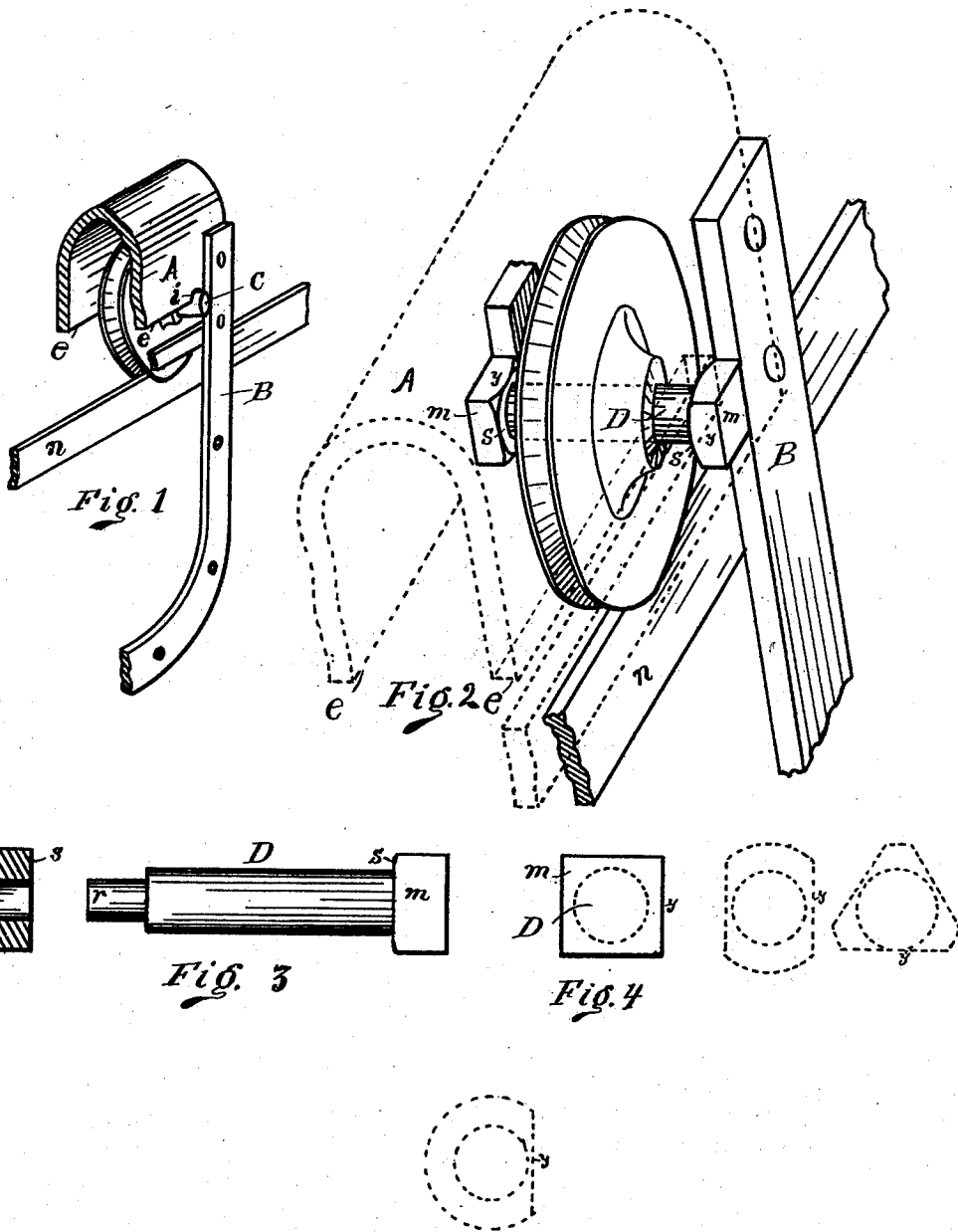


(No Model.)

W. CRONK.
DOOR HANGER.

No. 510,000.

Patented Dec. 5, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM CRONK, OF HAVANA, NEW YORK.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 510,000, dated December 5, 1893.

Application filed February 25, 1893. Serial No. 463,669. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CRONK, a citizen of the United States, residing at Havana, in the county of Schuylcr and State of New York, have invented certain new and useful Improvements in Door-Hangers, of which the following, with reference to the accompanying drawings, is 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.

My invention relates more especially to improvements in door hangers, and has the object of a better regulation for certain wearing surfaces, such as generally used in the mechanism with antifrictional running trucks, which improvements lead to a more perfect and lasting construction, and as applied to antifrictional hangers, add greatly to their life and durability, the same being more particularly described hereinafter, and pointed out in the claim.

I have chosen to illustrate my improvements in connection with a door hanger patented to me in the United States, on or about the 13th day of May, 1890, No. 427,838, and of which—

Figure 1 is a sectional perspective elevation. Fig. 2 is a perspective view of the same parts as Fig. 1 but with my improvements added thereto. Fig. 3 is a detailed longitudinal view, having a part in section of my newly improved axle, and as it appears previous to insertion in the wheel of the hanger, and Fig. 4 is an end view of said axle, the additional figurative dotted lines showing other numerous sided forms for the head of the axle, that may be considered modificational in a similar application.

In the following further description, like letters indicate like parts.

As component parts of my heretofore patented hanger A represents a plate bent over to cover the wheel, and so that its opposite longitudinal edges rest parallel upon the wheel's axle, forming the rider-bar faces *ee* along underneath which the axle C, which is solid with the wheel, rolls, and B represents the hanger arm secured to, and projecting angularly from the end or ends of said covering rider-bar.

With this illustration of the construction, shown in Fig. 1 it is seen how the axle may

travel up to the end of its rider-bar *e* or against the arm B, either of which may form a stop for the axle, previous to the finish or required run of the wheel on its track *n*, and especially does this occur when economy in price is exercised by the thoughtless purchaser for a hanger less in size than one of the proper size for the door to be hung with. The rigid axle of the wheel is thus driven up to the stop at the ends of the rider-bar provided therefor, and unable to roll farther, it is turned round and round in the same place, with the weight of the door suspended upon it, and shortly wearing upon the axle a fitting aperture *i* (see Fig. 1) up into the rider-bar, and finally out of which the axle will not roll, and the hanger to a certain extent of its usefulness is ruined. Now the result of my study to overcome this trouble by a better distribution of the wearing surfaces, which heretofore has come upon the rider-bar and axle at this point, is to prepare the axle D independently, as may be seen in Figs. 3 and 4, and so that the wheel may revolve loosely upon the central part of it, which is rounded to extend beyond the hub of the wheel each way sufficiently to travel upon the faces *ee* of the rider-bar, and also beyond these faces sufficiently to slightly enlarge and square or flatten its free ends into heads *mm* as shown, or may be provided with one or more flattened surfaces *y* fitted to abut squarely against the arm B of the hanger, or against equivalent stops of any kind that may be arranged for the purpose by which means the axle coming in contact at its flattened surface, with the weight of the door applied, will cease to roll, and the wearing frictional surfaces are transferred to the wheel's center which at this time must begin its revolution upon the axle.

With this new arrangement of mine, it will therefore be seen how an improper application of the hanger, as heretofore described, and which provides a less distance proportionately on the track faces of the rider-bar than should be with the required run of the wheel on its track by the door, is remedied and under such adverse application is brought to a minimum of durability.

One of the objective purposes of enlarging the axle D at its ends, as well as to flatten it,

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is to provide it with the shoulders *s s* which
come outside the faces of the rider-bar and
prevent lateral displacement of the axle while
rolling thereunder, and to secure said shoul-
5 ders and permit insertion of the axle through
the wheel, both ends, or one end of said axle
as shown, is decreased in size to form a lon-
gitudinally projecting stud *r* upon which the
enlarged part or head of the axle, provided
10 with a hole *o* through it to fit said stud after
being inserted through the wheel, is riveted
or may be otherwise secured thereon.

Having thus fully described my improve-

ments, what I claim, and wish to secure by
Letters Patent of the United States, is— 15

In a door hanger, in combination, the wheel,
the axle having its end or ends provided with
one or more flattened surfaces, and a stop at
the track ends of the rider-bar for meeting
the flattened part of said axle, substantially 20
as described.

WILLIAM CRONK.

Witnesses:

J. O. KILBOURN,
FRED SWICK.