W. H. HART
Hinge.

No. 218,436. Patented Aug. 12, 1879.

Fig. 1.

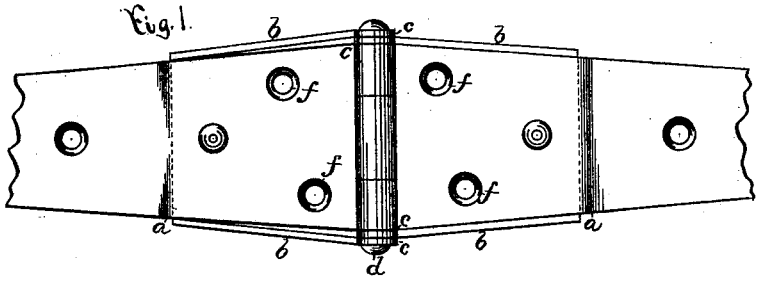


Fig. 2.

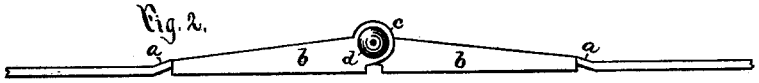


Fig. 3.

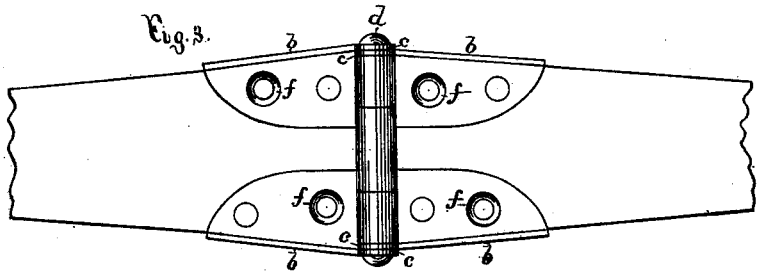


Fig. 4.

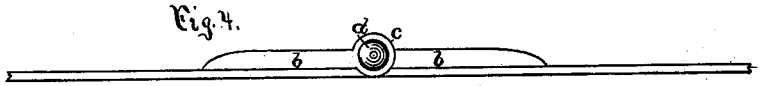
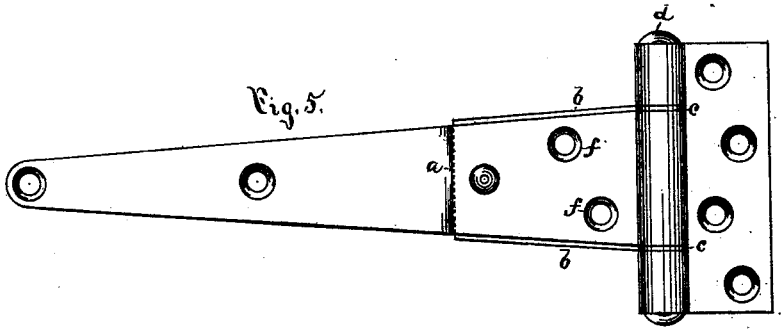


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. HART, OF NEW BRITAIN, CONNECTICUT.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. **218,436**, dated August 12, 1879; application filed June 23, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. HART, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

The object of my invention is to strengthen the strap leaf or leaves of a T or strap hinge from the knuckle to the first screw-holes; and the invention consists in the combination of an ordinary strap-leaf of a hinge with strengthening-ribs formed on a plate separate from the hinge-leaf and mechanically secured thereto, as hereinafter described.

In the accompanying drawings, Figure 1 is a side view of a hinge which embodies my invention. Fig. 2 is an edge view of the same. Figs. 3 and 4 are side and edge views of another style of hinge which embodies my invention; and Fig. 5 is a side view of a T-hinge which embodies my invention.

In all of the several figures the hinge proper is of substantially the ordinary form and is cut out with ordinary dies in the ordinary manner.

The extreme outer ends of the strap-leaves are represented as broken off; but they are of the ordinary form.

In Figs. 1, 2, and 5 the strap-leaves have a short offset at *a*, as shown.

In addition to the ordinary hinge I form two strengthening-ribs, *b b*, for each leaf that is designed to be strengthened, which ribs have an ear, *c*, at one end, through which the pintle *d* is passed. Each leaf is formed on a plate standing at about right angles to the leaf strengthened, which plate is secured to the leaf by means of a suitable rivet or rivets.

In Figs. 1, 2, and 5 two ribs are secured to one plate, which plate is set in the offset on the back of the leaves, the offset being of a depth equal to the thickness of the plate, so that the plate and the under side of that portion of the leaves which extend beyond it will be in the same plane, as shown in Fig. 2. These styles of ribs and plates may be made of sheet metal by blanking out the same and turning or bending up the ribs *b b*.

e e designate rivets, by which the plates and their ribs are mechanically secured to the leaves. The first screw-holes *f f* are also made through the ribbed plates, so that the fastening-screws will also firmly bind the leaves and plates together.

In Figs. 3 and 4 each rib is secured to a separate plate, which plates are secured by rivets *e e* to the inside of the leaves instead of the outside, so that it is unnecessary to offset the leaves. This style may be made of cast malleable metal and the rivets cast on, if desired.

For a T-hinge the ribs are applied to the strap-leaf only; but otherwise they are substantially the same as before described.

In either style the hinge proper is substantially the ordinary hinge, made in the usual form and manner, and the ribs are separately formed and mechanically secured to what would, without said ribs, be an ordinary hinge.

By this construction the shape of the blank for making the hinge proper does not require to be so changed as to make any additional waste of stock in cutting out, and the same ordinary quality of metal may be used as heretofore for both the hinge proper and the ribbed plates, as neither of them have to be bent but one way across the grain. The ribs and their plates greatly strengthen the metal at the point most liable to bend or break.

If desired, the hinge proper may be made of lighter or thinner metal than in ordinary hinges of the same size, and when thus ribbed they will be much stronger even if lighter than the ordinary hinge.

I am aware that hinges have been made with strengthening-ribs turned up from the edges of the leaves and with ears through which the pintle passed, said ribs, ears, and hinge-leaf being all formed of one and the same piece of sheet metal, and I hereby disclaim the same.

I claim as my invention—

In a strap or T hinge, the combination of the ordinary strap-leaf with the strengthening-ribs formed on a plate or plates separate from the hinge-leaf and mechanically secured thereto, substantially as described, and for the purpose specified.

WM. H. HART.

Witnesses:

WILLIAM PARKER,

JAMES SHEPARD.