

H. L. HAPGOOD.
HINGES.

No. 181,843.

Patented Sept. 5, 1876.

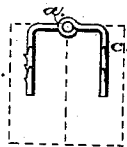


FIG. 2.

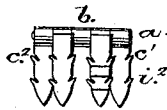


FIG. 1.

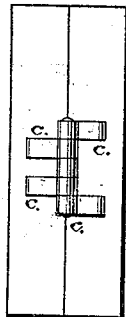


FIG. 3.



FIG. 7.



FIG. 6.

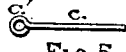


FIG. 5.

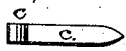


FIG. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

HERBERT L. HAPGOOD, OF ATHOL, MASSACHUSETTS.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. 181,843, dated September 5, 1876; application filed January 27, 1876.

To all whom it may concern:

Be it known that I, HERBERT L. HAPGOOD, of Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Hinges, of which the following, taken in connection with the accompanying drawings, is a specification:

My invention relates to the construction of hinges more especially adapted to use as a substitute for the ordinary small butt-hinges now in common use; and has for its object a saving in the cost of the hinges, and in the labor of applying them, besides dispensing entirely with the use of screws or nails for securing them in place; and it consists in making the hinges of two, four, or more narrow strips of sheet metal, pointed at one end and bent flatwise of the strip at the other end around a joint-pin, said pointed strips projecting alternately from opposite sides of the joint-pin, and having their outer portions bent at right angles to the portion next the joint-pin, said pointed outer portions having cut or otherwise formed on their corners, edges, or sides one or more barbs or pointed projections, and serving as means of securing the hinge to the two parts or objects to be hinged together by being driven endwise into the wood, as will be described.

Figure 1 of the drawings is a side elevation of my improved hinge. Fig. 2 is an end view of the same as applied to hinge together two pieces of wood, (shown in dotted lines,) one of which may represent a door, open or swung back upon the piece to which it is hinged. Fig. 3 is an elevation of the same hinge applied, as seen looking directly at the edge of the door and the part to which it is hung. Figs. 4 and 5 are respectively a plan and edge view of one of the straps before being bent at right angles; and Figs. 6 and 7 represent a thimble, to be placed between the two inside straps of the hinge surrounding the pivot-pin.

The pin *a* has secured to its middle the thimble *b*, or the pin *a* may have formed upon it an enlargement at *b* to keep the inside straps a suitable distance apart when more than two

straps are used. The straps *c c* are punched from sheet metal in the form substantially as shown in Fig. 4, and are bent at their square ends into the form of a cylindrical eye, *c'*, of a size to fit the exterior of the pin *a*. Their pointed ends are then bent at right angles to the other portion, as shown in Fig. 2, and have formed thereon, in any well-known manner, one or more barbs or hooked projections, *c''*, which may be upon the edges, sides, or corners of the prongs, one or all. These bent straps or prongs are then placed upon the pin *a*, side by side, projecting therefrom alternately in opposite directions, with the pointed and barbed prongs all pointing downward or all upward, and the pin *a* is then slightly riveted down at each end. In applying these hinges no screws or nails are required, it only being necessary, in applying them to soft wood, to place the two pieces of wood together, as indicated in dotted lines in Fig. 2, place the hinge in position with the pin *a*, directly over and parallel to the joint, with the points of the prongs resting upon the edges of the two pieces of wood, and drive them all together into the wood with a hammer or other suitable tool. In applying them to hard wood it will be necessary to cut shallow recesses in the edge of the wood to receive the part of the straps which lie parallel with the edges of the wood into which the barbed prongs are driven.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

A hinge, consisting of a central pivot-pin and two or more pointed straps-projecting therefrom upon opposite sides, and having their outer or pointed ends provided with one or more barbs or hooked teeth, and bent at right angles, as set forth, and adapted to be applied without screws or nails, substantially as described.

Executed at Athol, Massachusetts, this 17th day of January, 1876.

HERBERT L. HAPGOOD.

Witnesses:

FARWELL F. FAY,
J. M. HAPGOOD.