Dec. 6, 1927. 1,651,607

H. H. KURTZ

MATERIAL HANDLING DEVICE

Filed Dec. 7, 1925

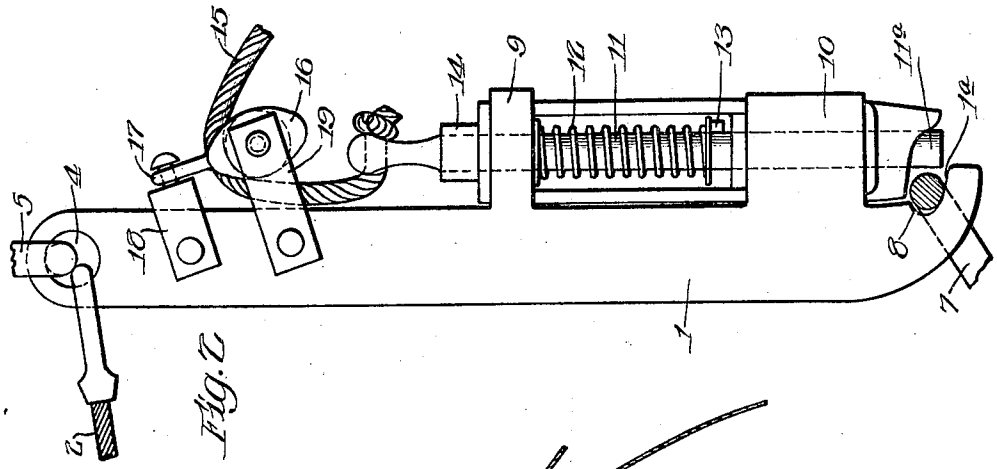


Fig. 2

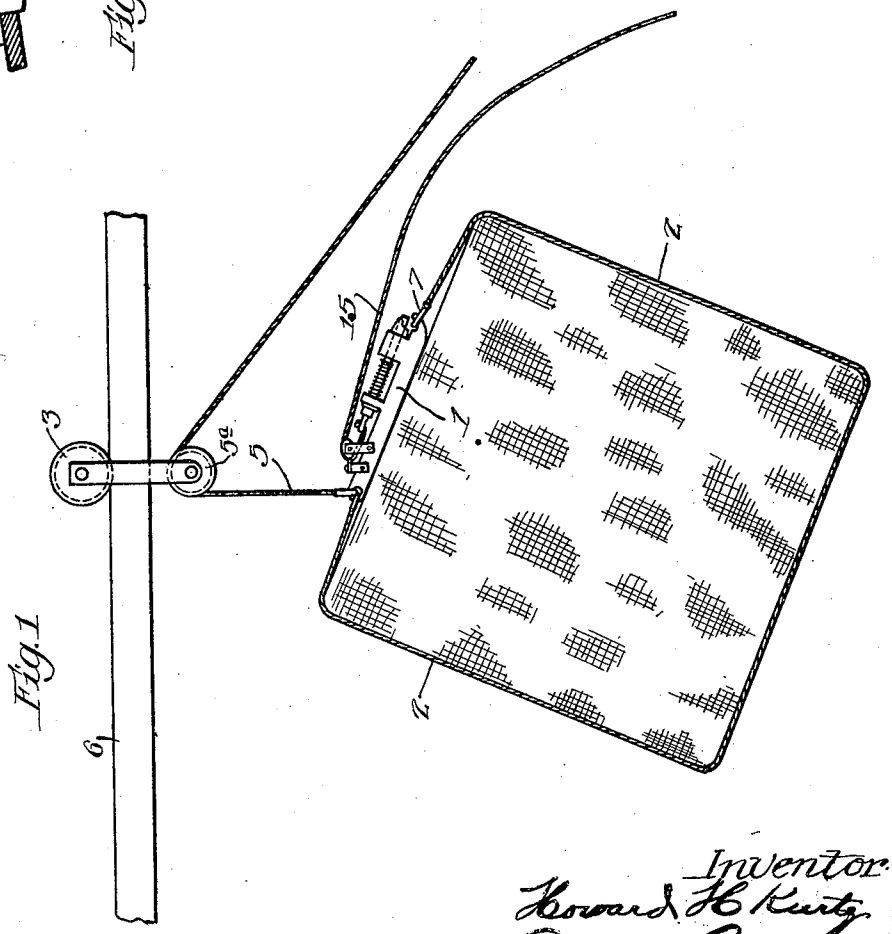


Fig. 1

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MATERIAL-HANDLING DEVICE.

Application filed December 7, 1925. Serial No. 73,586.

This invention relates to material handling devices and has for its object to provide a new and improved device of this description.

The invention has as a further object to provide a simple, effective material handling device by means of which the material may be easily, quickly and effectively released after it has been moved to the desired position so that it may be deposited at the point desired.

The invention has as a further object to provide a material handling device particularly adapted to be used in stowing hay, grain and the like in a barn.

The invention has other objects which are more particularly pointed out in the accompanying description.

Referring now to the accompanying drawing:—

Fig. 1 is a view showing one form of material handling device in a position ready to be released.

Fig. 2 is an enlarged view of the material handling device shown in Fig. 1.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings, the device consists of a body portion 1 provided at one end with means for connecting a binding element therewith, such as the flexible binding element 2, and is also provided with means for suspending it from a carrier 3. In the construction shown the body portion 1 is provided with an opening 4 which receives the binding element 2 and which also receives the support 5 by means of which it is connected with the carrier 3. This carrier is mounted on a support 6 which extends along above the place where the material is to be deposited. The binding element 2 is provided with a connecting piece 7 which may be a hook, link or the like which hooks over the end of the body portion 1, said body portion being provided with a recess 8 to receive said hook. The end of the body portion below the recess as shown at 1^a is inclined so that the hook may easily slide off when released. The body portion is provided with the separated lateral projections 9 and 10. Slidably mounted upon these projections is the locking member 11. A spring 12 engages one of these projections as, for example, the projection 9 and also engages a stop 13 on the locking member 11. This spring normally holds the lower end 11^a of the locking member opposite the recess 8 so that the connecting piece 7 is held in position and cannot be accidentally released. The locking device 11 is provided with a stop 14 which limits its movement in response to the spring 12.

A flexible controlling device 15 is connected with the locking member 11 and passes over a direction changing device 16 attached to the body portion 1 in any suitable manner. As herein shown, this direction changing device is illustrated as a pulley provided with a ring 17 which is connected to a projection 18 on the body portion. There is also a projection 19 on the body portion which engages the direction changing device so as to hold it in proper position. The particular direction changing device illustrated is a pulley having a member in which the pulley is mounted, the ring 17 being connected with said member, there being a connection between the ring and the body portion and between the member in which the wheel is mounted and the body portion. The controlling device 15, which may be a rope, hangs down within the reach of the operator and by pulling upon it the locking device 11 is moved to its released position so as to unlock the connecting piece 7 and permit it to be released so as to release the material in the binding element 2.

For purposes of illustration I have shown and described a particular construction embodying the invention but it is, of course, evident that the parts may be varied in many particulars without departing from the spirit of the invention as embodied in the claims hereto appended.

The use and operation of my invention are as follows:—

When the device is used, for example, for storing away hay or the like in a hay mow, the hay or grain is confined by the binding element 2, the connecting piece 7 thereof engaging the end of the body portion 1 and being received in the recess 8. To place the hook in position, the locking element 11 is raised and then released and when so released holds the hook 7 so as to prevent its accidental displacement. The bundle of material is then moved to the point desired and when in this position the releasing device is out of reach of the operator. The controlling device 15, however, is within the reach of the operator and when it is desired to drop the material the operator pulls upon the controlling device 15. This moves the

locking device 11 so that its end 11ª will be moved away from the recess 8. The connecting piece 7 is now free and moves down the inclined face 1ª of the body portion thus being released therefrom, and the material held by the binding element is discharged. It will thus be seen that the locking element 11 can be easily and quickly released regardless of the position of the body portion 1, that is, even though said body portion should be below the operator, or above the operator, or at a point where it is about on the level with the operator but at a distance horizontally from him. This device prevents binding of the parts and insures the easy and effective release of the connecting piece 7 and the binding element 2.

I claim:—

1. A material handling device comprising a body portion, separated projections connected therewith, a locking element at one side of said body portion movably mounted on said projections, a spring for normally holding said locking element in its locking position, a stop for said locking element, a flexible controlling device connected with said locking element, a direction changing device over which said controlling device passes, said direction changing device being in alignment with the longitudinal axis of said locking element, said controlling device extending to a distant point, a binding element connected with said body portion, a connecting piece on said binding element adapted to engage the end of said body portion, a portion of said locking element being arranged opposite the connecting piece when in position so as to prevent it from being disconnected from the body portion, said controlling device when pulled moving the locking element so as to release said connecting piece and binding element.

2. A material handling device comprising a body portion, separated projections connected therewith, a locking element movably mounted on said projections, a spring for normally holding said locking element in its locking position, a flexible controlling device connected with said locking element, a direction changing device over which said controlling device passes, said controlling device extending to a distant point, two connections between said direction changing device and said body portion, a binding element connected with said body portion, a connecting piece on said binding element adapted to engage the end of said body portion, a portion of said locking element being arranged opposite the connecting piece when in position so as to prevent it from being disconnected from the body portion, said controlling device when pulled moving the locking element so as to release said connecting piece and binding element.

3. A material handling device comprising a body portion, a flexible binding element connected therewith, a connecting piece on said binding element adapted to be releasably connected with the end of said body portion, the body portion having a recess into which the connecting piece is received, and a downwardly inclined portion extending from said recess to the end of the body portion, a locking element having a portion opposite said recess when in its locking position which prevents said connecting piece from being removed, a pulley including a wheel, a member in which said wheel is rotatably mounted, a ring connected with said member, a connection between said ring and said body portion, a second connection between said member and said body portion, a flexible controlling device connected with said locking element and passing over the wheel of said pulley and adapted, when pulled, to move the locking device to release said connecting piece.

Signed at Bellflower, county of McLean, and State of Ill., this 19th day of November, 1925.

HOWARD H. KURTZ.