(No Model.)

J. W. CONCHAR.

DOOR HANGER.

No. 491,081. Patented Feb. 7, 1893.

Fig. 1.

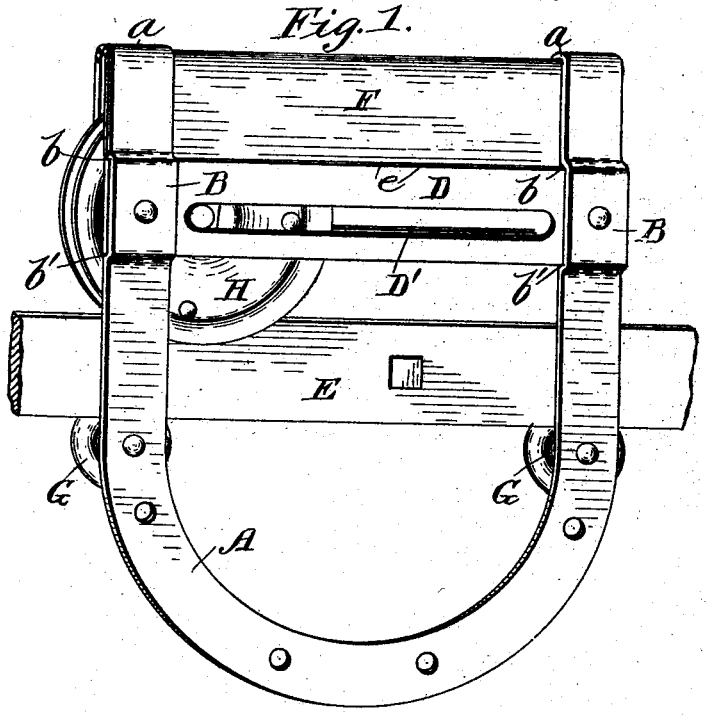


Fig. 2.

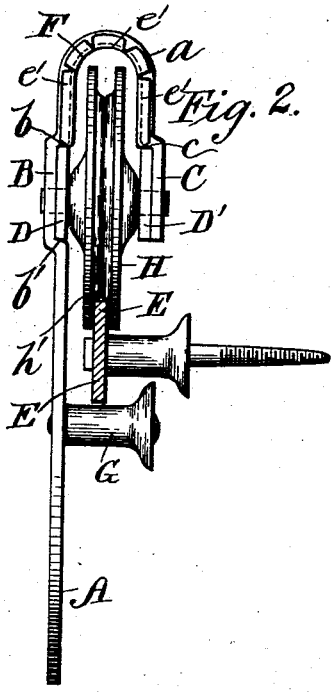


Fig. 3.

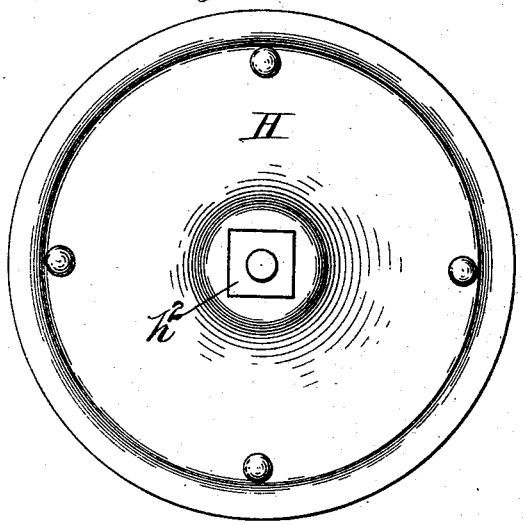
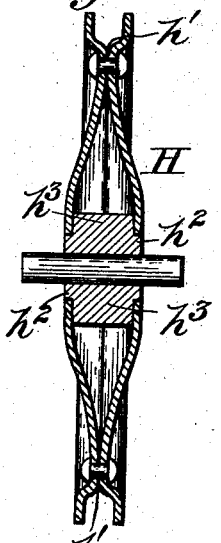


Fig. 4.



Witnesses
Severance
C. S. Lines

Inventor
James W. Conchar
by E. J. Fennock
his Attorney

UNITED STATES PATENT OFFICE.

JAMES W. CONCHAR, OF DUBUQUE, IOWA.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 491,081, dated February 7, 1893.

Application filed January 28, 1892. Serial No. 419,570. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. CONCHAR, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Door-Hangers; 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.

My invention relates to new and useful improvements in doorhangers, and consists in certain novel constructions and arrangements of parts, as will be hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 is a side elevation of the door hanger, showing the relation of the different parts, and Fig. 2 is an edge view of the same. Fig. 3 is a side elevation of a wheel which I prefer to use in connection with my hanger, and Fig. 4 a transverse section of the same.

A, in the drawings, represents the hanger frame made of malleable or wrought iron which is flat in cross section, and preferably U-shaped in form, and secured to the top of the door by screws, bolts or rivets in the usual manner. On its front face and near its top, the frame is provided on each of its limbs with an off set B forming two determined upper and lower square shoulders *b* and *b'* at its top the frame is secured or formed with a return bend *a* which extends downward opposite to, and for a short distance parallel with, the upper portion of the front of the frame, but about midway of its length it is formed on both of its limbs with an off set C having determined outwardly extending upper square shoulders *c* corresponding to the shoulder *b* of the offset B. Between the upper and lower shoulders *b* and *b'* of the off-set B, a square seat is formed on the inner face of the front limbs into which is closely fitted the slotted rider bar D and secured to the front limbs of the frame by suitable rivets or bolts, the said rider bar resting on the lower shoulders *b'*, and the shoulders *b* resting on the rider bar. The square shoulders *c* of the off set C rest on an opposite and parallel slotted rider bar D, which latter is riveted to the lower end of the recurved position *a*, as shown. By this construction the rivets only serve to unite the parts and the weight of the door, which is generally very great, is removed from the rivets to the frame proper and to the ordinary fixed rail E above the door.

On the inside of the upper portion of the frame and extending entirely across the same, I arrange a housing for protecting the wheel and its bearings from snow, ice and rain, the said housing being lettered F, and which is formed by bending a piece of sheet metal in approximately the form of the upper portion of the frame having its lower ends bent outward at *e* to form a flange which rests on the top surface of the rider bars and with its ends flattened down at *e'* against the outer ends of the front and rear limits of the frame, thereby firmly securing the housing in place on the frame and avoiding any liability of the lateral displacement of the same. The hanger frame A is provided with spools G which prevents the frame from bending should the stay roller give way and pressure be brought on the door, and they also effectually guard against the door being thrown from the track.

The wheel H, which is arranged as in ordinary construction, being journaled on opposite sides in the parallel slotted rider bars D D' and bearing with its periphery upon the stationary track bar E and is constructed as follows: The wheel consists of two disks separated throughout their central portions by being flared and gradually tapered outward and united by bolts or rivets near their outer peripheries. From the point *h'* where the two disks meet and are united, the outer edges of the two disks are flared outward in V shape to form the tread for the wheel, which shape of tread causes the least possible friction on the track and provides a seat or bearing for the track and stiffens the rim of the wheel to such an extent that any tendency to part in any direction is avoided. The centers of the disks being flared outward so stiffens and strengthens the wheel that all danger of crushing or yielding is overcome. The disks are provided with central square openings into which is closely fitted the square shoulders h^2 of the hub h^3, which prevents the disks when united from turning on the hub. Through the center of the hub a round journal is passed which extends out on either side of the wheel and has its bearing in the slots of the two

parallel rider bars when the wheel is applied in the frame. By forming the hub with square ends and extending hub entirely across the wheel, the center of the wheel is effectually prevented from being forced inward and the square ones engaging closely the square central passages in the disks provide a strong and safe device for turning the wheel on its axle and prevent wear of either hub or wheel, and also that the length of the hub materially strengthens the axle proper as only a small portion of said axle is without a bearing.

What I claim as my invention is:

In a door hanger, the combination of a frame consisting of recurved limbs having offsets provided in them which form approximately square shoulders, two parallel rider bars secured to the limbs between the shoulders by rivets or other suitable fastening means, whereby the weight of the suspended door is removed from the fastening devices which secure the rider bars to the frame and is transferred to the frame proper, substantially as described.

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

JAMES W. CONCHAR.

Witnesses:
JOHN E. REYNOLDSON,
M. M. CADY.