

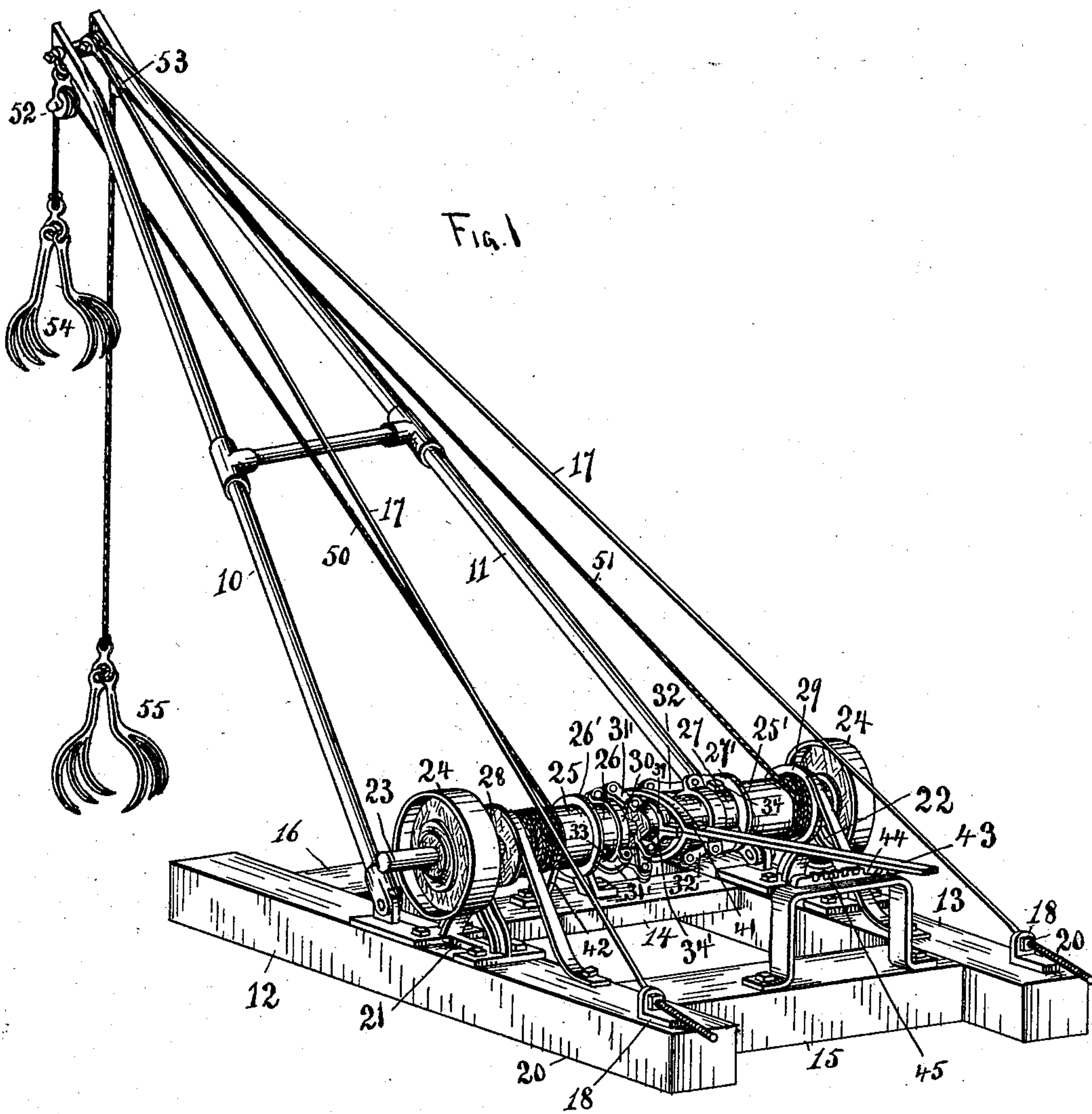
No. 673,177.

Patented Apr. 30, 1901.

H. REEMSnyder.
HOISTING APPARATUS.
(Application filed Mar. 7, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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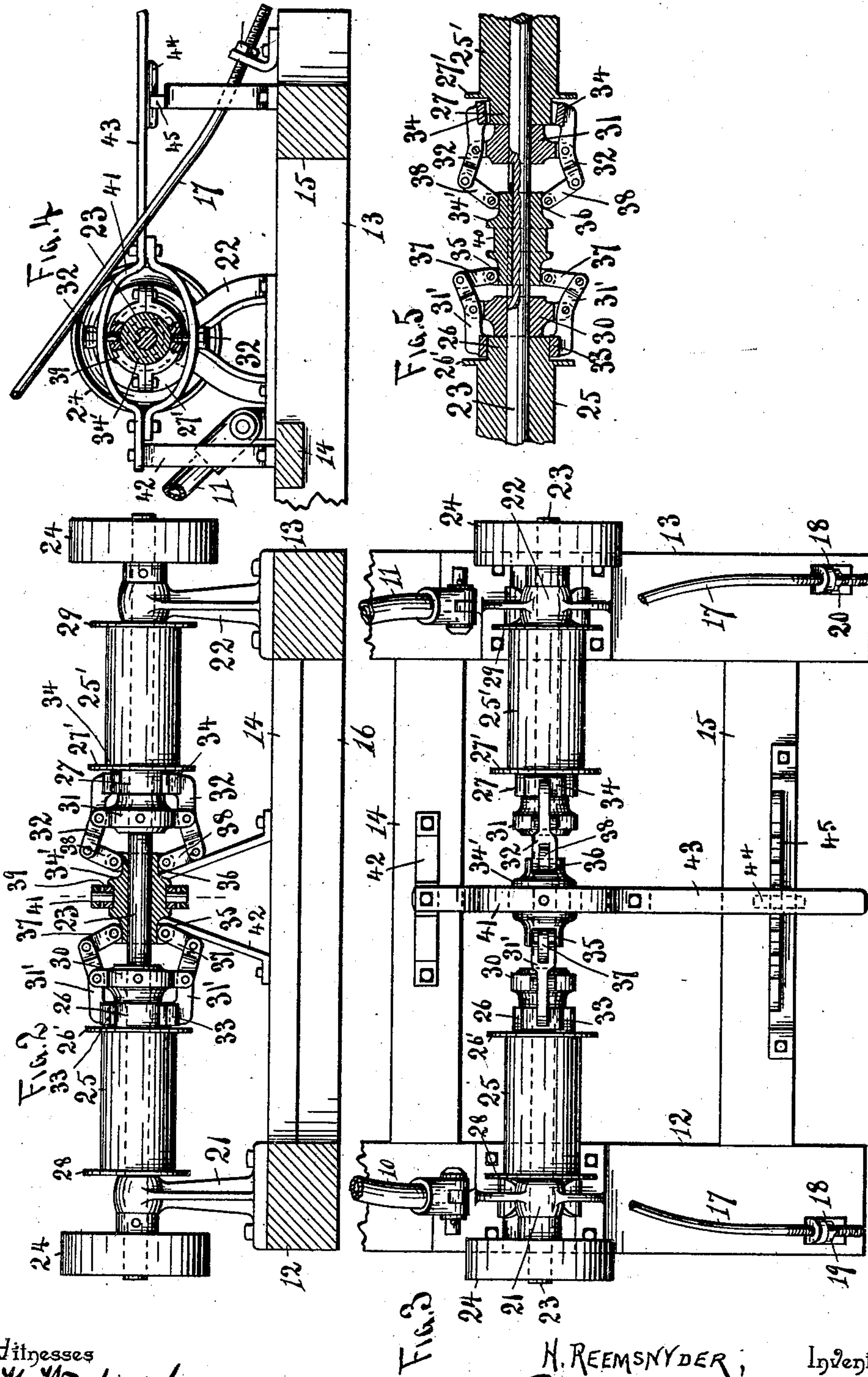
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UNITED STATES PATENT OFFICE.

HARVEY REEMSNYDER, OF HAYS, KANSAS.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 673,177, dated April 30, 1901.

Application filed March 7, 1901. Serial No. 50,239. (No model.)

To all whom it may concern:

Be it known that I, HARVEY REEMSNYDER, a citizen of the United States, residing at Hays, in the county of Ellis and State of Kansas, have invented a new and useful Hoisting Apparatus, of which the following is a specification.

This invention relates to hoisting apparatus, and more particularly to apparatus designed to be placed upon the top of a threshing-machine for hoisting the sheaves to the table of the thresher, one object of the invention being to provide a simple and efficient construction which may be easily operated and including separate winding-drums and connected tackles, whereby the tackle of one drum may be wound up to raise a sheaf, while the other tackle is permitted to unwind to lower its grapple for engagement with another sheaf.

Further objects and advantages of the invention will be apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing the complete mechanism. Fig. 2 is a view, partly in elevation and partly in section, of the winding-drums and their clutching mechanism. Fig. 3 is a top plan view of the drums with their clutching mechanism. Fig. 4 is a transverse section through the apparatus in the plane of the shifting lever of the clutch. Fig. 5 is a longitudinal sectional view through the inner end portions of the winding-drums and the clutch, the shaft being shown partly in elevation.

Referring now to the drawings, the present mechanism includes a derrick comprising upwardly-converging sides 10 and 11, suitably braced and pivoted at their lower ends upon the sills 12 and 13 of a supporting-frame, which also includes the cross-pieces 14, 15, and 16. This frame is adapted to be mounted upon the top of the threshing-machine, and in order to hold the derrick at the proper inclination, so that its upper end will hang over the side of the machine, tie-rods 17 are connected to the upper end of the derrick and are engaged through eyes in plates 18, secured upon the sills. The lower ends of these

rods are threaded for engagement of nuts 19 and 20, by means of which they may be adjusted to hold the derrick at different inclinations.

Upon the sills 12 and 13 are pillow-blocks 21 and 22, in which is journaled a power-shaft 23, having driving-pulleys 24 fixed at its ends, and disposed loosely upon the shaft, between and adjacent to the pillow-blocks, are two winding-drums 25 and 25', which are separated at their adjacent ends by an interspace, as shown, and at these inner ends of the winding-drums are formed cylindrical clutch members 26 and 27, which are separated from the winding portions of the drums by flanges 26' and 27', said drums having also flanges 28 and 29 at their outer ends.

To clutch the winding-drums interchangeably to the drive-shaft, so that one of them may be rotated to wind up its tackle while the other is released to permit its tackle to unwind, blocks 30 and 31 are fixed upon the shaft adjacent to the inner ends of the winding-drums, and which blocks have ears, between which are pivoted clutch-levers 31 and 32, respectively, which latter have clutch-faces 33 and 34 for engagement with their respective clutch members 26 and 27. With this construction it will be seen that if the inner ends of the levers 31 and 32 be moved outwardly their clutch-faces will engage the members 26 and 27 and that if said levers be moved with their inner ends inwardly their clutch-faces will be moved from engagement with the said clutch members. To thus move the inner ends of the levers to effect the clutching actions a block 34 is splined upon the shaft for sliding movement longitudinally thereof and is provided with ears 35 and 36 at opposite ends thereof and to which are pivoted links 37 and 38, which are in turn pivoted to the free ends of the clutch-levers, so that if the block be slid in one direction the links at one end will wedge under their connected clutch-levers to move their clutching-faces into operative positions, while the links at the opposite end will draw their connected levers to move the clutch-faces thereof from the clutch members or drums 26 or 27 corresponding thereto. Thus as the block is slid in one direction the drum 25 is clutched for rotation by the shaft and the drum 25' is

released, and when the block is slid in an opposite direction the reverse is the result.

To reciprocate the block 34, a strap 39 is loosely engaged in a peripheral groove 40 therein, and this strap is encircled by a yoke 41, which is pivoted thereto at diametrically opposite points, this yoke having a fulcrum upon a standard 42 at one side of the operating-shaft and having a lever or handle 43, provided with a knife-edge 44, disposed for movement over a rack 45, supported upon the beam 15. When engaged with said rack, the knife-edge holds the lever against movement, so that it may lie in position to hold either winding-drum clutched to the power-shaft or may be held in an intermediate position, with neither drum clutched to the shaft.

With this apparatus one of the drums is operatively connected with the shaft while the other is released therefrom, and the lifting lines or tackle include the ropes 50 and 51, which are attached to their respective drums and are then taken upwardly and over pulleys 52 and 53 at the head of the derrick and at their outer ends are provided with grapples 54 and 55 of any suitable style for engagement with the sheaves of the grain to be threshed and in which they are raised to the table of the threshing-machine and there discharged.

It will be understood that in practice modifications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. In a hoisting apparatus, the combination with a derrick of a power-shaft mounted adjacent thereto, winding-drums mounted loosely upon the shaft and having clutching-faces, blocks fixed to the shaft adjacent to the inner ends of the drums, clutch-levers pivoted upon said blocks for movement into and out of operative engagement with the clutch-faces of the drums, a block splined upon the shaft

for movement longitudinally thereof and having link connections with the clutch-levers, said slidable block having a peripheral groove, a strap loosely engaged in the groove of the slidable block, a pivoted yoke-lever pivotally connected with the strap for shifting the slidable block and having a knife-edge, and a retaining-rack disposed in operative relation to the knife-edge to hold the lever at different points of its adjustment, said drums having lines connected therewith and passed over the derrick.

2. In a hoisting apparatus, the combination with a supporting-frame, of a derrick pivoted thereto, tie-rods attached to the frame adjustable and connected with the derrick, whereby the inclination of the derrick may be adjusted, said derrick having pulleys, a power-shaft mounted upon the frame at the base of the derrick and having pulleys for connection of a driving-belt, drums mounted loosely upon the shaft and having exterior friction-faces at their inner ends, blocks fixed upon the shaft adjacent to the inner ends of the drums, clutch-levers pivoted upon the blocks and having clutch-faces for engagement with the corresponding faces of the drums, a block splined upon the shaft for slidable movement thereon, links pivoted to the slidable block and to the clutch-levers for operating the latter, said slidable block having a peripheral groove, a strap engaged with the groove loosely, a yoke-lever pivoted to the strap and fulcrumed at one side of the shaft, a rack at the opposite side of the shaft, and a knife-edge carried by the lever for engagement with the rack to hold the lever at different points of its pivotal movement.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HARVEY REEMSNYDER.

Witnesses:

JUSTUS BISSING, Jr.,
A. P. STAINER.