

(No Model.)

C. W. BULLARD.

DOOR HANGER.

No. 277,542.

Patented May 15, 1883.

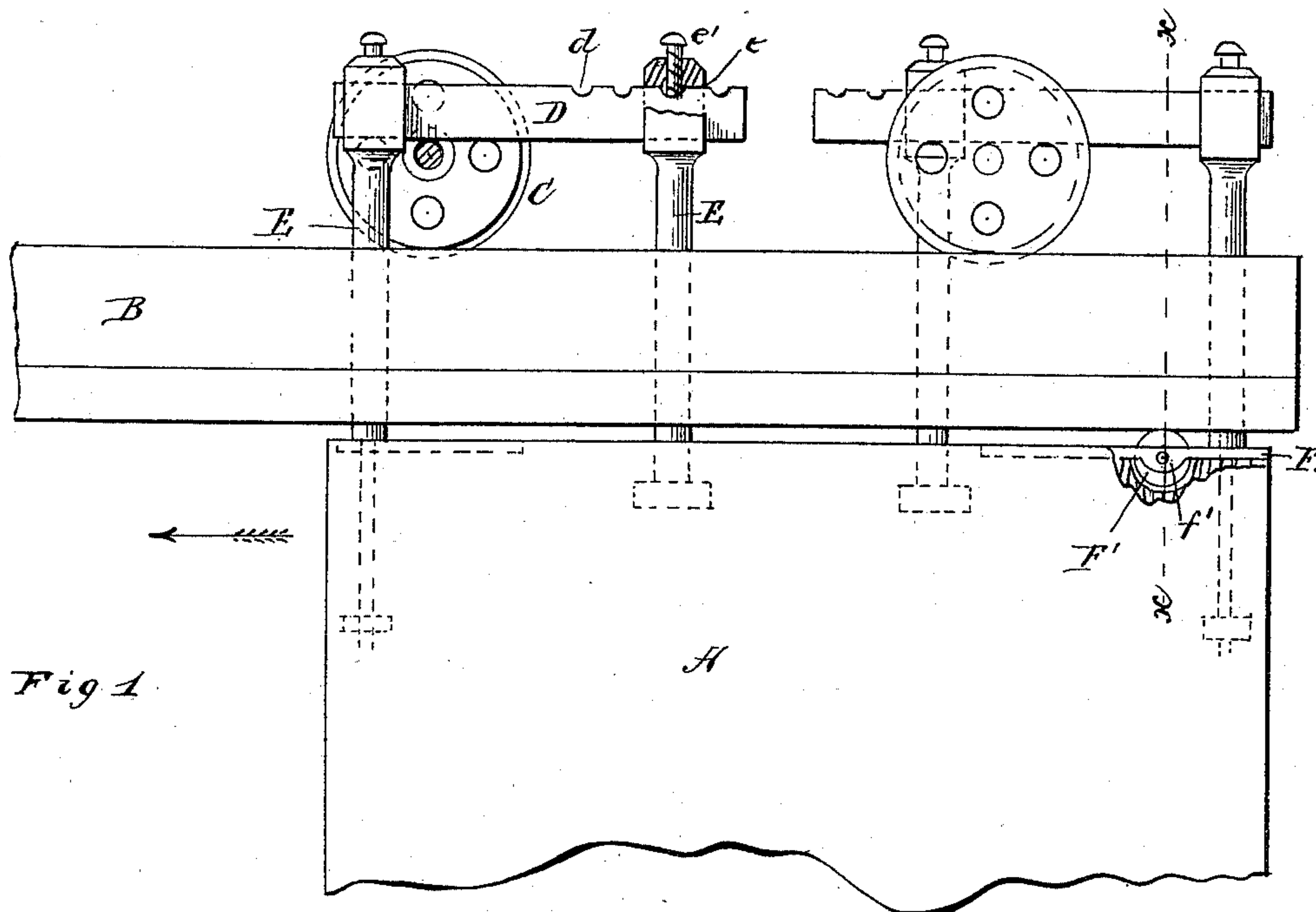


Fig 1

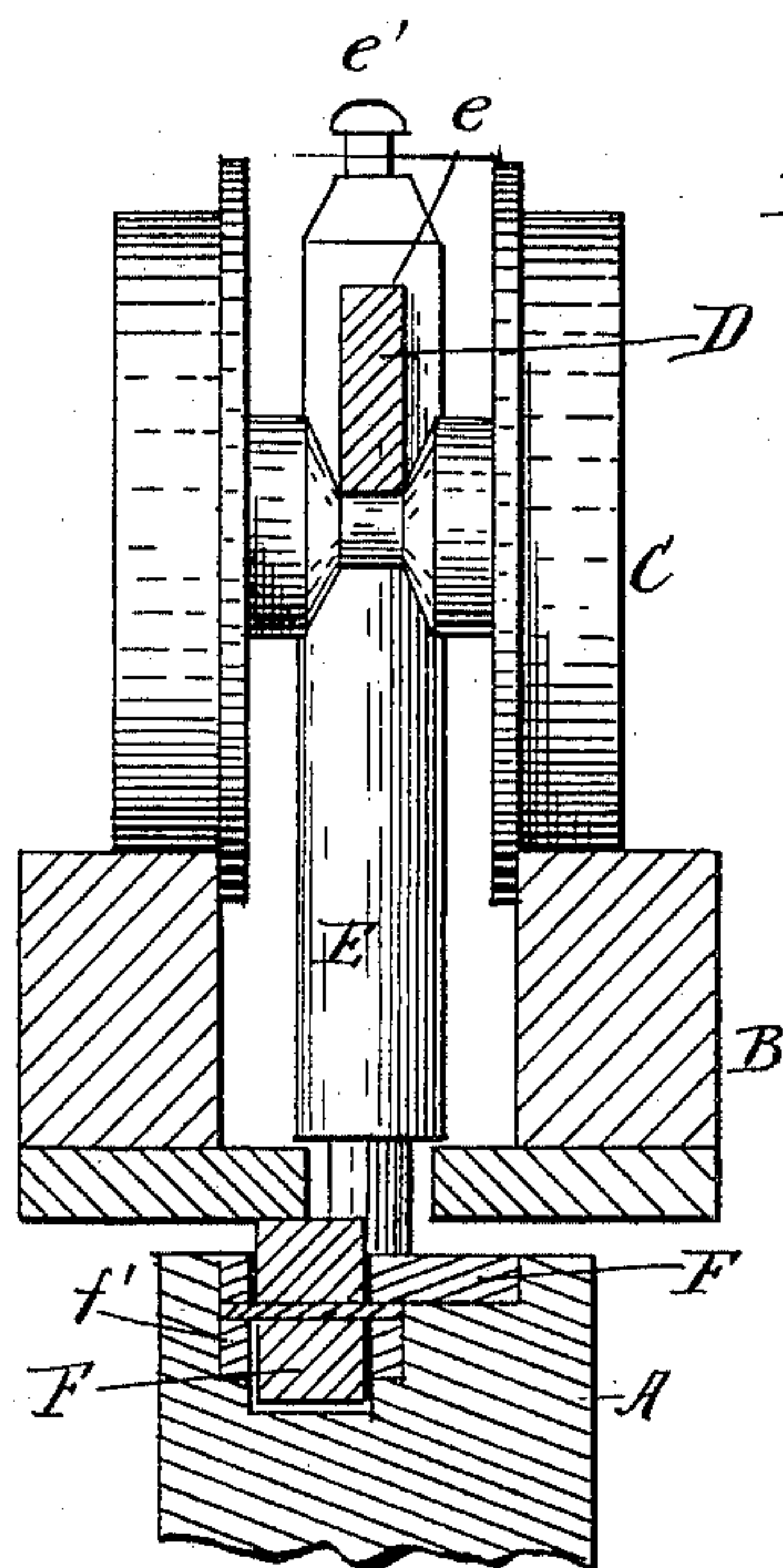


Fig 2

Fig 3

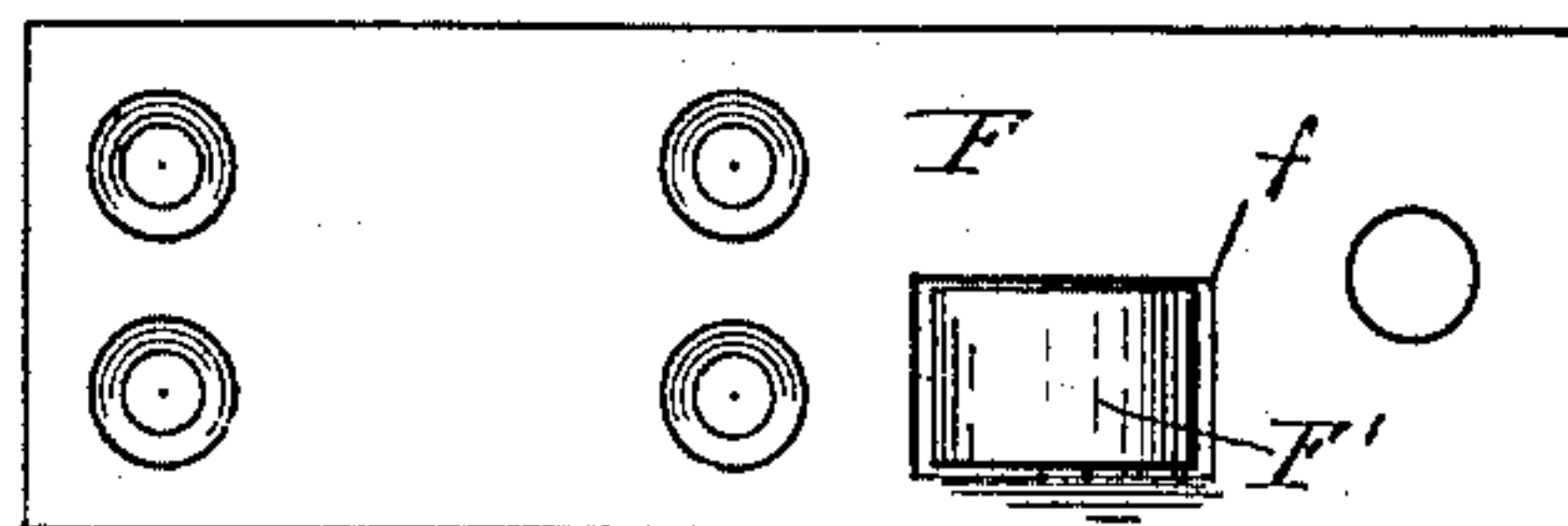
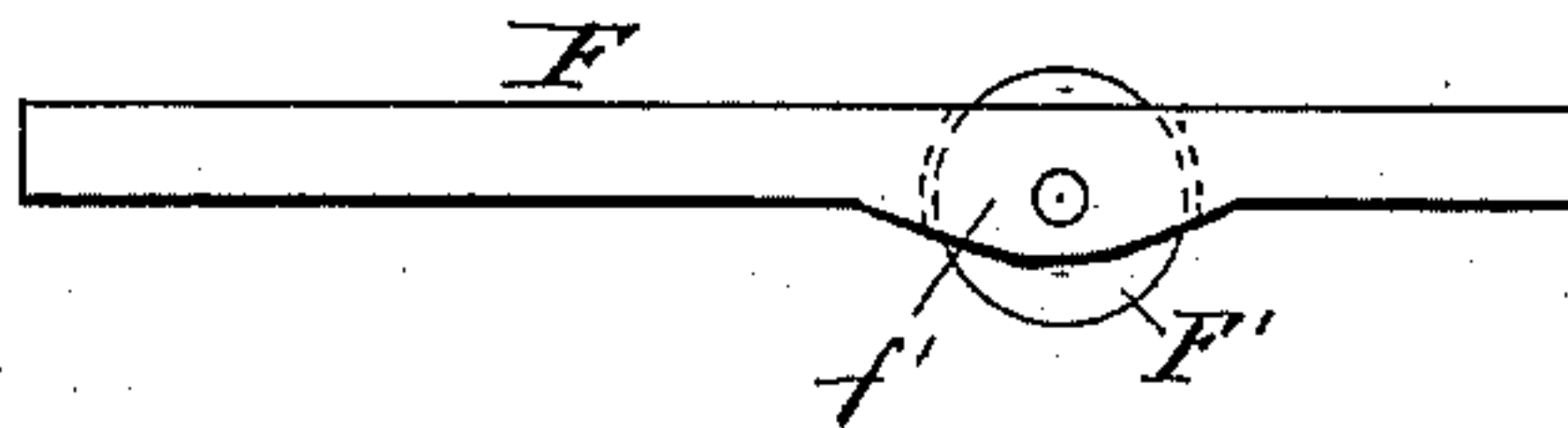


Fig 4



Witnesses  
W. C. Corlies  
A. M. Best.

Inventor  
Charles W. Bullard  
By *Edmund T. Thacher*  
Attorneys



# UNITED STATES PATENT OFFICE.

CHARLES W. BULLARD, OF MAYWOOD, ILLINOIS.

## DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 277,542, dated May 15, 1883.

Application filed October 16, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. BULLARD, a citizen of the United States, residing at Maywood, in the county of Cook and the State of Illinois, have invented certain new and useful Improvements in Door-Hangers, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a sliding door provided with my improved hanger, one of the sheaves being in section. Fig. 2 is a section on the line *xx* in Fig. 1. Fig. 3 is a plan view of the roller-plate. Fig. 4 is an edge view of the same.

The same letters denote the same parts in all the figures.

My invention relates to apparatus for the support and guidance of sliding doors; and it consists partly in a rider-bar resting on a sheave which travels on a track above the door, the rider-bar being connected with the door by rods or bolts adjustable lengthwise of it, and partly in a roller arranged on the surface of the plate through which the outer rod or bolt passes, the object being to adapt the same hanger to doors of different widths, and also to prevent the upper edge of the door from binding on the lintel above it when the door is moved.

In the drawings, A denotes the door; B, a pair of rails arranged in the casing above the door, their inner sides being equidistant from the middle of the door, measuring across its upper edge. On these rails travels a sheave, C, which supports a rider-bar, D. All these are substantially like the corresponding parts of the device shown in my Patent No. 233,836, dated November 2, 1880. In that device, however, a single rider-bar is supported on a pair of sheaves, and is connected with the door near the ends of the latter. In the present instance I use two or more rider-bars arranged at different points of the length of the door, and each supported on a single sheave, as shown in Fig. 1 of the drawings. Each rider-bar is connected with the door by rods or bars E, arranged at two points of its length. Each connecting-bar has at its upper end an eye or tubular passage, *e*, whose interior dimensions are such as to allow the rider-bar to slide

easily through it, so that the connecting-bars may be made to depend from the rider-bar at any two points of its length, and their position thus be adjusted to any desired width of door. I fasten the connecting-bar to the rider-bar by means of a set-screw, *e'*, which fits a female screw in the top of the eye *e*, and, passing through it, comes in contact with the upper surface of the rider-bar. To insure the hold of the set-screw on the rider-bar, I cut notches or sockets *d* in the upper surface of the latter, at different points of its length, to receive the set-screw, so that the connecting-bars can be firmly attached to the rider-bar at any desired distances apart.

Where two rider-bars are used, it will obviously be desirable to have the outer connecting-bar enter the door as near the edge of the latter as practicable, as shown in Fig. 1. In such cases the adjusting device may be dispensed with for that bar, and it may be formed in one piece with the rider-bar. With doors of unusual width, however, three or more rider-bars, each supported on its sheave, may be found advantageous, and then it will be convenient to have both connecting-bars adjustable.

It often happens that on taking hold of a sliding door to move it the slight lifting of the door which naturally results causes its upper corner to come in contact with the casing above it, so as to hinder the movement of the door, and bruise either door or casing, or both. To remedy this evil I form in the plate F, which is affixed to the upper edge of the door to receive the outer connecting-bar, a slot, *f*, from whose sides depend bearings *f'* for a roller, F', which I make of such diameter that its circumference shall rise just above the upper surface of the plate, so as to come in contact with the lintel above and prevent any binding of the door on it. The door is mortised on its upper edge deep enough to let the roller turn freely.

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

1. In a door-hanger, a track arranged above the doorway, a sheave adapted to travel on the track, a rider-bar resting on the sheave, and connecting-bars attached to the rider-bar adjustably with reference to its length, all in

combination, substantially as and for the purpose described.

2. The rider-bar provided on its upper surface with sockets or notches, in combination  
5 with the connecting-bar provided with an eye at its upper end, and a set-screw arranged to pass through the upper side of the eye and en-

gage with said notches, substantially as and for the purpose described.

CHARLES W. BULLARD.

Witnesses:

JNO. C. MACGREGOR,  
J. LEE COBURN.