

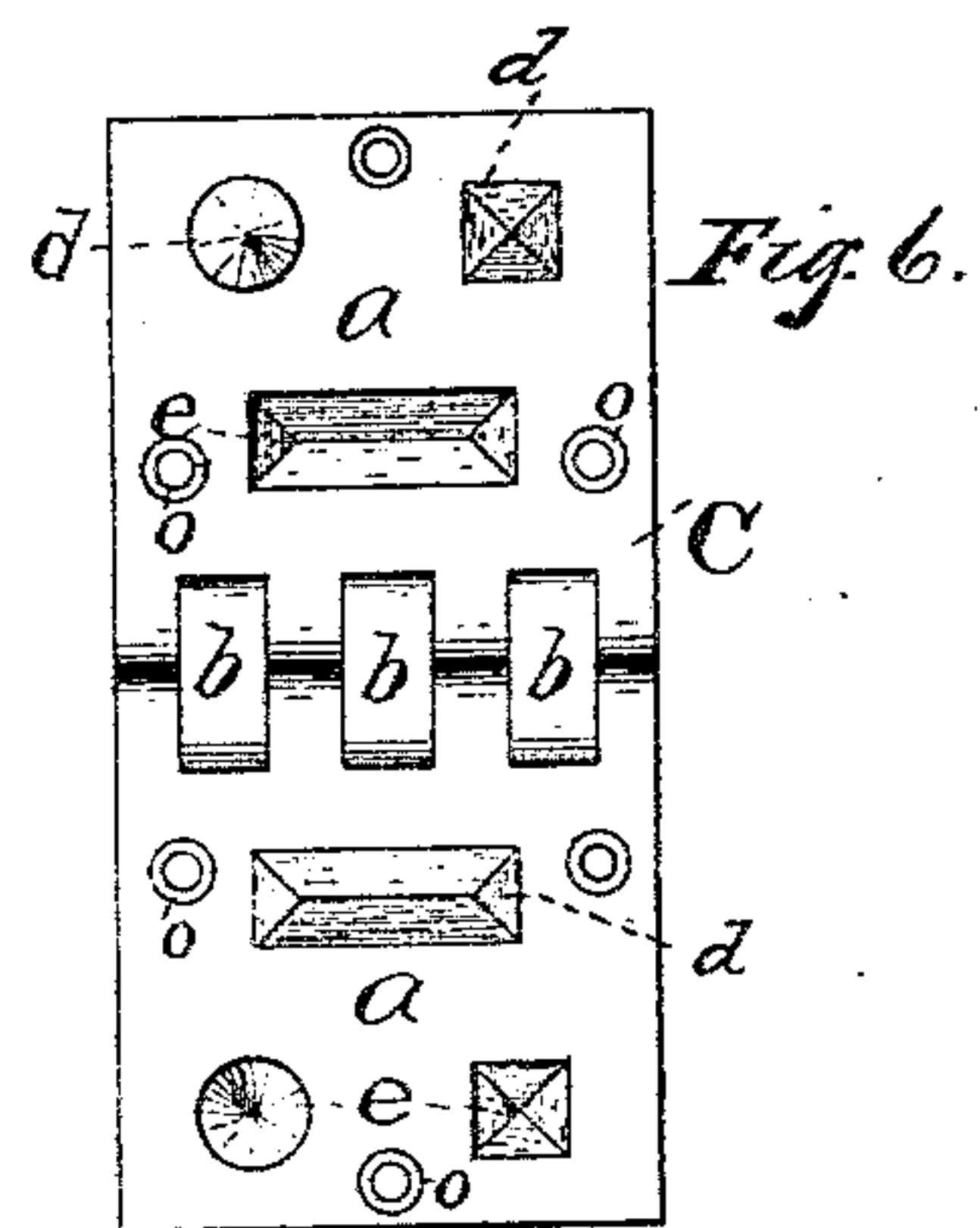
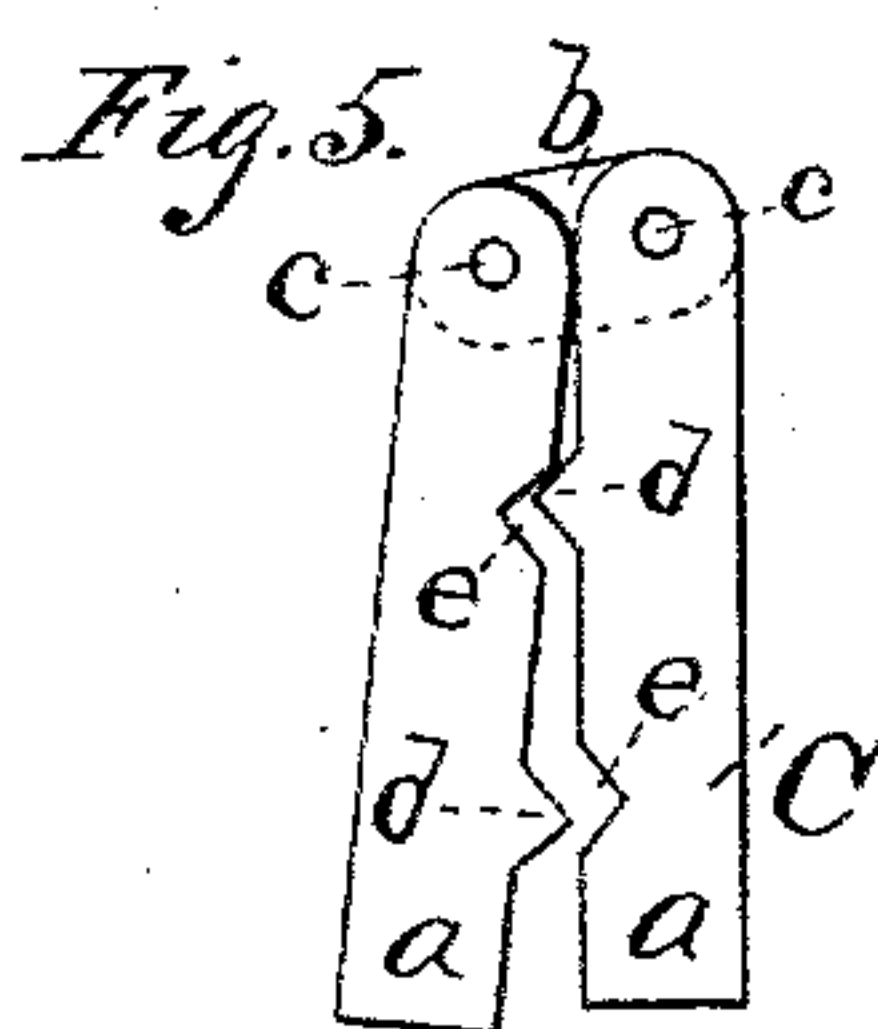
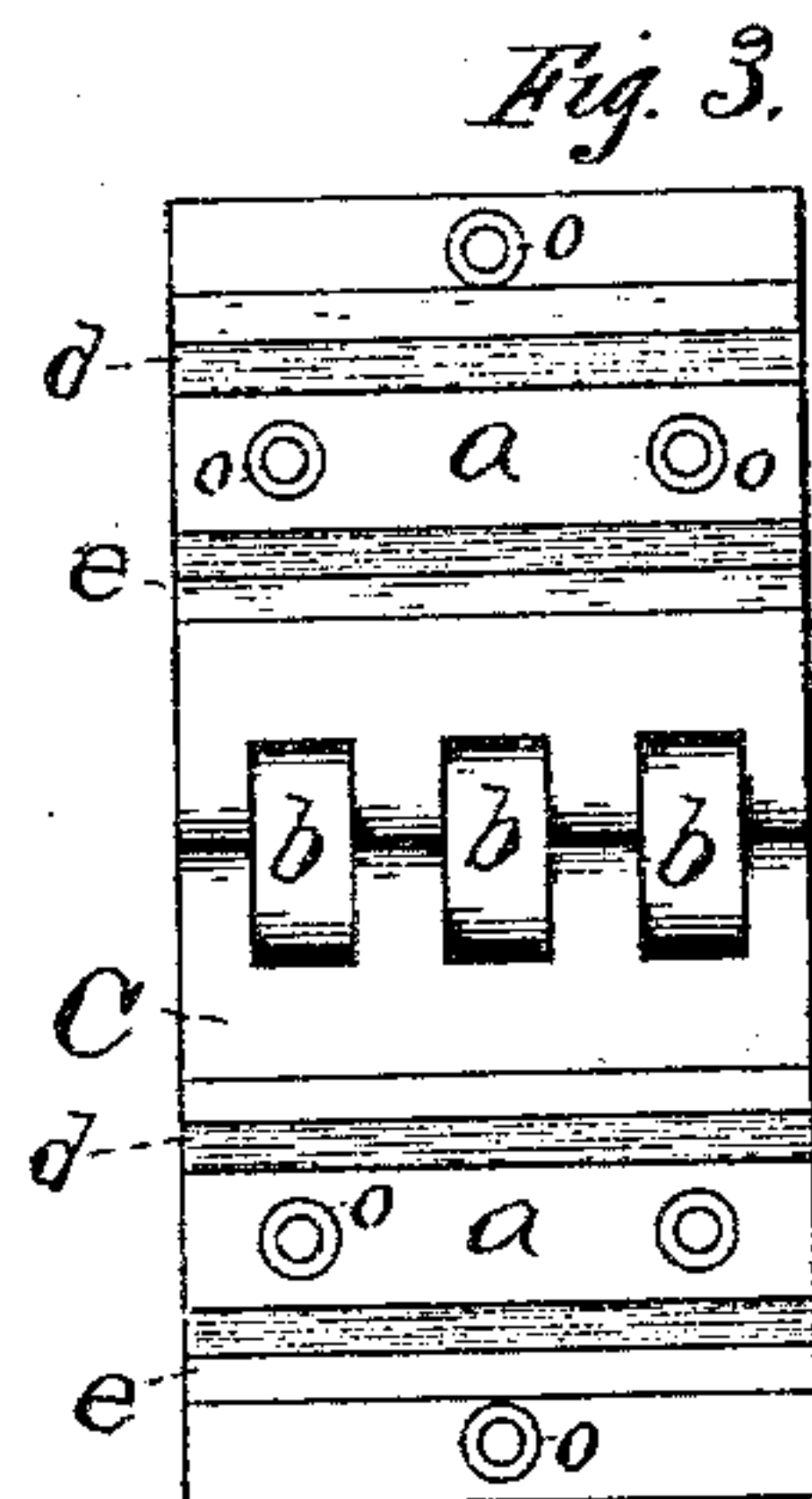
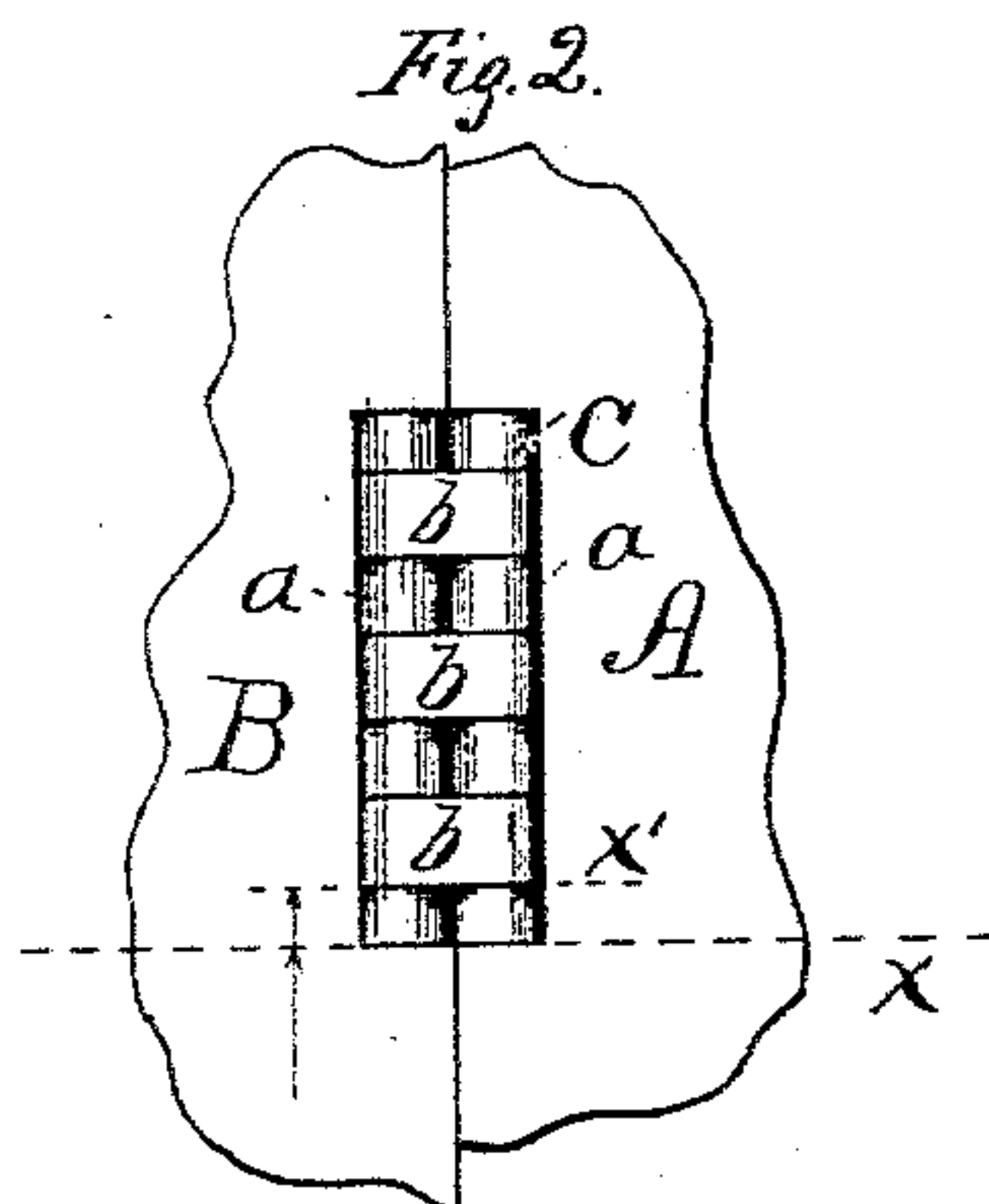
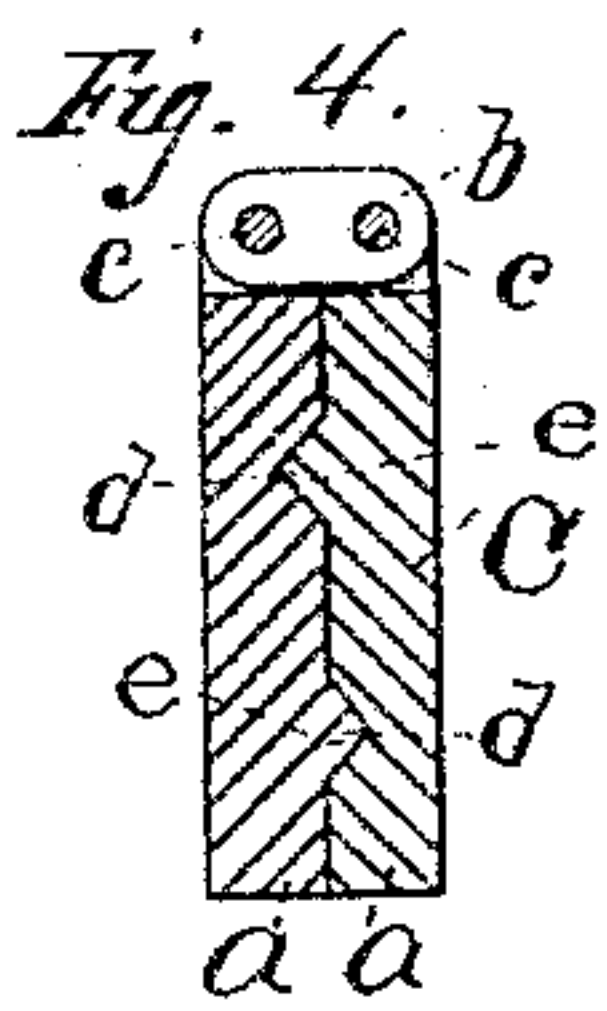
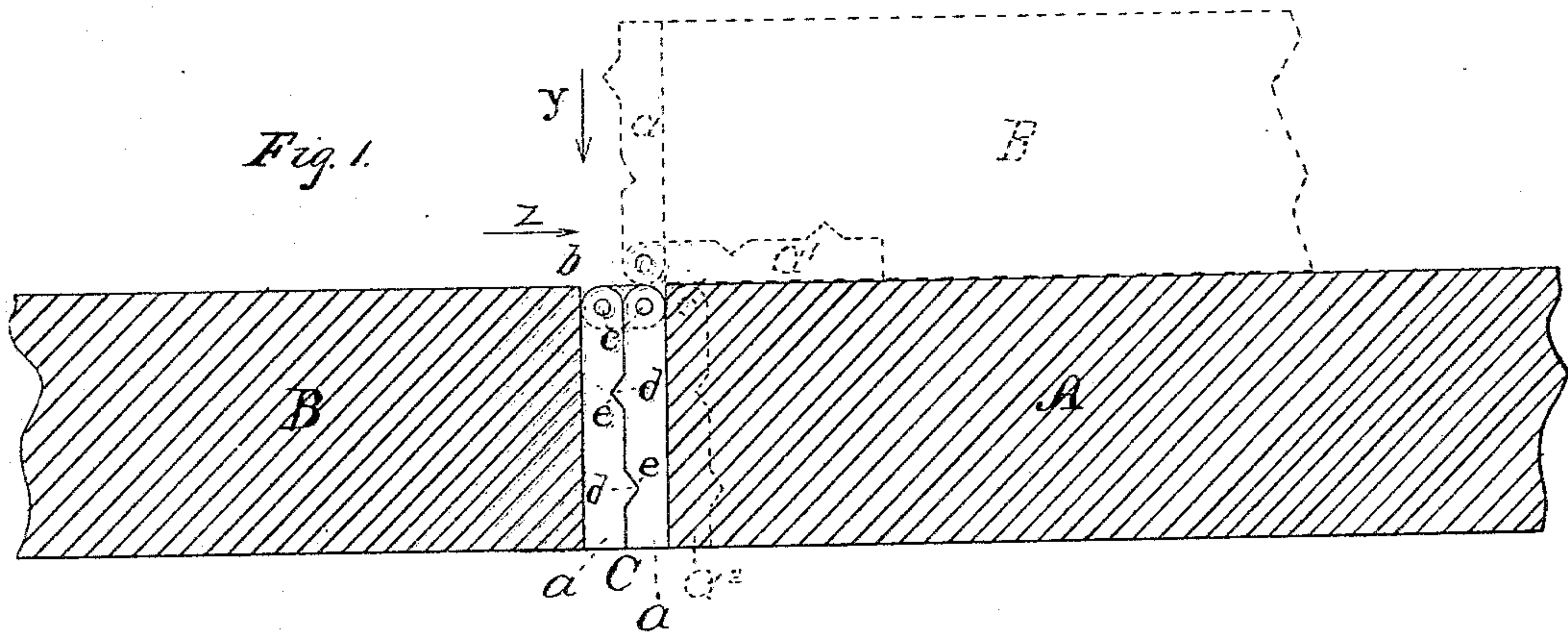
(No Model.)

L. H. LEMPERT.

HINGE.

No. 369,346.

Patented Sept. 6, 1887.



Attest:
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UNITED STATES PATENT OFFICE.

LEON H. LEMPert, OF ROCHESTER, NEW YORK.

HINGE.

SPECIFICATION forming part of Letters Patent No. 369,346, dated September 6, 1887.

Application filed May 25, 1887. Serial No. 239,347. (No model.)

To all whom it may concern:

Be it known that I, LEON H. LEMPert, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Flush Hinges, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The ordinary butts or hinges used for hanging doors, lids, &c., are of such a construction that it is necessary to put them onto the parts to be joined so as to project some distance beyond the surfaces of said parts, in order that the two parts joined by them may be folded back one upon the other without straining the hinge. The projecting part of the hinge is very frequently in the way and objectionable, particularly where the hinge is used upon articles that are to be closely packed for storage or shipment—as, for instance, pianos and similar musical instruments. Where a part of the hinge projects, as is the case with those in common use, it is liable to dent or mar the surface of the part or piece resting against it when the articles are packed together. On this account a flush hinge—that is to say, a hinge in which no part projects above or beyond the surface of the parts joined by them—is desirable; and the object of my invention is to produce such a hinge, the same being hereinafter fully described, and more particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a section of a portion of the top of a piano, for instance, with a part of the lid thereof joined by my improved hinge, parts being shown in various positions by full and dotted lines, the section being taken at the end of the hinge and at right angles to the joint between the parts joined, as on the dotted line *x* in Fig. 2, the parts being viewed as indicated by the arrow pointed on said dotted line; Fig. 2, a view of the various parts seen as indicated by arrow *y* in Fig. 1; Fig. 3, a view of the hinge opened and seen as indicated by arrow *z* in Fig. 1; Fig. 4, a view of the hinge seen in the direction in which Fig. 1 is seen, the leaves being transversely sectioned, as on the dotted line *x'* in Fig. 2, and viewed as indicated by

the arrow pointed thereon; Fig. 5, drawn to a slight increased scale, is a view of the hinge, seen in the direction in which Fig. 1 is seen, drawn to further show its operation; and Fig. 6, a similar view of the hinge to that shown in Fig. 3, drawn to show modifications in the form of the interlocking parts.

Referring to the parts shown, A represents a portion of the top board of a musical instrument, for instance; and B, a portion of the lid thereof joined to the top board by my improved hinge C. The hinge is formed of two side plates or leaves, *a*, joined at their edges by ties or links *b*. The links are formed with circular ends, and the edges of the leaves adjacent to the links are also formed circular. The links are connected with the respective leaves by parallel axial pins *c*, which give to the parts two independent axes of motion about each other.

The opposing faces of the leaves *a* are formed with tapered projections *d* and corresponding opposing cavities, *e*, which serve to adjust the leaves or to determine their relative position, one with the other, as shown. Should one leaf or side of the hinge sag below the other from the weight of the part to which it is attached, as shown in Fig. 5, the meeting of the inclined surfaces of the projections and cavities will cause the leaves to come evenly together, as shown in Figs. 1 and 4. These projections and cavities may be prismatic, conical, or pyramidal, as shown, their use being to adjust the parts of the hinge together, as stated. In the case of a safe or vault, where the axes of the hinge are vertical instead of horizontal, the weight of the door would tend to draw or hold the leaves of the hinge askew; but in this case, as in the one above described, the projections and corresponding depressions will serve to bring the leaves squarely together, as stated.

In Fig. 1 the dotted forms respectively referred to by skeleton letters *a'* and *a''* show the hinge when one leaf is turned back through an angle of two hundred and seventy degrees, or so as to stand at right angles with the other leaf, and also when it is turned back through a complete circle, in which positions the leaves are parallel and lie back to back. The hinge

formed as shown admits of this motion through a complete circle without binding or cramping at the joints.

The hinge is held to place by means of ordinary screws passed through conical holes in the leaves.

What I claim as my invention is—

A hinge having two separate and parallel

axes, substantially as shown, the leaves of the hinge being formed with corresponding opposing projections and depressions co-operating together, as set forth.

LEON H. LEMPert.

Witnesses:

E. B. WHITMORE,

M. L. McDERMOTT.