ABSTRACT OF THE DISCLOSURE

Apparatus used in the removing of bulk cured tobacco from a separable bulk tobacco rack which includes an automatic release for a portion of the rack and a hold-down member for tobacco so that the other portion of the rack can be released. After the bulk tobacco has been removed from the rack, the tobacco leaves are secured together.

BACKGROUND OF THE INVENTION

Field of the invention.—This invention relates generally to apparatus for processing and treating agricultural products and specifically to apparatus used with bulk tobacco after it has been cured.

Description of the prior art.—For many years tobacco was cured by gathering several leaves together into a “hand,” looping twice or string about the stems, placing a plurality of “hands” on a stick and curing the same in a barn. After the tobacco was cured it was removed from the stick and placed on a pallet or basket and sold. This process required much hand labor and in recent years bulk tobacco curers have come into widespread use in an effort to avoid the labor problem. In a bulk tobacco curer a relatively large mass of tobacco leaves are placed on one portion of a rack and the remainder of the rack is applied to the tobacco. This second portion has a series of times which are forced through the mass to hold the leaves during the curing process. After the tobacco has been cured it has been removed from the times by hand and placed on the pallets to be sold.

SUMMARY OF THE INVENTION

Apparatus adapted to receive a rack of bulk cured tobacco and separate one portion of such rack from the other portion and the tobacco leaves. The apparatus then holds the leaves in position while the portion of the rack with the ties is withdrawn from the leaves. After the rack is entirely removed the portion of the apparatus holding the leaves is raised and the leaves are gathered into a bundle which is tied together by twine or string.

It is an object of the invention to provide a relatively simple unloading table for bulk cured tobacco which will expedite and simplify the removal of a bulk tobacco rack after the tobacco has been cured.

Another object of the invention is to provide an unloading table for bulk cured tobacco having means for separating a bulk tobacco rack and supplying means for holding the mass of cured tobacco leaves together.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective illustrating the unloading table of the present invention.

FIG. 2 is an enlarged fragmentary side elevation thereof.

FIG. 3 is a side elevation illustrating a bulk tobacco rack being placed on the unloading table.

FIG. 4 is a side elevation showing the rack on the table with a portion of the rack removed from the tobacco.

FIG. 5 is a side elevation illustrating the other portion of the rack being removed.

FIG. 6 is a side elevation illustrating the mass of tobacco being tied in a bundle.

FIG. 7 is an enlarged fragmentary detail section illustrating the rack opening means prior to separation of the rack.

FIG. 8 is a section similar to FIG. 7 illustrating the rack opening means after the rack has been separated.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With continued reference to the drawings a conventional bulk tobacco rack 10 is provided having a lower portion 11 constructed of a hollow framework with a locking member 12 on each end. An upper portion 13 of the rack includes an elongated top member 14 connected to generally vertical end members 15 to provide a generally inverted U-shaped body. The top member 14 has a plurality of spikes or tines 16 connected thereto which have one end extending downwardly a distance greater than the length of the end members 15, so that the tines will pass entirely through the tobacco leaves and terminate within the hollow framework of the lower portion 11. Each of the end members 15 has a latch 17 adapted to engage the locking member 12 of the lower portion to maintain the rack in assembled relation. The structure thus far described is conventional in the prior art and forms no part of the present inventive concept.

After the tobacco has been cured the leaves of tobacco 18 must be removed from the rack 10 and in order to assist in such removal an unloading table 20 is provided having a fixed frame or base 21 with a leg 22 at each corner. If desired certain of the legs or all of the legs may have ground-engaging wheels 23 mounted thereon so that the table can be moved easily from place to place. The fixed frame 21 preferably has a pair of generally parallel side members 24 connected at opposite ends by end members 25 to form a generally rectangular frame. A pair of longitudinally extending tobacco leaf supporting members 26 are welded or otherwise attached to the end members 25 and extend substantially the full length of the frame in spaced relation to and generally parallel with the side members 24.

At one end, the frame 21 has one or more upright posts 27 to which a movable frame 28 is pivotally mounted by pins 29. The movable frame 28 includes a pair of spaced generally parallel side members 30 of a length longer than the fixed frame 21 and which extend outwardly beyond the upright posts 27. The side members 30 are connected at one end by an end member 31 and at the opposite end by a counterweight 32. At the end of the fixed frame 21 remote from the posts 27, an upright latch supporting member 33 is provided having a latch 34 mounted thereon in a position to engage the end member 31 when the movable frame 28 is in its lowestmost position. The movable frame normally is in a generally upright position as illustrated in FIGS. 3, 4 and 6 but can be swung to a position generally parallel with the fixed frame 21 as illustrated in FIGS. 1, 2 and 5.

An upright shaft 35 is mounted on the counterweight 32 and is adapted to receive a ball of twine 36 held in position by a flat plate or washer 37 and a nut 38 carried by the shaft 35. The twine extends from the ball 36 through an opening 39 in the plate 37, through a guide 40 carried by the counterweight 32 and then to a clip 41 at the opposite end of the fixed frame 21. If desired a sharp razor-like cutter blade 42 can be welded or otherwise attached to the fixed frame 21 in any desired manner, as by welding, fasteners, or the like, and utilized for severing the twine.

At each end of the fixed frame 21, a post 43 is provided and these posts function as guides for the rack 10 when the rack is placed on the table 20. An uprighting
lug 44 is mounted on each end of the fixed frame 21 adjacent to the posts 43 and adapted to engage the upper portion 13 of the rack 10 to locate the rack in correct position. A latch release member 45 is fixed to each of the end members 25 of the fixed frame 21 in a position to engage the latch 17 of the rack as the rack is lowered onto the table, as illustrated in FIGS. 7 and 8.

In the operation of the device, after a rack of bulk tobacco has been cured, the rack is removed from the barn and placed on the table with the upper portion 13 in engagement with the posts 43, after which the rack is lowered until the leaves of tobacco 18 rest upon the supporting members 26 of the fixed frame 21. Just before the leaves reach the supporting members 26, the latch release members 45 will engage the latches 17 of the rack and release the lower portion 11 so that such lower portion will fall by gravity to the ground below the table 20. When the rack has been separated, the movable frame 28 will be swung downwardly about the pins 29 until the end member 31 engages the latch 34 and locks the movable frame in lowered position, at which time the side members 30 will be in direct engagement with the mass of tobacco leaves 18. With the leaves thus held by the table 20, the upper portion 13 of the rack 10 is removed from the leaves, as illustrated in FIG. 5, after which the rack can be refilled with leaves of tobacco to be cured or stored for future use. The latch 34 then is operated to release the movable frame 38 and such frame is returned to its initial upright position by the counterweight 32 and a length of twine, which at this point is located below the leaves of tobacco, can be cut on the blade 42 and the opposite ends brought upwardly around the mass of tobacco leaves and tied together to form a bundle which is then removed from the table. When the bundle has been removed, the end of the twine is pulled the length of the table and placed within the clip 40 after which the process is repeated.

It will be apparent that a relatively simple unloading table for bulk cured tobacco has been provided which will automatically separate portions of a bulk tobacco rack and thereafter portions of the table can be moved into engagement with the leaves of tobacco so that the remaining portion of the rack can be removed easily and quickly.

What is claimed is:
1. An unloading table for bulk cured tobacco carried by a rack having separable portions normally latched together, said table comprising a fixed frame with at least one tobacco supporting member thereon, an upright post mounted at one end of said fixed frame, a movable frame swingably mounted on said upright post, said movable frame extending the entire length of said fixed frame and outwardly beyond one end thereof, counterweight means mounted on said movable frame outwardly of said post, a latch mounted on the end of said fixed frame remote from said post and adapted to engage said movable frame when the movable frame is in lowered position, latch release means carried by said fixed frame and adapted to engage the latch on said tobacco rack and permit separation of one portion from the remaining portion, said movable frame serving to restrain the tobacco held by the remaining portion so that the remaining portion may be removed from the tobacco.

2. A table for unloading bulk cured tobacco from a rack having multiple detachable portions held together by latch means, said table comprising a fixed frame for receiving the bulk tobacco rack, a movable frame swingably mounted on said fixed frame and selectively movable into generally parallel relation therewith, means for securing said movable frame in at least one position, latch release means carried by said fixed frame and engageable with the latch means of the tobacco rack to permit a first portion of said rack to separate by gravity from the second portion and the tobacco, said movable frame serving to restrain the tobacco as the second portion of the rack is separated from the tobacco.

3. The structure of claim 2 including means on said movable frame for normally maintaining said movable frame in a generally upright position.

4. The structure of claim 2 including means for securing the leaves of tobacco together after the rack has been removed.

5. The structure of claim 2 including guide means carried by said fixed frame for guiding said rack to a predetermined position on said fixed frame.

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