(Model.)

W. GRACE.

DOOR HANGER.

No. 281,054. Patented July 10, 1883.

Fig. 1.

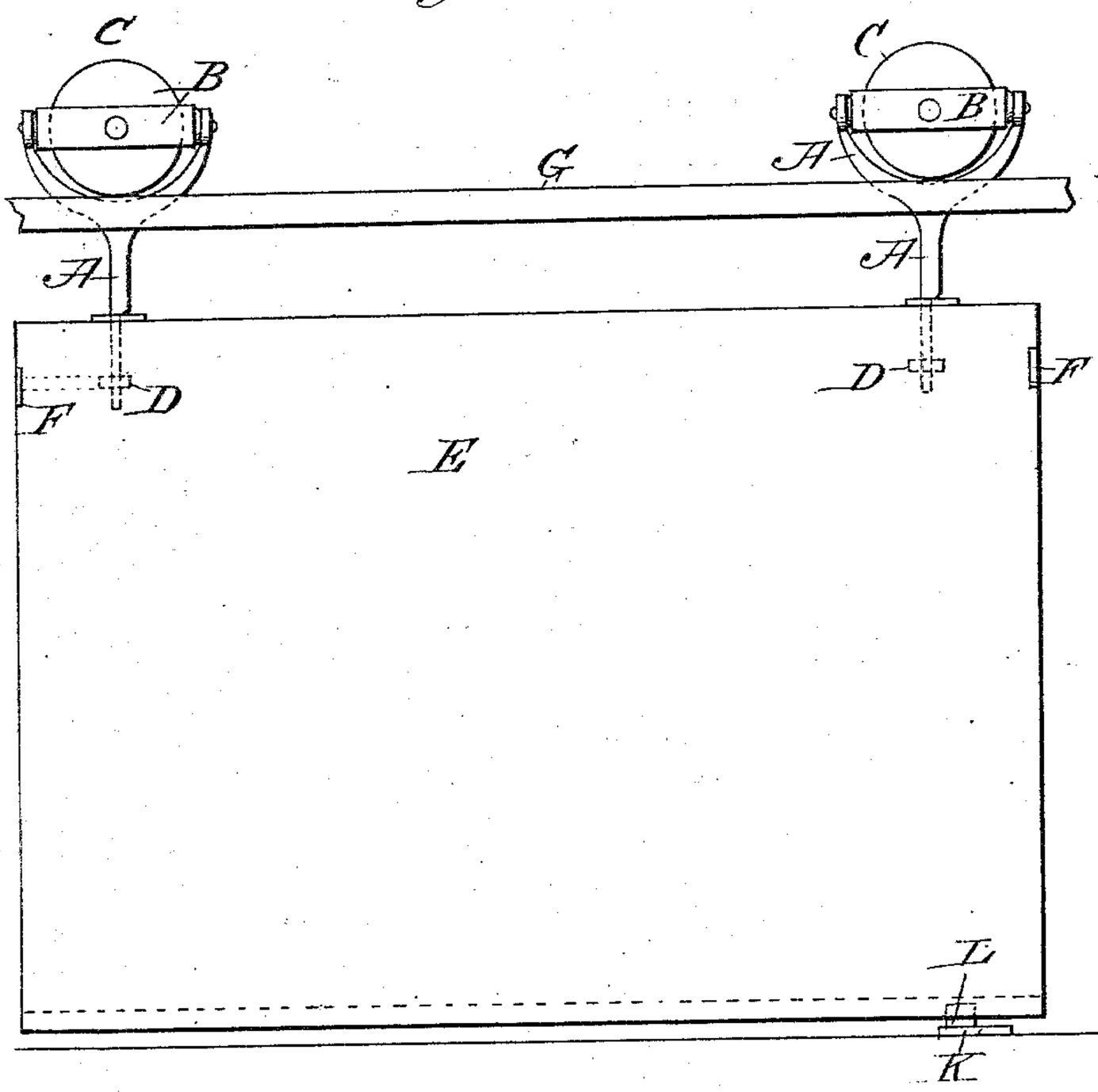


Fig. 2.

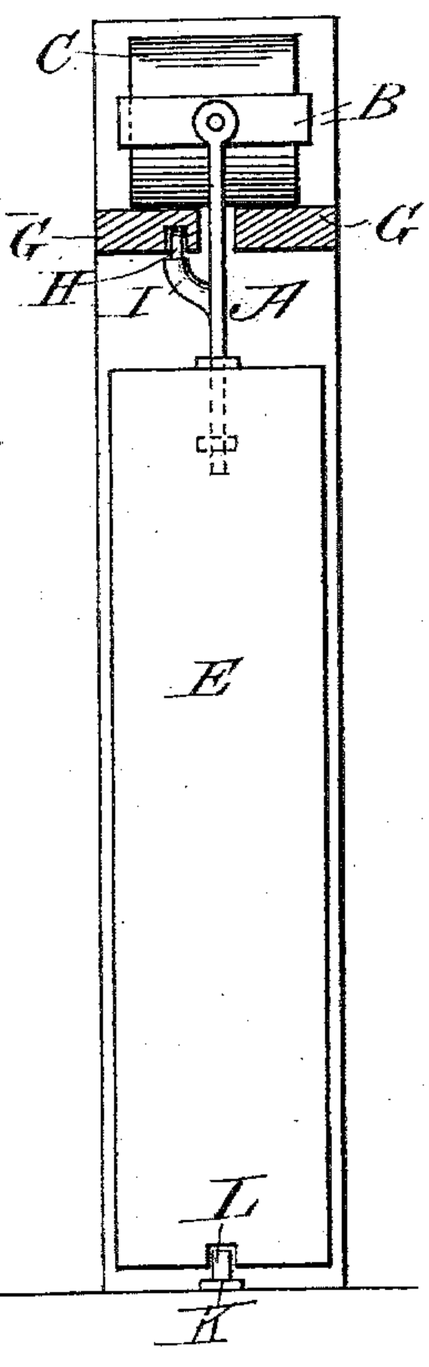


Fig. 3.

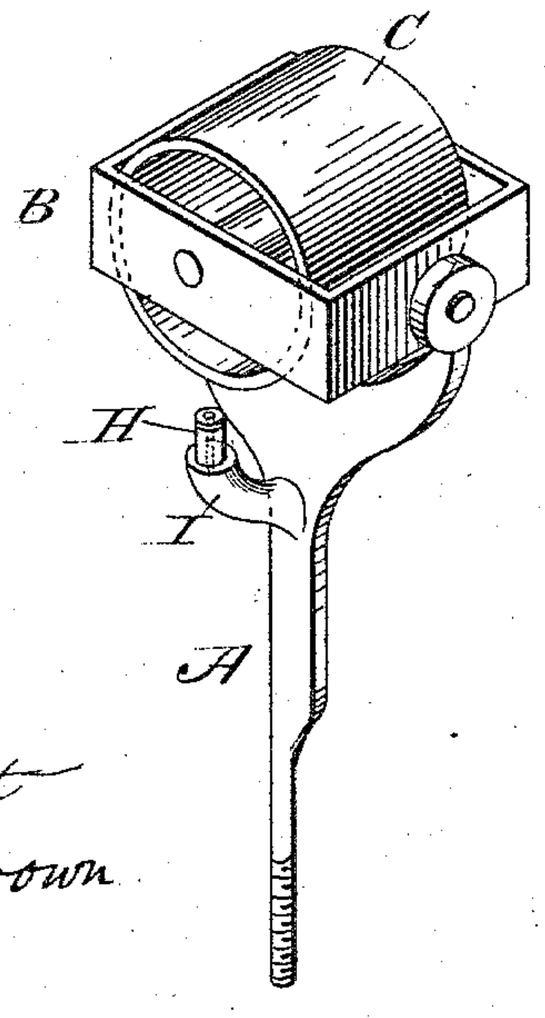
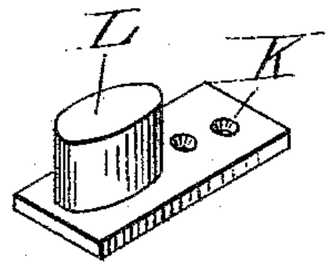


Fig. 4.



Attest:
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A. R. Brown

Inventor:
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by H. Watson & Co. Atty

UNITED STATES PATENT OFFICE.

WILLIAM GRACE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO C. H. MITCHELL, OF SAME PLACE.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 281,054, dated July 10, 1883.

Application filed April 7, 1883. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM GRACE, a subject of Victoria, Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Hangers; and I do 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 to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide an adjustable door-hanger capable of accommodating itself to irregularities in the supporting-tracks without strain to the suspension devices, and so that the door will always hang in a vertical position.

To this end the invention consists in the construction and arrangement of parts as hereinafter more fully set forth in the claims.

In the annexed drawings, illustrating the invention, Figure 1 is a side elevation of a pair of my improved door-hangers attached to a sliding door. Fig. 2 is an end elevation of door and hanger, the track being shown in section. Fig. 3 is a perspective view of my improved door-hanger. Fig. 4 is a perspective view of an adjustable guide.

Like letters of reference designate like parts.

The door-hanger comprises a bifurcated suspension rod or bar, A, in which is swiveled a frame, B, carrying a roller, C. This rod or suspension-bar is screw-threaded at its lower end for engagement with a nut, D, that is placed in a recess formed in the end of the door E. A similar recess is formed in each end of the door, the hangers being arranged as shown in Fig. 1.

It will be seen that by removing the plates F a tool may be inserted in the recesses at the ends of the door, so as to turn the nuts D, thereby raising or lowering the door, as required.

The rollers C C are supported on parallel tracks G G′, as shown in Fig. 2, one of these tracks, G′, being grooved on its under side to receive a guide-roller, H, that rotates on a pin attached to an arm, I, projecting from one side of the suspension rod or bar A, as shown in Figs. 2 and 3.

The lower edge of the door E is grooved for passage over a guide consisting of a plate, K, having on its upper face an oval pin or lug, L, that enters said groove. The plate K is provided with holes for the passage of screws, by which the guide is secured to the floor. It will be seen that by withdrawing one of these screws the plate may be turned upon the other screw as a pivot, so as to adjust the guide or vary the position of the lug L with relation to the groove in the door, thus compensating for wear of the groove and enabling it to be fitted to the varying diameter of the guide-lug. The guide L is thus capable of fitting grooves of varying width, as well as being adjusted to take up wear.

It will be observed that the door E is suspended by means of one roller at each end, this roller being of sufficient width to extend across the space between the tracks G G′ and rest on each. The roller C being journaled in a frame, B, having a swiveled connection with the suspension bar or rod A, it is obvious that the door E, attached to said rods, will always be suspended in a vertical position, and may be readily made to slide back and forth, even if the tracks G G′ should not be perfectly parallel or true one with the other. Owing to the shrinkage and swelling of such tracks, it frequently happens that one or both become more or less irregular, causing the rollers, which are often arranged in pairs, one on each track, to run unevenly, thereby subjecting the suspension devices to great strain and liability of injury, besides causing the door to operate or slide in an unsatisfactory manner. These difficulties are entirely obviated by the construction embodied in my improved door-hanger, which operates smoothly and effectively, whether the tracks are in good condition or not, being entirely independent of any ordinary defects in the construction or setting of such tracks.

By means of the arm I, attached to the suspension-bar A, and carrying a roller, H, that runs in a groove in the under side of one of the tracks, the suspension-bar is securely braced, and the roller-frame B is caused to turn freely

upon its pivotal connection with the suspension-bar A as the roller passes over any inequalities of the tracks, the suspension-bar thus serving, in conjunction with the guides F and L, to hold the door in a vertical position as it is moved back and forth.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A door-hanger consisting of the bifurcated suspension-rod A, the lower end of which is screw-threaded for attachment to the door, said rod having an arm, I, carrying a guide-roller, H, for entering a groove in the under side of one of the suspension-tracks, a frame, B, swiveled in the bifurcated end of the suspension-rod, and a roller, C, journaled in said frame, substantially as described.

2. The combination, with the door E, having a groove in its lower edge, of an adjustable guide consisting of the plate K, having an oval pin or lug, L, for engaging said groove, substantially as described.

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

WILLIAM GRACE.

Witnesses:
SAMUEL E. DALE,
JNO. H. JALLINGS.