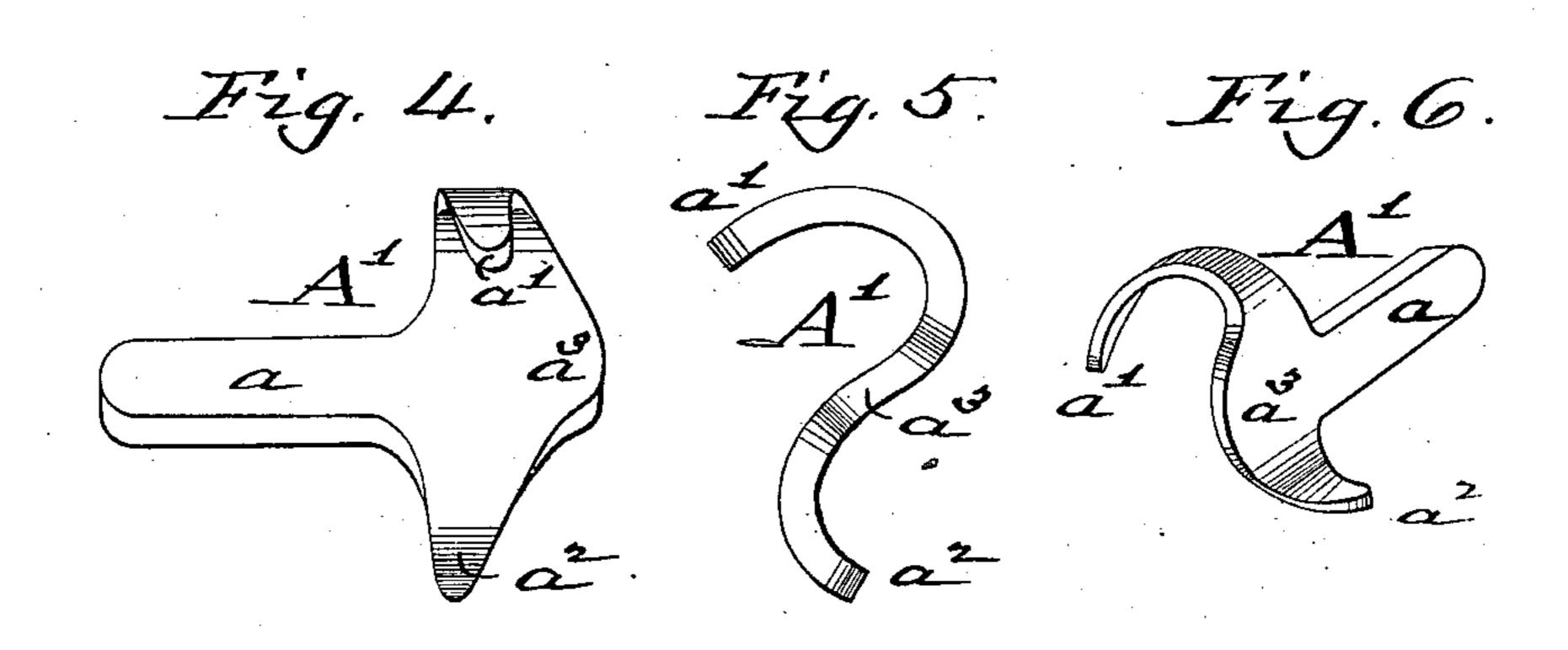
## C. M. HINE.

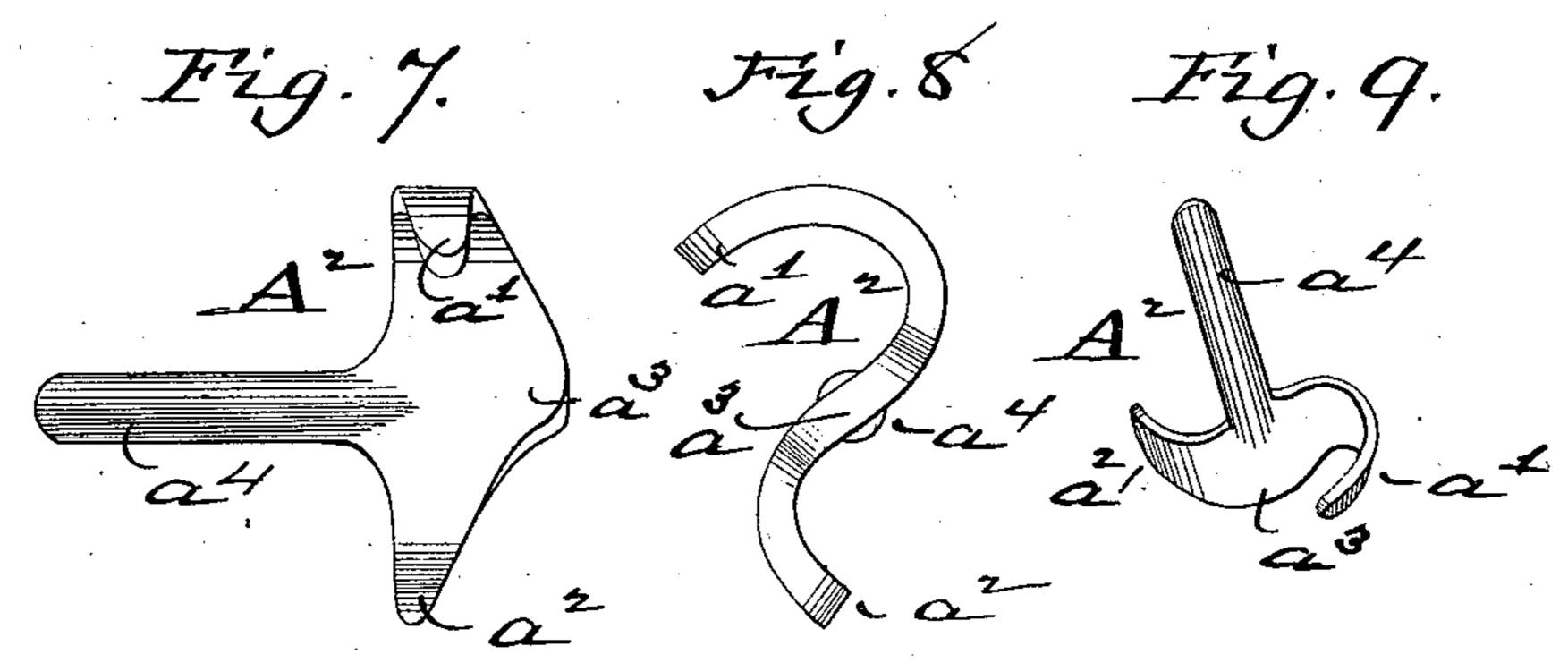
## SEWING MACHINE HOOK.

No. 256,215.

Patented Apr. 11, 1882.







Witnesses: Sund N-Alend H.W. Vellmein Treventor: Oparles M. Hine by @ Dunovy asty.

## United States Patent Office.

CHARLES M. HINE, OF ST. LOUIS, MO., ASSIGNOR TO JUDSON M. BEMIS, OF BOSTON, MASS., AND STEPHEN A. BEMIS, OF ST. LOUIS, MO.

## SEWING-MACHINE HOOK.

SPECIFICATION forming part of Letters Patent No. 256,215, dated April 11, 1882.

Application filed November 21, 1881. (Model.)

To all whom it may concern:

Be it known that I, CHARLES M. HINE, of St. Louis, Missouri, have made a new and useful Improvement in Sewing-Machine Hooks, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figures 1, 2, and 3 are respectively a side elevation, an edge elevation, and a perspective view, of the blank from which the hook is made. Figs. 4, 5, 6, similar views, respectively, of the blank shaped into the hook in question; and Figs. 7, 8, and 9, a third series, showing a rounded shank on the hook.

The same letters denote the same parts.

The present hook is intended for single-thread sewing-machines—such as the Hine or Willcox & Gibbs machine.

The improvement is valuable not only in its being very readily made, and in its being free from sharp bends and corners wherein the thread catches and wears and soon destroys the usefulness of such a hook as is used in the Willcox & Gibbs machine, but in its being so formed that it can run at a very high speed. The liability of the thread becoming entangled upon the hook is also greatly lessened, and should the thread for any cause wind upon the hook, the latter automatically clears itself.

In making this improved hook sheet metal is stamped into blanks of the peculiar form shown at A, Figs. 1, 2, 3, the blank having the shank a, the prong a', the prong  $a^2$ , and the swell or rounded projection  $a^3$ , the prongs extending in opposite directions from the shank, the prong a' being longer than and slightly

out of line with the prong  $a^2$ , and the projection  $a^3$  being about opposite the shank. The blank-prongs a'  $a^2$  are then bent into the forms 40 shown at A', Figs. 4, 5, 6—that is, in edge elevation, Fig. 5, the prong a' being about semicircular, and the prong  $a^2$  being at about a right angle with the part  $a^3$ , which part last named remains flat and in the same plane with 45 the shank a. The prong  $a^2$  in this view also points away from the prong a', and at about a right angle therefrom.

In side elevation, Fig. 4, it will be seen that the points of the prongs are still slightly out 50 of line with each other, the prong  $a^2$  being the nearer to the shank. Both prongs at the outer edge taper from the part  $a^3$ , but at the inner edge are nearly straight. This hook A' is now very cheaply finished, from the fact that it requires none of the expensive milling operations necessary in the manufacture of other hooks.

For some machines the flat shank a is rounded, as in Figs. 7, 8, 9, the change being accomplished by swaging the flat shank a into the 60 cylindrical form  $a^4$ , Figs. 7, 8, 9.

I claim—

1. The herein described sewing machine hook, having the curved prongs a'  $a^2$ , projection  $a^3$ , and the flat a or rounded shank  $a^4$ , sub- 65 stantially as described.

2. As a new manufacture, the blank A, having the shank a, the prongs a' and  $a^2$ , and the swell or projection  $a^3$ , substantially as described.

C. M. HINE.

Witnesses:

G. W. BALLOCH, GEORGE CORNELL.