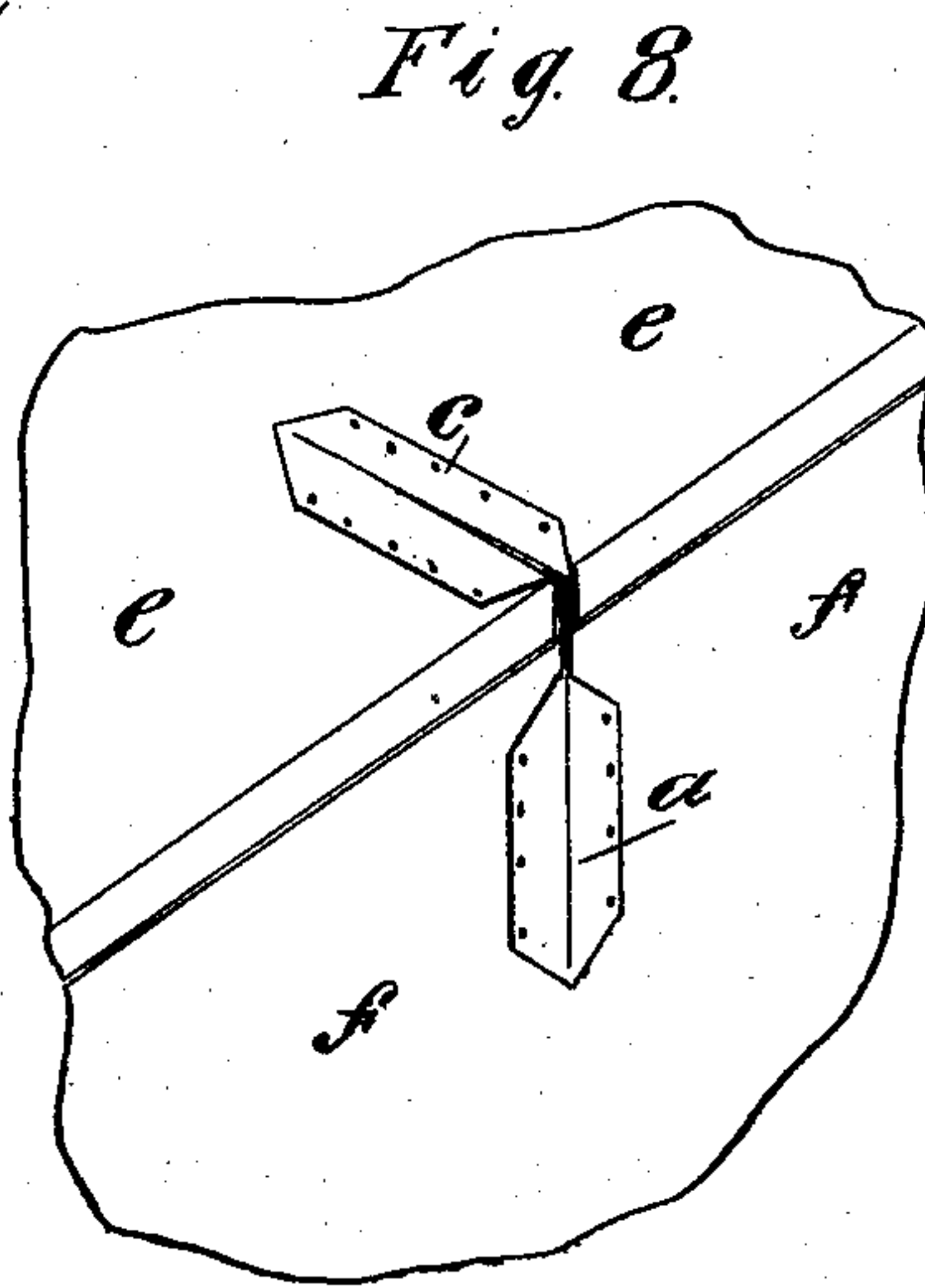
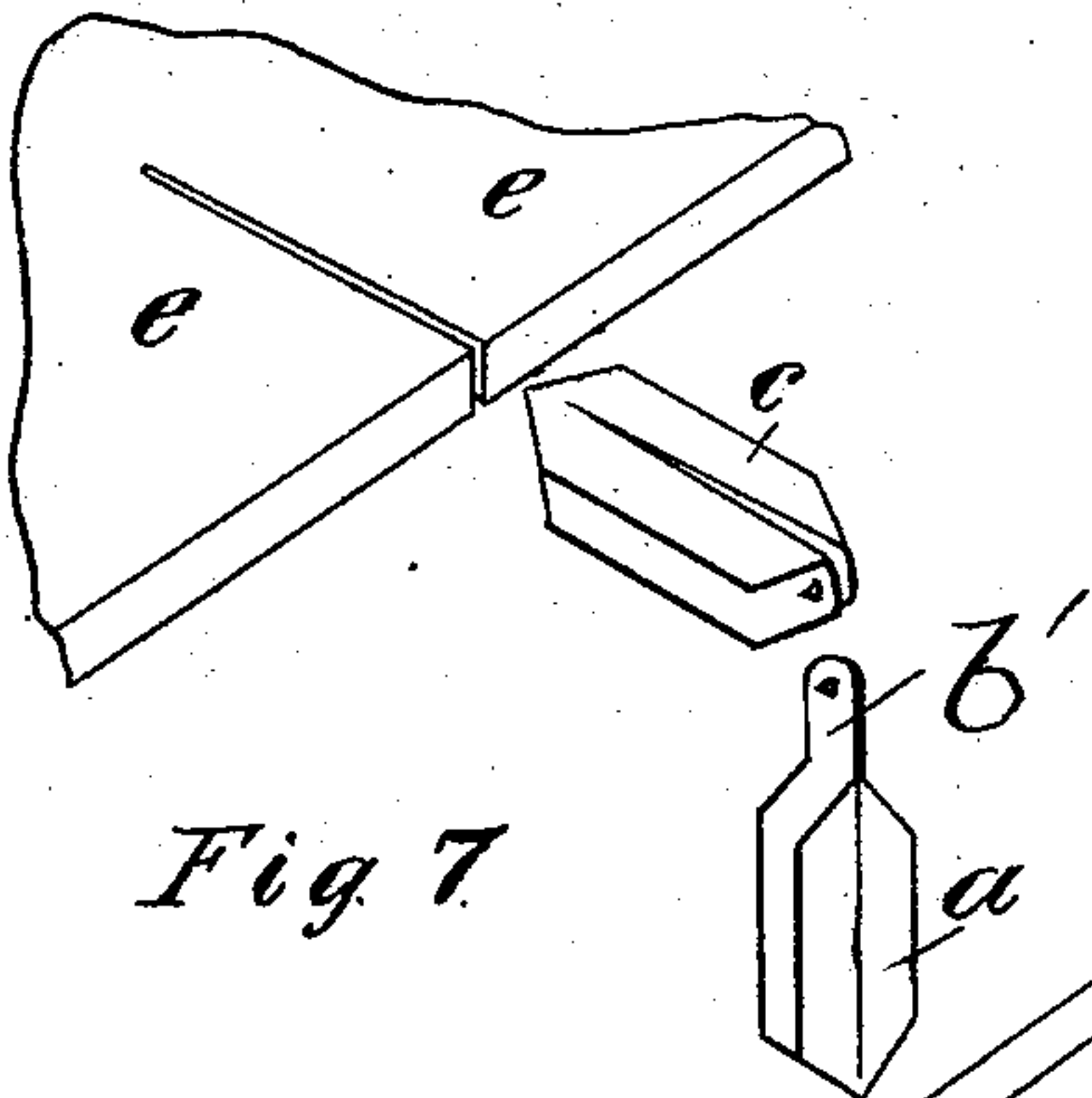
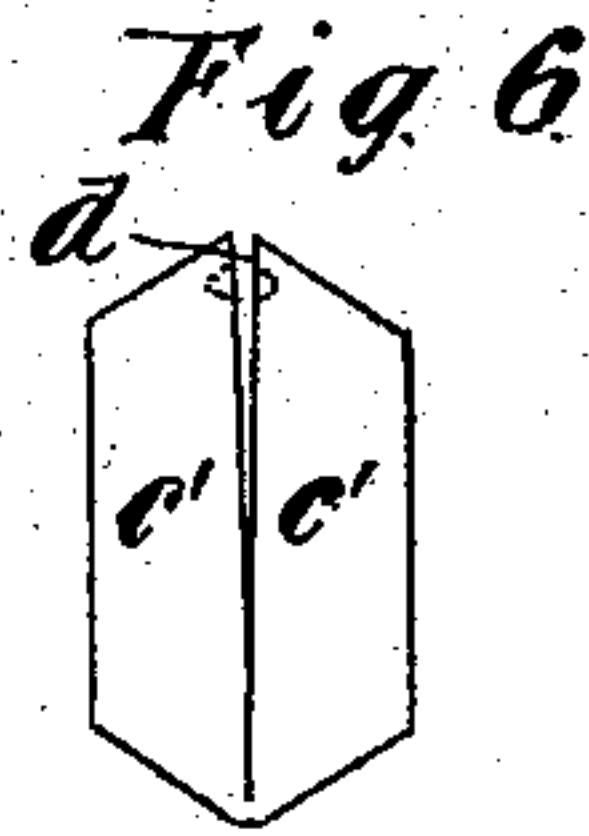
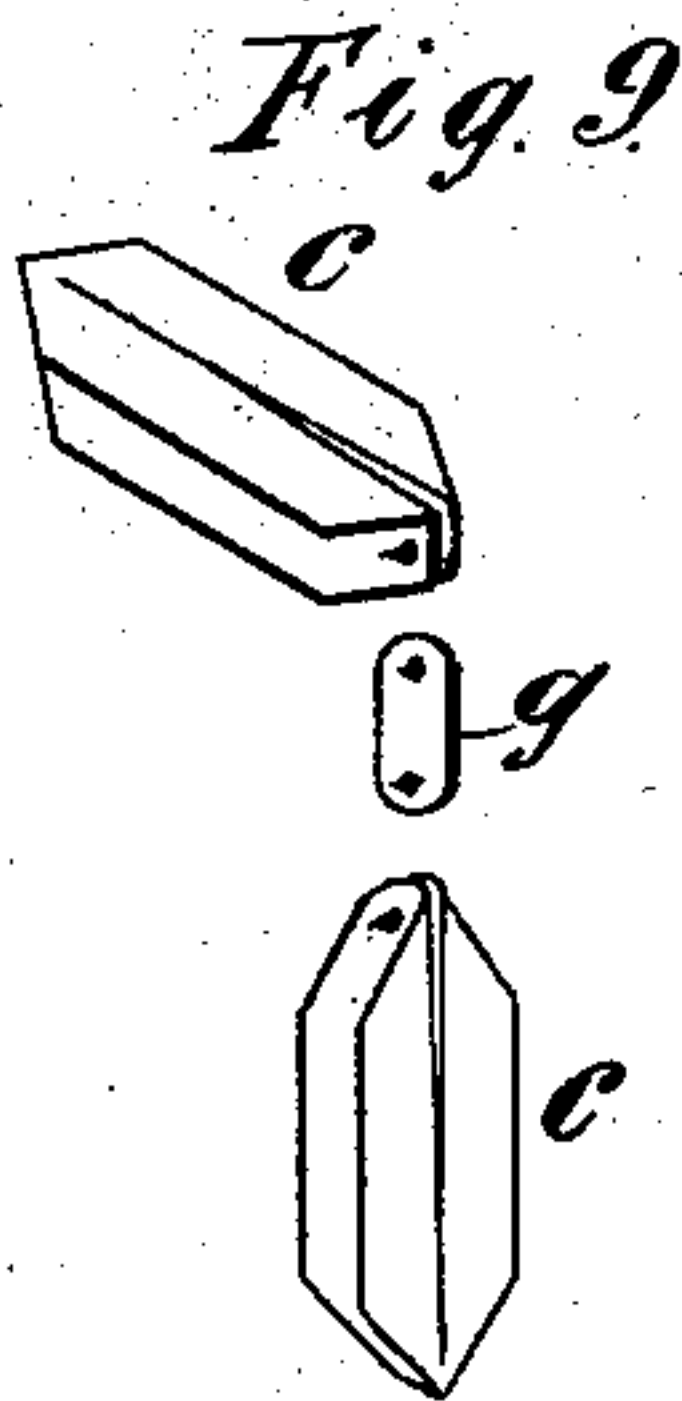
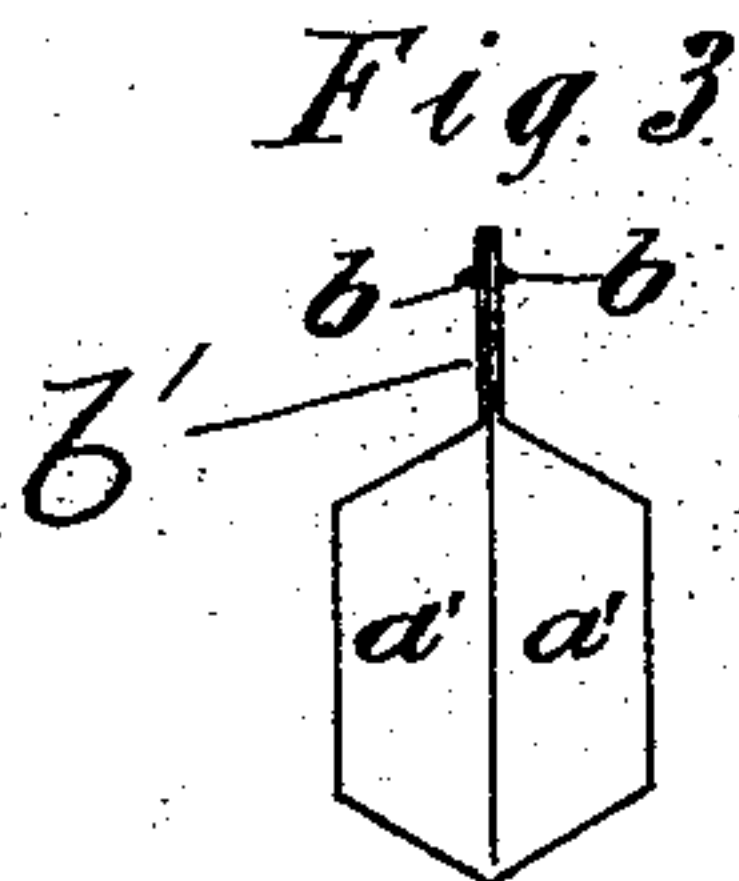
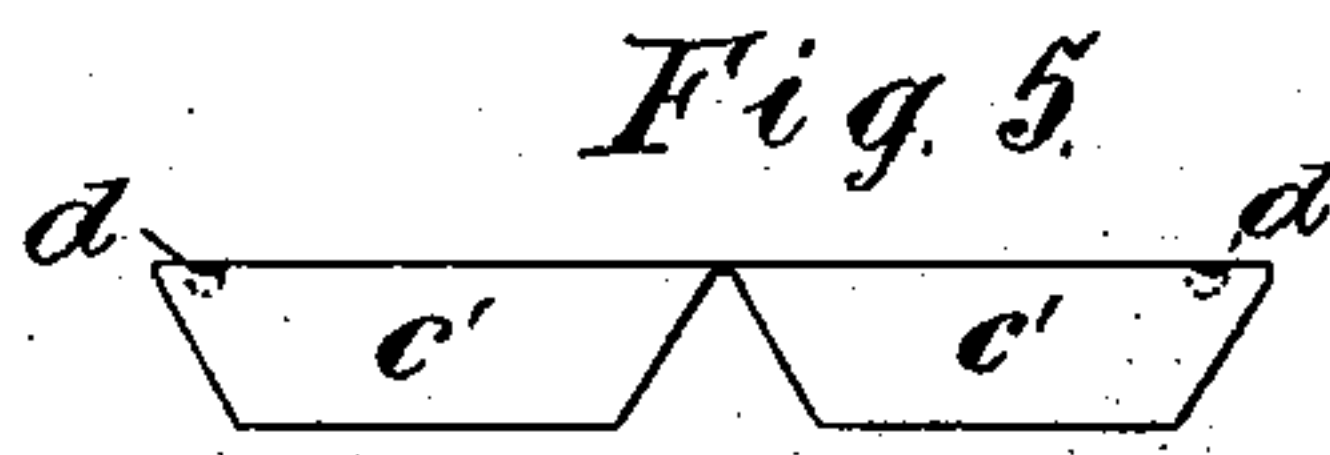
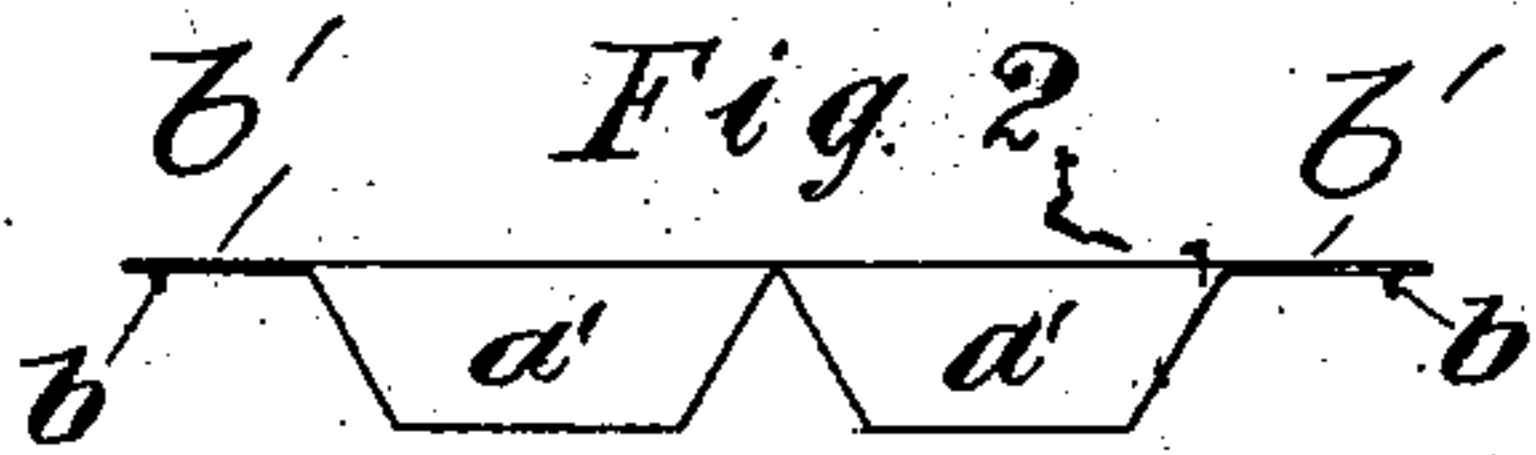
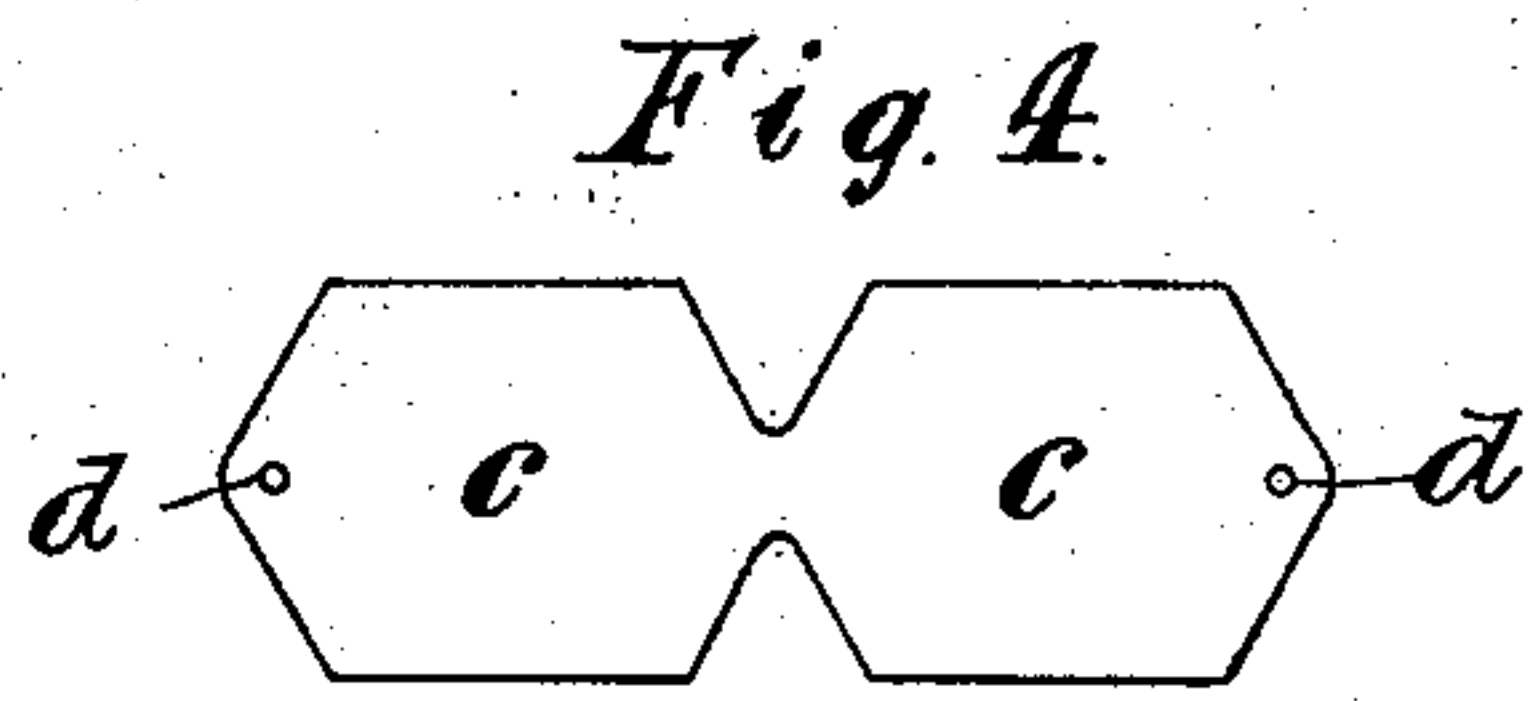
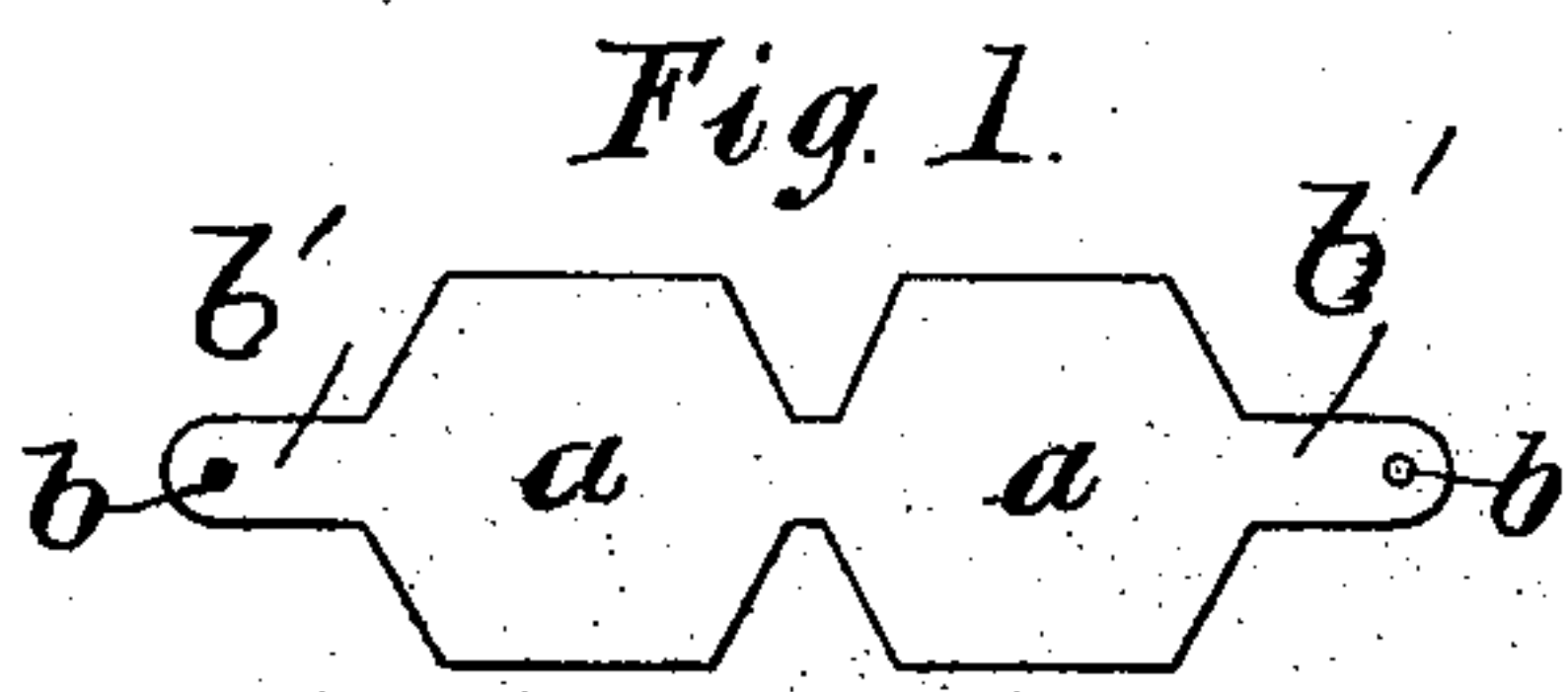


(No Model.)

R. M. ESPLIN.
HINGE.

No. 506,679.

Patented Oct. 17, 1893.



Witnesses.

E. H. Stewart

A. S. Busing

INVENTOR.

Richard M. Esplin.

By his Atty.

[Signature]

UNITED STATES PATENT OFFICE.

RICHARD MASON ESPLIN, OF MANCHESTER, ENGLAND.

HINGE.

SPECIFICATION forming part of Letters Patent No. 506,679, dated October 17, 1893.

Application filed December 2, 1892. Serial No. 453,892. (No model.)

To all whom it may concern:

Be it known that I, RICHARD MASON ESPLIN, box-maker and timber merchant, a subject of the Queen of Great Britain and Ireland, residing in Manchester, in the county of Lancaster, England, have invented Improvements in Hinges, of which the following is a full, clear, and exact description.

My said invention relates to improvements in hinges for boxes, applicable also to other purposes.

The accompanying sheet of drawings fully illustrates my invention.

Figure 1, shows the blank in plan from which one member of the hinge is formed. Fig. 2, shows said blank partially bent, and Fig. 3, shows it fully bent to make the complete member. Figs. 4, 5 and 6 are similar views to 1, 2, and 3 of the other member. Fig. 7, is a perspective view of the members, and the lid and back of a box showing the parts in the relative positions assumed when the members are being applied to the lid and back. Fig. 8, is a similar view of the hinge in place on the box.

In making a hinge I punch or otherwise form a flat piece *a* of sheet metal to the shape shown at Fig. 1. I then fold down the sides *a'* as shown at Fig. 2 and finally double the piece together as at Fig. 3. In punching the piece I also form two protrusions *b b* at the ends of the blank, so that when the blank is folded together as at Fig. 3 the projections *b b* lie in line. This completes the male half of the hinge. To make the female half I punch a blank *c* of the shape shown at Fig. 4, bend down the sides *c'* as at Fig. 5, and double it together as in Fig. 6. In forming this blank I stamp two hemisphere recesses *d d* to fit the protrusions *b b* in the other half *a*.

When applying the hinge to a wooden box I make a saw-cut in the lid *e* and also in the side or back *f* of the box as appears in Fig. 7. I then insert or drive the hinge half *a* into the slit in *f* and the half *c* into the slit in *e* having first or during the operation inserted or sprung the projections *b b* into the recesses *d d*. The driving home of the hinge halves closes them one upon the other, so that the projections *b b* play like pivots or hinge pins within the recesses *d d* and cannot leave

them. To prevent the hinges from being withdrawn, I countersink the turned over side flaps *a'* and *c'* with a punch so as to give them a grip on the lid and back of the box.

In some cases instead of bringing the two hinge halves directly together as described I might connect them by a link *g* as shown in Fig. 9. The ends of the link *g* might be shaped as spheres to occupy the recesses *d d*. I might also use a rivet to hinge the two halves together instead of the projections *b* and recesses *d* as shown. Two or any greater number of hinges may be applied to the box. The boxes might be of material other than wood and the improved hinges might be used for purposes other than for box hinges. For example they might be used in the manufacture of articles of furniture, toys, and for hinging together the limbs of dolls.

The projections *b'* of Fig. 1 and the links *g* of Fig. 9 form extensions at the ends of the plates adapted to connect them, the extension being rigid in one case and pivoted in the other.

I declare that what I claim is—

1. A hinge comprising one member formed of a plate bent back upon itself and having its side edges bent down, said plate having its meeting ends adapted for connection with a second member, and the second member connected to the ends of the bent plate, substantially as described.

2. A hinge comprising the two members each formed of a plate bent back upon itself and having the side edges bent down at an angle to the main body, and the connecting extensions between the meeting ends of the members, substantially as described.

3. In combination, the plate *a* bent back upon itself and having its side edges bent at an angle to its body portion and having also the connecting extensions *b'* at its ends, and the plate *c*, bent back upon itself and having the bent edges, said plate *c* having its meeting ends adapted to engage the extensions *b'* on the other plate, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

RICHARD MASON ESPLIN.

Witnesses:

W. TOMLINSON,
RICHARD IBBERTSON.