Aug. 26, 1930. A. BOUCHARD 1,773,805

GRAIN UNLOADING DEVICE

Filed Jan. 12, 1929 2 Sheets-Sheet 1

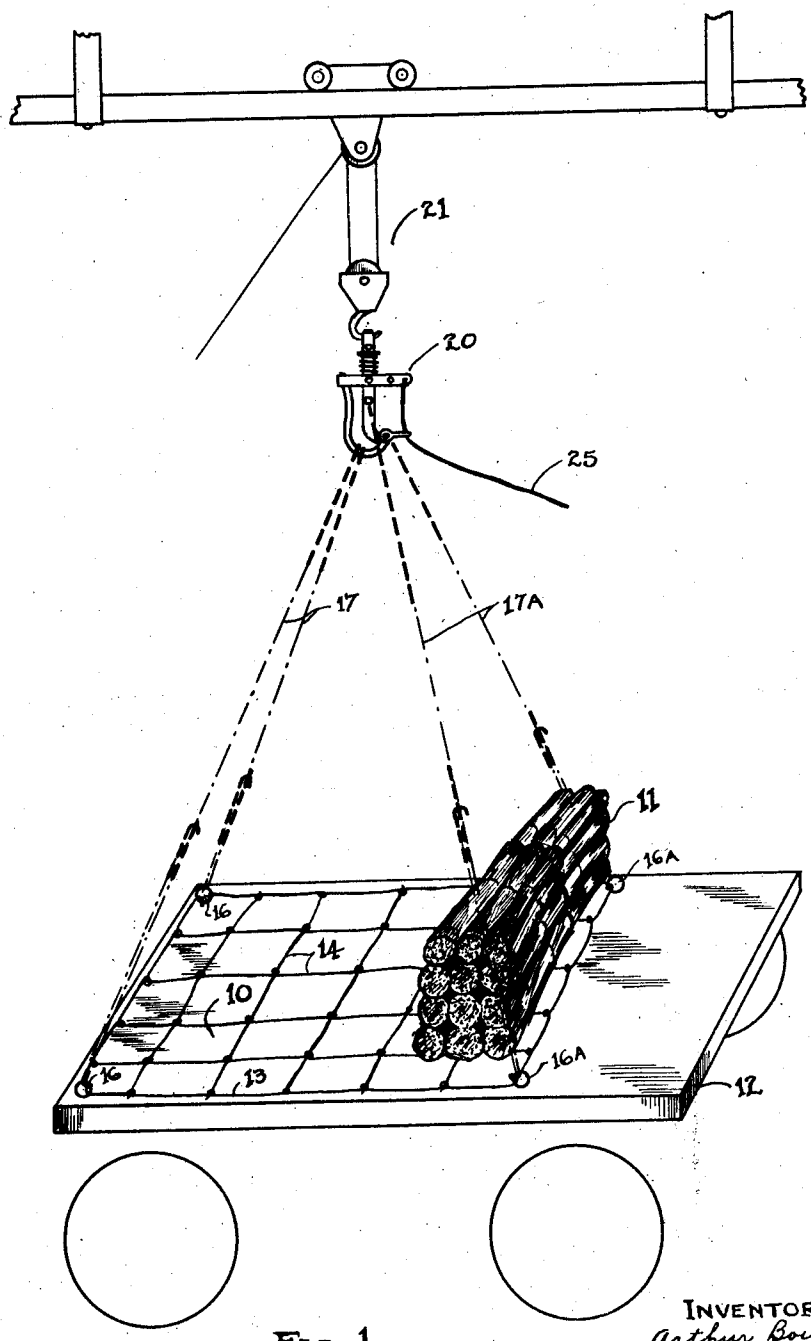


FIG. 1

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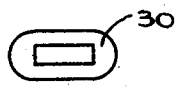


FIG. 8

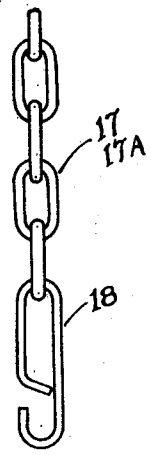


FIG. 2

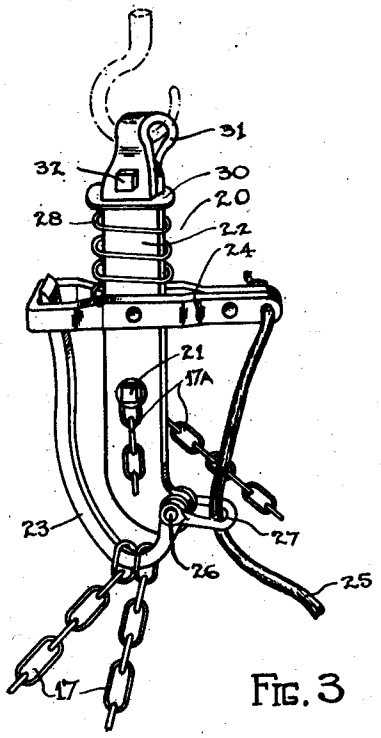


FIG. 3

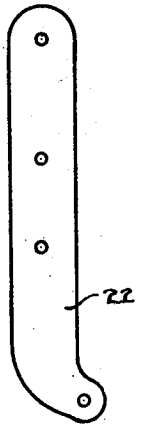


FIG. 4

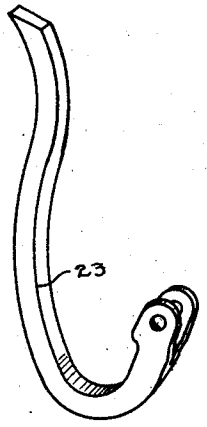


FIG. 5

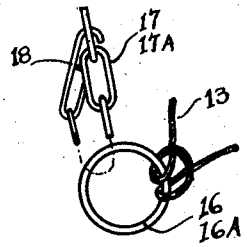


FIG. 6

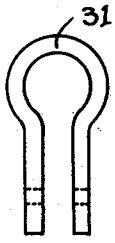


FIG. 7

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UNITED STATES PATENT OFFICE

ARTHUR BOUCHARD, OF LORRAINVILLE, QUEBEC, CANADA

GRAIN-UNLOADING DEVICE

Application filed January 12, 1929. Serial No. 332,010.

My invention relates to a grain sheaf unloading device as described in this specification and illustrated by the accompanying drawings.

The main object of my invention is to provide a simple device for quickly unloading grain sheaves from a carriage, thus resulting in a very appreciable saving in labor; another object is to so construct the device that it may be folded into a very small space and not be apt to break or become damaged when handled carelessly. Although the device was primarily developed to unload grain sheaves it may have other useful applications where unloading is to effected quickly by dumping.

In the drawings:

Figure 1 illustrates the application of my invention, the device being ready to be operated to lift a load of sheaves off a carriage for ultimate dumping at a desired place;

Figure 2 shows a portion of one of four corner or lifting chains;

Figure 3 is a perspective view of the chain releasing mechanism;

Figure 4 is a side view of the main member or shank of the chain releasing mechanism;

Figure 5 is another member of the chain releasing mechanism;

Figure 6 illustrates my method of fastening the net corner rings to the corresponding chains;

Figure 7 is a side view of the clevis;

Figure 8 is a plan view of the washer.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings, and particularly to Figure 1, a net 10 is used to receive or carry the grain sheaves 11 when raised from the carriage 12 (shown here diagrammatically only). As will be clearly understood by referring to Figure 1, the net 10 is laid flat upon the carriage and the sheaves laid side by side into rows and built into piles in the same way as wood is piled into cords. While in this figure, these sheaves are not shown as laid over the entire surface of the net, it is to be understood that in practice the net is fully covered. I have found by numerous experiments that a very satisfactory net may be made of a rope 13 forming the four sides of a rectangle and other ropes 14 laid crosswise to form fairly small rectangles, the ropes being tied where they cross or meet, with suitable knots.

The net 10 is provided with four corner metal rings 16 and 16A for suspending or hanging the net from chains or suspension members 17 and 17A. Each of the chains 17 and 17A has a hook 18 (see Figure 2) made to engage in any of the chain links, so that each chain may be made to carry one corner of the net by passing or threading the chain through the corresponding corner ring (17 or 17A as the case may be) folding the chain back and hooking into a chain link (see Figure 7).

The chains 17 and 17A are hung or depend from a block or chain releasing mechanism 20 which in turn is hung from the overhead carrier of conventional design indicated by numeral 21.

Two of the chains, namely those shown as 17A, are permanently attached to the releasing mechanism 20 or more particularly to a bolt 21 passed through the shank 22, and the other two chains, namely those shown as 17, can be released or allowed to drop by sliding off the hinged lever 23 when it swings downwardly upon the operation of the latch 24 by a pull on the rope 25. Thus, the sheaves can be dumued by releasing the chains 17 to cause the net to drop at one end. The lever is pivoted as at and on a pin 26 on which turns a clevis 27 engaged by the operating or release rope 25.

The lever, when raised, or in its closed position (see Figure 3) engages with the latch 24 which is normally held down by a spring 28 compressed between the latch and a washer 30; the washer bears against the clevis 31 which is pivotally mounted on the shank 22 as with a bolt 32.

The lever 23 is preferably formed at 33 as shown, to cause the uppermost link of each of the chains 17 to slip down until it is in substantially the longitudinal axis of the releasing mechanism; thus the shank 22 will hang in a substantially vertical position.

One or more nets may be used side by side

according to the size of the carriage used or the hoisting capacity of the overhead apparatus used; and where the strength of the carriage admits, two or more nets may be used one above the other with each its own load of sheaves.

Operation: The net 10 is laid out flat upon a carriage and conveyed therewith to the places in the field where the sheaves are to be gathered. The sheaves are made into piles upon the net and conveyed to the barn where they are to be stored. The carriage is wheeled into the barn and placed under the overhead track, the overhead carriage pulled to a position above the centre of the carriage. The chains 17 and 17A are fastened as already described, to the corner rings 18 and 18A, the lever 23 released or swung downwardly by pulling down on the release rope 25, the uppermost links or rings of the chain 17 are slipped over the lever, and the lever swung back and locked by the latch 24. The net is next raised and conveyed over to the particular place in the barn where the sheaves are to be unloaded or dumped. A pull of the rope 25 releases the latch and the chains 17 drop, causing the net to fall at one end and therefore dumping the sheaves.

What I claim is:

In a grain sheaf unloading device, a mechanism adapted to be suspended above the ground having suspension members depending therefrom and operating to release a number of said suspension members, a net adapted to receive the sheaves and suspendable from said suspension members, and means in said suspension members adapted for altering the effective length thereof.

Signed at Ville-Marie, Quebec, this 21st day of December, 1928.

ARTHUR BOUCHARD.