

No. 704,077.

Patented July 8, 1902.

C. H. McCAULEY.

HINGE.

(Application filed June 22, 1901.)

(No Model.)

Fig. 1.

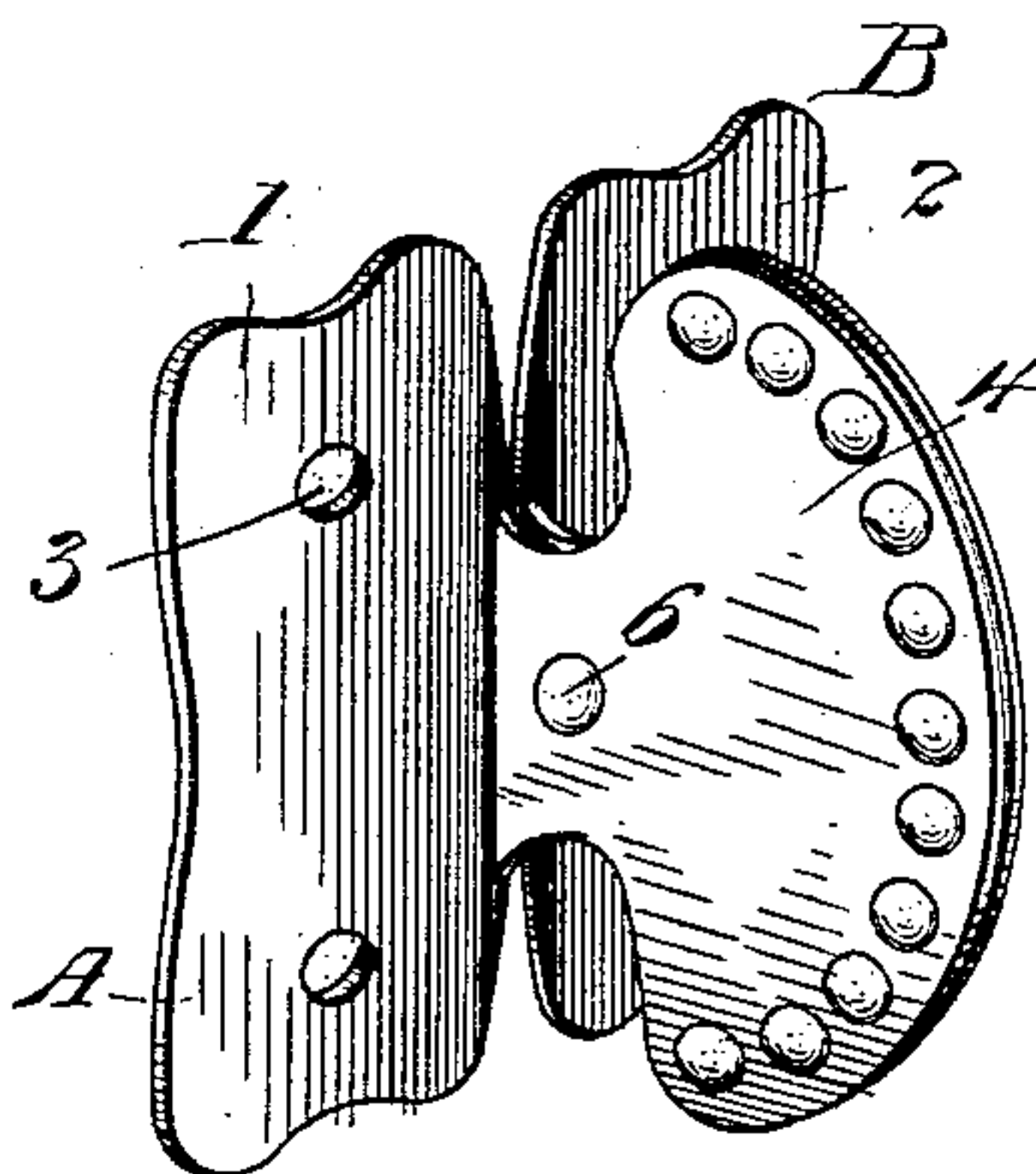


Fig. 6.

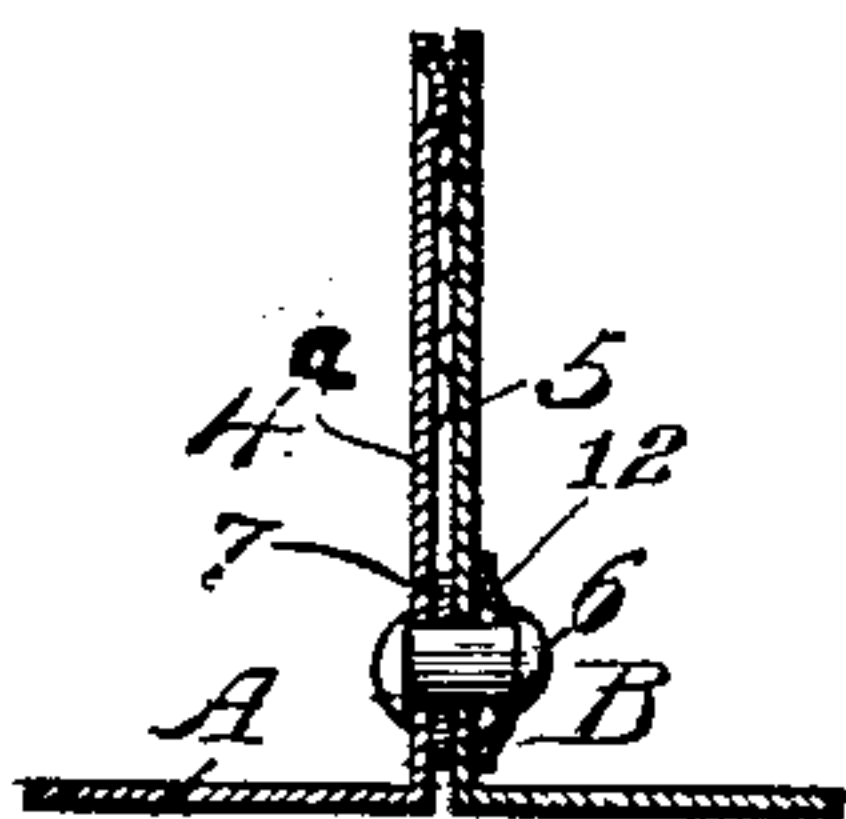


Fig. 2.

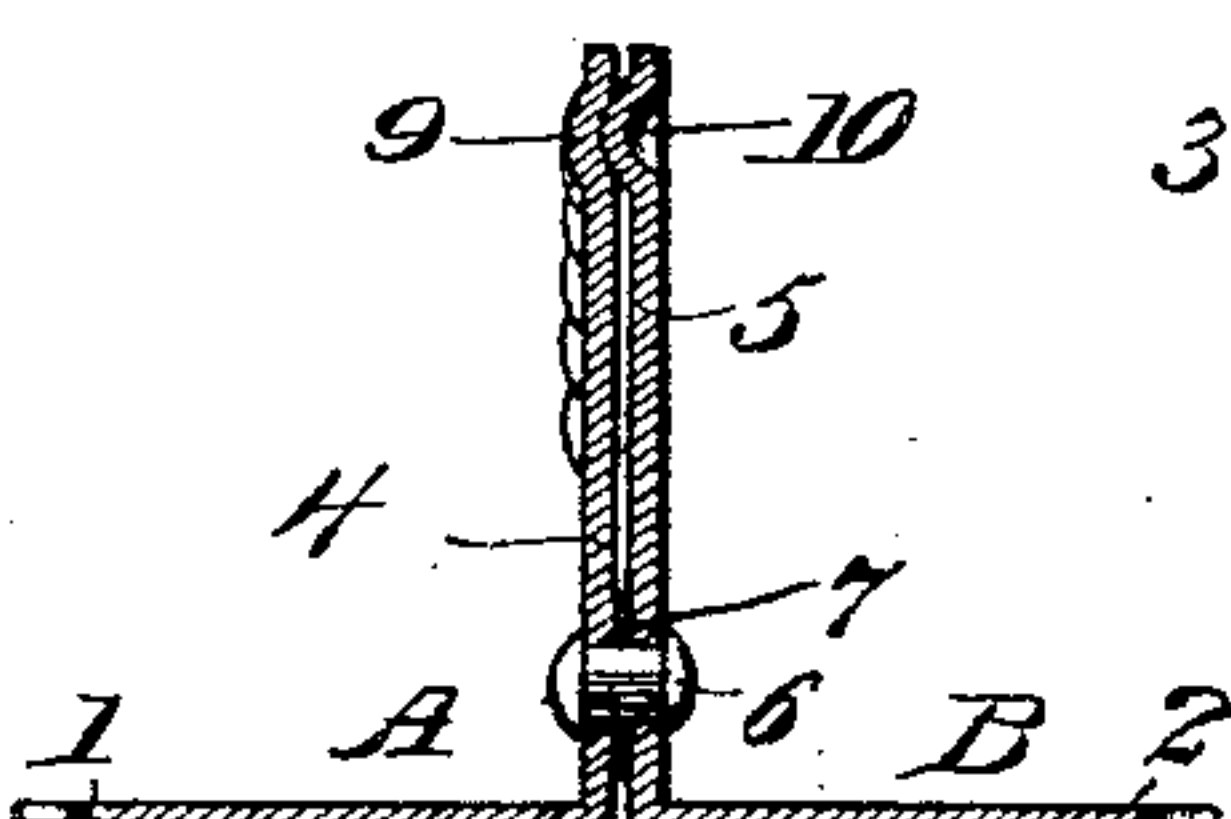


Fig. 7.

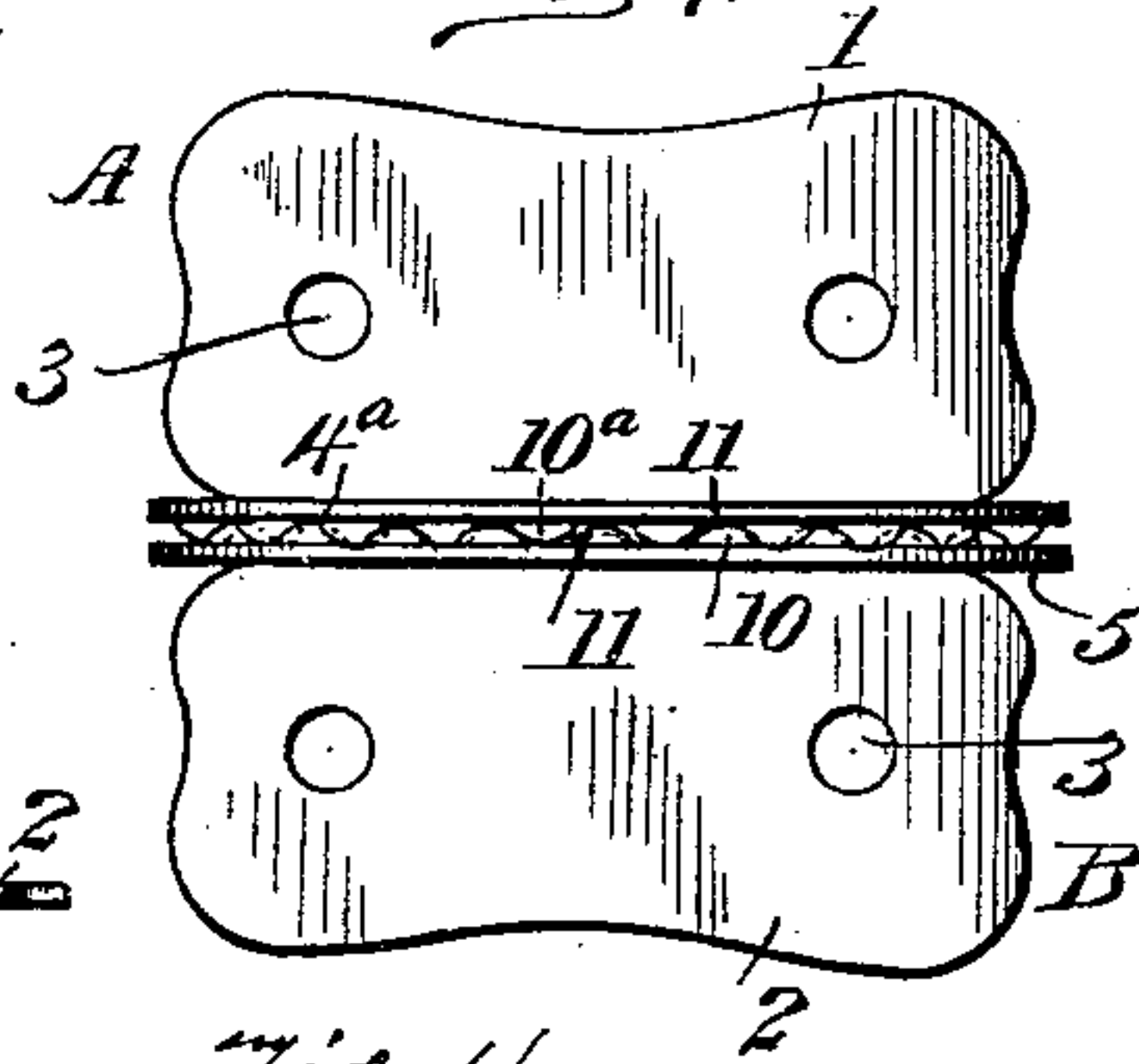


Fig. 3.

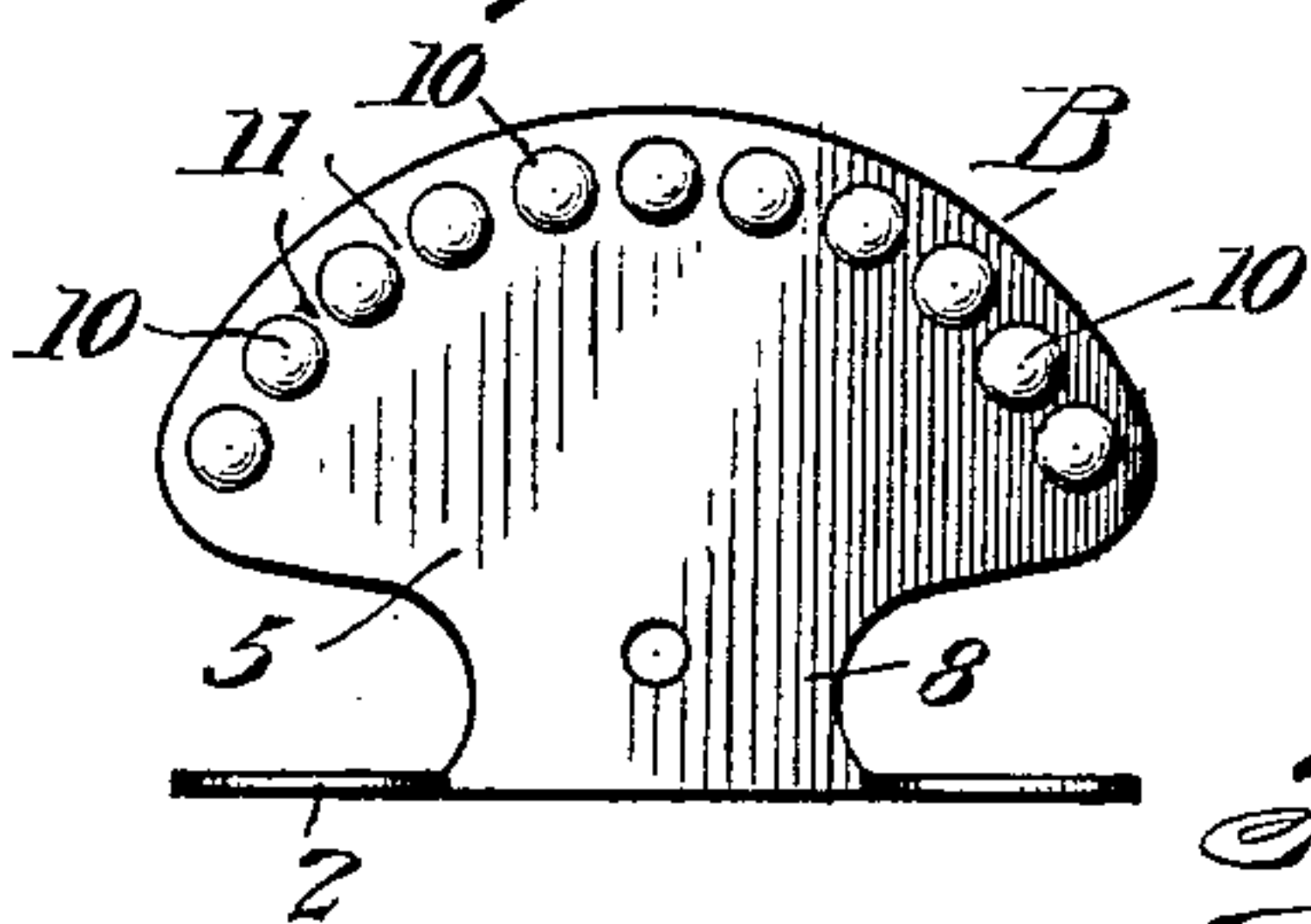


Fig. 4.

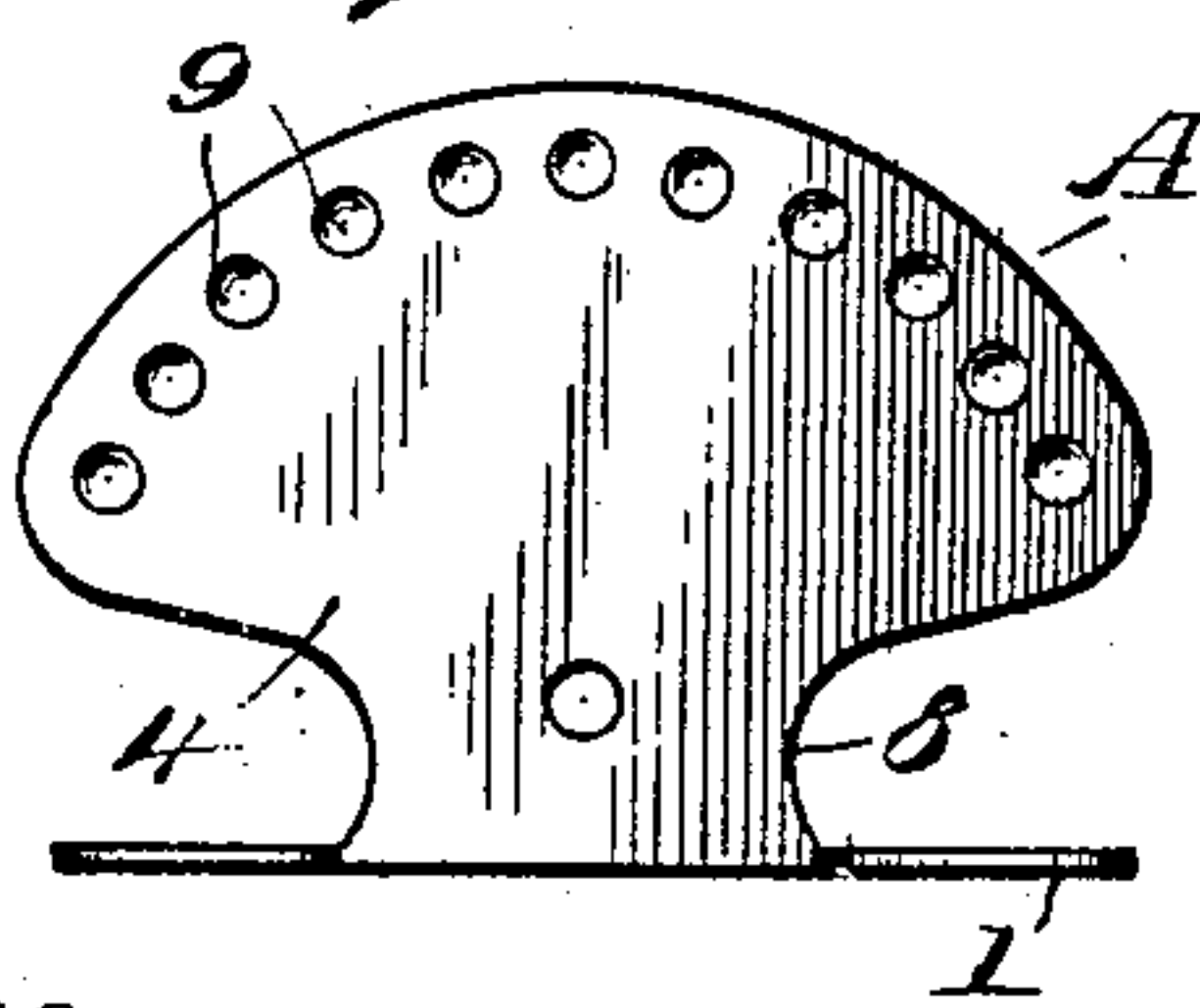
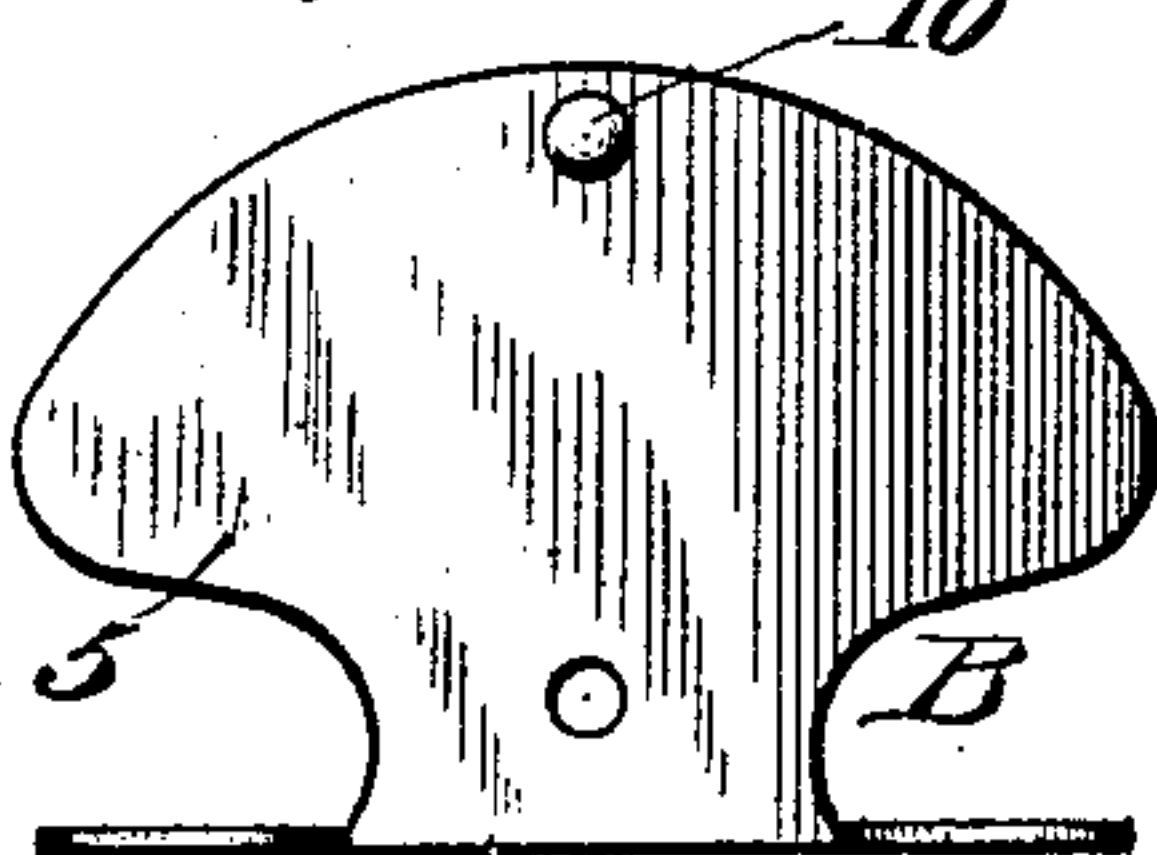


Fig. 5.



Witnesses

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HINGE.

SPECIFICATION forming part of Letters Patent No. 704,077, dated July 8, 1902.

Application filed June 22, 1901. Serial No. 65,641. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. McCAULEY, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to improvements in hinges for pivotally supporting transoms, mirrors, &c., in various adjustments.

10 In the accompanying drawings, which illustrate the invention, Figure 1 is a perspective view of the hinge. Fig. 2 is a central sectional view through the hinge. Figs. 3 and 4 are views of the two parts of the hinge separated and showing the inner or meeting faces of the wings having the interlocking parts. Fig. 5 is a view showing a wing having a single elevation thereon. Fig. 6 is a central sectional view, and Fig. 7 a plan view, of a hinge, showing another arrangement of interlocking elevations and depressions.

Referring to Figs. 1 to 4, inclusive, of the drawings, A and B indicate the two parts of the hinge, which are stamped out of spring sheet metal, preferably steel, each part having the same general outline. The leaves 1 and 2 of the hinge are provided with the usual openings 3 for the reception of the screws for attaching the hinge to the object upon which it is to be employed and with wing portions 4 and 5, respectively, said wing portions being turned outwardly at right angles to the meeting edges of the leaves and being united face to face by a pivot-pin 6. A washer 7 upon the pivot-pin is interposed between the wings in order to slightly separate them. Each wing, as shown, is fan-shaped in outline, having a wide outer portion which is united to the leaf by a contracted portion or neck 8, and the pivot-pin extends through the contracted portions of the wings. Elasticity is given to the wings by making them narrow at or near their pivotal point and junction with the leaves. Adjacent to the outer curved edge of the wing 4 a series of depressions 9 is formed in said wing, said depressions being arranged in the arc of a circle whose center is the center of the pivot-pin 6. Upon the inner face of the opposing wing 5 a series of elevations 10 is formed, said elevations being arranged in an

arc of a like circle and adapted to fit into the depressions in the opposing wing. The depressions 9 are formed by stamping the inner face of the wing 4, and the elevations 10 are formed by stamping the outer face of the wing 5, with a suitable forming-die, which may be the same for both wings. It will be seen that when the two parts of the hinge thus formed are turned relatively to one another about the pivot-pin the elevations upon the part 5 will engage the depressions in the part 4 successively, the wings having sufficient elasticity to permit the rounded elevations upon the one part to pass out of the depressions of the other part and into the succeeding depressions.

In Fig. 5 is illustrated a modification in which the wing 5 is provided with only a single elevation 10. It will be apparent that with this construction said elevation will engage successive depressions in the opposing wing 4 when the parts of the hinge are turned relatively to one another, although the parts will not be held so firmly against turning as if said part were formed with a greater number of elevations, as in Fig. 3. Any number of elevations may be formed upon the part 5.

Instead of forming the wing 4 with a series of cavities, as in Fig. 2, the wings of both parts may be formed with elevations upon the opposing faces, as in Figs. 6 and 7. As shown in Fig. 7, the wing 4^a is formed with a series of elevations 10^a and the wing 5 is formed with a corresponding series of elevations 10, the elevations upon each wing being staggered with respect to the elevations upon the opposing wing. It will be seen that the spaces 11 with this construction correspond in function to the depressions 9 in the previously-described figures and that the two wings will be held by the interlocking of the projections upon one plate with the depressions upon the other. In forming a hinge having the projections arranged face to face two parts similar to Fig. 3 may be employed or one such part in conjunction with a part having only one projection, as in Fig. 5, or a greater number of projections. In Fig. 6 the wing 4^a has a series of projections, while the wing 5 has but a single projection.

The hinge is preferably made entirely of

spring sheet metal; but it will be obvious that the leaves themselves may be of cast metal, the wings being attached and having some degree of elasticity. A spring-washer
5 12 may, if desired, be interposed between the rivet-head and one of the wings, as illustrated in Fig. 6, to hold the parts yieldingly together.

Having thus described my invention, what
10 I claim, and desire to secure, is—

1. A hinge comprising two leaves each having an outwardly-bent wing, said wings being arranged face to face and pivotally connected and having their free outer edges
15 yieldingly pressed together, one of said wings having a series of depressions arranged in the arc of a circle whose center is at the pivotal point of the hinge, and the other wing having one or more elevations adapted to engage said depressions.
20

2. A hinge comprising two leaves each having an outwardly-bent spring-metal wing, said wings being arranged face to face and

pivotally connected, one of said wings having a series of depressions arranged in the
25 arc of a circle whose center is at the pivotal point of the hinge, and the other wing having one or more elevations adapted to engage said depressions.

3. A hinge comprising two leaves each having an outwardly-bent spring-metal wing united thereto by a contracted portion, said wings being arranged face to face and pivotally connected near their junction with the
30 leaves, one of said wings having a series of depressions arranged in the arc of a circle whose center is at the pivotal point, and the other wing having one or more elevations adapted to engage with said depressions.
35

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

CHAS. H. McCAULEY.

Witnesses:

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