(No Model.) 2 Sheets—Sheet 1.

H. A. WILBUR.

HINGE.

No. 260,437. Patented July 4, 1882.

FIG. 1.

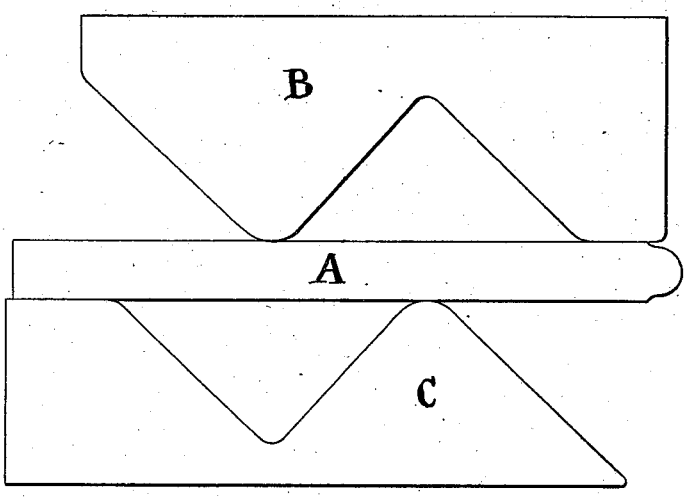


FIG. 2.

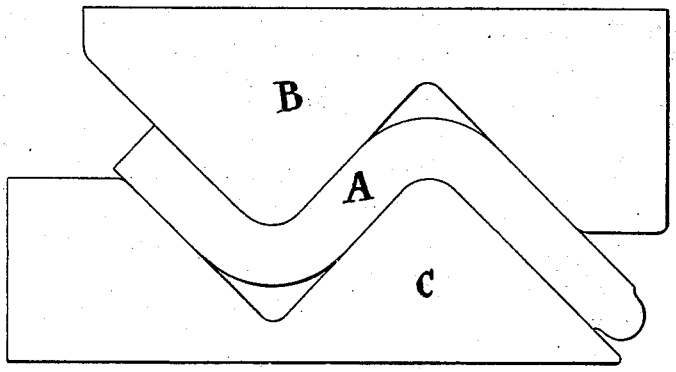


FIG. 3.

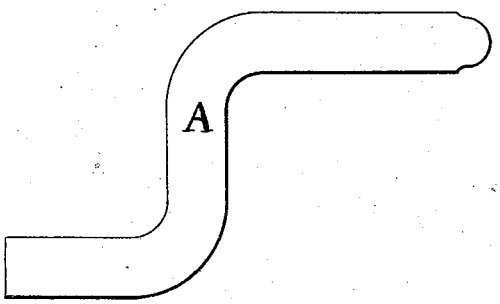
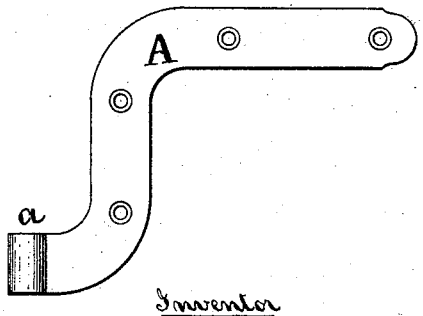


FIG. 4.



Witnesses.
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Horace E. Ware

Inventor
H. A. Wilbur
by J. H. Adams
Atty.

(No Model.) 2 Sheets—Sheet 2.

H. A. WILBUR.

HINGE.

No. 260,437. Patented July 4, 1882.

FIG. 5.

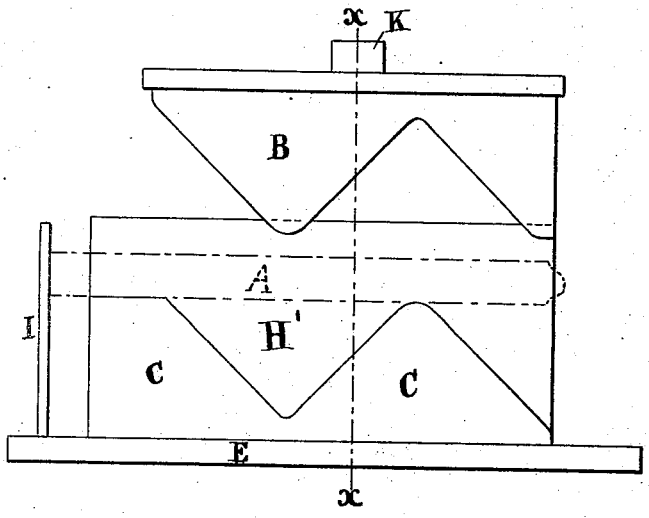


FIG. 6.

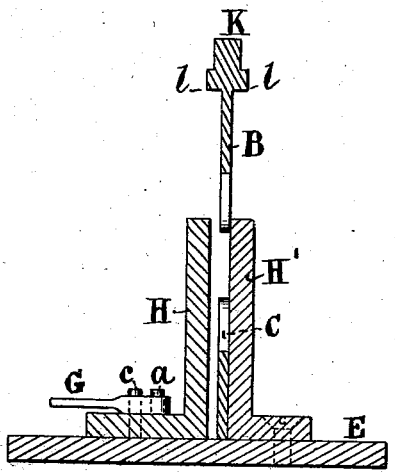
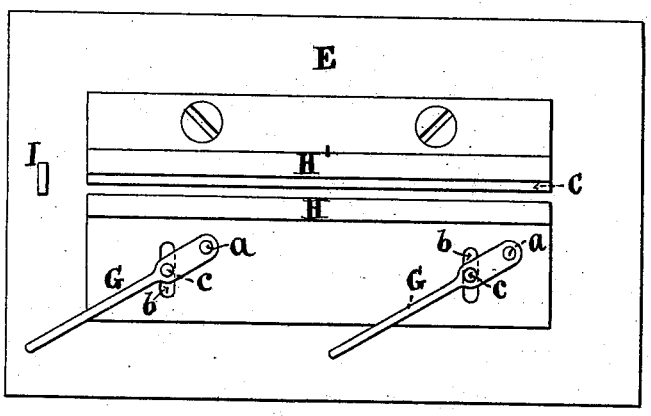


FIG. 7.



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E. Blanton.
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Atty.

UNITED STATES PATENT OFFICE.

HENRY A. WILBUR, OF CAMBRIDGE, ASSIGNOR OF ONE-HALF TO FRANK W. LOWE, OF BOSTON, MASSACHUSETTS.

HINGE.

SPECIFICATION forming part of Letters Patent No. 260,437, dated July 4, 1882.

Application filed December 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. WILBUR, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Hinges for Shutters or Blinds, of which the following is a specification.

My invention relates to an improvement in that class of hinges which are made of thin flat bar-iron, and used for shutters and blinds, and known as "angle" hinges. These hinges as now made consist of blanks cut out in angle form from plates of thin flat iron, and the portion that forms the eye for the reception of the pintle is liable to be bent in a direction at an angle with the grain of the iron. In this way the eye portion becomes cracked and the hinge is weakened and rendered unsalable. In order to obviate this difficulty, the portion forming the eye has been made separate from the main portion and secured to the same by means of rivets. This again is objectionable, for the reason that the rivets are liable to rust and become loosened, and, besides, the hinge does not present an even surface where attached to the blind.

In both the above-named constructions there is a considerable waste of material, besides the other objections.

It is the object of my invention to obviate all these objections, and to that end the invention consists in forming the blank of a single strip of rolled metal pressed into the proper angular form by means of a die composed of two jaws, so constructed and operating as to force the metal strip edgewise into the proper shape.

Referring to the accompanying drawings, Figure 1 represents a strip of metal placed between the jaws of the die and before being operated upon. Fig. 2 represents the bar pressed into the proper angular shape by the die. Fig. 3 shows the blank properly bent, and Fig. 4 shows the completed part of the hinge. Fig. 5 is an elevation of the die with the front plate removed. Fig. 6 is a vertical section on line *x x*, Fig. 5. Fig. 7 is a plan view of the same.

A represents a blank composed of a strip of rolled metal, as indicated in Fig. 1, and is pressed into the desired form edgewise, as shown in Figs. 2, 3, and 4, which is effected by means of a die composed of a follower, B, of the form shown in Figs. 1, 2, and 5, and which, in its upper part, is of increased thickness, forming shoulders *l l*, while on the center of the upper part is a head, K, upon which the pressure is exerted from any suitable mechanism to force the follower B down upon the blank.

H′ is a rectangular metal plate, securely fastened to the base-plate E, as shown in Fig. 6. On the inner side of the plate H′ is fixed or cast a projecting piece or former, C, of about the same thickness of the blank to be bent and corresponding in shape with the follower B, as shown.

H is a rectangular plate, which is made movable on the base-plate E, and is similar to the plate H′. The plate H is moved toward and from the fixed plate H′ by means of levers G G, pivoted to the horizontal part of plate H, as shown at *a a*, and also pivoted on pins *c c*, secured to the bed-plate E and passing through slots *b b* in the horizontal part of plate H, as shown in Figs. 6 and 7.

I is a stop against which the blank A is set when placed in the die. When the blank A is to be bent it is placed edgewise on the projecting piece C on plate H′, as shown by dotted lines in Fig. 5, and also in Fig. 1. The plate H is then moved up toward plate H′, leaving sufficient space between the two to allow the blank to pass down freely as it is bent between the follower B and projection C. The follower B is then forced down, and the blank assumes the form shown in Fig. 2. By this means the grain of the metal in the blank is relatively maintained throughout its length, thus retaining all its strength and enabling the portion forming the pintle-socket *a* to be bent over without breaking or cracking.

Instead of the projection or former C on the stationary plate H′, pins may be inserted in said plate H′ at points corresponding to the upper portions of the plate or projection C, upon which the bar is placed and forced down by the follower B, thus effecting the same result as when pressed over plate C.

By my improved method of forming the hinge it will be seen that there is no waste of material, as in the usual method of stamping or cutting out the blanks from a plate of sheet

metal, and the hinge is, besides, made much stronger.

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

1. The combination of the follower B, the stationary plate H′, provided with a former, C, and the movable plate H, operated by means of levers G G, substantially as and for the purpose set forth.

2. A fibrous rolled-iron hinge, curved edgewise, as described, the fibers of which are continuous and unbroken from one end to the other, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY A. WILBUR.

Witnesses:
JOS. H. ADAMS,
E. PLANTA.