

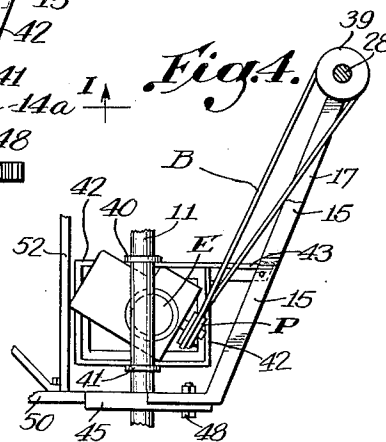
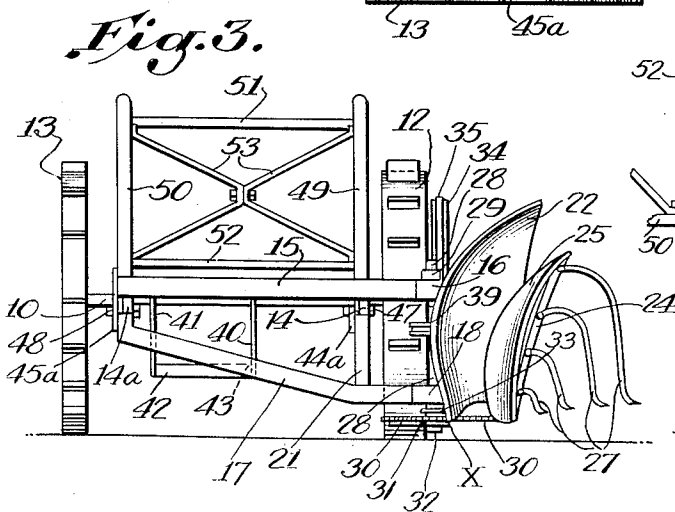
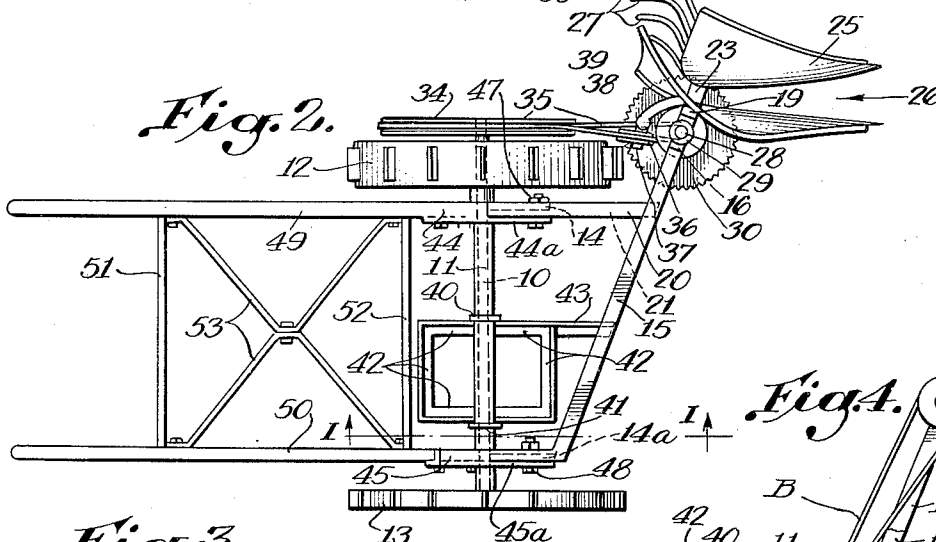
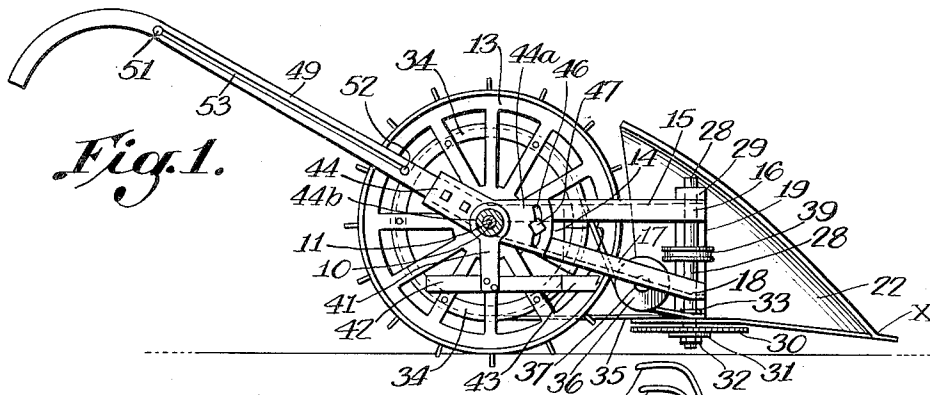
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TOBACCO HARVESTING MACHINE

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TOBACCO HARVESTING MACHINE

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2 Claims. (Cl. 56—27.5)

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My invention relates to a machine for harvesting tobacco. The object of the machine is to provide a machine that will travel down the tobacco row and cut the tobacco stalks and lay them uniformly on the ground at one side of the machine as the machine moves along.

A further object is to provide a machine of the kind mentioned that is simple and light in weight and one that is highly efficient in its work.

A further object is to provide a machine of the kind mentioned that may be operated or used as a hand power machine, but the machine is provided with suitable hangers whereby a small engine may be mounted thereon and used to drive the cutting elements of the machine and, if desired, the engine would also propel the machine.

A still further object is to provide a machine of the kind mentioned that is simple in structure and yet the machine is sturdy and substantial as well as inexpensive to build. These and other objects will be more fully explained as this description progresses.

Now referring to the accompanying drawings,

Fig. 1 is a sectional and side view of the machine, the view being taken along the line I—I in Fig. 2.

Fig. 2 is a top plan view of the machine.

Fig. 3 is a front view of the machine.

Figure 4 is a fragmentary top plan view illustrating a motor drive for the cutter.

Similar numerals of reference designate the same parts throughout the several figures of the drawings.

In the drawings is shown the machine as having an axle shaft 10 that is revolvably carried in a tubular axle housing element 11. On the outer ends of the axle 10 is revolvably mounted a pair of supporting wheels 12 and 13.

Integrally formed on, or rigidly attached to, the tubular axle housing 11, preferably by welding, is a pair of forwardly extending support or bracket elements 14 and 14a. To the bracket 14a is rigidly attached one end of a support frame member 15 that extends forwardly and across the front of the machine, the other end of the frame member 15 rigidly connects to a shaft bearing element 16. To the bracket 14a is rigidly attached one end of a second support frame member 17 which rigidly connects to a second and lower shaft bearing member 18. The shaft bearing members 16 and 18 are rigidly fixed on a vertically positioned support bar 19. To the support bracket 14 is rigidly attached one end of a supporting frame member 20 which extends forwardly and the other end thereof is rigidly con-

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nected to the cross frame member 15. To the support bracket 14 is rigidly attached one end of another forwardly and downwardly frame support member 21 the outer end of which is rigidly connected to the lower cross frame support member 17.

Rigidly attached to the vertically positioned support bar 19 is a guide plate 22 that is substantially triangular in shape and is positioned with its base nearly parallel with the ground and the front point X thereof being tipped slightly downwardly. The guide plate 22 is curved and twisted so to form one side of a chute or guide through which the tobacco stalks will pass as they are cut.

Rigidly mounted on the lower end of the support bar 19 is a cross support bar 23 that projects outwardly and on which is rigidly mounted the lower end of a support standard 24. On the support standard 24 is rigidly mounted a second chute or guide plate 25 which is also substantially triangular in shape and is spaced away from the first guide plate 22 so as to provide a throat or passage 26. Between and due to the shape and position of the two plates 22 and 25 the throat opening 26 is wide at the front and narrows down at the rear. As the throat 26 progresses to the rear it curves to one side and the top thereof curves still more to the same side so that tobacco stalks entering the throat 26 will progress rearwardly therein, and as the machine moves forward the tobacco stalks are cut off and will fall to one side of the machine and lay uniformly on the ground. Rigidly mounted on the support standard 24 is a series of curved outwardly and rearwardly extending fingers 27 that function to assist in guiding the falling tobacco stalks to their uniform lying position on the ground.

Vertically and revolvably positioned in the bearing members 16 and 18 is a shaft 28. On the upper end of the shaft 28 is rigidly fixed a collar 29 that rests on the bearing member 16 and functions to support the shaft 28 in a fixed position as it revolves.

Rigidly fixed on the lower end of the revolvable shaft 28 is a circular saw 30 that is rigidly held on the lower end of the revolvable shaft 28 by means of a washer 31 and a nut 32 that is threaded on the lower end of the shaft 28. The saw 30 is large enough in diameter that the saw 30 crosses the entire width of the rear portion of the throat 26.

Rigidly mounted on the shaft 28 is a small V-belt pulley 33, and rigidly mounted on the supporting drive wheel 12 is a large V-belt drive

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pulley 34. Around and engaging the two pulleys 33 and 34 is a V-belt 35. At 36 is an idler pulley that is mounted on a pin or spindle 37 that is a part of a supporting bracket 38 that is rigidly mounted on and carried by the vertical support bar 19. The idler pulley 36 engages the V-belt 35 and guides the belt into the pulley 33.

Rigidly mounted on the revolvable shaft 28 is a second V-belt pulley 39.

If it is desired to make the machine a power driven machine, the axle housing 11 is provided with a pair of depending leg elements 40 and 41 on which is supported an engine support frame 42. The frame 42 is provided with a forwardly extending brace member 43 the outer end of which rigidly joins with the lower cross frame member 17 and acts to stabilize the engine support frame 42. An engine E may be mounted on the engine support frame 42 and a V-belt B may be run from the drive pulley P of the engine to the pulley 39 on the shaft 28. In this case, as the engine drives the shaft 28, the V-belt 35 will drive the pulley 34 to drive the wheel 12 which will propel the machine, or, if desired, the V-belt 35 may be dispensed with and the engine will only drive the saw shaft 28 and saw 30 thereon and the machine may be propelled by hand.

Revolvably mounted as shown at 44b on the axle housing member 11 is a pair of handle holding elements 44 and 45, each of which are provided with forwardly extending plate portions 44a and 45a and each are provided with an arcuate slot, such as illustrated at 46 in Fig. 1. Through the support brackets 14 and 14a passes bolts 47 and 48 which also pass through the arcuate slots 46. This arrangement permits the handle mounts 44 and 45 to be rocked up or down to adjusted positions where they may be rigidly locked and held by the tightening of the nuts on the bolts 47 and 48.

Rigidly fixed in the handle mounts 44 and 45 is a pair of rearwardly extending handle elements 49 and 50 having strut and brace members 51, 52 and 53 therebetween to make the handle elements 49 and 50 rigid.

To prepare the machine for use, the nuts on the bolts 47 and 48 may be loosened and the handles 49 and 50 rocked to the right height to fit the person operating the machine.

The machine having thus been prepared, is pushed or propelled down the field so that the row of crop enters the throat or opening 26 of the machine. The saw 30 engages and cuts the stalk and as the machine advances the front low pointed portion of the guide plates 22 and 25 run under the drooping leaves of the crop. As the machine further advances, the leaves are raised upward and the rear twisted portion of the guide plate 22 tips the cut crop to one side against the guide fingers 27 and guide the cut crop to a uniform lying position on the ground where it remains until such time as the crop is picked up and taken to a final place of curing and storage.

The crop being handled as above described, the leaves are preserved from breakage and a much larger percent of the crop remains in a well preserved and usable condition, which enables the owner of the crop to realize more money out of his crop.

Such modifications of the invention may be employed as lie within the scope of the appended claims. Now having fully shown and described my invention, what I claim is:

1. In a tobacco harvesting machine of the kind

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described; the combination of an axle, a pair of wheels, one of said wheels having a belt pulley thereon, said wheels being revolvably mounted on said axle, a frame and an axle housing as a part thereof, said frame being rockably carried by said axle housing which is rockably mounted on said axle, and handle means for handling the machine, said handle means being rockably carried by the axle housing and means for rigidly attaching said handle means to the frame in adjusted vertical angular positions relative to the frame, a shaft, said shaft being vertically positioned and revolvably carried in bearings supported on said frame and at one side thereof, and pulley means on said shaft, a belt, said belt passing around and engaging the said pulley means on one of said wheels and the pulley means on said shaft for driving purposes between the wheel and the shaft, a circular saw, said saw being rigidly mounted on the lower end of the said shaft, a pair of substantially triangular shaped guide plates, said guide plates being supported by said frame and being spaced apart to form a throat therebetween and the base of the triangular shaped guide plates being positioned immediately above the saw and the saw spanning the width of the throat, the upper and rear portion of said guide plates curving rearwardly and outwardly from the pulleyed wheel of the machine, and one of said guide plates having outwardly and downwardly curving fingers carried thereon to guide and lay the cut crop on the ground.

2. In a tobacco harvesting machine of the kind described; the combination of an axle, a pair of wheels, one of said wheels having a belt pulley thereon, said wheels being revolvably mounted on said axle, a frame and an axle housing as a part thereof, said frame being rockably carried by said axle housing which is rockably mounted on said axle, and handle means for handling the machine, said handle means being rockably carried by the axle housing and means for rigidly attaching said handle means to the frame in adjusted vertical angular positions relative to the frame, a shaft, said shaft being vertically positioned and revolvably carried in bearings supported on said frame and at one side thereof, and pulley means on said shaft, a belt, said belt passing around and engaging the said pulley means on one of said wheels and the pulley means on said shaft for driving purposes between the wheel and the shaft, a circular saw, said saw being rigidly mounted on the lower end of the said shaft, a pair of substantially triangular shaped guide plates, said guide plates being supported by said frame and being spaced apart to form a throat therebetween and the base of the triangular shaped guide plates being positioned immediately above the saw and the saw spanning the width of the throat, the upper and rear portion of said guide plates curving rearwardly and outwardly from the pulleyed wheel of the machine, and one of said guide plates having outwardly and downwardly curving fingers carried thereon to guide and lay the cut crop on the ground, said frame also having a carriage thereon as a mount for an engine, said shaft having a second pulley thereon to receive a belt for delivering power from the engine to the said shaft for the rotary driving thereof.

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