W. H. TILSON.

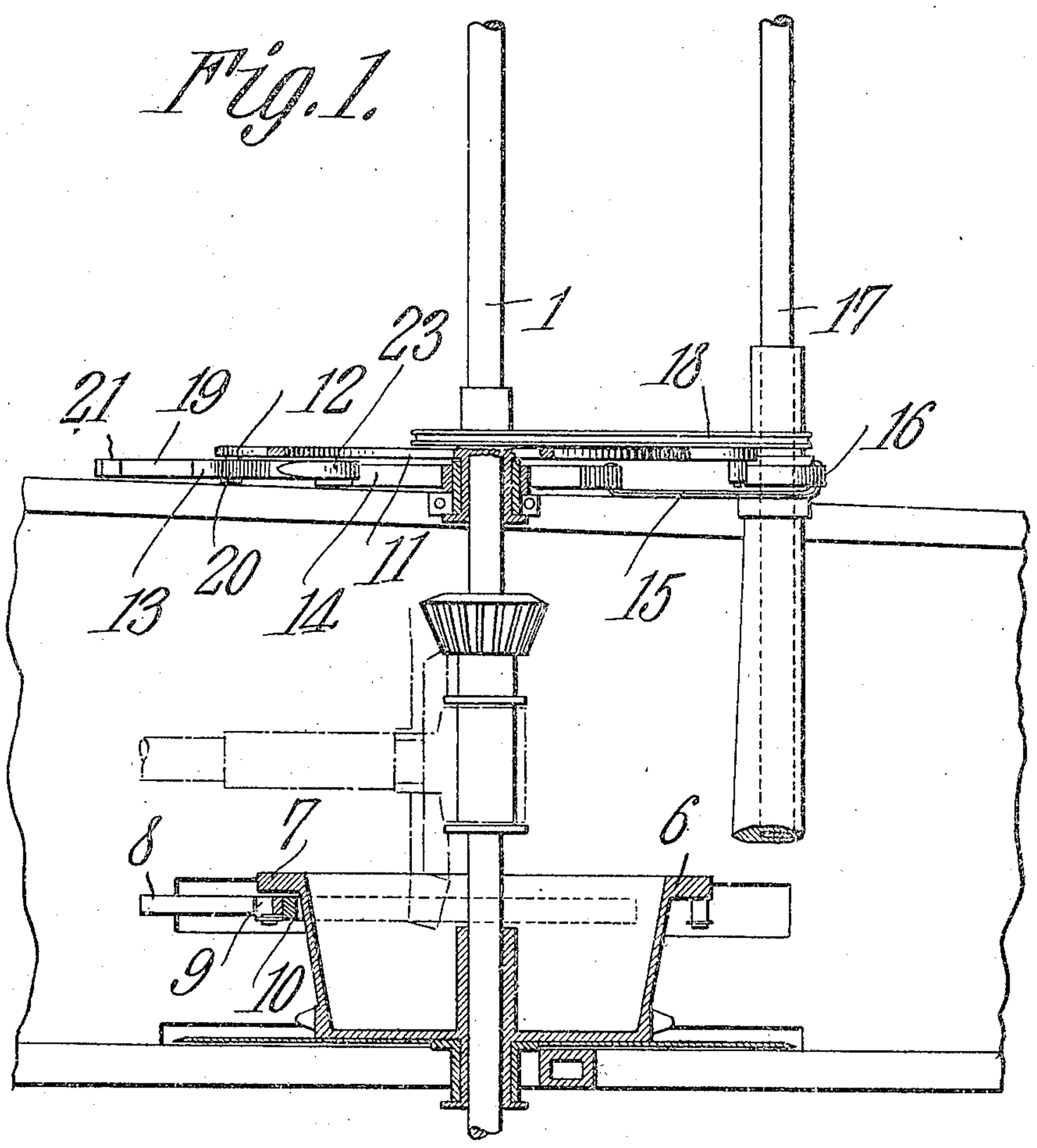
STALK PACKER FOR CORN HARVESTERS.

APPLICATION FILED NOV. 17, 1908.

951,922. Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

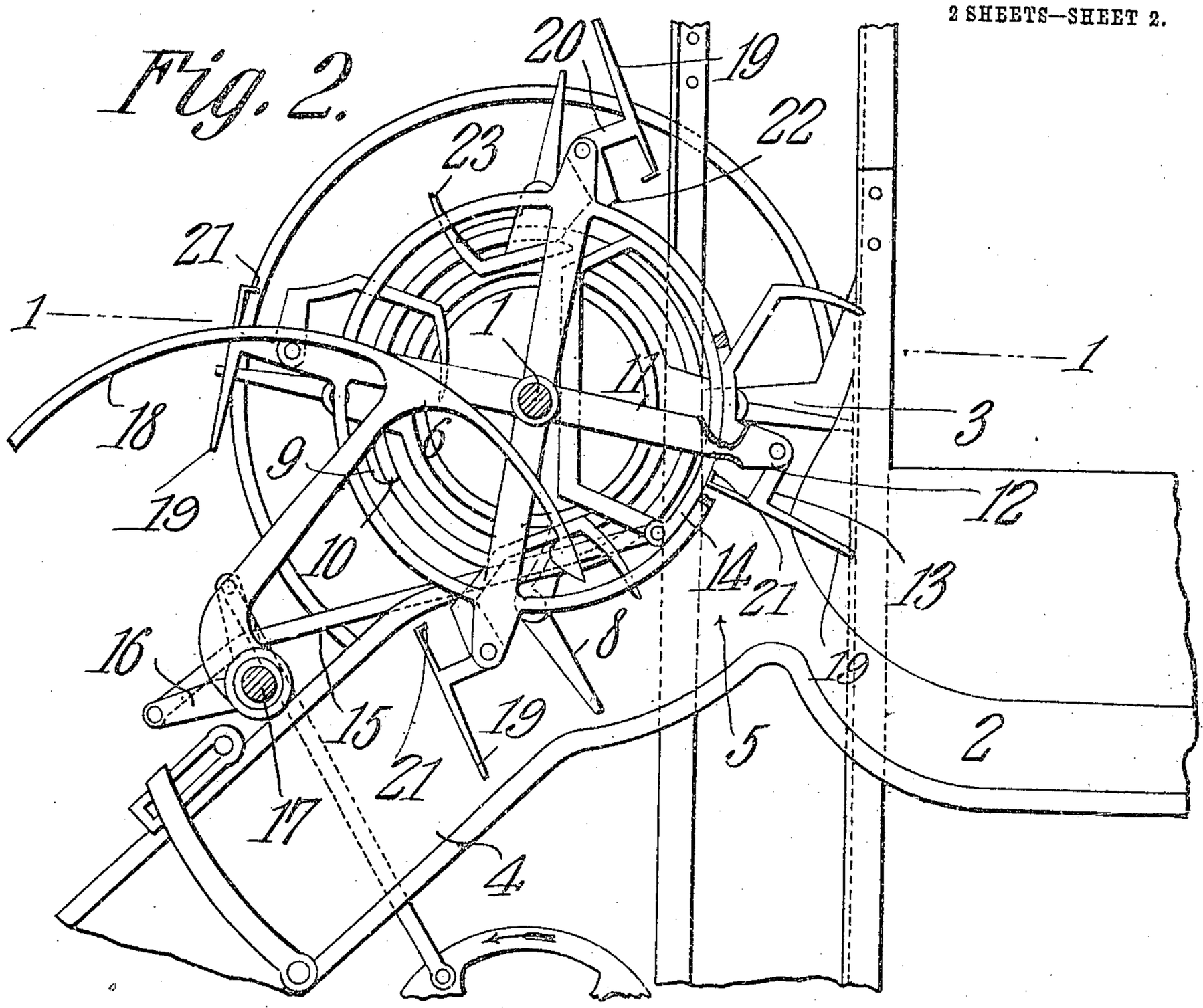
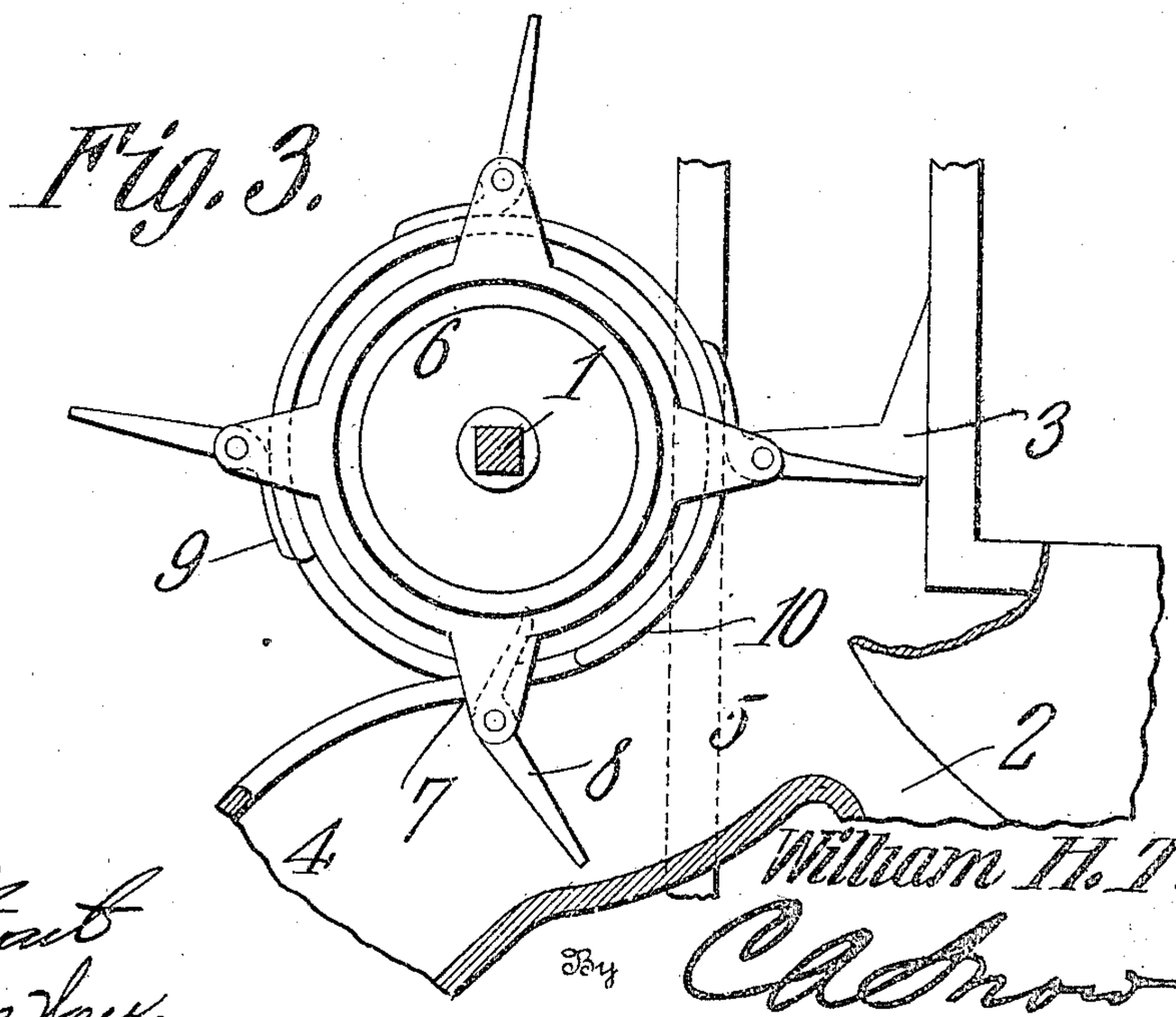


Fig. 3.



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UNITED STATES PATENT OFFICE.

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STALK-PACKER FOR CORN-HARVESTERS.

951,922. Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed November 17, 1908. Serial No. 463,094.

To all whom it may concern:

Be it known that I, WILLIAM H. TILSON, a citizen of the United States, residing at Plainview, in the county of Hale and State of Texas, have invented a new and useful Stalk-Packer for Corn-Harvesters, of which the following is a specification.

This invention has relation to stalk packers for corn harvesters which consists in the novel construction and arrangements of its parts as hereinafter shown and described.

The present invention refers particularly to the means for packing the stalks against the gate provided at the bundle outlet of the machine, and operates upon the stalks in advance of the binding needle.

The packer consists of a rotating device adapted to operate upon the butts, or butt portions, of the stalks, and, also, of a rotating mechanism of peculiar construction and arrangement adapted to operate upon the middles of the stalks. The parts above mentioned are arranged upon a shaft common to both and from which they derive their movements.

In the accompanying drawing:—Figure 1 is a sectional view of the packing mechanism cut on the line 1—1 of Fig. 2. Fig. 2 is a top plan view of the packer, and Fig. 3 is a plan view of the butt packing mechanism.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The present invention is adapted to be used upon corn harvesters of any usual form, but it is especially intended for use upon harvesting machines of the character indicated which are adapted to gather corn from two or more rows simultaneously. In such machines the corn as it is cut is transmitted along passages which eventually merge into a common passage where the packing operation is performed. The packing device is located at the point of merger of the said passages and operates upon the stalks which are impaled against the outlet gate as above indicated. The packer consists of the shaft 1 which is journaled for rotation upon the frame of the machine. The passages 2 and 3 lead from the various corn cutting mechanisms of the machine and merge into a passage 4 at the point 5. The shaft 1 is located adjacent the said point of merger. The base packing mechanism consists of a disk 6 which is mounted upon the shaft 1 and is provided at its periphery with a series of spaced lugs 7. The packers 8 are pivotally attached to the lugs 7 and each said packer is provided with an angularly disposed arm 9. The interrupted annulus 10 is arranged upon the frame of the harvester and is concentric with the shaft 1. The said annulus is so disposed that the packing arms 8 are held substantially in alinement with the radii of the disk 6 when the said arms are passing through or across the ends of the passages 2 and 3. This is accomplished by the portions 9 bearing laterally against the said annulus. After the portions 9 have passed beyond the end of the annulus, the packers 8 may swing on their pivots and withdraw from the stalks which have been moved into the passage 4 in a transverse direction with relation to the said passage. Thus the packers are withdrawn from the corn stalks without friction.

The middle packing mechanism consists of a wheel 11 fixed to the shaft 1 in elevated position with relation to the disk 6. The said wheel is, also, provided with radially disposed lugs 12 which are located at its periphery. The middle packers 13 are of peculiar configuration and are pivotally mounted or attached to the lugs 12. The configuration of the packers 13 will be described hereinafter. The arcuate segment 14 is pivoted upon the shaft 1 and is connected by means of a rod 15 with a crank arm 16 of the needle shaft 17. The arrangement of the parts 14, 15, 16 and 17 is such that when the needle shaft 17 is operated so as to move the needle 18 across the passage 4 that the segment 14 will be so moved as to interrupt the operation of the packers 13 in advancing stalks toward the needle or the passage 4. This interruption of the operation of the packers is necessary, for otherwise the stalks will be compressed against the needle with incident friction or damage to the parts. The packers 13 consist of the heads 19 which are integrally connected with crank arms 20. Each head 19 is provided at its inner end with a flange 21. The opposite ends of the crank arms 20 merge into the arcuate sections 22, which in turn merge into the hooked ends 23. The inner surfaces of the flanges 21 lie in the same arc as the inner surfaces of the arcuate portions 22, while the heads 19 and the hooked ends 23 are adapted to traverse or sweep across the ends of the stalk passages 2 and 3.

As the shaft 1 rotates, the wheel 11 is carried around with the same, and the packers 13 are successively passed along the arcuate surface of the segment 14. When the arcuate portions 22 of the packers 13 engage the edge of the segment 14, the said portions 22 slide along the periphery of the said segment and thus each packer 13 as it moves along the said segment is fixed in this position with relation to the wheel 11. When in said position, the head 19 is disposed substantially in alinement with the radius of the said wheel, and all stalks that happen to be in advance of the said head are moved toward the passage 4 of the machine. The space between the head 19 and the hooked portion 23 is, also, occupied by stalks which are taken up from the passage 2 and advanced toward the passage 4, while the space between the rear edge of the hooked portion 23 of the preceding packer 13 and the forward edge of the head 19 is filled by stalks which are moved from the passage 3 into the merger chamber 5, thus the packers 13 are so arranged as to operate upon stalks arriving through both of the said passages, and forces the stalks thus assembled into the outlet passage 4. When the hooked portions 23 arrive at that end of the segment 14 nearest the passage 4, the said hooked end 23 moves beyond the center of the wheel 11, and thus the packer 13 turns upon its pivotal connection with the lug 12 and permits the head 14 of the packer to enter the end of the passage 4 in substantially parallel relation with the gate 24 located at the end of the said passage 4. This arrangement, also, permits the head 19 of the packer 13 to withdraw laterally from the compressed stalks located in the passage 4, thereby reducing friction to a minimum. As the butts of the stalks are of greater diameter than the middles thereof, the packing arms 8 are not located practically under the packing heads 19 of the packers 13, but are positioned sufficiently behind the same in order that the stalks may receive uniform pressure from the packing mechanism at the base and the middle.

I claim:—

1. In a harvester a member mounted for rotation, a segment concentrically arranged with relation to said member, a packer pivotally mounted upon the rotating member and having a head portion, a crank portion, an arcuate portion, and a hooked portion spaced from the head portion.

2. In a harvester a stalk packer comprising a member mounted for rotation, a segment concentrically arranged with relation to said rotating member, a packer pivotally mounted upon the rotating member and comprising a head portion provided at its inner end with a flange, and having a crank portion, an arcuate portion, and a hooked end portion, said hooked end portion being spaced from the head portion, said flange on the head portion lying in the same arc as that described by the arcuate portion.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

W. H. TILSON.

Witnesses:
W. G. PHILLIPS,
E. GRAHAM.