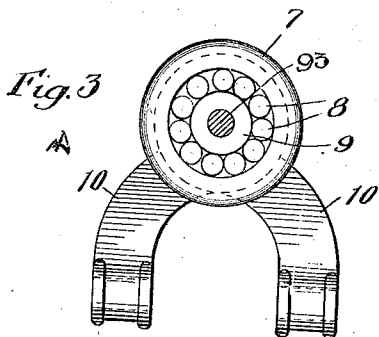
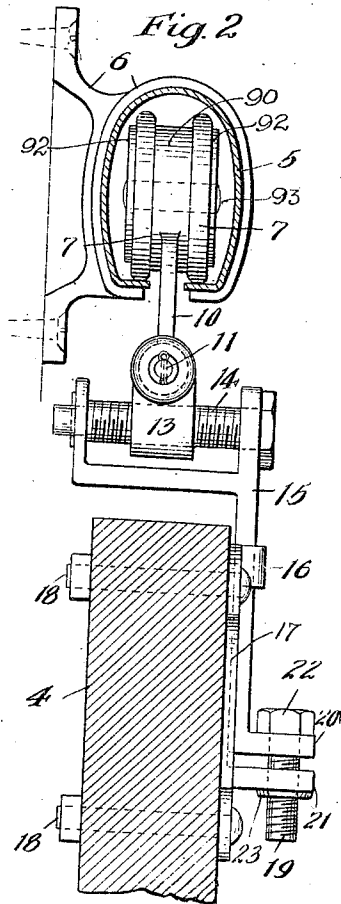
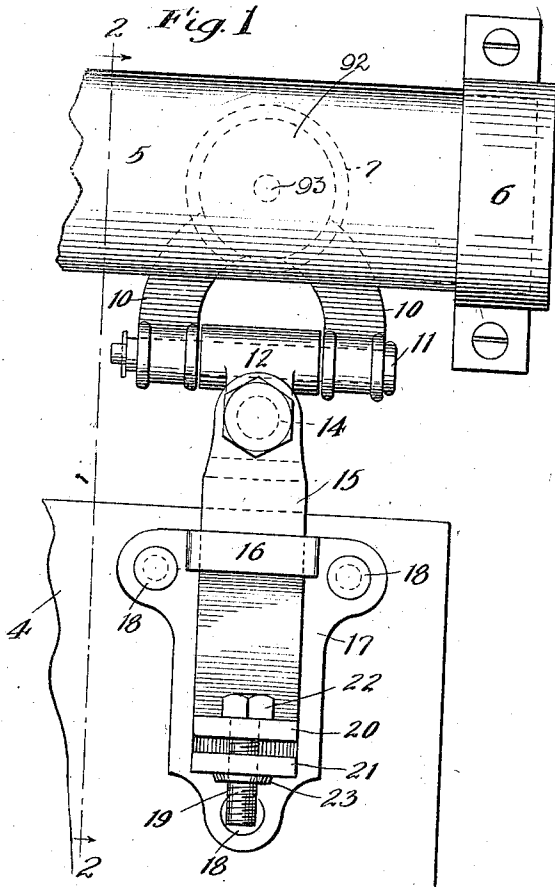


F. M. YENTZER.
BARN DOOR HANGER.
APPLICATION FILED DEC. 17, 1909.

963,975.

Patented July 12, 1910.



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UNITED STATES PATENT OFFICE.

FRANCIS M. YENTZER, OF OTTAWA, ILLINOIS, ASSIGNOR TO J. E. PORTER COMPANY,
OF OTTAWA, ILLINOIS, A CORPORATION OF ILLINOIS.

BARN-DOOR HANGER.

963,975.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed December 17, 1909. Serial No. 533,558.

To all whom it may concern:

Be it known that I, FRANCIS M. YENTZER, a citizen of the United States, residing in Ottawa, in the county of Lasalle and State of Illinois, have invented a new and useful Improvement in Barn-Door Hangers, of which the following is a specification.

This invention is intended to provide an improved construction of barn door hangers which shall be strong and durable and weather and bird proof.

The nature of the invention is fully developed in the specification and will be understood from the accompanying drawing when considered in connection with the specification which follows.

In said drawing Figure 1 is an elevation of the structure embodying the invention; Fig. 2 is a section on the line 2—2 of Fig. 1 and Fig. 3 is a partial vertical section showing the construction of the roller supports.

In said drawing 4 represents the door supported by suitable hangers from a tubular track 5. This track is elliptical in cross-section and supported from the wall of the barn by brackets 6 shaped to correspond with the track. This track may be applied either to the inside or the outside of the barn as preferred, and it has an arched formation at its top and sides which are carried inwardly toward the central or major axis of the curvature, and thereby exert a bracing effect tending to prevent the spreading of the free edges of said sides under a heavy load. Furthermore, the free edges of said sides are intumed at an angle to said sides to form horizontal flanges or bearings for the wheels 7 which support the door, but only to such an extent as to leave a longitudinal slot in the bottom of the track through which the supporting arm 10 secured to the wheeled central casting 90, may freely move. The wheels are formed of rings each inclosing and supported by a series of balls 8 traveling around the hubs 9 which project at each side of the central casting 90. The wheels are held in place by the enlarged center of the casting 90 upon their inner sides and by washers 92 on their outer sides, the washers being secured together by pin 93 headed at both ends and passing through them and the casting 90. The arms 10 support a pivot 11 passing through a sleeve 12 attached to a nut 13

through which a screw 14 passes. The ends of said screw are supported in a hanger 15 and this hanger is attached to the door as specified below. The screw 14 is of such length as to give all necessary freedom for the adjustment of the door to and from the barn and the pivot 11 gives the door freedom to be raised at the bottom to allow cattle and stock to pass under it and also to allow it to serve as an awning when that is desired.

The hanger 15 is confined by a strap 16 to a plate 17 which is made fast to the door by bolts 18. Said hanger is also vertically adjustable on the said plate 17 by the screw 19 which passes through a projecting lip 20 on the hanger and also through a projecting lip 21 on the plate 17. The screw also carries a nut 22 above said lip 21 so that by turning the screw in one direction the door may be lifted, and by turning it in the other direction the door may be lowered by the nut 23. This enables the user to keep the door free from interference with ice and snow in winter.

To render the tubular track bird proof as well as weather proof, it is only necessary to close the end openings of the track as is obvious.

The rings which form the peripheries of the wheels 7 are made of case hardened steel and their outer surfaces are rounded as plainly illustrated. By this feature and the ball bearings the wheels are rendered almost frictionless in operation so that the doors carried by them are always easy in operation.

The shape of the rail is such that it cannot turn or get out of position in the supporting brackets, and no other means to prevent turning or twisting are needed.

I claim—

1. As an article of manufacture, a door hanger track formed from sheet metal and comprising in its construction a tubular body having an arched top and depending curved sides carried inwardly toward the vertical or major axis of the curvature, the free edges of said sides bent up and inwardly at a right angle thereto to form horizontal flanges or ways and leave a slot therebetween.

2. In a door hanger the combination with a tubular track, having an arched top and

depending curved sides carried inwardly toward the vertical or major axis of the curvature, the free edges of said sides bent up at a right angle thereto to form horizontal
5 flanges or ways and a slot therebetween, of a roller carriage mounted on said track and adapted to travel on said flanges, and a door

operatively connected to said carriage to be movably supported thereby on said track.

FRANCIS M. YENTZER.

Witnesses:

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