

(No Model.)

H. J. TWISS. CUTTER FOR HAY STACKS.

No. 582,966.

Patented May 18, 1897.

FIG. 1.

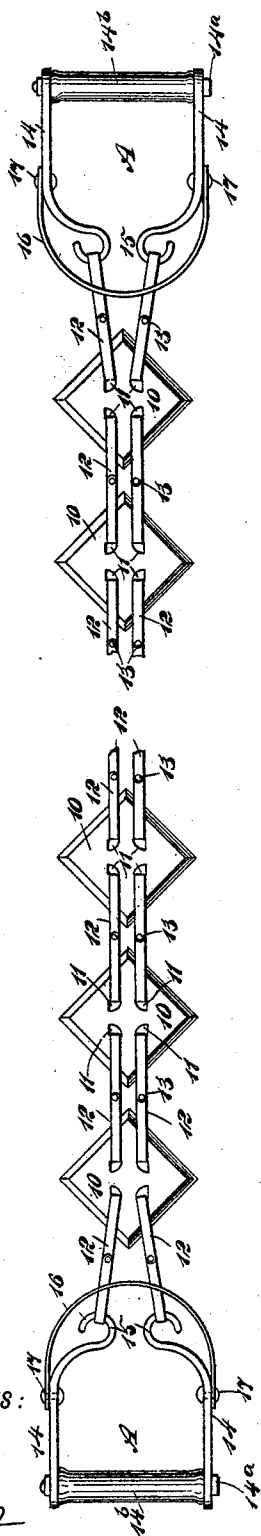


FIG. 2.

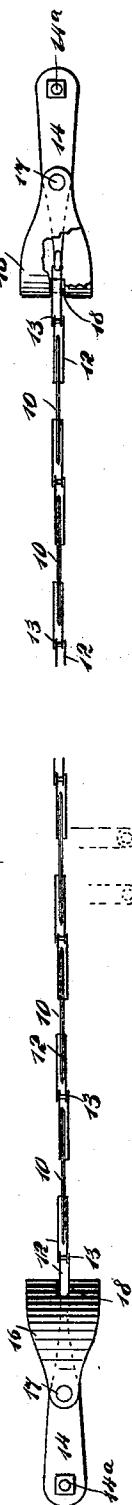


FIG. 3.

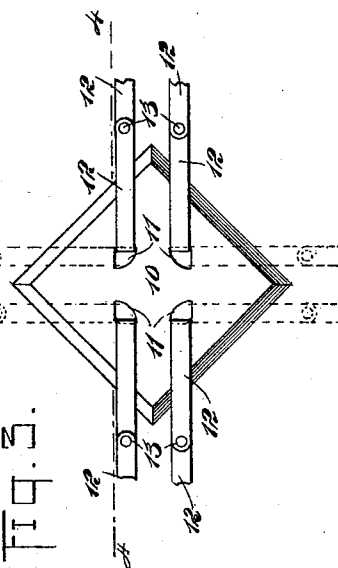


FIG. 4.



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HILARY J. TWISS, OF BAKER CITY, OREGON.

CUTTER FOR HAY-STACKS.

SPECIFICATION forming part of Letters Patent No. 582,966, dated May 18, 1897.

Application filed January 22, 1897. Serial No. 620,177. (No model.)

To all whom it may concern:

Be it known that I, HILARY J. TWISS, of Baker City, in the county of Baker and State of Oregon, have invented certain new and Improved Cutters for Hay-Stacks, of which the following is a full, clear, and exact description.

The object of the invention is to so construct a stack-cutter that it will comprise a number of cutting-blades having a yielding connection and handles detachably connected with the chain of cutters.

A further object of the invention is to provide a stack-cutter capable of convenient application to a stack or rick for the purpose of slicing the same vertically or horizontally, to divide such rick or stack into sections suitable to feed from, which divisions will also greatly assist in "forking off" the hay.

Another object of the invention is to construct the device in a simple, durable, and economic manner, the device being operated by two persons in like manner as a crosscut-saw.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the cutter, a part of the same being broken away. Fig. 2 is an edge view of the cutter shown in Fig. 1. Fig. 3 is a plan view of one of the cutting-blades and the link adapted to connect it with adjoining blades, the blade being drawn on a large scale; and Fig. 4 is a vertical section taken on the line 4 4 of Fig. 3.

The cutting-blades 10 are shown as square or rectangular in general contour or they may be given other shape, and the edges of the blades are beveled both from the top and from the bottom to form sharp cutting edges at each marginal surface. The cutting-blades 10 when given the rectangular shape shown are grouped together so that the angular surfaces of the blades will face each other, the blades in plan view presenting somewhat of a diamond shape. Each blade is shown as provided with four openings 11,

the said openings being in pairs and the pairs being at each side of the center of the blade. Adjoining blades 10 are connected by links 12, two pairs of links being placed between each opposing blade, and the pairs of links are pivotally connected by pins 13. The links extend across both the top and the bottom surfaces or side surfaces of the blades, so that when a number of links are thus connected a chain of links will be practically obtained. Each end blade is also provided with links 12, arranged in pivotally-connected pairs, the said links projecting outward from the end blades, and these first end links 12 are adapted for engagement with handles A. The handles usually consist of side members 14, which are made to approach each other at their inner ends, and their inner extremities are bent to form hooks 15 or the equivalent of the same. The side members 14 of the handles are connected at their outer ends by a bar 14^a, which may be readily attached to the handle, but the said bars are preferably provided with spools 14^b, mounted to turn loosely thereon.

A curved strap 16 is attached to the side members 14 of each handle through the medium of pivot-pins 17, or the straps may be readily secured to the sides of the handles, and each strap at its inner or bow portion has a slot 18 longitudinally produced therein, as shown in Fig. 2. Through these slots 18 the end links of the chain of blades are made to pass and are carried to an engagement with the hook sections or portions 15 of the handles. The chain of cutters may be removed from either handle by simply forcing the end link connected with the handle to be detached outward through the slot in the strap 16 of that handle until the pivots 13 of the end links will be practically within the strap 16, the side bars 14 of the handle moving on their pivot outward a corresponding distance to the distance which the links are forced through the strap. Therefore the outermost links 12, located within the strap, may be moved toward the ends of the straps and disconnected from the hooks.

In operation the chain of cutters is thrown, for example, over the top of the hay stack or rick. Each handle is then grasped by an operator and the chain of cutters is laterally re-

ciprocated in like manner as a crosscut-saw until the stack or rick has been divided from the top to the bottom or from the top to any desired point between the top and the bottom; or the chain of cutters may be employed for separating the stack horizontally, if desirable or necessary. The handle which is nearest to the stack is disconnected from the chain of cutters after the separation of the stack has been accomplished, so that the person having hold of the opposite handle may readily draw the chain of cutters entirely from the stack.

The links are so connected with the plates 10, as shown in Fig. 3, that the said links may be made to assume a position at right angles to their normal position whenever such change may be required. In fact, the blades are practically pivotally connected with their links. Therefore the position of the blades may be changed at will or as occasion may demand, but when the blades have been given their position they will not move therefrom while the device is being manipulated, since the links will engage with a straight wall of the opening through which they are to pass.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

30 1. A stack-cutter consisting of a series of blades, links loosely connected with the said blades and extending in opposite directions therefrom, the links of opposing blades being pivotally connected, handles consisting of slotted straps, the links of the end blades being passed through the slots of the said straps, the handles pivoted in the said straps and pivotally connected with the links passed through the straps, substantially as and for the purpose specified.

45 2. A cutting apparatus consisting of a series of angular-edged blades each having two openings at each side of the transverse center thereof, and two links located between each blade, the links respectively having their ends loosely held within the openings whereby the links and blades form a continuous flexible chain, substantially as described.

50 3. A cutting apparatus consisting of a series of angular-edged blades each having two

openings at each side of its transverse center, two links located between each pair of blades, the links respectively having their ends pivoted within the openings in the blades and each link having a joint intermediate the end thereof whereby a continuous flexible chain is formed, substantially as described. 55

4. A cutting apparatus consisting of a series of angular-edged blades separated from each other, and links respectively located between each pair of blades, the links being pivotally connected to the blades and serving to form a continuous chain, the links being attached to the blades at points adjacent to their longitudinal centers whereby portions of the blade project on each side of the links and give a double cutting edge, substantially as described. 60 65

5. A cutting apparatus consisting of a series of edged blades, and a link between each pair of blades, the links being respectively pivoted to the blades at points adjacent to the longitudinal centers of the blades whereby portions of the blades project on each side of the links so as to give the cutting apparatus a double cutting edge, substantially as described. 70 75

6. A cutting apparatus consisting of a plurality of edged blades each with an opening therein, the openings being respectively located on opposite sides of the transverse centers of the blades, and a link located between each pair of blades, the links each consisting in two looped strips of material respectively passed through the openings in the blades and having their inner ends respectively pivotally joined to each other, substantially as described. 80 85

7. The combination of two links, a handle having two side portions each with a hook respectively removably receiving the ends of the links, a rigid connection between the side portions of the handle, and a curved rigid strap the ends of which are respectively secured to the side portions of the handle, the strap being provided with an opening receiving the links, substantially as described. 90 95

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Witnesses:

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