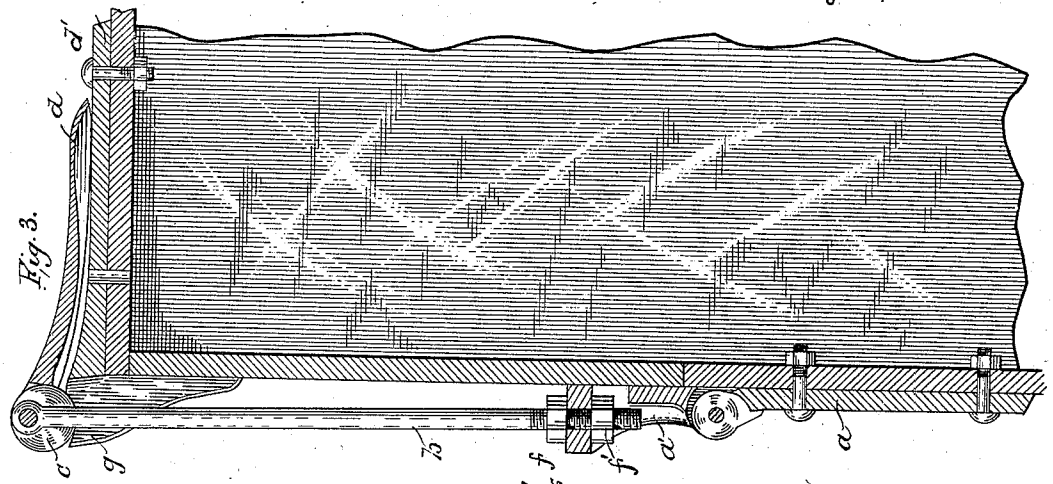
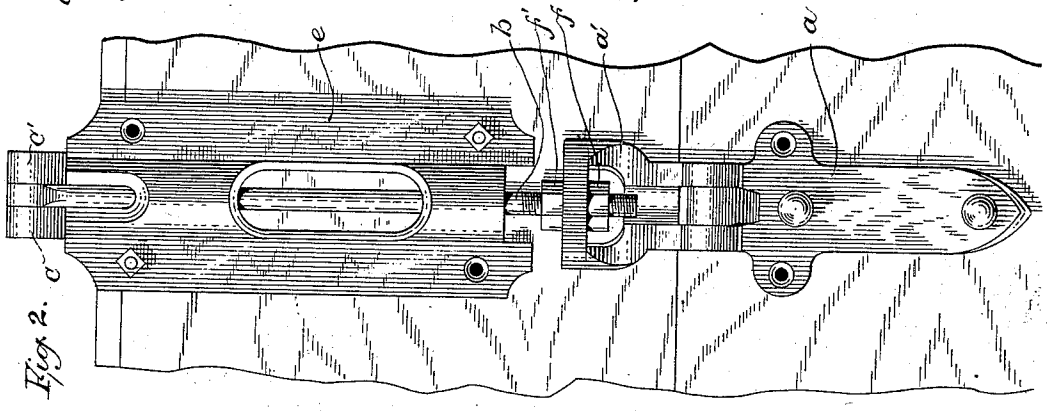
(No Model.)

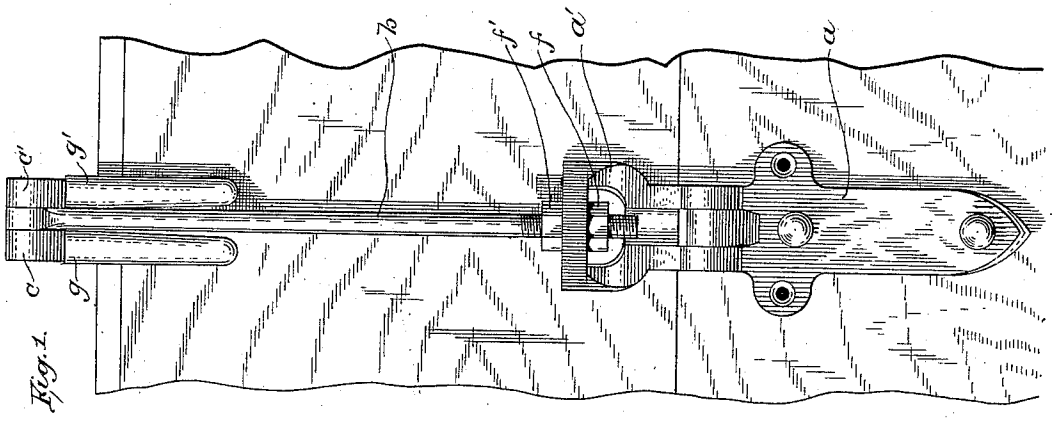
N. S. ANDREWS & H. F. BURNAP.

CLAMP HINGE.

No. 366,143. Patented July 5, 1887.







Witnesses.
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UNITED STATES PATENT OFFICE.

NATHANIEL S. ANDREWS AND HIRAM F. BURNAP, OF DUBUQUE, IOWA.

CLAMP-HINGE.

SPECIFICATION forming part of Letters Patent No. 366,143, dated July 5, 1887.

Application filed February 18, 1887. Serial No. 228,033. (No model.)

To all whom it may concern:

Be it known that we, NATHANIEL S. ANDREWS and HIRAM F. BURNAP, citizens of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Clamp-Hinges; and we do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a new and useful clamp-hinge, and one that is especially adapted to be used in connection with churns, transporting-tanks, or any kind of boxes where a tight joint is absolutely necessary; and the objects of our invention are to produce a strong and durable hinge, and one that is easily applied and easily regulated, so as to conform to the shrinkage and swelling of the box.

We have for a further object a hinge that can be instantly loosened, so as to allow the cover to be tipped back or taken entirely off, as the case may be.

For the better comprehesion of our invention attention is invited to the drawings accompanying this specification, wherein like letters have reference to corresponding parts in the several views, and in which—

Figure 1 is a front elevation of a hinge that is to be used when it is necessary to entirely remove the cover of the box, &c., to which the hinge is attached; Fig. 2, a front elevation of a hinge that is to be used when it is only necessary to tip back the cover of the box, churn, &c., to which the hinge is attached; and Fig. 3, a longitudinal section of the device illustrated in Fig. 1.

The only difference between the devices illustrated in Figs. 1 and 2, respectively, lies in the addition of the guide *e* to Fig. 2.

To the upper part of the box is fastened very securely the T-shaped piece of metal *a*, to which is fastened or pivoted the upper part, *a'*, of the hinge proper. This upper part is provided with a suitable opening in its top for the reception of the rod *b*. This rod *b* is provided at its lower end with two nuts, *f* and *f'*, one being screwed above and one below the top of the upper part, *a'*, of the hinge; but it is obvious that the opening in the top of the piece *a'* may be screw-threaded for the reception of the rod, which may be screwed therein. The object of either of these two devices is to enable the clamping power of the hinge to be adjusted as desired. The upper end of this rod is pivoted between two cam-shaped ears, *c c'*, of the lever *d*.

On the upper part or top of the cover of the box is to be fastened very securely the angle-iron *d'*, provided at its front end with two overhanging lips, *g g'*, each lip having a slight concave bearing-surface on its top.

As we have said before, the addition of the guide *e* constitutes the only difference between the device illustrated in Fig. 1 and that shown in Fig. 2. This guide can be made of a separate piece of metal; but we prefer to have it made in the same piece as the angle-iron *d'*.

The mode of operation is as follows: Supposing the device of Fig. 1 the one operated with, and, further, supposing the rod and lever to be disengaged from the angle-iron, first, insert the rod between the two lips *g g'* of the angle-iron and now press the lever toward the box until it rests upon the cover. The two cams bear in the concave surfaces of the two lips *g g'* and exert an upward pressure upon the rod, pulling the box and cover tightly together. When the guide *e* is used, it is not necessary to first insert the rod between the two lips, as this guide is always holding the rod between them.

It will be apparent that two hinges of the character illustrated in Fig. 2 can be attached to one side of the box, churn, &c., and used as the hinges proper, and one or two or even more hinges, as illustrated in Fig. 1, can be attached to the opposite side of the box, churn, &c., and used as a locking device.

We are aware that prior to our invention clamp-hinges have been made, but the same were operated on a different principle. Therefore

What we claim, and desire to secure by Letters Patent, is—

1. The combination, with a two-part hinge, of a vertically-adjustable clamp-rod provided with a cam-lever, and an angle-iron, substantially as described.

2. A clamp-hinge consisting of the hinge

proper, *a a'*, and upright rod *b*, provided with two adjusting-nuts, *f f'*, the lever *c c' d*, and the angle-iron having the two lips *g g'*, substantially as described.

3. A clamp-hinge consisting of the hinge proper, *a a'*, upright rod *b*, provided with two adjusting-nuts, *f f'*, on its lower end, the guide *e*, and levers *c c' d*, pivoted at the upper end of said rod, substantially as and for the purposes described.

In testimony whereof we affix our signatures in presence of two witnesses.

NATHANIEL S. ANDREWS.
HIRAM F. BURNAP.

Witnesses:
MONROE M. CADY,
J. F. MCEROY.