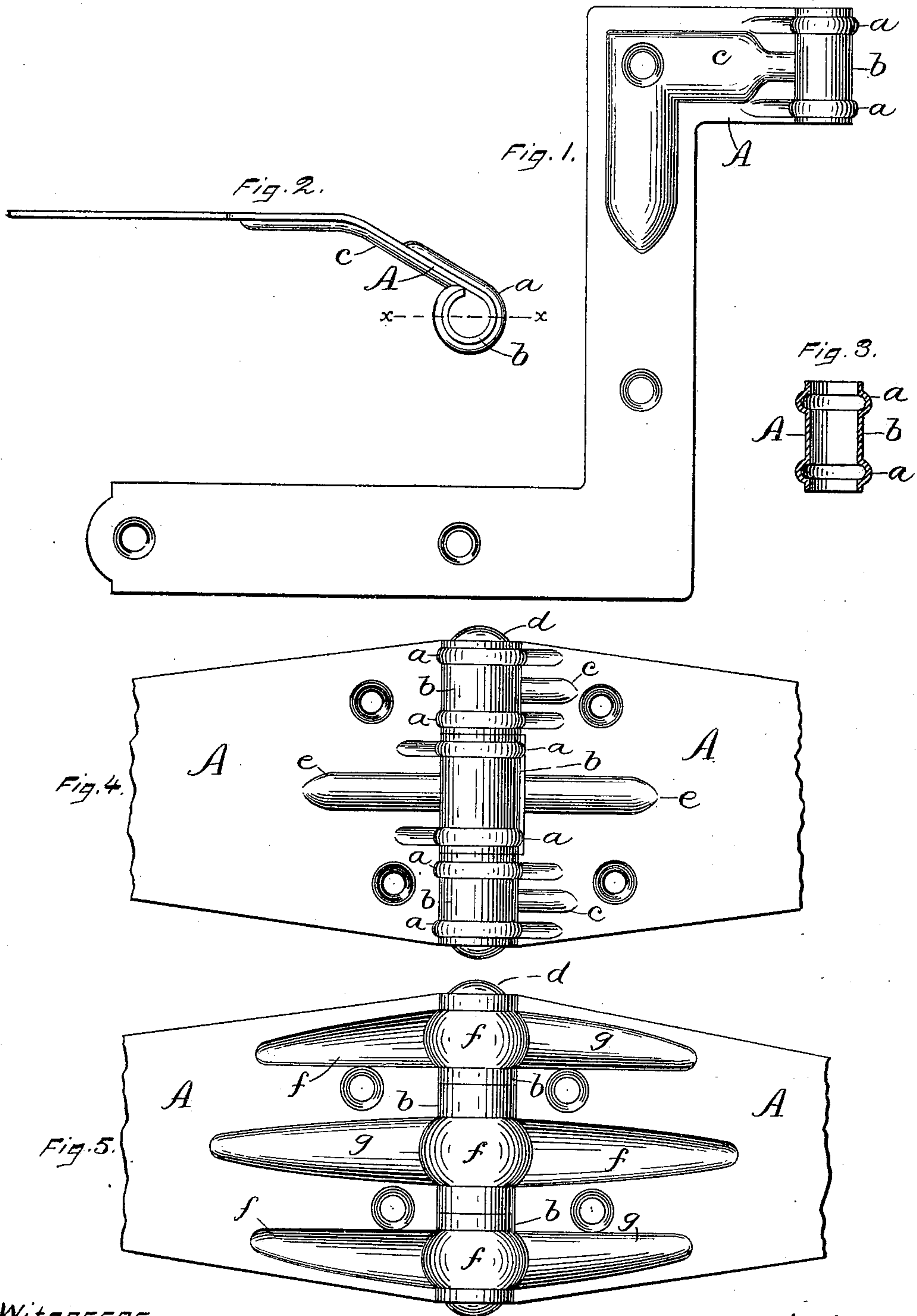


(No Model.)

W. H. HART & T. CORSCADEN.
SHEET METAL HINGE.

No. 377,104.

Patented Jan. 31, 1888.



WITNESSES.
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Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM H. HART AND THOMAS CORSCADEN, OF NEW BRITAIN, CONNECTICUT, ASSIGNORS TO THE STANLEY WORKS, OF SAME PLACE.

SHEET-METAL HINGE.

SPECIFICATION forming part of Letters Patent No. 377,104, dated January 31, 1888.

Application filed July 13, 1887. Serial No. 244,128. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. HART and THOMAS CORSCADEN, both citizens of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sheet-Metal Hinges, of which the following is a specification.

Our invention relates to improvements in sheet-metal hinges; and the principal object of our improvement is to strengthen the joint end of the hinge-leaves.

In the accompanying drawings, Figure 1 is a front elevation of the angular leaf of a blind or shutter hinge which embodies our improvement. Fig. 2 is a plan view of the joint end of said hinge-leaf. Fig. 3 is a vertical section of the same on line *xx* of Fig. 2, and Figs. 4 and 5 are front elevations of the middle portion of our hinge in the form known as "strap-hinges."

It is well known that the weakest place in sheet-metal hinges is at or near the joint end of the leaves, and many devices have been invented to strengthen the hinge at this point.

The angular-shaped leaf shown in Figs. 1, 2, and 3 is designed for use in connection with a pintle that is formed on the outer end of a shank, and adapted to be secured to the window-frame in any ordinary manner, such pintle being also of ordinary construction. At the joint end of the hinge-leaf *A* we form two beads, *a a*, which extend transversely to the pintle, around the pintle-sleeve *b*, and for a short distance along the body of the leaf, as shown. We prefer to so form these beads that the hollowing side comes upon the inside of the pintle-sleeve. These beads can be readily swaged or struck up in dies before the pintle-sleeves are rolled. Between the beads *a a* we form a third bead, *c*, which preferably projects from the leaf on the opposite side from the projection of the beads *a a*, and extends toward the pintle-sleeve far enough to lap by the ends of the beads *a a*, as shown. In other words, a transverse section of the leaf through the bead *c* at the end nearest the pintle-sleeve will also cut through the beads *a*. We also extend this bead around the first angle in the hinge-leaf, so as to strengthen the leaf at the joint end to a point beyond the first angle from the joint.

In Fig. 4 the same construction is applied to a strap-hinge, each of the three pintle-

sleeves *b* being formed in the manner shown and described for the single pintle-sleeve of Figs. 1, 2, and 3, which three pintle-sleeves are secured together by a pintle, *d*, substantially as in other strap-hinges. We have also added an extra bead, *e*, to the leaf having two pintle-sleeves to make it match in appearance the central bead of the leaf having only one pintle-sleeve, and to continue a strengthening-bead beyond the first screw-holes from the joint.

In Fig. 5 we have shown coarser beads and only one bead for each pintle-sleeve. The beads *f* have their hollowing face on the face side of the hinge-leaves, so as to leave the inside of the pintle-sleeve free from projections, the projecting face of the beads being on the outer face of the pintle-sleeves. The other beads, *g*, face in the opposite direction, are set in alignment with the beads *f*, and extend up to the pintle-sleeves. The beads *g* and the beads *f* in each leaf extend far enough to lap by each other, as shown.

By our improvement with a given thickness of sheet metal we produce a hinge which is materially strengthened at the joint end of the leaves, and the hinge is also improved in appearance.

We claim as our invention—

1. In a hinge, the sheet-metal leaf or leaves having a swaged or struck-up strengthening-bead at the joint end, said bead extending transversely to the axis of the pintle, substantially as described, and for the purpose specified.

2. In a sheet metal hinge, the leaf or leaves having a bead extending around the pintle-sleeve and over a portion of the leaf, and another bead on the body of the leaf extending toward the pintle-sleeve to a point where a transverse section through the leaf will extend through both beads, substantially as described, and for the purpose specified.

3. In a sheet-metal hinge, the angular leaf having strengthening-beads at the joint end, and a bead extending from said end around the first angle of the leaf, substantially as described, and for the purpose specified.

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