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HAY STACK BADGER

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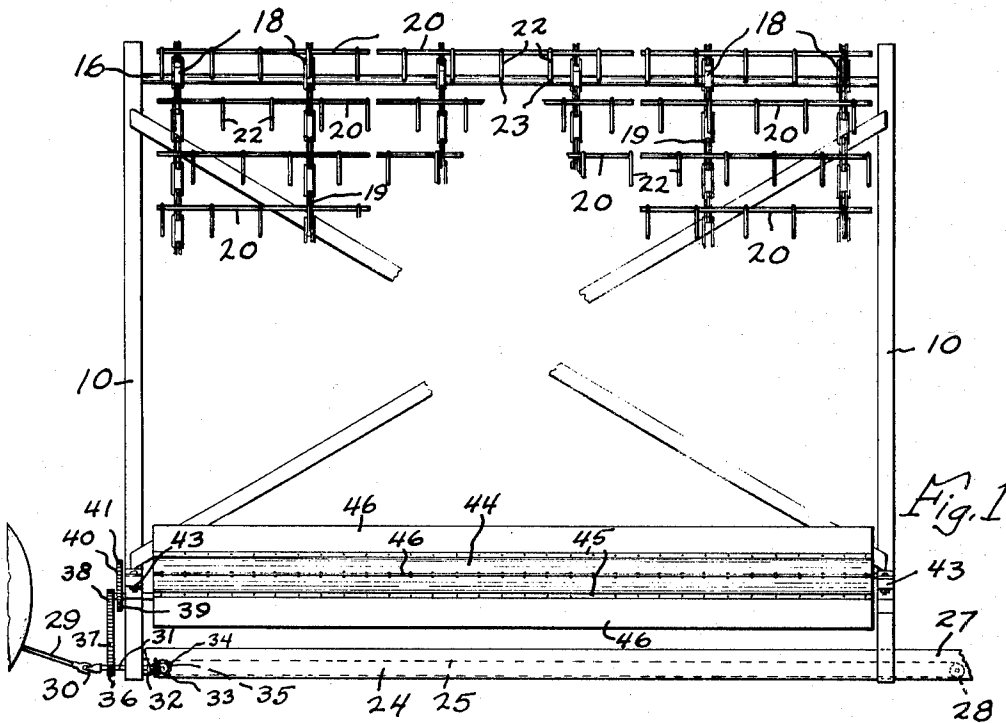


Fig. 1

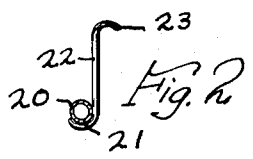


Fig. 2

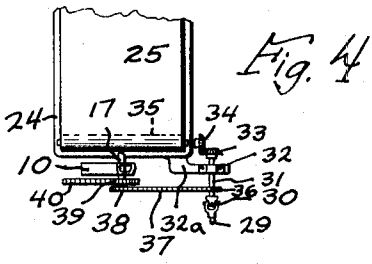


Fig. 4

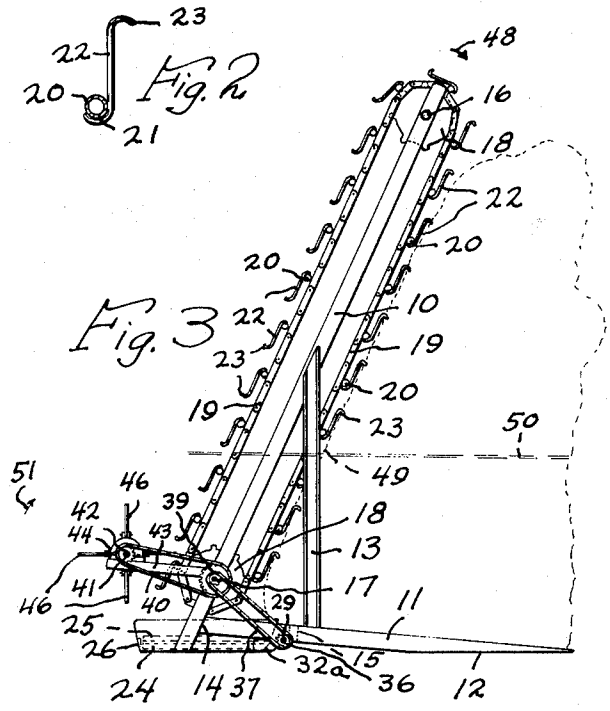


Fig. 3

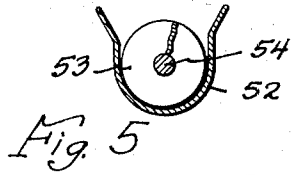


Fig. 5

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HAY STACK BADGER

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2 Claims. (Cl. 146-70)

My invention relates to a hay stack badger.

An object of my invention is to provide a device which will effectively separate the hay in a hay stack so that the said hay can be then transported to a grinding or other arrangement as desired.

A further object of my invention is to provide a device which can be readily operated from a tractor or other power source.

A further object of my invention is to provide an arrangement which can be readily positioned with respect to the hay stack for the above purposes.

With these and other objects in view, my invention consists in the construction, arrangement, and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

FIGURE 1 is a side elevation of the arrangement with parts broken away,

FIGURE 2 is an enlarged detail,

FIGURE 3 is an end view of FIGURE 1,

FIGURE 4 is a plan view of a portion of the driving arrangement, and

FIGURE 5 is a sectional view of a modification of the conveying unit.

My invention contemplates the provision of a device which will tear down a hay stack and which will properly separate the hay therein so that it can be thence conveyed in the same device to a grinder or any other arrangement required.

In describing my invention I have used the character 10 to designate a pair of side supports angularly positioned as shown, the character 11 indicating a series of laterally spaced beams having the chamfered portions 12 adapted to rest on the ground, the character 13 indicating vertical braces attached between the members 10 and 11, there being several of such members 11, which are secured as at 14 to the members 10, and which are additionally secured to a transverse beam such as 15.

The character 16 indicates an upper shaft journalled in the members 10, the character 17 indicating a lower shaft similarly journalled in the members 10, the character 18 indicating a series of spaced sprocket members mounted on the upper and lower shafts.

The character 19 indicates sprocket chains engaging the sprockets 18, and attached to the sprocket chains 19 are the pipes 20 to which are attached as at 21 the hook members 22 terminating in the curled portions 23. The character 24 indicates generally a lower conveyor member having the conveyor belt 25 passing over a suitable roller journalled as at 26 therein, which conveyor member 24 extends throughout the entire bottom of the arrangement, and can be extended as at 27 to communicate with a grinder or any other type of apparatus. The conveyor belt 25 also passes over the further roller 28, and the character 29 indicates a suitable shaft passing to the rear power take-off of a tractor, which is connected at 30 to a further shaft 31 journalled as at 32 to the member 32a which is attached to the conveyor member 24. The character 33 indicates a bevel gear attached to the shaft 31 which meshes with the further bevel gear 34 which drives the roller 35 which drives the belt 25. Attached to the shaft 31 is a sprocket 36 which drives a sprocket chain 37 which drives a sprocket 38 which is attached to the lower shaft 17, this arrangement thereby providing means for driving the various sprockets 18, and attached to the

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lower shaft 17 also is a sprocket 39 which drives the sprocket chain 40 which in turn drives a further sprocket 41, which is attached to a shaft 42 which extends throughout the width of the device and is journalled on the supports 43 which are attached to the members 10, the character 44 indicating a drum driven by the shaft 42. Attached to the drum 44 at 45 are the flexible flaps 46. The character 47 indicates suitable braces for bracing the unit, arranged as shown.

It will now be noted from the foregoing description that the sprockets 18 will be driven from the lower shaft 17, which drives the sprocket chains 19, the members being adapted to travel in the direction of the arrow 48. The hay stack is indicated generally by the dotted lines character 49, the stack being drawn to the arrangement by any desired arrangement of cables 50 and suitable winches. The unit is then started, and it will be noted that during the downward travel of the hooks 23, the hay on the surface of the stack will be pulled downwardly into the conveyor member 24 and will be thence conveyed to the grinder, etc. The stack can be readily fed to the hooks, and gradually also, and the flaps 46 which rotate in the direction of the arrow 51 will uniformly force any hay particles which are passing upwardly, back downwardly towards the conveyor, thereby providing a smooth accumulation of the material. In this way it will be noted that the stack is literally torn apart and properly shredded to feed to the hammer mill or for any other purpose, which could also be to a baler, etc. The hay will become more palatable since the long pieces are broken up and the stack is more properly blended from top to bottom since the upper weathered or dried-out hay will be blended with the choicer intermediate hay, all of which will in turn be blended with the bottom layers which may be wetter or the like, the entire effect being to produce the results above mentioned.

FIGURE 5 illustrates a modification wherein an auger type conveyor could be employed as well, if desired, and wherein the character 52 designates a housing in which the auger 53 operates, the character 54 indicating a shaft suitably attached thereto, it being understood that other types of conveyor members could be used.

It will now be seen that I have provided the advantages mentioned in the objects of my invention with further advantages being apparent.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

1. A hay stack shredding device comprising a generally vertically positioned framework, a movable member on said framework including a plurality of hook elements attached thereto, movement of said hook elements downwardly being adapted to engage a hay stack exterior for shredding the same, a conveyor positioned at the lower end of said framework, said movable member including upper and lower shafts, sprockets attached to said shafts, sprocket chains engaging said sprockets, laterally positioned pipes attached to said sprocket chains, said hook elements being attached to said pipes, means for driving said shafts, brackets attached to said framework, a further shaft positioned in spaced relation to said framework, a plurality of radially positioned flexible flaps attached to said further shaft adapted to rotate adjacently to said hooks.

2. A hay stack shredding device comprising a generally vertically positioned framework, a movable member on said framework including a plurality of hook elements attached thereto, movement of said hook elements down-

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wardly being adapted to engage a hay stack exterior for shredding the same, a conveyor positioned at the lower end of said framework, said movable member including upper and lower shafts, sprockets attached to said shafts, sprocket chains engaging said sprockets, laterally positioned pipes attached to said sprocket chains, said hook elements being attached to said pipes, means for driving said shafts, brackets attached to said framework, a further shaft positioned in spaced relation to said framework, a plurality of radially positioned flexible flaps attached to said further shaft adapted to rotate adjacently to said hooks, a plurality of laterally spaced substantially horizontally positioned supports secured to said framework and adapted to rest upon the ground, said generally vertically

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positioned framework being pitched at an angle from the vertical so as to correspondingly engage said hay stack exterior.

References Cited by the Examiner

UNITED STATES PATENTS

2,529,263 11/50 Reese ----- 241—200 XR
2,876,817 3/59 Mann ----- 146—70

FOREIGN PATENTS

528,821 8/56 Canada.

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