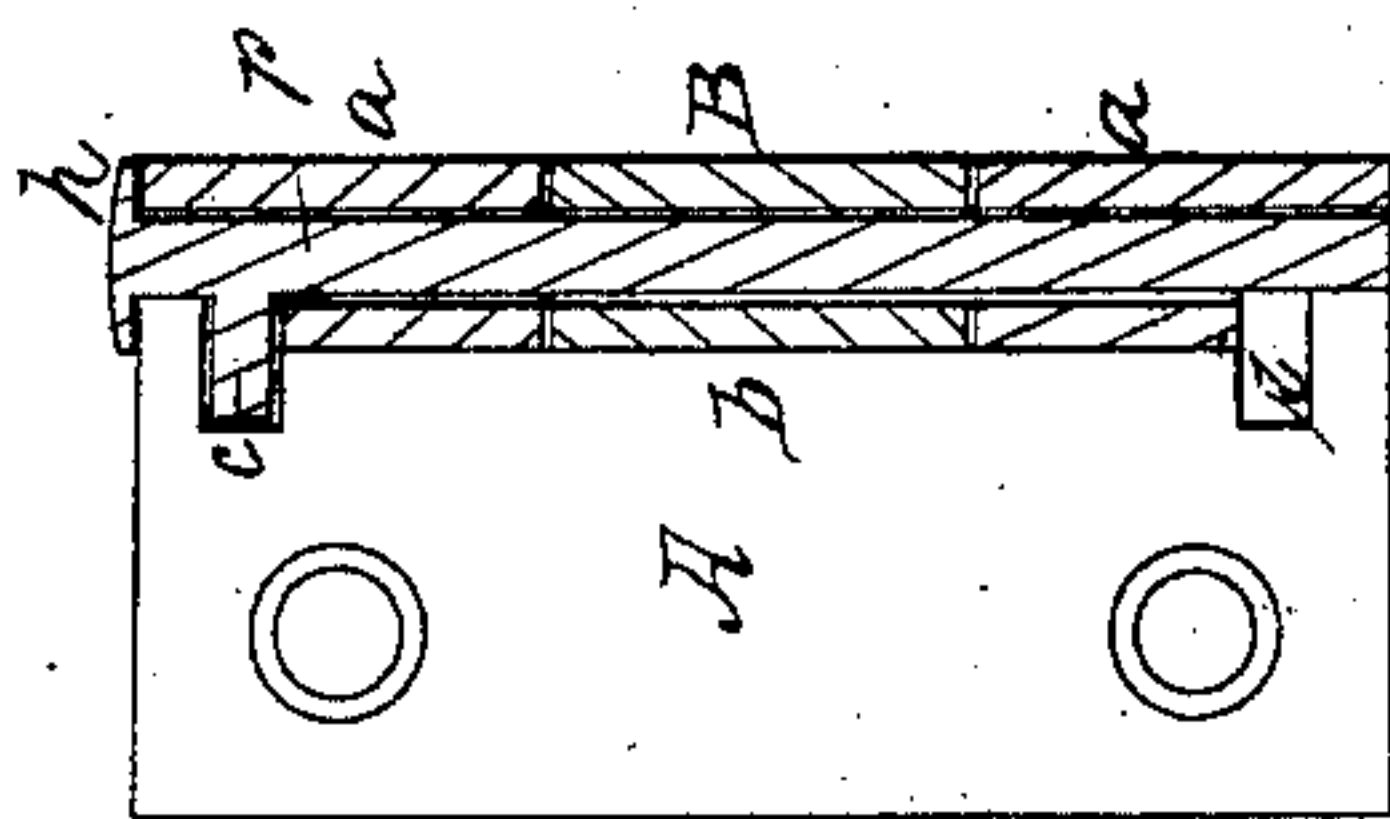


*J. E. Shields,*  
*Hinge.*

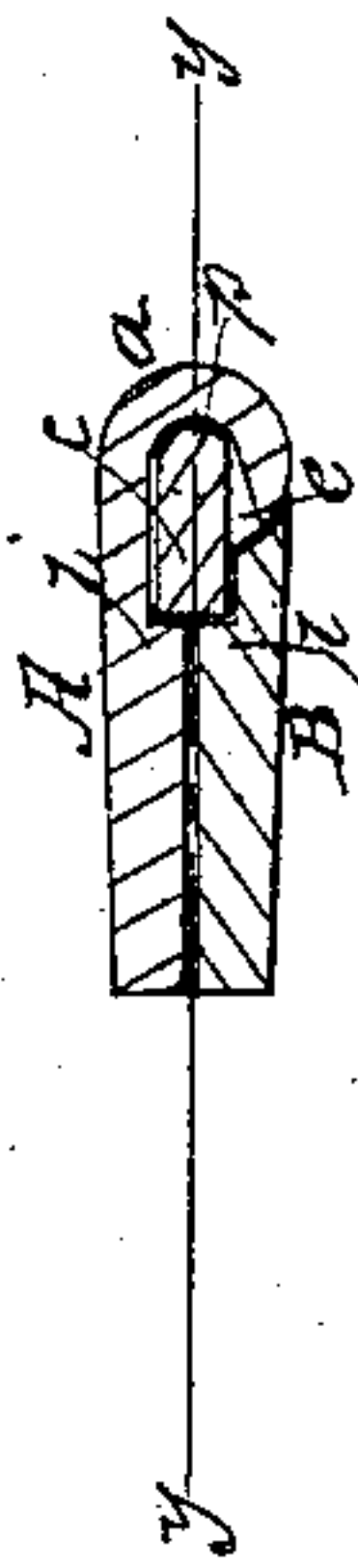
*N<sup>o</sup> 28,510.*

*Patented May 29, 1860.*

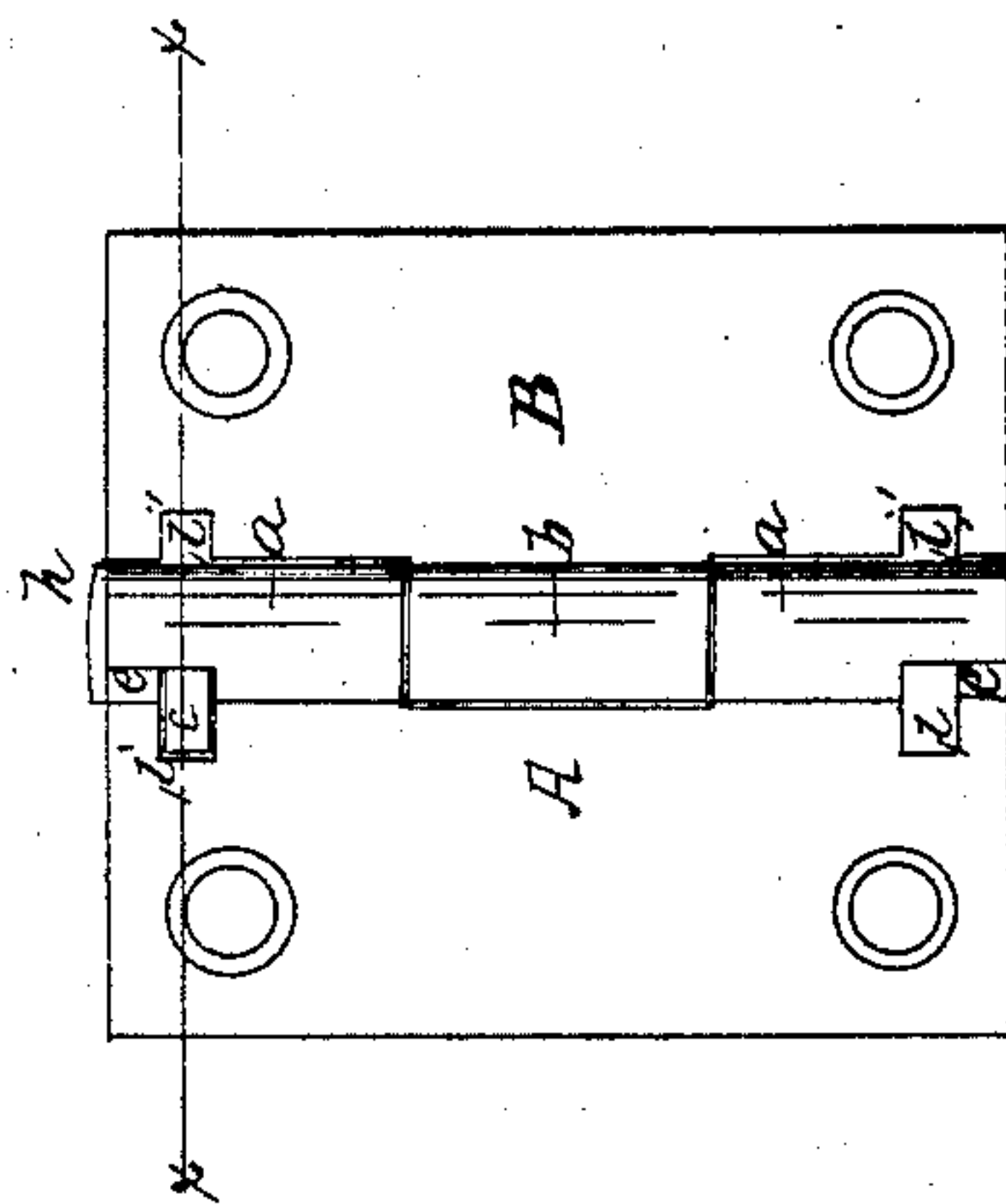
*Fig. 5.*



*Fig. 4.*



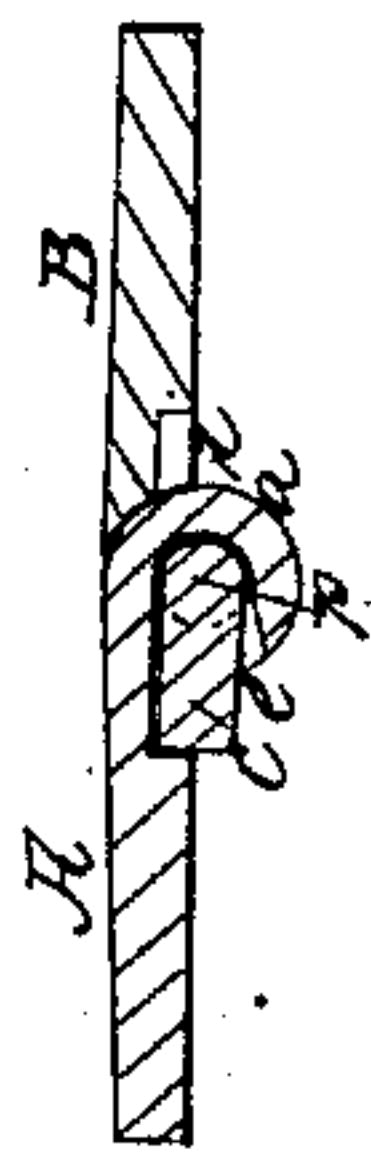
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



*Inventor:*  
*J. E. Shields*  
*per Geo. Patton*

# UNITED STATES PATENT OFFICE.

JOHN E. SHIELDS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BUTT-HINGE.

Specification of Letters Patent No. 28,510, dated May 29, 1860.

*To all whom it may concern:*

Be it known that I, JOHN E. SHIELDS, of Washington, District of Columbia, have invented a new and useful Improvement in Butt-Hinges; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, forming part of this specification, in the several figures of which similar characters of reference denote the same part.

Figure 1 is a view of hinge when open. Fig. 2 is a section on  $x x$  perpendicular to axis of pin. Fig. 3 is a top view of hinge. Fig. 4 is a section taken on  $x x$  perpendicular to axis of pin when the hinge is closed. Fig. 5 is a section through axis of pin on  $y y$  when the hinge is closed.

The object of this invention is to obviate the necessity for slip butt hinges, which must be made to suit a particular side of the door or window frame, its nature consisting in a hinge formed as a tight butt, and having its parts connected by a pin which is capable of removal when the hinge is open, and firmly connected with the leaves when closed so as to prevent removal; the details of construction and operation being as follows:

In the drawing A and B are the leaves of the hinge, the former with two segments of hollow cylinders  $a a$ , and the latter with a single segment  $b$  fitting between  $a a$  in the same manner as the ordinary tight butt.

The leaves are connected by a pin  $p$ , having a small projection C near the head, the ends of segments  $a a$  being slotted as seen at  $e$  to permit this projection to pass downward a sufficient distance to reach the cavity  $i$  in

leaf A. There is a corresponding cavity  $i'$  in leaf B, so that when the hinge is closed, the projection C is incased in cavities  $i i'$ , as shown in Fig. 4, rendering the removal of the pin impossible.

When the hinge is open the pin can be turned to bring projection C into slot  $e$ , and then may be slipped out. This gives the same facility for removing doors after hanging, as the loose butt, with the additional advantage due to strength of the tight butt. Both ends are made exactly alike, so that for opposite sides of the frame, leaf A has only to be reversed in position and the pin inserted at the upper extremity. This pin may have a thin flat head to mask the slot  $e$  and prevent the passage of water to the interior.

This construction enables any even number of single hinges to be used as pairs, obviating the disadvantage due to the use of loose butts, where they have always to be purchased in pairs. It has all the connecting advantages of the loose butt with the strength of the tight butt.

I claim as new and desire to secure by Letters Patent—

The side projection C on the connecting pin in combination with the slotted ends of the segments  $a a$ , and cavities  $i i'$  in the leaves; arranged and operating substantially as, and for the purposes set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JNO. E. SHIELDS.

Witnesses:

GEO. PATTEN,  
JOHN S. HOLLINGSHEAD.