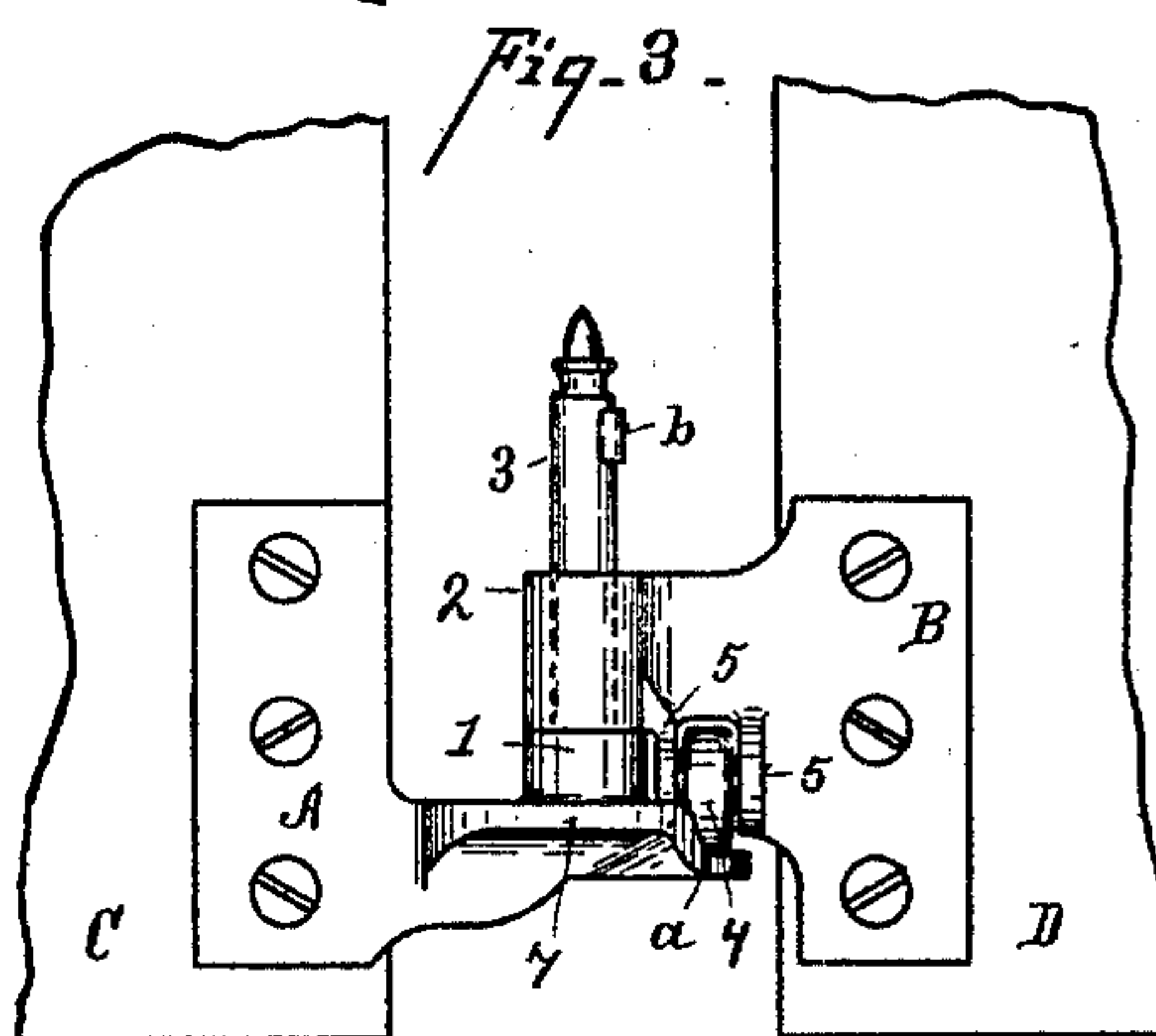
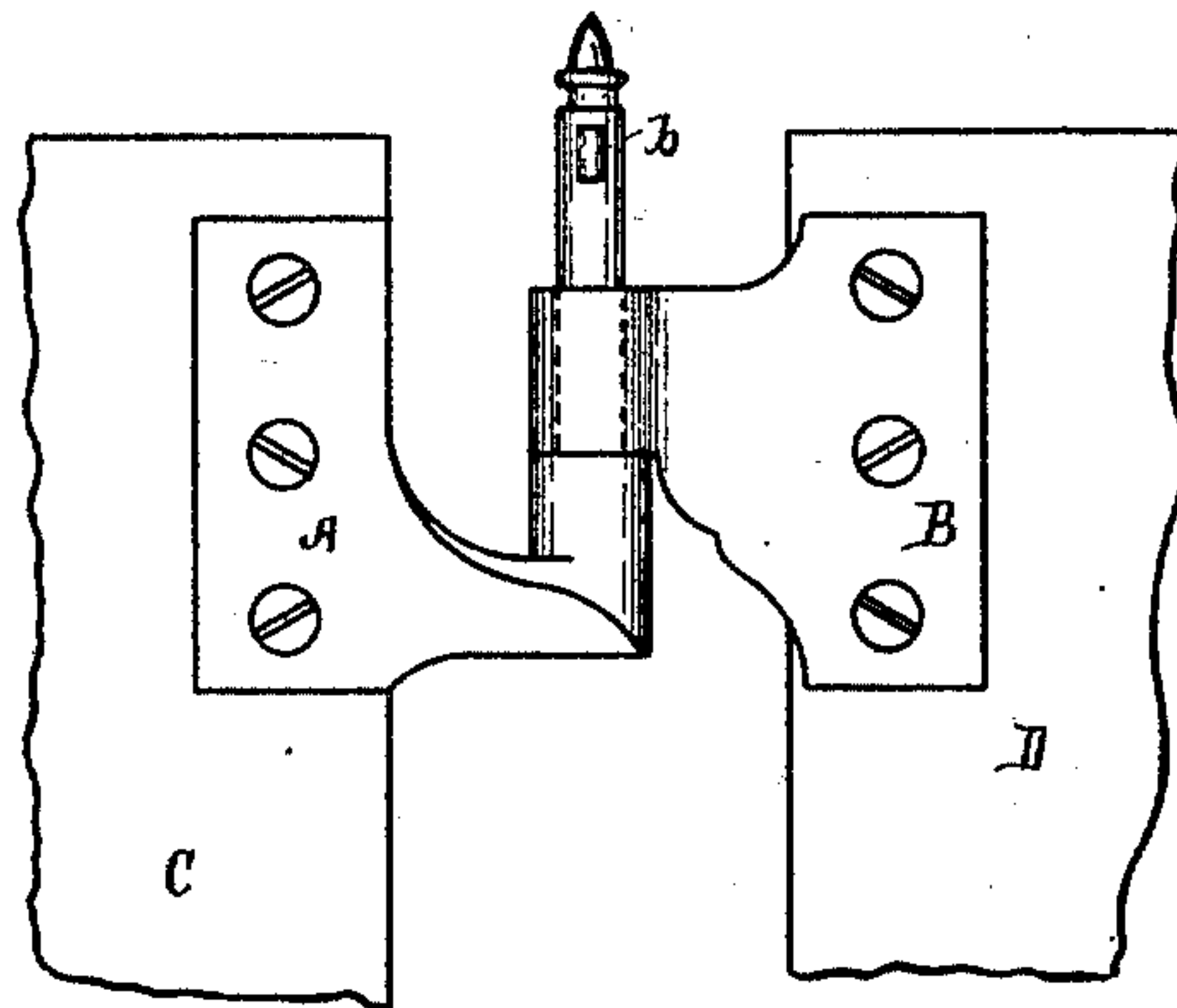
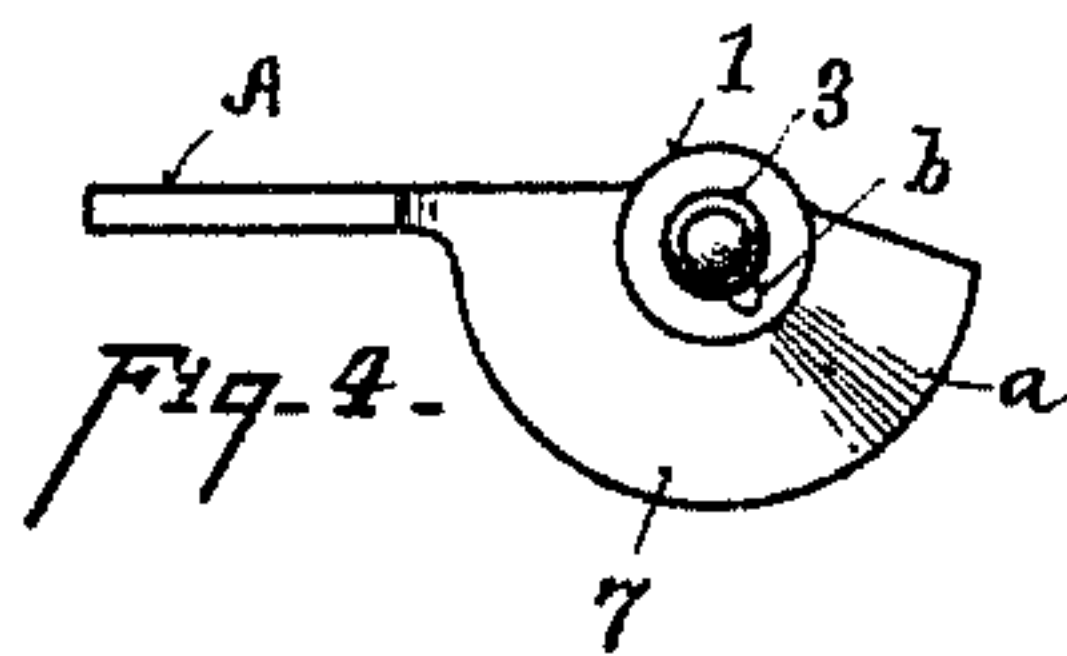
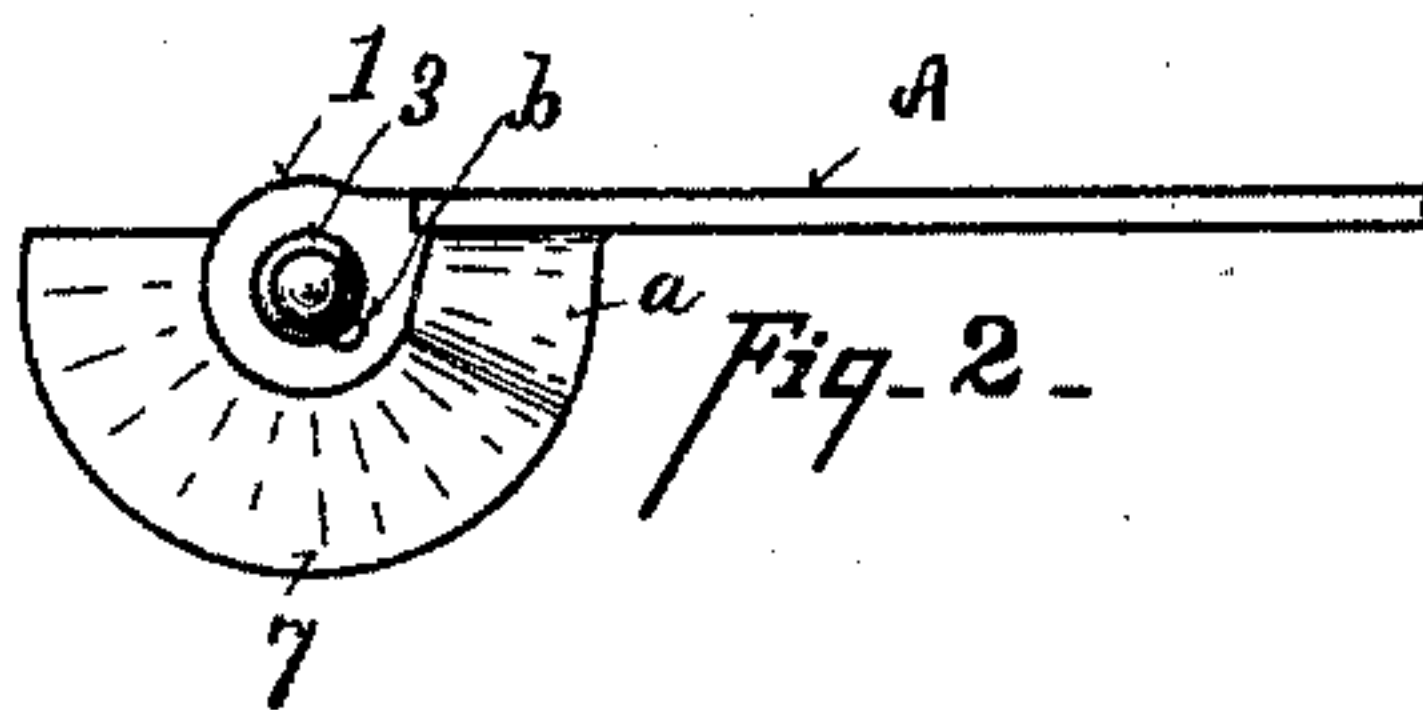
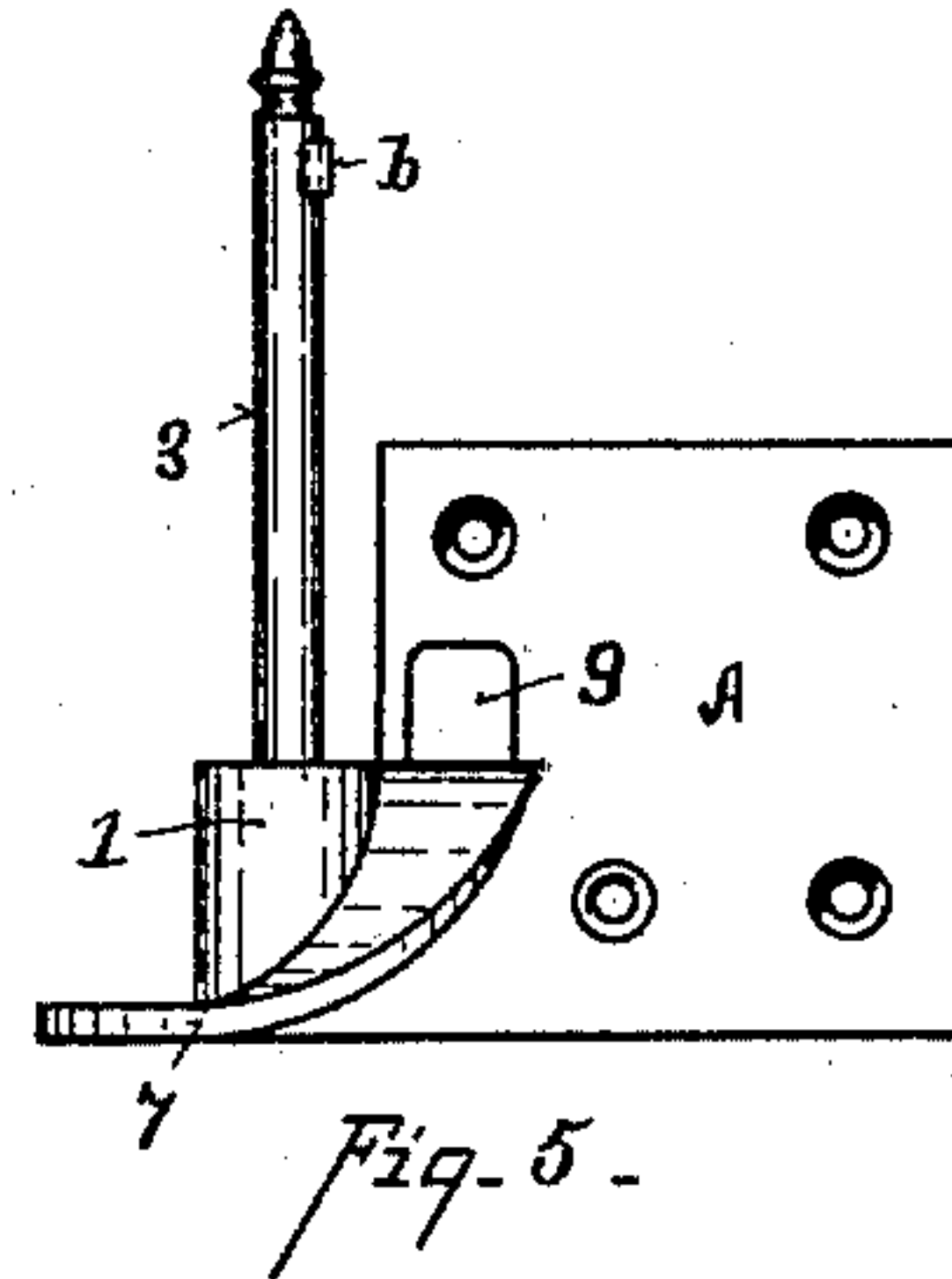
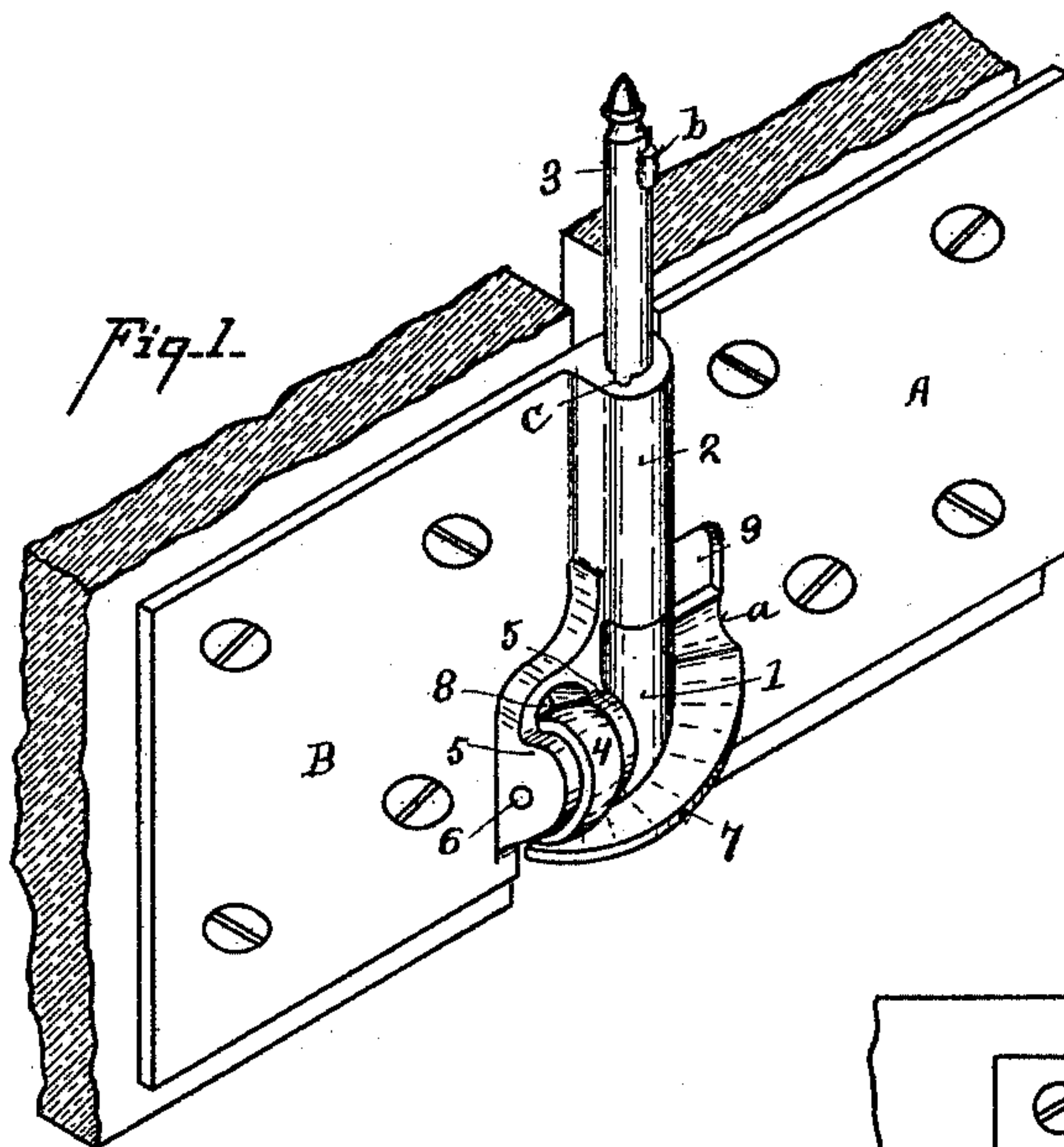


(No Model.)

J. G. SMITH.
LOCK HINGE.

No. 497,730.

Patented May 16, 1893.



Witnesses
C. W. Miles.
T. Simmons

Inventor
James G. Smith
By Wood & Boyd
Attorneys

UNITED STATES PATENT OFFICE.

JAMES G. SMITH, OF COVINGTON, KENTUCKY, ASSIGNOR OF ONE-HALF TO
JOSEPH WATSON, OF CINCINNATI, OHIO.

LOCK-HINGE.

SPECIFICATION forming part of Letters Patent No. 497,730, dated May 16, 1893.

Application filed October 18, 1892. Serial No. 449,283. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. SMITH, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

My invention relates to an improvement in hinges.

10 The object of the invention is to provide a cheap, strong hinge, with devices for holding the hinge in the open or closed position as may be desired.

15 Another object of my invention is to provide a locking device for holding the hinge in position and preventing the two sections from being separated or put together except at a given point.

20 The various features of my invention are fully set forth in the description of the accompanying drawings making a part of this specification, in which—

25 Figure 1 is a perspective view of my improvement. Fig. 2 is a top plan view of one of the sections. Fig. 3 is a modification showing a pair of hinges attached to a shutter. Fig. 4 is a top plan view of one of the hinges shown in Fig. 3. Fig. 5 is a plan view of a modification.

30 A, B, represent a pair of butt hinges.

1 represents the boss on which the eye 2 of leaf B revolves.

3 represents the long pintle on which leaf B journals.

35 4 represents an anti-friction roller supported between ears 5 by an axis 6.

40 7 represents an incline way on which the anti-friction roller 4 journals; this incline way is attached to and surrounds the boss 1, which is the axis of the inclined way.

45 The leaf B is provided with a slot 8 in which the anti-friction roller sets. The leaf A is provided with slot 9 in which the anti-friction roller passes when the hinge is opened outside. It will be observed that the incline way 7 rises so as to raise the leaf B up, the eye 2 sliding up on the long pintle 3; and at the rear end of the hinge is a depression *a*

into which the anti-friction roller 4 drops and holds the hinge in the open position.

50 In the preferred form shown in Fig. 5 the forward part of the way 7 is on the horizontal plane and the incline commences to rise a sufficient distance back to allow a door to move out of the jamb before the anti-friction roller 4 commences to travel up the incline, preventing the object hinged from binding in the case or jamb.

55 The form shown in Fig. 1 is adapted to be applied to a gate; the forms shown in Fig. 3 are adapted to be applied to a shutter, and the form shown in Fig. 5 is adapted to be used on a door.

60 In the modification shown in Fig. 3 the way 7 is horizontal, with the exception of the depression *a*, C representing the casing of a window, and D the shutter, being shown open. When it is closed it is designed to be held by a lock so it can not be opened from the outside. Hence, only one recess *a* is employed, and that to hold the shutter open.

65 In order to prevent the shutter or door from being raised too high and thrown off the hinge when opened quickly, I provide a boss *b* on the pintle 3, and a slot *c* through the eye 2 of the hinge; this boss *b* is placed sufficiently low on the pintle so that the eye 2 will rest upon the boss and allow the leaf B to be turned on the top of the pintle 3 until the slot *c* comes opposite the boss *b*, when the eye will pass down in position.

70 By the means herein shown the anti-friction roller and the way may be attached to the leaves of an ordinary butt hinge, and be made strong and compact so that the article hinged may be fully opened, the two leaves abutting one against the other, as in an ordinary butt hinge, and hold the article open or closed as desired; the incline serving to hold the parts closed, and the recess *a* in the way 7 holding the article hinged, open. It is obvious that the pintle 3 might be attached to the leaf B and the boss 1 might be pierced to form the journal for the axis.

75 Having described my invention, what I claim is—

2
A butt-hinge, consisting of the two leaves
A and B, one provided with the long pintle 3,
the inclined way 7 having the recess α at its
highest point and the recess 9 through said
5 leaf at a point opposite the inclined way, and
the other leaf provided with a long eye 2 en-
gaging the pintle and with the anti-friction
roller 4 adapted to travel on the inclined way

and partially enter the recess in the pintle-
carrying leaf, substantially as described. 10

In testimony whereof I have hereunto set
my hand.

JAMES G. SMITH.

Witnesses:

E. E. WOOD,
C. W. MILES.