

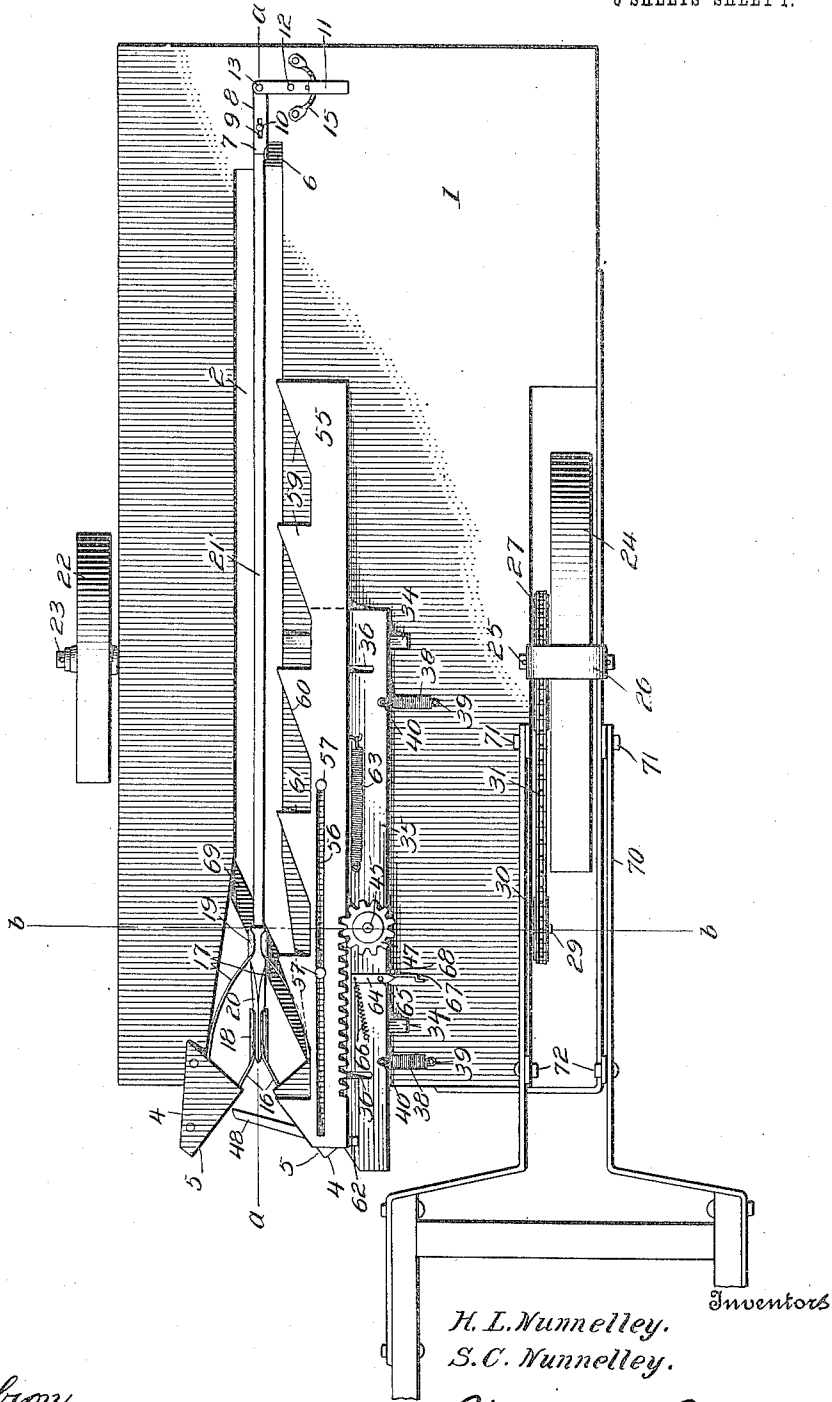
H. L. & S. C. NUNNELLEY.
TOBACCO HARVESTER.
APPLICATION FILED SEPT. 10, 1912.

1,090,747.

Patented Mar. 17, 1914.

6 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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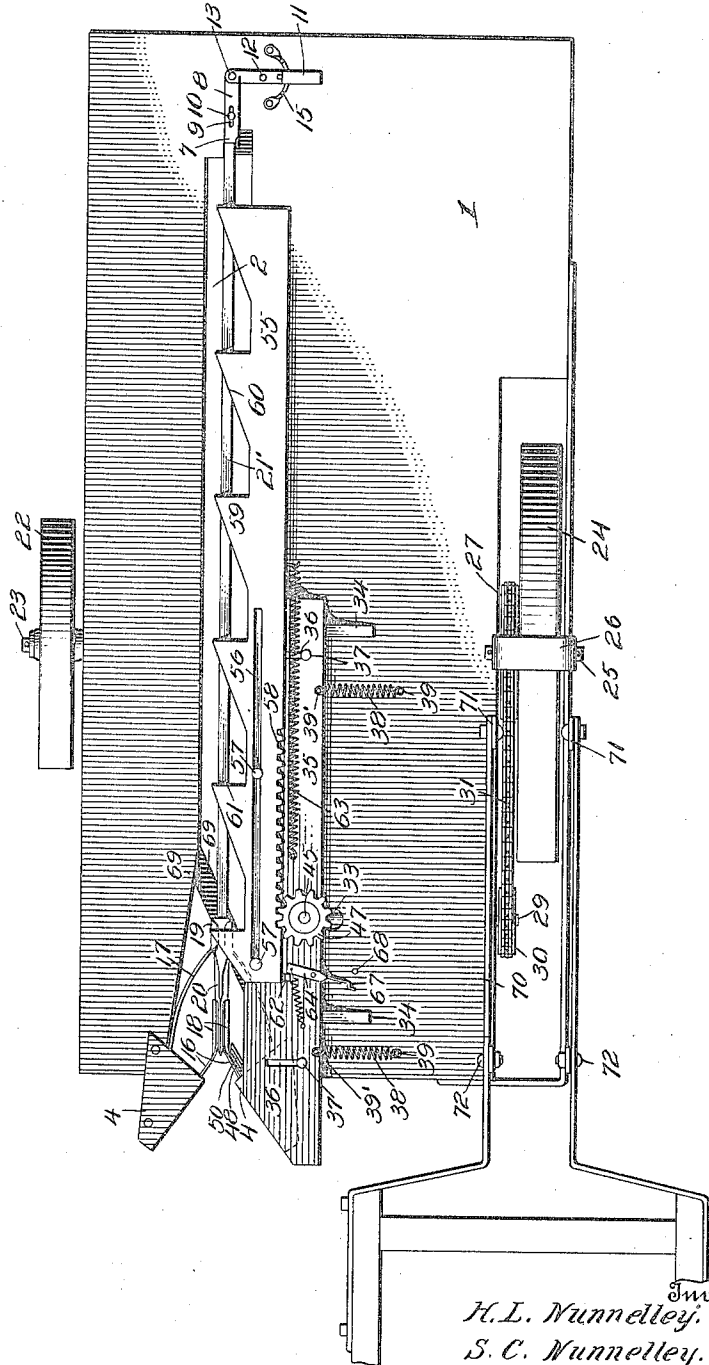
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5 SHEETS—SHEET 2.

Fig. 2.



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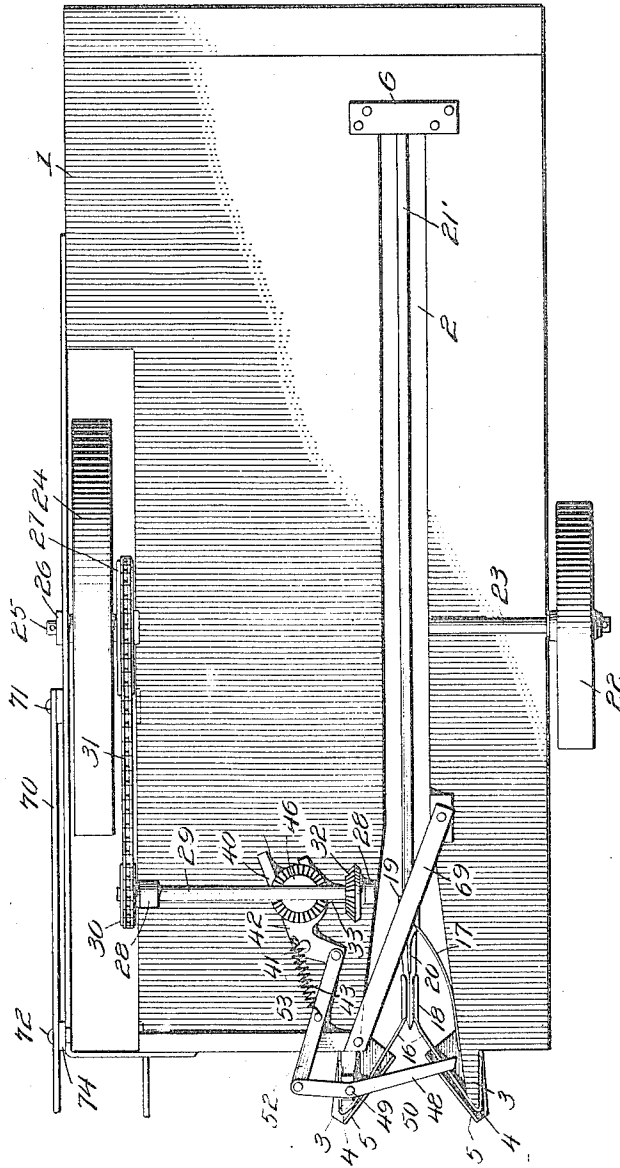
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5 SHEETS—SHEET 3.

Fig. 3.



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6 SHEETS-SHEET 5.

Fig. 6.

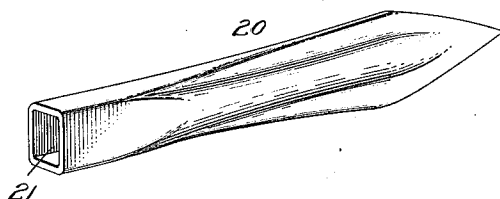


Fig. 7.

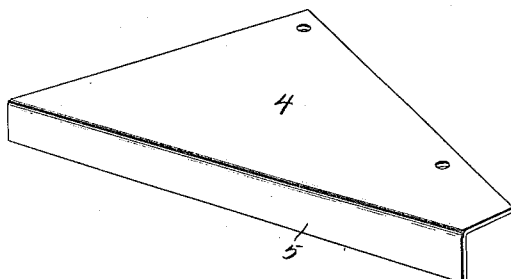
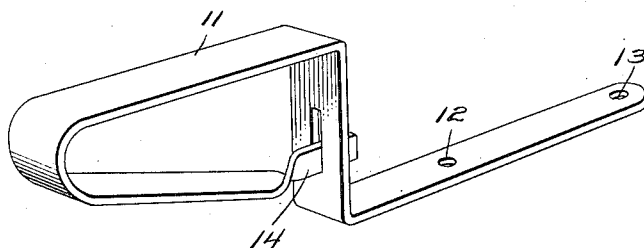


Fig. 8.



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UNITED STATES PATENT OFFICE.

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TOBACCO-HARVESTER.

1,090,747.

Specification of Letters Patent.

Patented Mar. 17, 1914.

Application filed September 10, 1912. Serial No. 719,629.

To all whom it may concern:

Be it known that we, HERBERT L. NUNNELLEY and SPENCER C. NUNNELLEY, citizens of the United States, residing at Greendale, in the county of Fayette and State of Kentucky, have invented new and useful Improvements in Tobacco-Harvesters, of which the following is a specification.

Our invention relates to improvements in tobacco harvesters for cutting standing tobacco stalks and placing the same on sticks, ready for removal to the curing house, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a plan of a tobacco harvester constructed in accordance with our invention, showing the same out of gear. Fig. 2 is a similar view, showing the same in gear. Fig. 3 is a bottom plan of the same. Fig. 4 is a vertical longitudinal sectional view of the same on the plane indicated by the line *a—*a** of Fig. 1. Fig. 5 is a vertical transverse sectional view of the same on the plane indicated by the line *b—*b** of Fig. 1.

In the embodiment of the invention here shown, there is a platform 1 which is provided near one side with a guide slot 2 the front end of which is open and is widened. Guide fingers 3 project from the front side of the platform at opposite sides of the guide slot and on the said fingers are guide plates 4 which are triangular in plan and present rearwardly converging opposing sides which are provided with downturned walls 5. At the rear end of the guide slot and on the under side of the platform is a supporting plate 6. A presser foot 7 which extends downwardly in the rear end of the guide slot, above the supporting plate is provided with a rearwardly extending arm 8 which bears on the platform and has a slot 9, a screw 10 extending through the said slot, permitting endwise movement of the presser foot and securing the presser foot in place. A set screw 11 is also provided which is fulcrumed on the platform as at 12 and has one end pivotally connected as at 13 to the arms of the presser foot, the said set lever being provided with a spring dog 14 which may be engaged with any of the teeth of a locking segment 15.

In the front end of the guide slot are pairs of spring guide arms 16—17. The arms 16 are in advance of the arms 17 and both pairs

of the guide arms converge rearwardly the front guide arms terminating at their rear ends in jaws 18 and the guide arms 17 terminating at their rear ends in jaws 19.

A spear head 20 is carried between the jaws of the pairs of guide arms, its broadened point being engaged on the opposite sides by the jaws 18 and its rear portion being engaged on opposite sides by the jaws 19, the said jaws 18—19 being, respectively, shaped, cross sectionally, to correspond with the cross sectional contours of the spear head and the latter has a longitudinal opening extending from its rear end and indicated at 21 which opening is adapted to receive the front of a suitable tobacco stick 22. The rear end of the tobacco stick is engaged by the presser foot and bears on the plate 6 and since the presser foot is movable longitudinally as hereinbefore stated and can be secured in any desired adjusted position, the tobacco stick may be readily placed in the spear head and on the plate 6 until the requisite number of tobacco stalks have been harvested and placed on the stick and the latter with the tobacco stalks thereon can be then readily removed and another stalk mounted in place on the machine instead.

A supporting wheel 22 is mounted at one side of the platform at a point substantially between the ends thereof, the axle being indicated at 23, and at the opposite side of the platform is a supporting master wheel 24 which has an axle shaft 25 arranged above the platform and mounted in bars 26. This axle shaft is provided with a sprocket wheel 27.

On the same side of the platform with the master wheel is a pair of hangers 28 which depend from the platform, are arranged at a suitable distance from the front end thereof and are provided with bearings for a countershaft 29. This countershaft has a sprocket wheel 30 which is connected to the sprocket wheel 27 by an endless sprocket chain 31 and said countershaft is also provided with a miter gear 32. The platform has a transverse slot 33 which is arranged above the countershaft 29. On the upper side of the platform and near the front and rear ends of the guide slot 2 are transverse guideways 34 on which a laterally movable shifter 35 operates. The shifter is provided with transverse slots 36 through which extend guide screws or other devices

37 which are connected with the platform and which holding the shifter in place permit it to move laterally. Springs 38 which are connected to the platform as at 39 are also connected to the shifter as at 40, are arranged at one side of the shifter and exert every tension to move the shifter outwardly or away from the guide slot 2.

On the under side of the platform is a carrier 40 which is pivotally mounted as at 41 and comprises a body 42 and an arm 43, the body being provided with a slot 44. A vertical shaft 45 operates in the slot 32 of the platform, has a bearing at its lower end in the slot of the carrier and also has a bearing near its upper end in the shifter, so that the said shaft is movable transversely with the shifter. At the lower end of the said shaft is a gear 46 which is a miter gear and is movable into and out of engagement with the miter gear on the countershaft. At the upper end of the said shaft is a spur gear 47 which is arranged immediately above the shifter. An operating bar 48 is pivotally mounted as at 49 and comprises an arm 50 to extend across the space between the guide arm 16, at the front of the machine and an arm 51, the latter arm being connected by a pitman 52 to the arm of the carrier. A spring 53 is connected to the carrier and also to the pitman and exerts its tension on the pitman to normally draw the latter rearwardly and thereby cause the pitman to normally move the arm 50 of the operating bar forwardly and also move the carrier outwardly.

On the upper side of the shifter near the edge thereof which is presented to the guide slot 2 is a packer 55 which is provided near its ends with longitudinal guide slots 56 which are engaged by guide and securing pins or screws 57, the packer being provided on its rear side with a rack 58 engaged by the gear 47, the front side of the packer or that side which is nearest the guide slot 2 being provided with a suitable number of teeth 59 appropriately spaced, six of the said packing teeth being here shown and each packing tooth having an oblique front edge 60 and a transverse rear edge 61 which forms a shoulder at the rear side of the tooth. Near the outer end of the packer on the rear side thereof, is a trip detent 62. A spring 63 is connected to the rear side of the packer and is also connected to the shifter and exerts its tension to move the packer forwardly. A catch 64 is fulcrumed as at 65 on the upper side of the shifter near the rear edge thereof. One end of the catch extends toward the packer and within the path of the trip detent 62. A spring 66 is connected to the catch and serves to engage a shoulder 67 which is at the outer or rear end of the catch with a stop pin 68 when the packer is in the desired position, as

shown in Fig. 1, the said stop pin being secured to and projecting up from the platform. A cutter 69, which is here shown as an obliquely arranged blade is below the platform and extends across the front portion of the guide slot 2. A pair of thills 70 are here shown as having their rear ends pivotally connected as at 71 to the platform. The thills are adapted to be adjusted to any desired inclination with respect to the platform and may be secured in adjusted position by means of set screws 72 which operate in slots 73 with which standards 74 are provided, the said standards projecting from the upper side of the platform. Supporting legs 75 depend from the front side of the platform and are employed to support the front end of the machine when the latter is out of use.

The operation of our improved tobacco harvester is as follows:—Let it be assumed that a tobacco stick has been secured in place with its rear end on the plate 6 and its front end in the spear head, as hereinbefore described and that the harvester is driven with the guide arms 16—17 on opposite sides of the stalks. As each tobacco stalk in succession is engaged by the operating bar 48, the arm 50 of said bar is moved rearwardly by the pressure against the stalk and the said bar through the instrumentality of the pitman 52 turns the carrier 40 in one direction on its pivot so as to cause the carrier to move the shaft 45 toward the guide slot 2 and, hence, cause the said shaft to move the shifter in the same direction against the tension of the springs 38 and thus project the teeth of the packer above the guide slot and over the converging ends of the pairs of guide arms and also move the gear 46 into engagement with the gear 32. When the gears are thus engaged at the completion of such movement of the shifter, the shoulder 67 of the catch is brought into engagement with the stop pin 68 by the action of the spring 66 thus holding the packer in such position and the wheels 32—46 in gear. The countershaft, by reason of its connection hereinbefore described with the master wheel, is constantly rotated while the machine is in motion, and hence such engagement of the gears 32—46, which is of short duration, causes the shaft 45 to be momentarily rotated. The forward movement of the machine causes the tobacco stalk to be directed rearwardly between the ends of the spring guide arms and into engagement with the spear head, so that the stalk is pierced by the spear head. The packer is moved rearwardly by the engagement of the gear 47 with the rack 58 and against the tension of the spring 63 and, hence, the stalk, which is cut by the blade or knife 69 is caught by one of the teeth of the packer and forced rearwardly throughout the length of

the spear head and onto the stick. As the packer nears the rearward limit of its movement its trip detent 62 engages the catch 64 and partly turns such catch against the tension of its spring 66 so as to disengage the shoulder 67 of the catch from the stop pin 68 and thereupon the springs 39 act to draw the shifter away from the guide slot 2 and to disengage the gear 46 from the gear 32. Owing to the number of the teeth on the packer, the teeth, as they move forwardly slip past the tobacco stalks on the stick and each tooth at the forward stroke of the packer gets in front of the tobacco stalk which it moved rearwardly on its preceding rear stroke. As soon as the required number of tobacco stalks are thus placed on the stick, according to the number of teeth on the packer and the loaded stick is removed, another is inserted in its place by the driver.

While we have herein shown and described a preferred form of our invention, we would have it understood that changes may be made in the form, proportion and construction of the several parts without departing from the spirit of our invention and within the scope of the appended claims.

We claim:

1. In a tobacco harvester, yieldable guides, an impaling head held between the yieldable guides, holding means coacting with the impaling head to support a tobacco stick in line with the impaling head, and means to cause standing tobacco stalks to be impaled on the impaling head and to be forced there-

from onto the stick and means to cut the impaled stalks.

2. In a tobacco harvester, guides, an impaling device to which standing tobacco stalks are directed by the guides, a laterally movable shifter, a longitudinally movable packer, means to operate the shifter and the packer and means to cut the impaled stalks.

3. In a tobacco harvester, a frame, a master wheel, a gear operated by the master wheel, guides, a cutter, a shifter movable laterally on the frame, an operating arm extending across the path of the guides, connections between the operating arm and the shifter to cause the operating arm to move the shifter in one direction, springs to move the shifter in the reverse direction, a spring pressed detent carried by the shifter to lock the latter in one position, a countershaft carried by the shifter and having a gear to momentarily engage the first-mentioned gear, the said countershaft being also provided with a pinion, a packer movable longitudinally on and carried by the shifter and having a rack to engage the pinion and also having a trip to release the detent, and a spring to move the packer in one direction.

In testimony whereof we affix our signatures in presence of two witnesses.

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SPENCER C. NUNNELLEY.

Witnesses:

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