

No. 700,435.

Patented May 20, 1902.

J. MACLEAN.

HINGE.

(Application filed Aug. 31, 1901.)

(No Model.)

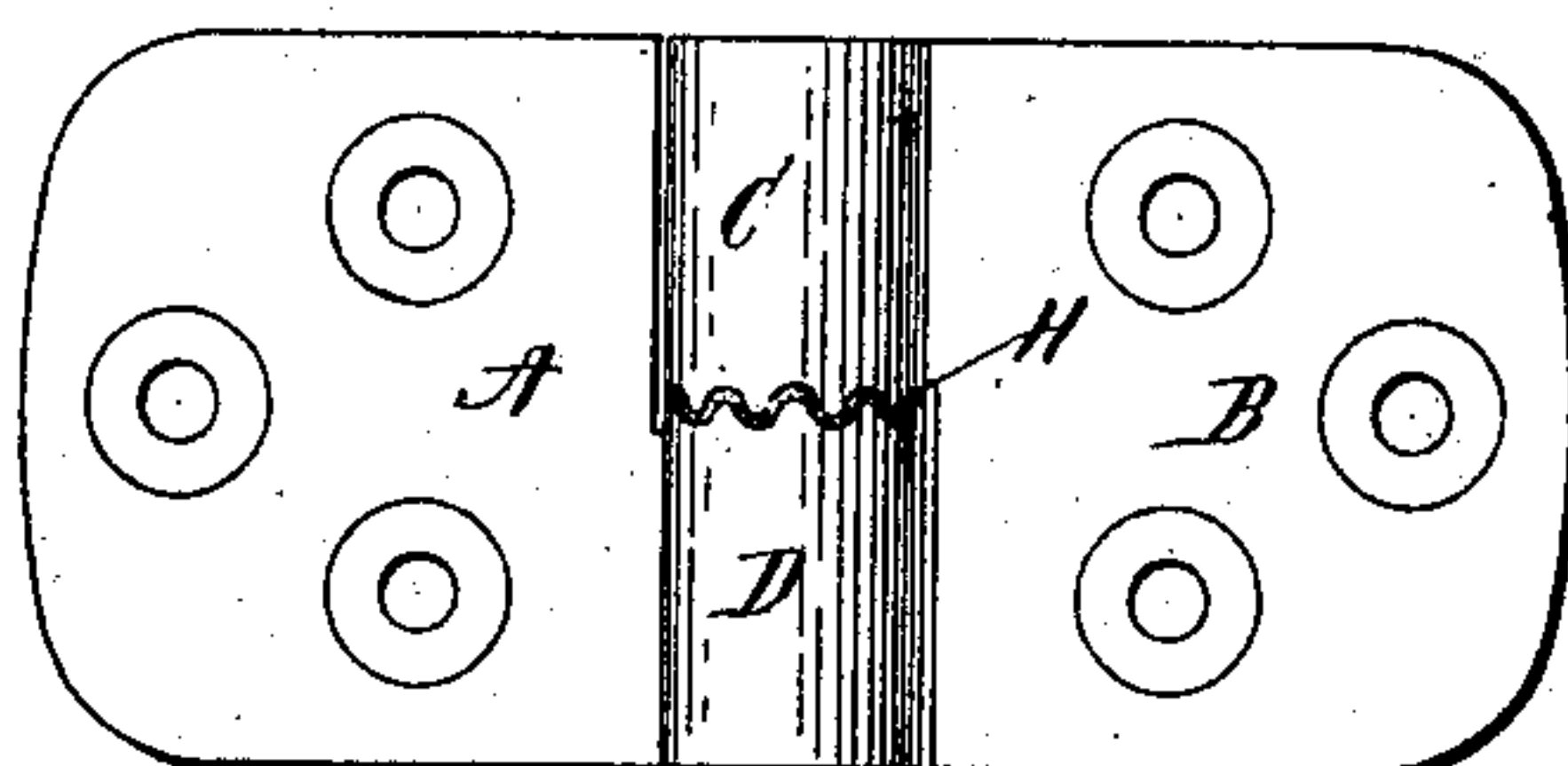


Fig. 1.

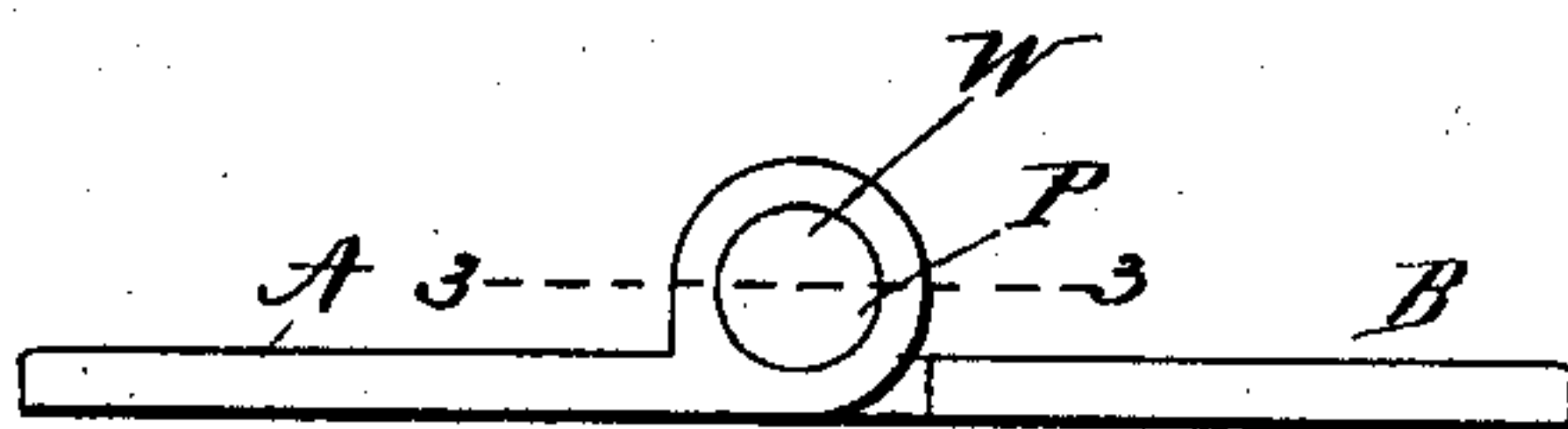


Fig. 2.

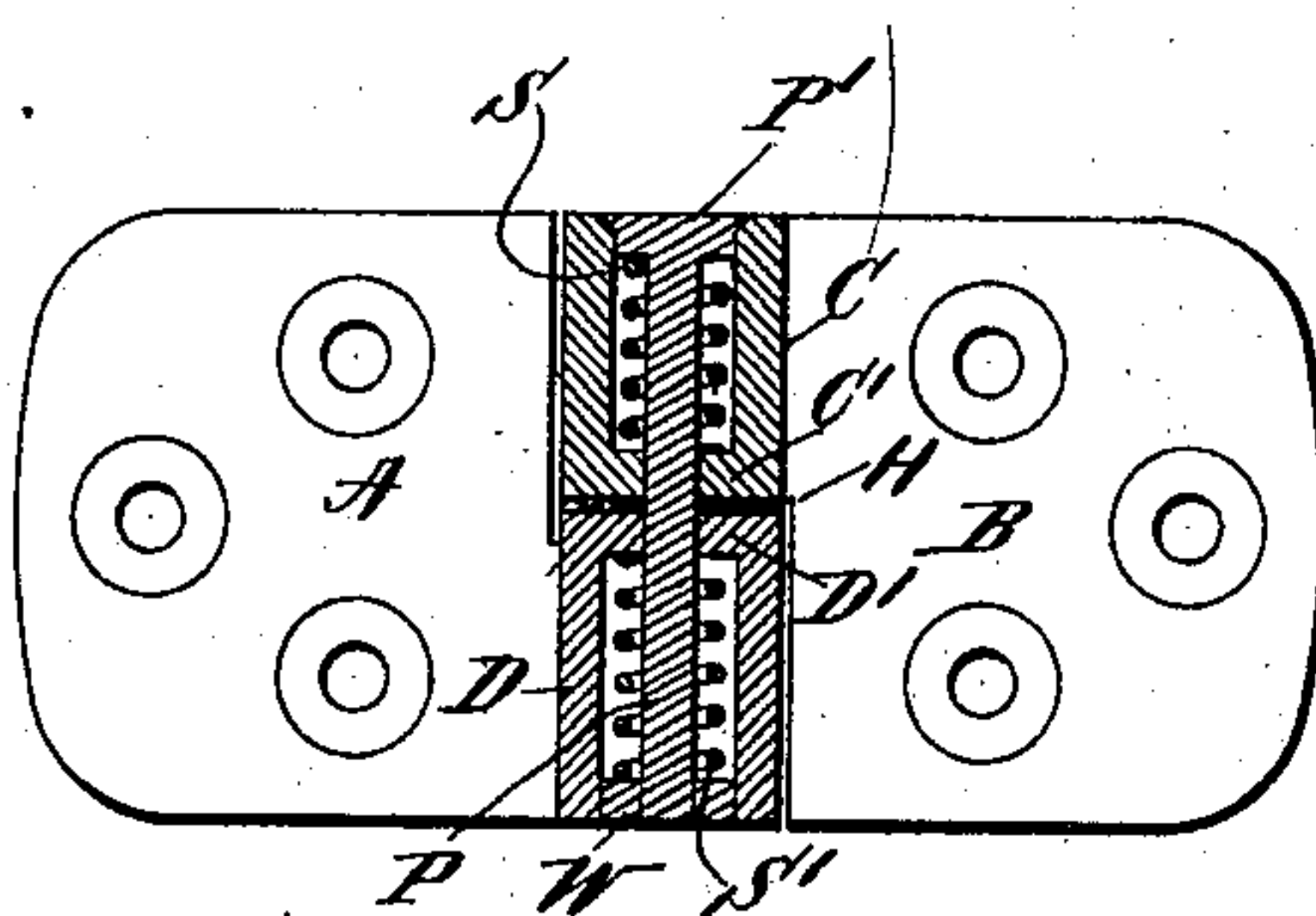


Fig. 3.

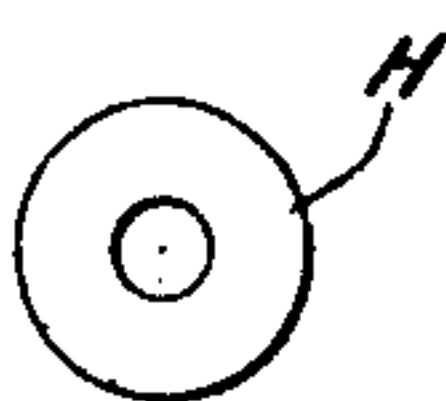


Fig. 4.

WITNESSES:

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JAMES MACLEAN, OF BOSTON, MASSACHUSETTS.

HINGE.

SPECIFICATION forming part of Letters Patent No. 700,435, dated May 20, 1902.

Application filed August 31, 1901. Serial No. 74,019. (No model.)

To all whom it may concern:

Be it known that I, JAMES MACLEAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Hinges, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to self-holding hinges to be used on boxes, doors, transoms, blinds, gates, &c.; and it consists in the peculiar construction and arrangement of parts by which they become hinges, the leaves of which both slide on the common pintle—that is, each of the leaves of the hinge has a motion on the pintle independent of the other—so that each hinge can act as a right or left hand one.

The object is to so make this class of hinges that each may be used as right or left handed, as required. This object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a plan showing the hinge extended. Fig. 2 shows the same in elevation. Fig. 3 is a section taken on line 3 3 of Fig. 2. Fig. 4 shows a washer that is used in connection with the hinge.

In the drawings I have shown a hinge which is more especially adapted for use on boxes, transoms, and the like; but my improvement is equally well adapted to other classes of hinges—for instance, those that would be adapted for use on doors, blinds, bulkheads, and heavy construction generally.

The hinge which I have chosen for illustration consists of two similar leaves A and B. The leaf A has a quill D and the leaf B a quill C. Each of the quills has an inwardly-projecting shoulder, as shown at C' and D', Fig. 3, upon which spiral springs S and S' rest. The pintle P has a head P', against which the spring S acts. To the other end of the pintle a washer W is riveted and serves as a buttress for the spring S' to act against. The inner ends of the quills C and D are dentated, as shown in Fig. 1. The dentations have inclined sides and rounded ends, so that they do not lock together, but simply offer a certain resistance to the turning of the hinge.

The springs S and S' serve to keep the two quill parts of the hinge together and to cause the dentations to engage with each other, but yet to yield sufficiently to admit of allowing the dentations to slip over each other when force is applied for the purpose of opening or closing. A comparatively soft and more or less elastic washer H is inserted between the dentations on the ends of the quills, which acts as a lubricant and also renders the operation of the hinge comparatively noiseless.

By making the hinge double-acting—that is, with two springs and two inwardly-projecting shoulders and two buttresses—each of the leaves of the hinge has a motion on the pintle independent of the other, so that each hinge can act as a right or a left hand one. This is an important feature. Otherwise in placing a pair of hinges on a box if one should be so placed as to resist the sliding on the pintle of the other (to allow the dentations to pass each other) then the two hinges would act one as a lock for the other, so that the box-cover could not be moved. By my device of two springs and two sets of buttresses I overcome this difficulty and produce hinges that have a function that is not possessed by any others.

I claim—

A hinge having dentated quills adapted to yieldingly engage with each other as described; a pintle passing through said quills and having a buttress on each end; an inwardly-projecting shoulder upon each quill; two springs adapted to engage respectively with the said buttress and shoulders whereby the said hinges each becomes a right or left hand one, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of August, A. D. 1901.

JAMES MACLEAN.

Witnesses:

FRANK G. PARKER,
CLARENCE BODENSTEIN.