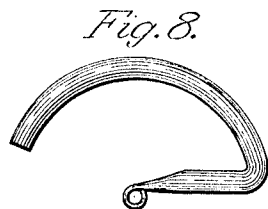
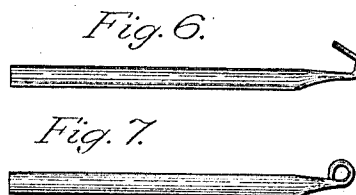
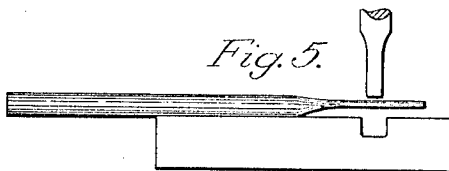
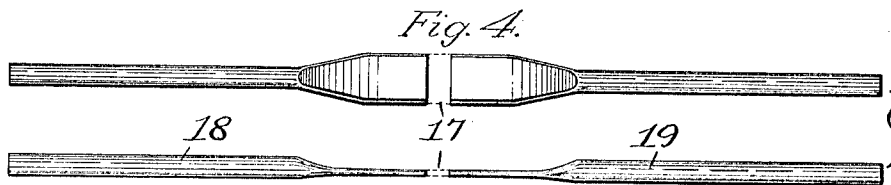
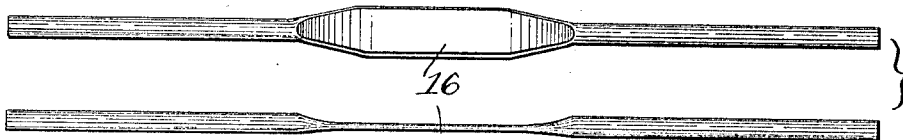
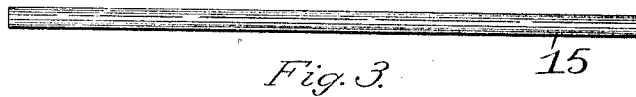
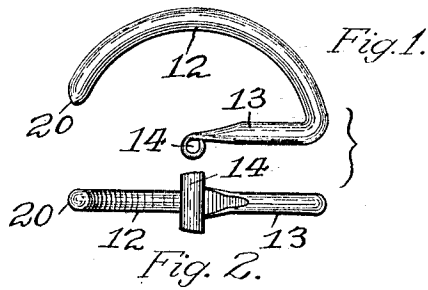


C. H. WILEY.
METHOD FOR FORMING BINDER HOOKS.
APPLICATION FILED OCT. 8, 1904.

1,048,619.

Patented Dec. 31, 1912.



Witnesses.

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UNITED STATES PATENT OFFICE.

CLARENCE H. WILEY, OF HARTFORD, CONNECTICUT.

METHOD FOR FORMING BINDER-HOOKS.

1,048,619.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed October 8, 1904. Serial No. 227,695.

To all whom it may concern:

Be it known that I, CLARENCE H. WILEY, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a certain new and Improved Method for Forming Binder-Hooks, of which the following is a specification.

The invention relates to binder hooks and more particularly to a hook of a particular form and structure, which may be made in unlimited quantities and with absolute precision.

The object of the invention is to provide a binder hook as an article of manufacture, which may be made from a single piece of material having at one end a loop or eye and a concentric arm appurtenant thereto.

Another object of the invention is to provide a method of forming binder hooks which will have certain qualifications hereinafter specified.

Referring to the drawings—Figure 1 denotes in elevation and plan the improved binder hook. Fig. 2 illustrates the material from which the binder hook is formed. Fig. 3 denotes in plan and edge view the first operation of forming the material indicated in Fig. 2. Fig. 4 indicates in plan and edge view the method of cutting the material after the formation indicated in Fig. 3. Fig. 5 illustrates the first operation of forming the loop for the hook. Fig. 6 illustrates the material of the hook after it is formed as indicated in Fig. 5. Fig. 7 indicates a complete loop formed on the hook. Fig. 8 illustrates the binder hook formed without the point.

The greatest difficulty has been experienced in providing binder hooks for binders which hooks are uniform in contour and which have the necessary characteristics for providing a free working and certain engagement with the papers ordinarily secured in such a binder.

It has long been the practice to form binder hooks in sections with a grip or eye for engaging the central pivot of the binder and securing thereto what is practically a semi-circular loop, which forms the clip or hook for securing papers in the binder. Such hooks have many disadvantages. It is absolutely essential in forming the binder hooks to provide a device which will readily fit the binder back and have its loop or hooks absolutely concentric with the eye or

pivotal point at which they are secured to the backing. In forming such prior hooks from a number of parts as above indicated, it is practically impossible to secure uniformity and provide a hook, the curved portion of which will be absolutely concentric with the pivot, so that the binder may be open or closed and always throw the hook upon the perfect arc of the intended circle to readily release or engage the loose leaves which are designed to be secured in the binder.

The present invention contemplates a hook and method of forming the same which will obviate all the objections heretofore encountered and by which a perfect hook may be produced with absolutely uniform qualifications.

The hook itself as illustrated in Figs. 1 to 8 inclusive consists of an arched member 12 of a predetermined radius, terminating at one end in a radial member 13, which at its inner end is formed into an eye or bearing 14 which is concentric with the arch 12 and forms the central pivot about which the hook may be rotated. The eye 14 is preferably formed with a considerable length to give a sufficient bearing for insuring proper action of the hook as it swings upon the pivot. This hook is of course formed from metal, and as illustrated in Figs. 2 to 8 inclusive, is produced by treating round wire or bar metal to various operations to secure the desired result. In order to prevent distortion of the main part of the bar which forms the arched member 12 a bar 15 is flattened or swedged between its ends, as indicated at 16 in Fig. 3. This particular swedging of the metal causes the bar to be elongated but does not vary the conditions except uniformly at either side of the flattened portion. After the bar is flattened to give the necessary width for the bearing or eye 14, it is cut away at the center as indicated at 17 in Fig. 4. By removing a small portion of the flattened surface a cut can be made without causing the metal to flow back on the flattened portion and thus distort it. When the bar is separated as indicated in Fig. 4, forming two similar parts 18—19, each is subjected to the action of a die as illustrated in Fig. 5, which forms the flattened portion into substantially U-form, as illustrated in Fig. 6. The U-shaped bend is then subjected to the action of a die which closes it down, forming an eye as indicated at Fig. 7. This

- operation is performed by any of several well-known metal working machines, such, for instance, as those used for forming hinge eyes. The hook may be subjected to the action of a pointing tool, which provides a rounded end as indicated at 20 in Fig. 1, and to secure the best results the process of forming the hook by various steps as indicated is quite material.
- 10 Any device for forming the hook to the general shape shown in Fig. 8 may be employed so long as the curved part of the hook finally assumes a form concentric with the center or pivotal point of attachment. In
- 15 forming the hook to this shape the eye or pivotal point is properly held and any desired means for determining the length of the radial member 13 to form the proper radius for the arc to be given to the hook may
- 20 be employed, and any desired means for giving the proper curve to the arched member 12 may also be used to cause said member to finally assume a perfect circle concentric with the pivotal point 14.

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

1. The method of forming binder hooks which consists in flattening a bar of metal between its ends, separating said bar into sections and rolling the flattened portion of each section into an eye, then holding said eye and forming a portion of the section into a curved member concentric with the formed eye.

2. The method of forming binder hooks which consists of flattening a bar of metal between its ends, separating said bar into sections, rolling the flattened end of each section into an eye, forming the section into an arch concentric with said eye, and with a substantially radial member intermediate said arch and eye and pointing the free end of said arch.

CLARENCE H. WILEY.

Witnesses:

LENA E. BERKOVITCH,
CLARA E. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."