July 30, 1929. G. O. GRINDAHL ET AL 1,722,329

HAY SLING

Filed April 14, 1928

Fig. 1.

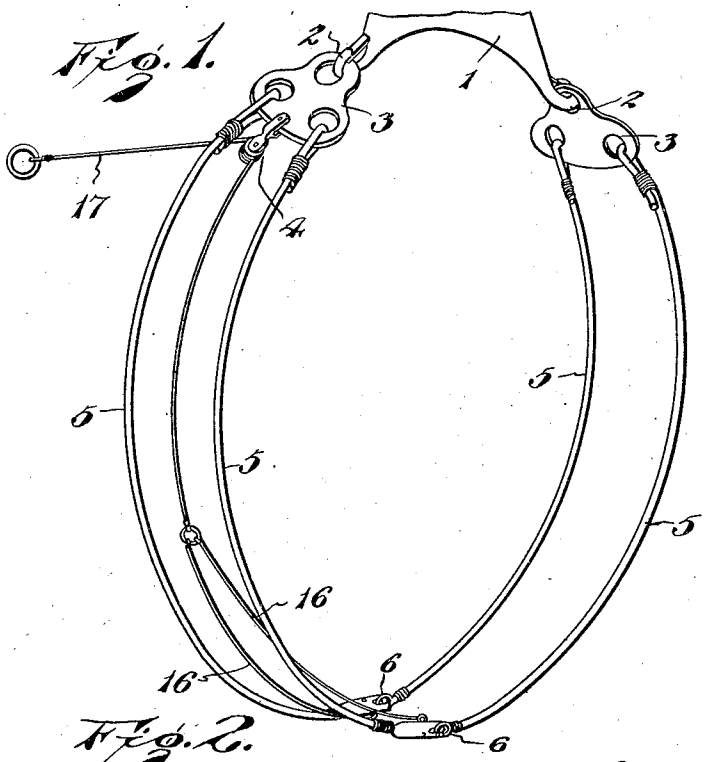


Fig. 2.

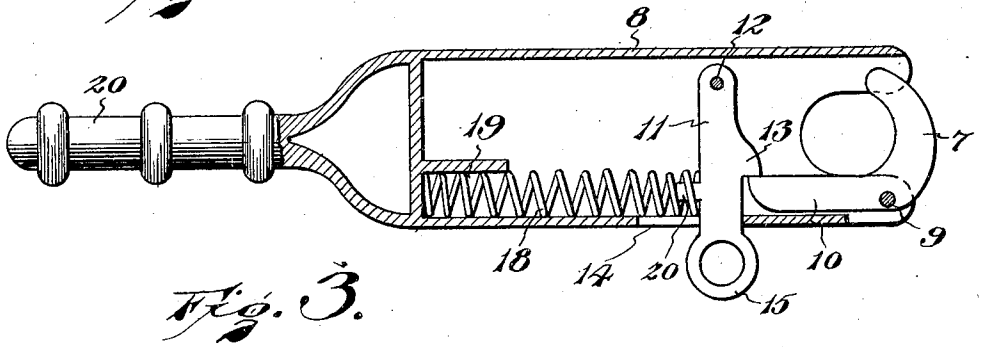
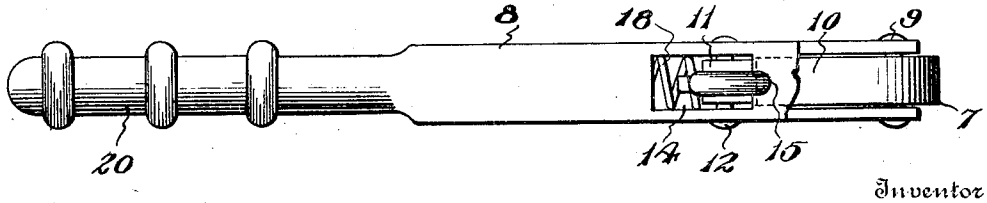


Fig. 3.



Inventor
G. O. Grindahl
H. T. Thompson

By Lacey & Lacey, Attorneys

Patented July 30, 1929. 1,722,329

UNITED STATES PATENT OFFICE.

GILMAN O. GRINDAHL, OF BELGRADE, AND HELMER T. THOMPSON, OF STAPLES, MINNESOTA.

HAY SLING.

Application filed April 14, 1928. Serial No. 270,136.

This invention relates to means for handling fibrous material, such as hay, straw, cornstalks, and the like, and contemplates a sling and a trip, the sling being constructed to readily and quickly clear the load when tripped without causing any entanglement of the material and thereby increasing the hazard from fire.

The invention provides a trip which is simple in construction, positive in action and not liable to get out of order, hence efficient and reliable.

While the drawing illustrates a preferred embodiment of the invention, it is to be understood that in adapting the means to meet specific needs and requirements, the design may be varied and changes in the minor details of construction may be resorted to within the scope of the invention as claimed, without departing from the spirit thereof.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and the drawing hereto attached, in which,—

Figure 1 is a perspective view of a hay sling embodying the invention.

Figure 2 is an enlarged sectional view of the trip.

Figure 3 is a view of the trip as seen from the bottom side, a portion of the casing being broken away.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawing by like reference characters.

The numeral 1 denotes a carrier, such as generally provided for use in connection with hay slings. In the present instance the carrier 1 is provided with snap hooks 2 for detachable connection therewith of the sling. The snap hooks 2 are separated and that portion of the carrier therebetween is concave to conform to the bunch of hay or other material to be handled. A plate 3 is connected to each of the snap hooks 2 and receives an end portion of the sling which is connected thereto. A sheave pulley 4 is connected to one of the plates 3 and operating cord 17 passes therearound.

The sling is of sectional formation, the sections being of equal length and separable at their lower ends which are adapted to swing apart and release the load. Each of the sections includes two strands or flexible elements 5 which are connected at their upper ends to the respective plates 3 and which are detachably connected at their lower ends by separable fastening means adapted to be tripped from a convenient or determinate point. The strands or flexible elements 5 may consists of metal or fabric and be of any preferred construction. The upper ends of the strands 5 are engaged with openings formed in the plates 3.

The lower ends of the strands of one section terminate in eyes 6 which engage hooks 7 provided at the lower ends of the strands comprising the companion section. The hooks 7 are pivoted to a casing 8, as indicated at 9, and are formed with a shank 10 which coacts with a latch 11 pivoted at one end within the casing 8, as indicated at 12. The pivoted latch 11 is formed with a projection 13 which is adapted to engage over the shank 10 and retain the hook 7 in operative position. The latch 11 projects through a slot 14 formed in a side of the casing 8 and terminates in an eye 15 to which a cord 16 is attached. The cords 16 from the two latches are connected to the operating cord 17, as indicated most clearly in Figure 1 of the drawings. The end of the casing 8 receiving the hook 7 is depressed to provide an opening for reception of the eye 6 when the latter is engaged with the hook 7. The hook 7 extends across the open side of the depression and is retained in engagement with the eye 6 by the projection 13 of the latch 11 engaged over the inner or rear end of the shank 10. An open coil spring 18 disposed within the casing 8 exerts an outward pressure upon the latch 11 to hold it in engagement with the shank 10. This spring is located at the side of the casing 8 in which the slot 14 is formed, and its rear end is seated in a pocket 19, whereas its forward end engages a tip 20 projecting from the rear side of the latch 11. In this manner the spring 18 is retained in place. The slot 14 determines the movement of the latch 11. The casing 8 is flat and is formed with a coupling end 20 to which strands of the sling are connected. The side of the projection 13 and the end of the shank 10 are beveled to admit of the shank riding upon the projection 13 when restoring the hook 7 to operable position, after being engaged with the eye 6 of the strand comprising a section of the sling.

When the invention is in active operation

the hay or analogous material is embraced by the sections comprising the sling, and when the load reaches the predetermined point it is released and discharged by tripping the latches 11. This is effected by a pull upon the operating cord 17. The sections of the sling being relatively short fly apart at their lower ends and admit of ready detachment of the sling from the hay without causing entanglement thereof. As a result, the hay may be elevated to within a short distance of the roof of a barn or other structure in which the material may be stored.

Having thus described the invention, we claim:

1. Fastening means for a hay sling, the same including a casing, a hook pivoted to the casing, a shank projecting into the casing from the pivotal end of the hook, a latch pivoted within the casing and adapted to engage the shank and hold the hook in operative position, said latch projecting through an opening formed in a side of the casing to admit of an operating cord being attached thereto, and a spring within the casing and normally urging the latch into engagement with the shank of the hook.

2. A hay sling comprising similar sections of equal length, a carrier, plates at the upper ends of the sections connected to the carrier, each of the sections comprising two strands, and the strands of one section terminating at their lower ends in eyes, fastenings at the lower ends of the strands comprising the other section and including pivoted hooks engageable with the eyes of the companion strand, pivoted latches coacting with the hooks to retain them in operative position, and an operating cord having connection with the latches to trip them and effect release of the hooks, whereby the sections comprising the sling fly apart at their lower ends.

3. In a hay sling, a carrier provided with spaced snap hooks, plates coupled to the snap hooks, strands attached at their upper ends to the plates, and fastenings connected to the lower ends of the strands comprising one of the sections of the sling, each of the fastenings including a casing, a hook pivoted at one end to the casing, a shank projecting from the pivotal end of the hook, a spring actuated pivoted latch adapted to coact with the shank and hold the hook in operative position, and an operating cord for tripping the latch.

In testimony whereof we affix our signatures.

GILMAN O. GRINDAHL.
HELMER T. THOMPSON.