E. W. Gilmore,

Hinge.

No. 51,447. Patented Dec. 12, 1865.

Fig. 1.

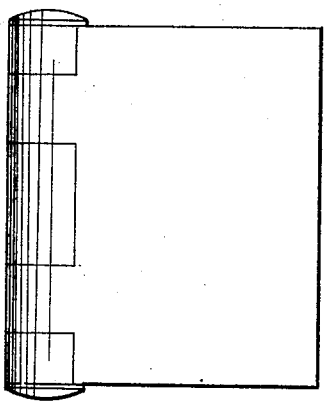


Fig. 2.

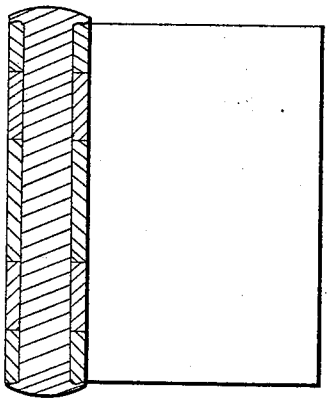
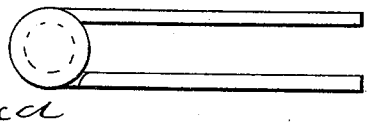


Fig. 3.



Witnesses.

Wm. C. Hibbard

N. G. Lombard

Inventor.

E. W. Gilmore

UNITED STATES PATENT OFFICE.

EDWIN W. GILMORE, OF NORTH EASTON, MASSACHUSETTS.

IMPROVED HINGE.

Specification forming part of Letters Patent No. **51,447**, dated December 12, 1865.

To all whom it may concern:

Be it known that I, EDWIN W. GILMORE, of North Easton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in the Manner of Constructing the Joints of Hinges; and I do hereby declare the following to be a full, clear, and exact description of the same, taken in connection with the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the hinge-joint. Fig. 2 is a section of the same through the center of the hinge, and Fig. 3 is an edge view of the same.

My invention relates to the manner of constructing and applying the rivet or joint-pin in hinges; and it consists in forming upon each end of the rivet a broad head of sufficient diameter to cover the boss of the joint, which is formed from the material of the rivet by means of a suitable machine, by upsetting the end of the same to the proper form after it is inserted in the joint, and hammering it down upon the boss of the joint and around upon the outside thereof, so as to partially embrace the boss and support it.

My invention is more especially applicable to hinges that are made of wrought-iron or other sheet metal, in which the eye of the joint or the hole that receives the rivet or joint-pin is made by bending round the plate, from which the hinge is formed, so as to form a cylindrical orifice within it to receive the rivet, and this is the kind that is represented in the drawings.

In constructing the hinge by this mode of operation, after the parts have been prepared in the usual manner, they are put together, and a piece of straight rod of the proper size to fill the holes and long enough to form the joint-pin, and also to contain metal enough to form the two heads, is put through the holes in the boss, and is then subjected to the operation of a riveting-machine adapted to the purpose, which upsets each end of the rod by light and rapid blows, causing it to spread and form a broad, thin head, which, by the shape of the riveting-tool, is closed down upon the boss of the hinge, which is also upset or swaged upon its outer surface by the hammering of the head upon it, so that the head of the rivet partially embraces it, as seen in the section, Fig. 2.

By this mode of constructing the heads of the rivet it gives greater support to the bosses of the joint laterally than in the usual construction, and it also serves to prevent the bends which form the outer parts of the joint from straightening, because they are partially embraced or inclosed by the heads, while in hinges as usually constructed the riveting tends to open the boss and gives it little or no support.

After the riveting is completed the edges of the heads are finished off with the outside of the boss of the hinge, in the usual manner.

I am aware that the pins in the joints of hinges have been made with large heads that covered the boss, which were made before putting the parts of the hinge together, and therefore I do not claim such mode of construction; but

What I claim as my invention is—

A hinge constructed substantially as described, as a new manufacture.

Executed at Boston this 22d day of May, A. D. 1865.

E. W. GILMORE.

Witnesses:

WM. C. HIBBARD,
N. C. LOMBARD.