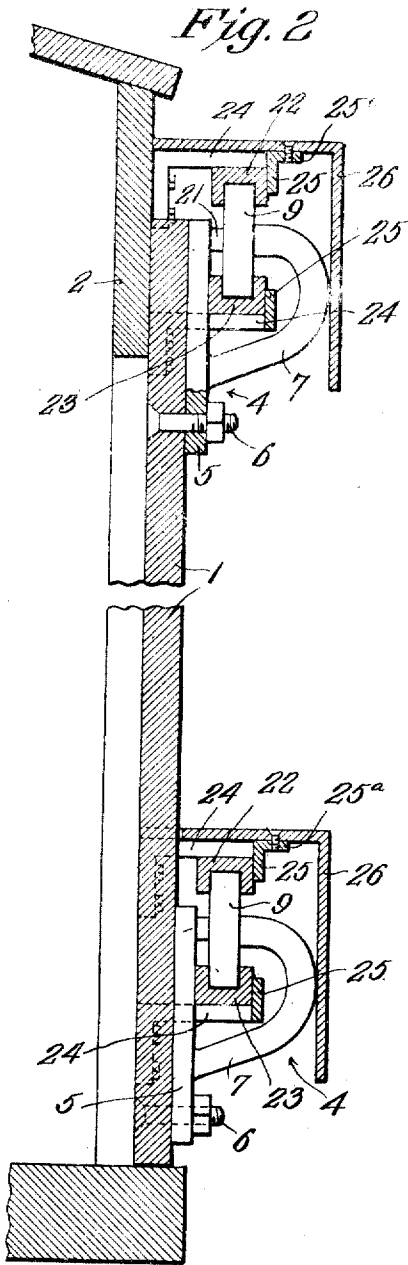


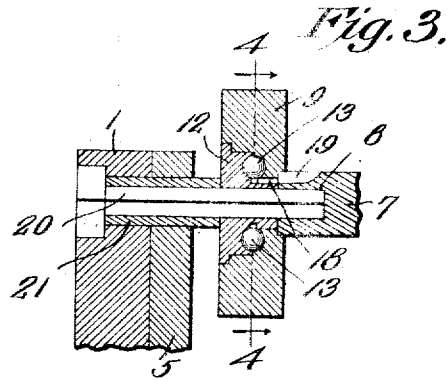
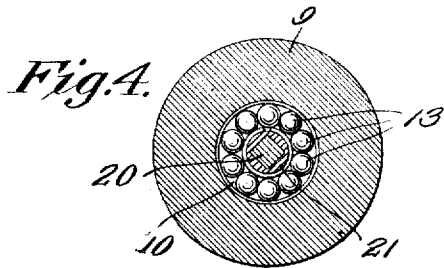
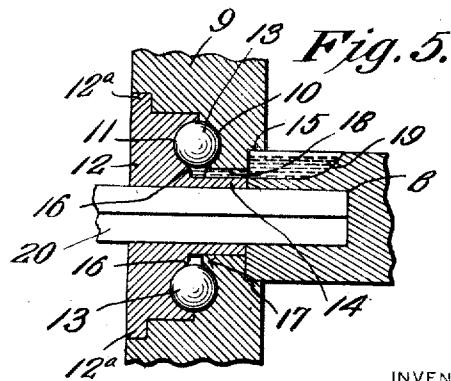
1,274,490.

Patented Aug. 6, 1918.
2 SHEETS - SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

DONALD J. WYATT, OF FREMONT, NEBRASKA.

CAR-DOOR HANGER.

1,274,490.

Specification of Letters Patent.

Patented Aug. 6, 1918.

Application filed April 3, 1917. Serial No. 159,451.

To all whom it may concern:

Be it known that I, DONALD J. WYATT, a citizen of the United States, residing at Fremont, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Car-Door Hangers, of which the following is a specification.

My invention relates to improvements in car doors, and it consists in the constructions, combinations, and arrangements herein described and claimed.

An object of my invention is to provide a car door including as one of the essential elements, an improved hanger and shield whereby the stability of the door upon the car and the freedom of danger of the entrance of foreign elements to the moving parts of the hanger, is assured.

Another object of the invention is to provide a car door including an improved hanger having means whereby the journals of the hanger sheaves are continuously lubricated.

Other objects and advantages will appear from the following specification, reference being had to the accompanying drawings in which

Figure 1 is a side elevation of a portion of a car showing the door in a closed position.

Fig. 2 is a vertical section on the line 2-2 of Fig. 1.

Fig. 3 is an enlarged section of one of the hanger sheaves.

Fig. 4 is a cross section on the line 4-4 of Fig. 3, and

Fig. 5 is an enlarged detail section of a portion of one of the hangers showing how the lubricant is applied to the roller bearings of the hanger sheave.

In carrying out my invention a car door 1 is movably disposed upon the side of a car 2 and is adapted to close the doorway 3. In the present embodiment the car 2 is of the ordinary box-car type but it is to be understood that the application of the door 1 is not limited to this use but may be applied to any kindred use as for instance upon a barn.

The door 1 is supported by hangers 4 which include the base members 5 having suitable openings wherethrough securing bolts 6 are passed to obtain the fastening of the hangers 4 on to the door 1. It should

be understood that the construction of each of the hangers 4 is identical and the description of one will suffice for all.

The support 5 includes an outwardly extending and upwardly curved goose-neck 7 having provided in its end a recess 8. The end of the goose-neck 7 terminates short of the base 5 as will be evident from Fig. 3, the obvious purpose of the intervening space being to permit the insertion of the hanger sheave 9 and the assemblage of the supporting elements therefor.

The sheave 9 has a semi-circular ball-race 10 which with the complementary ball-race 11 of the bearing cone 12 supports a plurality of ball-bearings 13. The bearing cone 12 includes a sleeve 14 which is of such a length as to terminate evenly with the base of an annular recess 15 in the outer surface of the sheave 9.

The recess 15 receives the end of the goose-neck 7 as clearly shown in Fig. 5 and acts as a bearing support for the sheave 9 in addition to the support offered by the bearings 13. Adjacent shoulders 16 and 17 respectively of the bearing cone 12 and sheave 9 are rounded as indicated in Fig. 5 forming an annular groove upon which the ball-bearings 13 rest and upon which the weight of the door 1 principally rests.

A lateral channel 18 communicating with the annular groove formed by the rounded portions 16 and 17, terminates at the base of the recess 15 where a lubricant is delivered thereto from a well 19 in the upper surface of the goose-neck 7.

A square bolt 20 is passed through the car door 1, the base 5, of the hanger 4 and enters the recess 8 in the goose-neck 7. A collar 21 positioned upon the bolt 20 forms a spacing member between the head of the bolt and the rear surface of the bearing cone 12. The head of the bolt 20 being seated in a square recess at the back of the car door 1, prevents turning of the bolt and consequently the bearing cone 12 is held rigidly in position. It will also be observed that the bearing cone 12 has an additional annular flange 12^a which enters a similarly formed recess in the rear surface of the sheave 9.

Tracks 22 and 23 are provided for the support and guidance of the door 1 and sheaves 9. The tracks 22 and 23 are supported by

brackets 24 at the extremities of the car 2. It will thus be understood that no intermediate supports of any kind are provided for the tracks 22 and 23 thereby offering no obstruction to the free movement of the door 1 over the surface of the car.

Bracing strips 25 also secured to the brackets 24 and secured at intermediate points to the respective tracks 22 and 23, impart sufficient rigidity to the tracks to prevent buckling thereof. It will be observed that the bracing strips 25 attached to the upper tracks 22 have right angularly turned flanges 25^a upon which shields 26 are secured. These shields 26 extend downwardly over the hangers 4 and effectively cover the hangers so that foreign elements such as dust and moisture may not collect upon the movable parts of the hanger.

An abutment strip 27 disposed in such a manner as to receive the adjacent edge of the door 1 is arranged at one side of the doorway 3 as shown in Fig. 1. A hasp 28 and staple 29 together with the lock 30 form the securing means for the door 1. An arcuate support 31 receives the hasp when in its freed position and prevents the hasp from dangling upon its fulcrum when the door is open.

While the operation of the door is thought to be obvious, a résumé thereof is thought to be of advantage. In assembling the hanger 4, the sheave 9 is applied to the end of the goose-neck 7 so that it rests in the recess 15. The bearing cone 12 having the ball-bearings 13 is then moved into position when upon applying the bolt 20 and the collar 21, the hanger may be secured upon the car door. The engagement of the door 1 with the side of the car will effectively prevent the bolt 20 from moving outwardly out of engagement with the recess 8 in the goose-neck 7.

The lubricant well 19 will feed the lubricant continuously to the channel 18 and in turn to the ball-bearings 13. The brace strips 25 prevent the sagging of the tracks 22 and 23 and an easy movement of the door is obtained requiring little physical effort to open and close the door-way 3.

While the construction and arrangement of the device is that of a generally preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims.

I claim:—

1. In a device of the class described, the combination of a base member, an outwardly extending upwardly curved goose-neck having an inwardly extending upper end, said goose-neck being formed upon said base member and having its upper end spaced from said base member, said base member having an opening in alinement with the end of said goose-neck, a bolt passing through the opening in said base member and engaging the end of said goose-neck, a collar carried upon said bolt, a core carried by said bolt and being held against shifting in one direction by said collar, a sheave rotatably mounted upon the end of said neck and upon said core, whereby the sheave will be held against displacement.

2. In a device of the class described, the combination of a base member, an outwardly extending upwardly curved goose-neck having an inwardly extending upper end, said goose-neck being formed upon said base member and having its upper end spaced from said base member, said base member having an opening in alinement with the spaced end of said goose-neck, a squared bolt passing through the opening in said base member and engaging the end of said goose-neck, a core positioned upon said squared bolt and fitting adjacent the end of said goose-neck, a collar carried upon said bolt and bearing upon said core for holding the core against shifting, a sheave rotatably mounted upon said core and the end of said goose-neck, and anti-friction means interposed between said core and said sheave.

3. In a device of the class described, the combination of a base member, a goose-neck formed upon said base member, a core having a sleeve bearing upon said goose-neck, means for supporting said core, said goose-neck having a well in the top portion thereof, said sleeve having a channel communicating with said well, a sheave rotatably mounted upon said core and said goose-neck, whereby lubricant may be placed within the well to pass through said channel and lubricate the inner portions of said sheave.

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

DONALD J. WYATT.

Witnesses:

LESLIE PETERSON,

HORACE J. RATHBUN.