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1,959,985

SLING SUCH AS IS USED IN THE HANDLING OF SUGAR CANE

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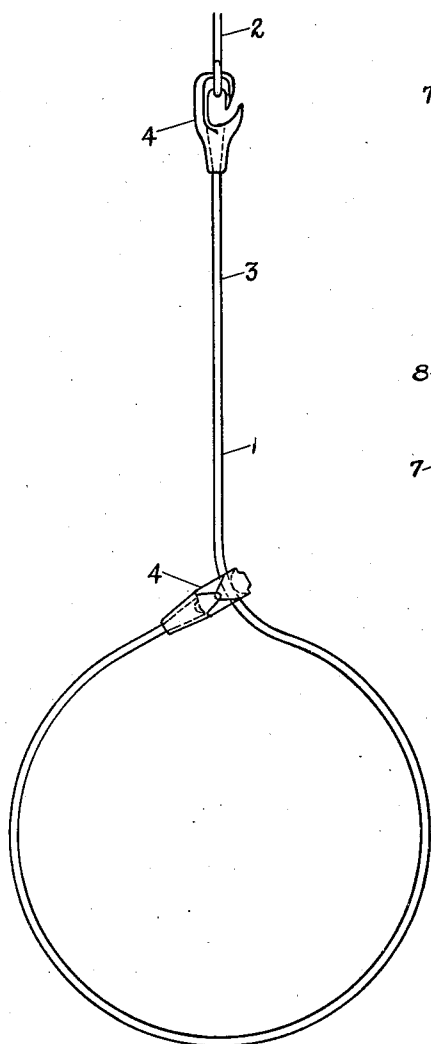


Fig. 1

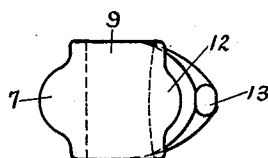


Fig. 4

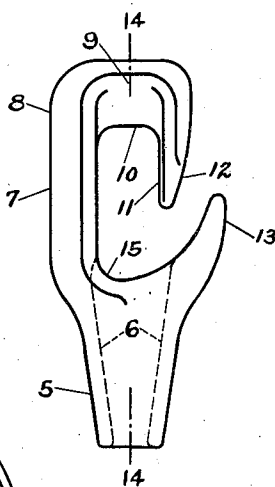


Fig. 2

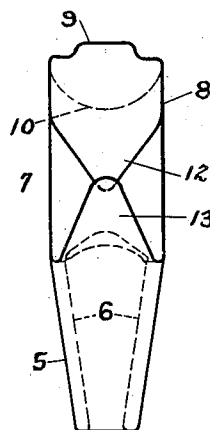


Fig. 3

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4 Claims. (Cl. 24—230.5)

My invention relates to a material handling sling comprising a flexible cable having hook shaped members secured to the free ends thereof and more particularly to the type of hooks employed in slings for the handling of sugar cane.

An object of the invention is the provision of such a hook having a bearing portion adapted for engaging either the hook of the hoisting means or the cable portion of the sling.

Another object of the invention is to provide the hook with means for obtaining a rope preserving straight line pull on the cable when supporting a bundle of cane, thereby eliminating any abrupt bends which cause the breaking of the cable.

Another object is to provide a hook having a rounded cable bearing portion, thereby avoiding injury to the cable and a cable retaining pocket oppositely disposed from said bearing portion.

A further object of the invention is the provision of such a hook which is free from projecting surfaces so as to be freely removable from beneath the cane when the cane bundles are loaded into a railway car or any other suitable receptacle. These and other objects will become apparent, to those skilled in the art, from the specification and drawing.

Referring now to the drawing which forms a part of the present description, Fig. 1 shows, suspended from a hoisting hook, a sling consisting of a wire cable and one of my improved hooks at each extremity thereof; Fig. 2 shows a front elevation of the hook; Fig. 3 shows a side elevation of the hook; Fig. 4 shows a plan view of the hook shown in Fig. 2.

Referring now in detail to the drawing where like reference characters refer to like parts, the sling 1 is shown suspended from an open hoisting hook 2, said sling consisting of a wire cable 3 with one of my improved hooks 4 securely fastened to each end thereof, one hook being in engagement with the hoisting hook and the other engaging the wire cable to form a loop whereby a bundle of sugar cane may be embraced.

The hook embodies a cable receiving portion or tubular base 5 having the basket portion 6 conically shaped so that after the wire cable is inserted into the basket portion it may be zined in place, thereby securing the hook to the cable. The shaft 7 of the cable retaining means 8 diverging from one side of the tubular base is substantially parallel to the pulling line 14—14 of the hook with the shank 9 perpendicularly disposed at its free end. The bearing surface 10 of the shank 9 is convexed in cross section so

that when the surface 10 is in engagement with the cable such as is the case when a bundle of cane is raised by the hoisting hook and the improved hook 4 slides along the cable as the weight of the bundle tightens the sling there will be no projecting sharp edges on the bearing surface 10 to injure the cable. The surface 11 of the lip 12 projecting upwardly from the shank 9 is parallel to the cable engaging surface of the shaft 7, thereby forming with its component parts shank 9 and shaft 7, a cable retainer.

It will be noted that the center of the shank 9 and the longitudinal center of the tubular base 5 lie in the same vertical plane, thereby obtaining a rope preserving straight line pull throughout the sling, this advantage being embodied in the hook to prevent injury to the cable at the point where it enters the tubular base when the sling is in tension.

The guard 13 diverging from the side of the tubular base, opposite the shaft 7, has its inner surface arcuated in order that a loosened cable may be deflected into the cable retaining portion of the hook. The free end of guard 13 projects downwardly over the free end of the lip 12, in spaced relation thereto, to permit the passage of the cable when forming a loop.

A further means for retaining the cable in engagement with the hook when forming a loop as in Fig. 1 is the formation of the inner surface of the guard 13 where it joins with the base 5 and shaft 7. It will be noted that the inner face of the guard 13 slopes inwardly and downwardly so as to deflect the cable towards the shaft 7 and the surface 15 forms a pocket to receive the cable. When a bundle of cane is lowered into a receptacle and the cable becomes sufficiently slackened it will come to rest in the pocket 15 so that when the cable is again placed under tension, said cable will follow the inner surface of the shaft 7 until it comes in contact with the bearing 10 of shank 9.

The shoulders formed on the tubular base to strengthen the cable retaining means and the guard are arcuated and the free end of the lip lies within the free end of the guard, thereby affording no obstruction to disturb the cane and to facilitate the comparatively free passage of the hook when pulled from under a bundle of cane which has been placed into a receptacle.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In a hook for a sling adapted to handle assembled cargo such as sugar cane and other ma-

materials, in combination, a base having oppositely disposed portions extending therefrom serving respectively as a cable retainer and guard, the cable retainer comprising a shaft portion having one end connected to the base, the opposite end flanged to overlie the base and ending in a lip disposed towards the base, the guard overlying said lip in spaced relation thereto, the inner face of said guard being inclined downwardly and inwardly of the hook and across the base, inwardly of the medial line of the base, to join with said shaft.

2. In a cargo sling having duplicate hooks at opposite ends thereof, each hook having in combination, a hollow cable attaching base, a cable engaging portion disposed on a medial line through the base and in spaced relation to the base, a shaft portion connecting one side of the cable engaging portion to one side of the base, a lip on the opposite side of the cable engaging portion and directed towards the base, a guard extending from one side of the base, overlying the lip and in spaced relation thereto, the inner face of the guard sloping downwardly and inwardly to join with the base inwardly of the said medial line.

3. In a sling hook of the character described, a base portion for connection to the sling, a shaft

portion extending from one side of the base, a re-entrant flange on the shaft portion and spaced from the base, smooth oppositely disposed walls on the shaft and flange forming a sling retaining portion, said portion being disposed on the extension of a medial line through the base portion, a guard extending from the base, opposite from the shaft portion, and overlying said re-entrant flange in spaced relation thereto, the inner face of the guard sloping downwardly and inwardly of the guard, across the said medial line of the base portion, and an arcuate connection between the inner face of the guard and the shaft.

4. In a cargo sling hook, in combination, a cable securing base portion, a cable bearing portion, a relatively straight wall shaft portion connecting one side of said base to the cable bearing portion, a lip on said bearing portion spaced from said shaft portion and directed towards said base, a guard on said base, opposite said shaft portion, extending toward said bearing portion and overlying said lip, the inner face of said guard having a downwardly and inwardly directed surface extending across the base to adjacent the shaft wall and joined with said shaft wall to form a pocket.

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30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150