(No Model.)

H. A. HOLST.

AIR AND WATER TIGHT THRESHOLD FOR DOORS.

No. 350,931. Patented Oct. 19, 1886.

Fig. 1.

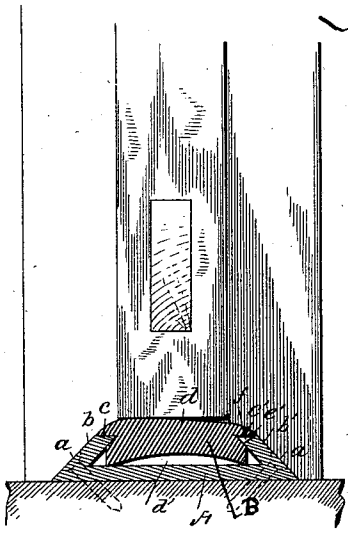


Fig. 2.

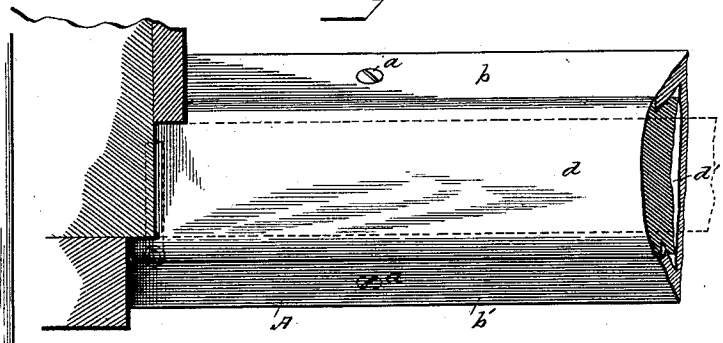


Fig. 3.

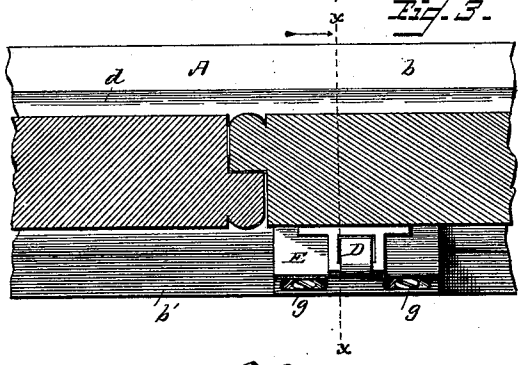


Fig. 4.

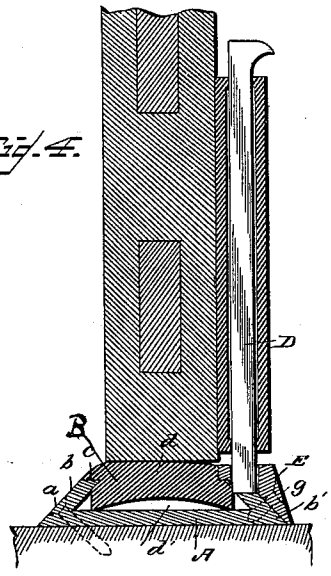


Fig. 5.

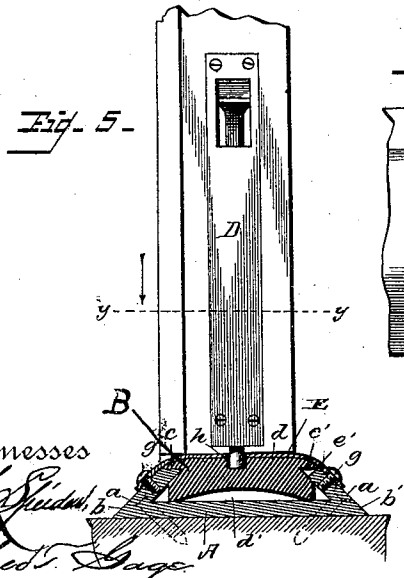
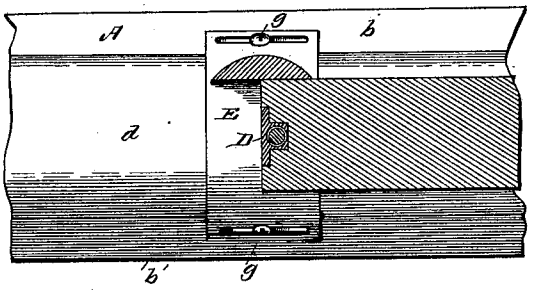


Fig. 6.



Witnesses
Wm. C. Speidel
Alfred S. Gage

Inventor
Hans Adolf Holst
By his Attorney
Franklin H. Hough

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

HANS ADOLF HOLST, OF HELENA, MONTANA TERRITORY.

AIR AND WATER TIGHT THRESHOLD FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 350,931, dated October 19, 1886.

Application filed June 2, 1886. Serial No. 203,892. (No model.)

To all whom it may concern:

Be it known that I, HANS ADOLF HOLST, a citizen of the United States, residing at Helena, in the county of Lewis and Clarke and Territory of Montana, have invented certain new and useful Improvements in Air and Water Tight Thresholds for Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

Like letters refer to similar parts throughout the several views.

My invention relates to thresholds or sills for doors, and has for its object to provide a threshold or sill for doors which will be both air and water tight, and also in means for securing or bolting the door or doors to the same.

To these ends, and to such others as the invention may pertain, the same consists in the peculiar combinations and the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and particularly pointed out in the claims.

In the drawings, Figure 1 is a vertical cross-section through the door and sill. Fig. 2 is a plan view of one end of the sill, with the door shown in dotted lines. Fig. 3 is a horizontal section through double doors, showing the metal socket for the face-bolt. Fig. 4 is a vertical cross-section on line *x x* of Fig. 3. Fig. 5 is an edge view of one of a pair of double doors, showing the bolt, the sill and socket-plate being shown in section. Fig. 6 is a horizontal section on line *y y* of Fig. 5.

Referring by letter to the drawings, A represents the base of the threshold or sill, made of malleable iron, and preferably in the form of a trough, having its sides *b b'* inclined inwardly at an angle of about forty-five degrees. This base is secured firmly to the floor or sill by means of screws *a a*, which are passed through suitable openings in the metal made to receive them, the screws being set substantially at right angles with the inclined sides *b b'* of the base, and having their heads countersunk so as to be flush with the outer surface of the same. The upper edge *c* of the inclined side *b* of the base is upon a horizontal plane, while the upper edge *c'* of the opposite side, *b'*, is inclined inwardly at an angle, as shown. Seated in this base-plate is a rubber block, B, preferably of substantially the form shown—that is, with its upper side, *d*, slightly rounded and its under side concave to form an air-chamber, *d'*, between said block and the base-plate A. Upon opposite sides this block is provided with longitudinal channels *e e'*, the former of which receives the upper inner edge of the inclined side *b* of the base-plate, which fits snugly therein; but upon the opposite side there is left an air-chamber, *f*, for a purpose hereinafter described. The top face, *c*, of the rubber block, at the inner edge, is cut away slightly, so as to leave a space beneath the door at this point, as clearly shown in Fig. 1 of the drawings, the object of which will be hereinafter explained.

In order to retain the door in its closed position, I employ any ordinary bolt, as D.

E, Fig. 5, is a metallic strip placed transversely on the rubber block, and is there held by means of screws or bolts *g*, passed through slots in the said strip and tapped into the inclined sides of the base-plate, as shown. This strip is provided with a socket, *h*, to receive the end of the bolt, which also enters a socket or opening formed in the rubber block coincident with said socket, as clearly shown in said Fig. 5.

In Figs. 3 and 4 I show the bolt D working within a case or housing, and the strip E having a socket, as in the construction shown in Fig. 5, secured to the threshold parallel with its length by means of screws *g*, passed through openings in said strip.

In operation the block B yields as the door is opened or closed, the air within the air-chamber *d'* serving to force the block upward in contact with the bottom of the door and making at all times an air and water tight joint. The air-chamber *f*, together with the space left beneath the door at its inner edge, as above described, greatly facilitates the opening or closing of the door. The rubber block prevents ingress of air or water into the apartment beneath the door, while the close joint between the inclined face *b* of the base-plate and the

longitudinal channel e' of the rubber block prevents the water and dust from entering into the space beneath the block, as will be readily understood.

Having thus described my invention and set forth its merits, what I claim is—

1. The combination, with the base-plate having inclined sides, of a rubber block having rounded upper face and concave lower face, held in said base-plate and formed with longitudinal channels $e\ e'$, substantially as and for the purpose specified.

2. The combination, with a base-plate and rubber block secured therein, of a metal strip provided with a socket to receive the end of the securing-bolt, substantially as described.

3. The combination, with the base-plate having inclined sides and a rubber block held in said base-plate, of a metal strip placed transversely over said block and secured to said inclined sides, and formed with a socket to receive the end of the securing-bolt, substantially as described.

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

HANS ADOLF HOLST.

Witnesses:
GEORGE HERMANN,
JOHN J. GEIER.