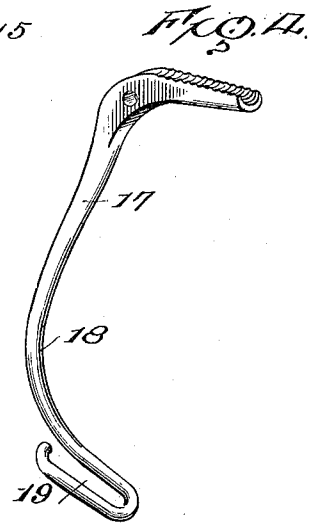
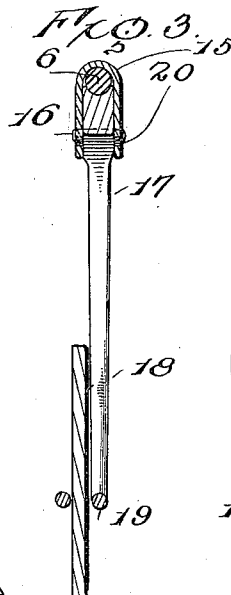
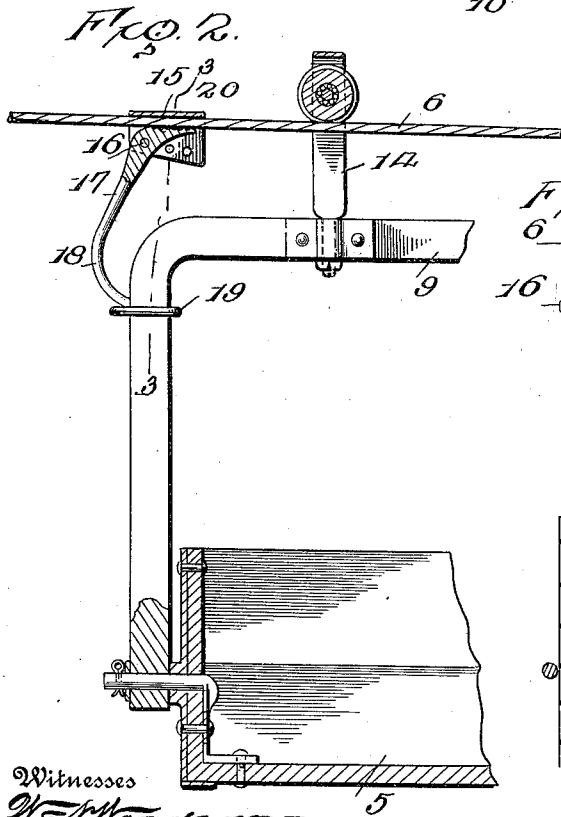


1,004,809.



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RETAINING DEVICE FOR OVERHEAD CARRIERS.

1,004,809.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Original application filed September 16, 1909, Serial No. 518,096. Divided and this application filed May 20, 1910. Serial No. 562,548.

To all whom it may concern:

Be it known that I, ADOLPHUS P. NELSON, citizen of the United States, residing at Grantsburg, in the county of Burnett and State of Wisconsin, have invented certain new and useful Improvements in Retaining Devices for Overhead Carriers, of which the following is a specification.

This invention relates to overhead carriers of that general class shown and described in my pending application filed in the United States Patent Office on the 16th day of September 1909, under Serial No. 518,096, and of which the present application forms a division.

The object of the invention is to provide a novel form of stop dog adapted to engage the carrier and prevent longitudinal movement thereof during the loading operation.

A further object is to provide a stop dog, the construction of which is such that the dog may be moved longitudinally of the suspension cable and adjusted in its casing or housing so as to grip cables of different cross sectional diameters.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of an overhead carrier provided with a stop dog constructed in accordance with my invention; Fig. 2 is a detail vertical sectional view of one end of the carrier, showing the construction of the stop dog; Fig. 3 is a detail vertical sectional view taken on the line 3-3 of Fig. 2; Fig. 4 is a perspective view of the stop dog removed from the casing.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The carrier 5 is mounted for travel on an overhead track 6, the latter being preferably in the form of a cable having terminal hooks

7 secured thereto and provided with threaded portions which extend through suitable posts or standards 8 for engagement with clamping nuts so that by adjusting the hooks 7, the tension of the track or cable may be regulated at will.

Suspended from the overhead track 6, is a substantially U-shaped frame 9, the opposite ends of which are pivotally connected with the carrier or receptacle 5. Secured to the exterior face of one of the end walls of the receptacle or carrier 5, is a curved plate 10 provided with an opening adapted to receive the adjacent end of a rod 11, the latter serving to hold the receptacle 5 normally in position to retain the load.

Pivotally mounted on the upper end of the locking rod 11, is a trip lever 12 having its intermediate portion pivotally mounted on the frame 9 and its free end curved upwardly and laterally beyond the track or cable 6 for engagement with a trip dog 13.

The receptacle or carrier 5 is suspended from the cable 6 by one or more hangers 14 having their lower ends swiveled in the frame 9 and their upper ends provided with rollers which bear against the track, as shown. As a means for preventing longitudinal movement of the receptacle 5 during the loading operation, there is provided a stop device, the latter being preferably in the form of a substantially U-shaped casing 15 which embraces the cable 6 and in which is pivotally mounted at 16 a stop dog 17 adapted to engage said cable. The free end of the dog 17 is extended downwardly to form a lever 18 having its terminal portion bent laterally to form a horizontally disposed hook 19 adapted to engage the adjacent end wall of the frame 9, the adjacent end of said frame, by engagement with the hook 19, serving to tilt the dog on its pivotal axis so that the dog will grip the cable and thus prevent longitudinal movement of the receptacle 5 on the cable 6.

In operation, the trip dog 13 is adjusted longitudinally of the track or cable to the point where it is desired to dump the material. The receptacle 5 is then loaded, and after being released from the stop device or dog 17 is caused to travel in the direction of the trip dog 13. As the receptacle 5 approaches the dog 13, the curved face of the trip lever 12 will engage said dog and cause the latter to firmly grip the cable and at the

same time tilt the trip lever so as to exert a longitudinal pull on the locking rod 11 and release the latter from the aperture in the plate 10, thus permitting the receptacle 5 to swing on its pivotal axis and effect the dumping of the load. If the load is banked on one side of the receptacle 5, the latter, when dumped, will make a complete turn and automatically right itself so as to cause the active end of the locking rod to enter the opening or aperture in said plate. Owing to the sag in the center of the cable, the opposite ends thereof have a slight rise or inclination in the direction of the adjacent supporting posts 8, the trip dog 13 being suspended from the cable near one supporting post, and the stop dog 17 being suspended from said cable near the other post. The momentum of the carriage, incident to the impact of the trip lever with the dog 13, and the slight rise in the cable at this point, will cause the carriage to travel in the direction of the stop dog 17. As the carriage approaches the dog 17, the frame 9 will strike the closed end of the hook 19 a glancing blow so as to swing the lever 18 laterally and allow the casing to travel on the cable until the motion of the carriage is arrested by contact of the roller on the adjacent hanger 14 with the casing 20, when the dip or inclination of the cable will direct the carriage in the opposite direction, thus causing the frame 9 to enter the open end of the hook 19 and in which position, it will be held against longitudinal movement during the loading operation. In order to release the carriage, it is merely necessary to move the latter in the direction of the casing 20 until the frame 9 is disengaged from the hook when the carriage may be directed to the point of discharge by imparting a slight longitudinal movement thereto. Attention is here called to the fact that the U-shaped casing 15 of the stop dog is formed with a plurality of openings 20 so that by inserting the pivot pin 16 in the different openings in the casing, said dog may be adjusted with respect to the top of the casing so as to effectually grip cables of different cross sectional diameters.

Having thus described the invention, what is claimed as new is:

1. In an apparatus of the class described,

a track, a pivoted load carrier, and a stop dog slidably mounted on the track and having a depending hooked portion adapted to embrace the suspension device of the carrier for preventing longitudinal movement thereof during the loading operation, said stop dog being actuated by engagement with the carrier to grip the track. 55

2. In an apparatus of the class described, an overhead track, a carrier suspended from the track, a casing mounted on said track, and a stop dog pivotally mounted in the casing and having one end thereof extended to form a depending lever terminating in an angularly disposed hook adapted to embrace a portion of the carrier for preventing longitudinal movement thereof during the loading operation. 65

3. In an apparatus of the class described, an overhead track, a carrier suspended from the track, a casing mounted on the track and having a plurality of spaced perforations formed therein, a dog having its upper end disposed in the casing and its lower end extended to form a depending lever terminating in a horizontally disposed hook adapted to embrace a portion of the carrier for preventing longitudinal movement thereof during the loading operation, and a pivot pin extending through one of the perforations in the casing and said dog and forming the pivotal axis of the latter. 80

4. In an apparatus of the class described, an overhead track, a carrier suspended from the track, an inverted U-shaped casing embracing the track, a stop dog pivotally mounted in the casing and having its pivoted end extended laterally to form a head adapted to grip the track, the lower end of the stop dog being extended downwardly to form a lever, the free end of which is bent upon itself and extended rearwardly in a horizontal plane to form a hook adapted to embrace a portion of the carrier for preventing longitudinal movement of said carrier during the loading operation. 85

In testimony whereof, I affix my signature in presence of two witnesses. 100

ADOLPHUS P. NELSON. [L. s.]

Witnesses:

ROBERT CASSEL,
L. R. ROBERTS.