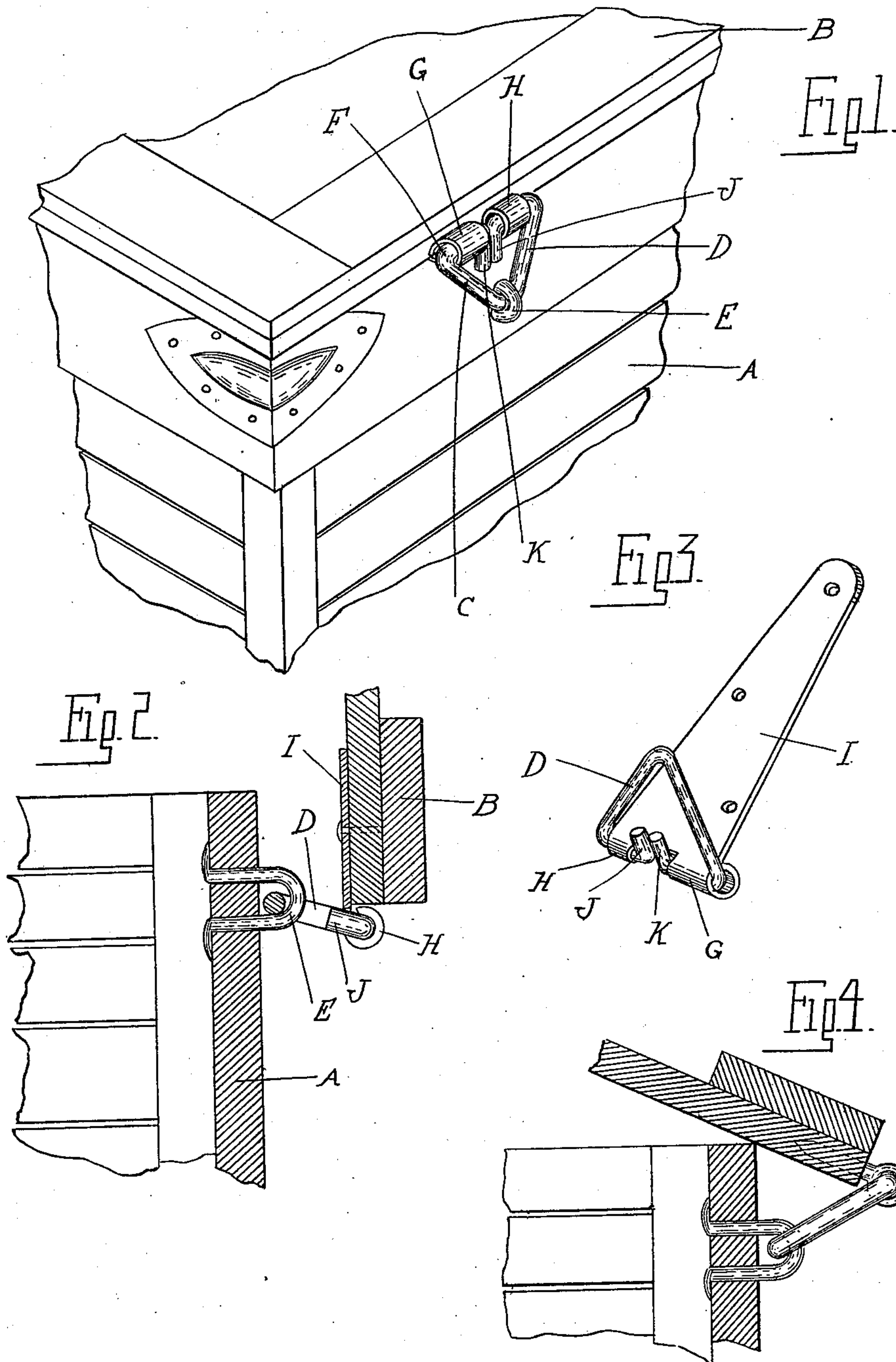


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HINGE.
APPLICATION FILED MAY 14, 1908.

Patented Nov. 10, 1908.

903,236.



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UNITED STATES PATENT OFFICE.

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HINGE.

No. 903,236.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed May 14, 1908. Serial No. 432,859.

To all whom it may concern:

Be it known that I, LOUIS H. SCHWANBECK, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan; have invented certain new and useful Improvements in Hinges, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a novel construction of hinge especially designed in the present instance for use in connection with boxes or crates, but applicable as will be readily apparent from its construction as hereinafter set forth for use in connection with any two complementary members adapted to be folded one upon the other.

The invention consists in the novel and simple construction of the hinge, further in the peculiar arrangement and combination of its parts, and still further in certain details of construction as will be more fully hereinafter pointed out.

In the drawings,—Figure 1 is a perspective view of a corner of a crate or box with my improved hinge applied; Fig. 2 is a sectional view through the box and hinge showing the position of the latter when the lid or cover is open; Fig. 3 is a detached perspective view of the preferred form of hinge; and Fig. 4 is a sectional view illustrative of an ordinary type of hinge.

Referring to the drawings thus briefly described, A represents a crate or box of any suitable construction, B its lid or cover, and C my improved hinge connecting the parts.

One of the principal objects of the present invention is to provide a flexible hinge connection between the cover and box or crate body that will prevent the former during the operation of closing from scraping over the upper edges of the box, thus unnecessarily wearing the parts, and further to prevent the lid during the closing movement to become fulcrumed upon the body in the manner indicated in Fig. 4, such relation between the parts being frequent by reason of the previous construction of flexible hinge connections, and detrimental in that the cover is often left in a relatively angular position, and any weight applied to the front or free end of the lid,—as for instance the placing of another crate thereon,—tends to break down the cover or severely strain it.

To obviate the difficulties set forth, the

hinge is so constructed that its principal connecting member or hinge proper is held in substantially right angular relation to the cover during the closing movement, thus preventing the cover from scraping over the top edges of the box body and compelling the lid to be entirely closed after its folding movement has once been started, thus preventing any liability of becoming fulcrumed upon the body and left in that position, as previously set forth.

The hinge in its preferable form is of the following construction:—D represents a link forming the principal member or hinge proper of the connection, having a pivotal connection with the box body at a distance below its upper edge, and a similar connection with the lid, and preferably carrying means for locking the cover in angular relation to itself during the closing movement. As shown, the link is open-centered and of triangular configuration. The pivotal connection between the hinge proper and the body is a staple bearing E, the staple engaging over the apex of the link, as plainly shown in Fig. 1. The side F of the hinge proper, constituting the base of the triangle, engages preferably spaced tubular bearings G and H upon the lid. These bearings are preferably formed upon the butt end of a suitable strap I connected to the under side of the cover, the bearings projecting beyond the said rear edge and being arranged in axial alinement.

To obtain the desired results, I preferably form the link with locking means to hold the parts in the angular relation described, the means in the present instance being in the form of a projection, as J, which during the folding movement between the parts engages the rear edge of the lid and locks the latter and the hinge proper in substantially right angular relation, as clearly indicated in Fig. 2, a sufficient clearance being thus formed between the lid and cover to permit the former to be folded over and upon the box body without scraping.

As shown, the lock is preferably formed by the extension J previously described, and a similar projection K, the two projections forming integral parts of the link and extending inwardly within the open center of the hinge proper intermediate the tubular bearings upon the cover, as illustrated.

It will be apparent that the object sought to be obtained is accomplished by the lock-

ing means employed, and further the projections forming the lock serve to prevent any possibility of the link being withdrawn from the bearings upon the cover in use, and its efficiency as a hinge destroyed.

What I claim as my invention is,—

1. The combination with a crate or box, of a lid or cover therefor, spaced axially alining tubular bearings upon the lid, an open-centered link pivoted to the box and engaging with the lid bearings, and an inwardly-extending projection upon the link intermediate said bearings.

2. The combination with a box or crate, of a cover therefor, a hinge having pivotal connections with each permitting the superposition of the cover upon the crate body, and a retainer carried by and rigidly secured to the hinge acting to hold the latter and cover in substantially right angular relation during the operation of closing.

3. The combination with a crate or box, of a cover therefor, a link pivoted to the cover

and to the box body at a distance below its top permitting the superposition of the cover upon the crate, and a projection upon the link at one side of its connection with the cover acting to maintain the cover and link in substantially right angular relation during the folding of the cover upon the box or crate body.

4. The combination with a crate or box, of a cover therefor, complementary transverse bearings upon the cover and box, a link having transverse portions engaging the bearings and proportioned to permit the superposition of the cover upon the box body, and an inwardly extending projection upon the link at the side of the cover bearing opposite the link body.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS H. SCHWANBECK.

Witnesses:

WILLIAM H. SCHWANBECK,
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