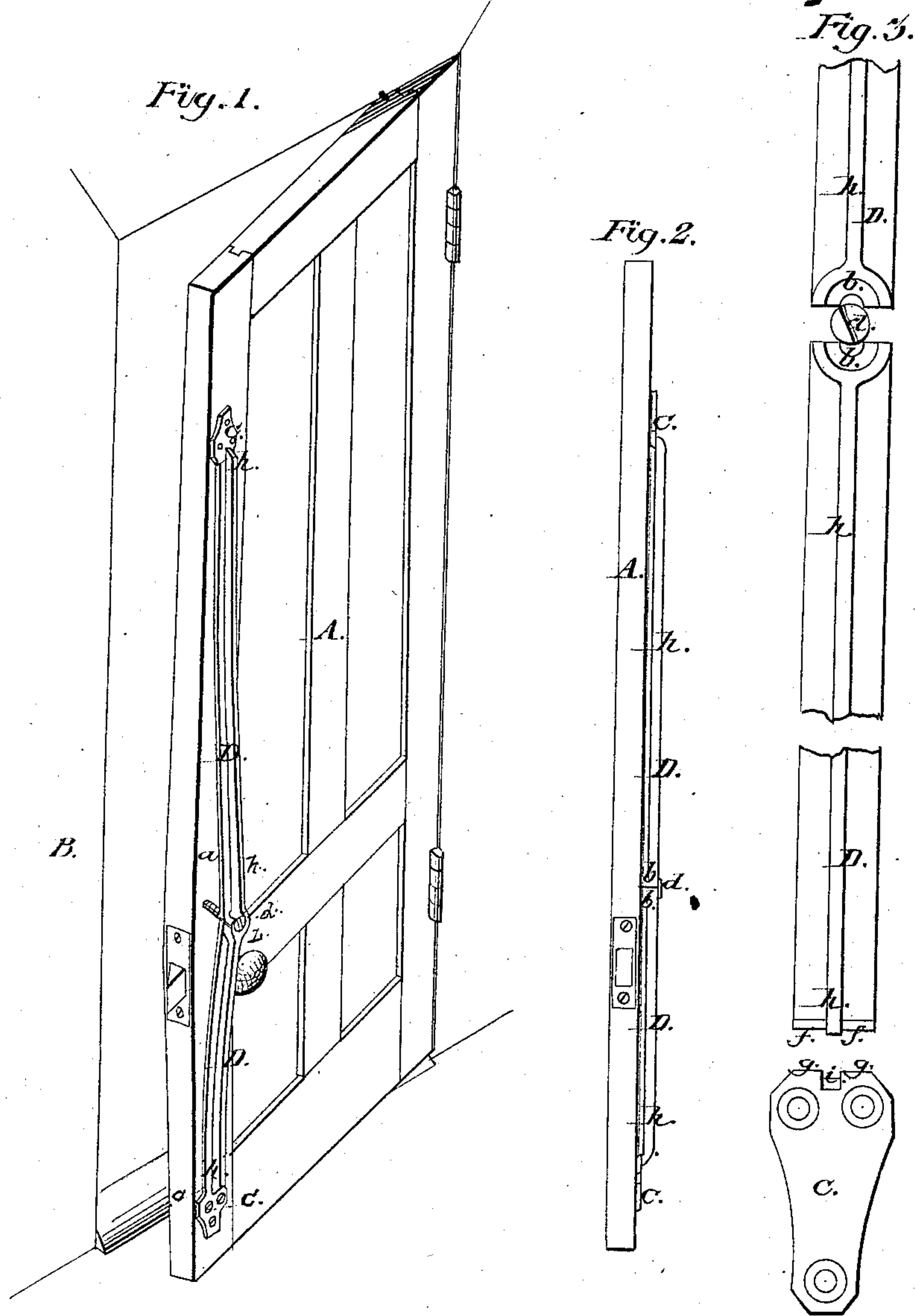


O. C. Ross,
Door Straightener,
No 79,862,
Patented July 14, 1868.



Witnesses:
J. R. Drake

Geo. W. Matt

Inventor:
O. C. Ross
by
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Atty.

United States Patent Office.

O. C. ROSS, OF PENFIELD, NEW YORK.

Letters Patent No. 79,862, dated July 14, 1868.

IMPROVED DOOR-STRAIGHTENER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, O. C. Ross, of Penfield, in the county of Monroe, and State of New York, have invented a certain new and useful Improvement in Devices for Straightening Warped Doors; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of a door with my improvement applied thereto.

Figure 2, an edge view of the door straightened into shape.

Figure 3, an enlarged view of the device detached, and with the parts separated.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists of a device for straightening warped doors, constructed in two main sections, connected by a screw in the centre, and engaging at the ends with fixed bearings by means of a peculiar joint, as hereinafter described.

In the drawings, A indicates a door with a warp at *a*, and B indicates the casing in which it fits.

The device for straightening the warp consists of two sections, D D, of iron, or equivalent material, having an intermediate joint, *b*, at the junction, in a socket of which fits a screw, *d*, that holds them in place and strikes into the door to draw the parts together. The extremities of the sections connect with bearings or lugs C C, screwed fast to the door. This connection is formed by means of sharp edges or angles *ff* on the ends of the sections, that strike under similar reverse sharp edges *gg* of the bearings, and by ribs *hh* of the former, which rest in slots *ii* of the latter. This connection holds the parts firmly against displacement, both vertically and laterally.

I prefer to make the sections D D a little curved inward toward the door, so that, as the parts are brought together, said sections will straighten in a bracing attitude. I do not confine myself, however, to this form. The sections are made as light and slender as possible, compatible with the necessary strength.

Since the warps in doors are in various positions, it is necessary to adapt the length of the sections to such conditions. For this purpose, the sections may be made of any desired length, or one section may be made longer than the other, as necessity may require.

In the present style of building, doors are made much higher than formerly, and much difficulty is experienced from warping, especially where hot fires are kept, and it often becomes necessary to remove them. It is frequently the case that they will not catch at the lock, or the top or bottom will project so far as to form a large crack.

By the employment of my device, as above described, I am enabled to straighten doors and hold them in place till they become fixed in position, or they may be finished like the door, and remain as a permanent fixture, and may be made to produce an ornamental effect.

The construction of the device is such as to attach readily, and to operate easily. The lugs or bearings C C are first fixed in the proper position above and below the warp, and the sections D D then applied so as to form a toggle, when the screw draws the door into form and clamps the parts closely in contact.

The jointing of the sections in the middle, by the socket *b* and screw *d*, not only allows the toggle connection to be attained, but also holds the parts in line so that they cannot escape. The loose connection with the lugs or bearings C C by the angles and ribs is of much importance, since it allows a ready insertion or removal of the sections, and also allows the turning which is necessary, and which could not be secured were the connections stiff throughout. The angles *fg* and ribs and slots *hi* are also indispensable to retain the connection properly in place, as before described. These features are an important part of my improvement.

What I claim as my invention, and desire to secure by Letters Patent, is—

The device for straightening doors, consisting of sections D D, connecting intermediately at *b*, and engaging at the extremities with lugs C C, by means of angles *fg*, and ribs and slots *hi*, substantially as herein set forth.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

O. C. ROSS.

Witnesses:

R. F. OSGOOD,

W. J. CREELMAN.