C. S. JOHNSTON.

CYCLE.

APPLICATION FILED MAY 28, 1908.

914,492. Patented Mar. 9, 1909.

Fig. 1.

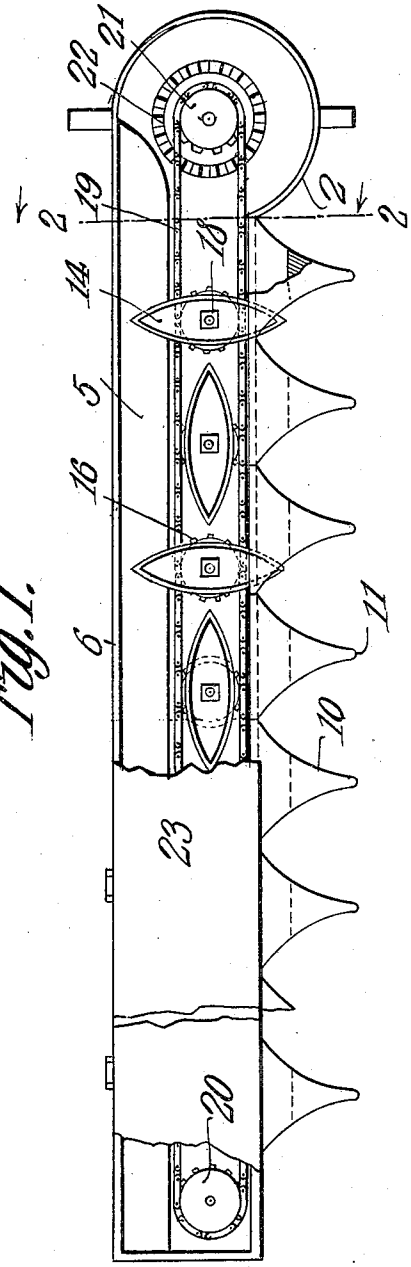
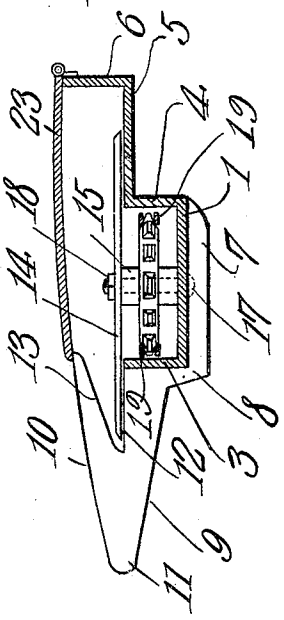


Fig. 2.



Witnesses

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CLARENCE S. JOHNSTON, OF GLENDIVE, MONTANA.

CYCLE.

No. 914,492. Specification of Letters Patent. Patented March 9, 1909.

Application filed May 28, 1908. Serial No. 435,457.

To all whom it may concern:

Be it known that I, CLARENCE S. JOHNSTON, a citizen of the United States, residing at Glendive, in the county of Dawson and State of Montana, have invented a new and useful Cycle, of which the following is a specification.

This invention relates to mowers and more particularly to the cutting mechanism thereof.

One object of this invention is to provide an improved form of cutting mechanism, which will not leave portions of the grain or grass uncut as frequently happens with devices of this kind.

Another object is to provide a device simple in structure and to which ready access may be had at all times for purposes of oiling or repair.

With these and other objects in view as will more fully hereinafter appear the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described illustrated in the accompanying drawings and particularly pointed out in the appended claim it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a plan view of the device with a portion of the door broken away disclosing the cutting mechanism. Fig. 2 is a cross section taken on line 2—2 Fig. 1.

Similar numerals of reference are employed to designate corresponding parts throughout.

In the construction illustrated, a substantially rectangular box or casing preferably formed of metal has a base plate 1, provided at one end with an enlarged circular head or extension 2, from the sides and ends of the base plate rise the side walls 3, and 4, having one end curved to conform to the configuration of the circular end 2 of the base plate. The side walls 3 and 4 will subsequently be termed the front and rear walls respectively. Projecting outwardly and at right angles to the rear wall 4 is an extension 5 of less width than the base plate 1, running substantially the entire length of the rear wall and having on its outer end a vertical extension 6, substantially the same height as the front and rear walls 3 and 4.

The guards in the present instance are shown as formed of a base plate or shoe 7 of the same width as the base plate 1, and secured to the latter by means of bolts or screws. These shoes are adjacent one another and present a continuous surface from the inner edge of the enlarged portion 2, to adjacent the opposite end. From the front end of the shoe 7, rises an outwardly inclined wall 8, which extends upwardly to a point a trifle below the longitudinal center of the front wall 3, and terminating in a nose the lower face 9 of which projects outwardly and upwardly at an obtuse angle to the wall 8, and terminates in a rounded off portion 11 from which projects the inwardly and upwardly inclined upper face 10, the inner end of which is in the same horizontal plane with the upper edge of the extension 6, and in a vertical plane with the inner face of the front wall 3. The opposed side faces of the guards curve laterally in opposite directions from the rounded off portion 11. It can be readily seen when a number of these guards are secured side by side on the base plate 1, and the inner terminals of their side walls abutting—considerable space will exist between the rounded off portions 11, thus forming pockets into which the stalks of grass or grain will be forced for cutting. Formed on the inner face of the nose portion of each guard is a transverse recess extending outwardly to a point at substantially the middle of the nose, and the lower side 12 of which is in a plane with the upper edge of the front wall 3, and the upper side 13 extending from the inner end of the recess and curving upwardly to the inner edge of the upper face 10 of the nose. It is to be understood while these guards have been described as units, the entire number may be forged or cast in one piece.

The knives or cutters 14, as illustrated are formed of tool steel and are substantially elliptical in marginal contour the opposed sides of which are ground to a shear edge, these cutters are keyed or otherwise secured to one end of a hub 15, to the middle of which is secured a sprocket wheel 16. The hub is secured to the base plate 1 by means of a suitable bolt 17 which enters in an opening formed at approximately the longitudinal center in the base plate 1, and extends through the hub projecting beyond the upper face of the knife 14 and on this projecting portion is threaded a nut 18. It is designed to dispose the bolts 17 to one side

of the meeting point of the laterally curved sides of the guards and the length of each blade in performing its circular movement is sufficient for its opposed ends to enter into the recess of one guard and the pocket thence into the recess of the adjacent guard, it being understood that the lower face of the blades lie sufficiently above the lower floor 12 to form a cutting edge with the latter. The distance between the pivot point of any two blades is considerably less than the length of a blade and for this reason the blades are mounted alternately perpendicular and parallel with respect to the front and rear walls 3 and 4.

The actuating mechanism consists of a suitable endless sprocket chain 19 embracing the opposed end sprockets 20 and 21 of the same diameter and lying in a plane with the cutter sprockets 16. Mounted on the shaft with the end sprocket 21 and in the circular head 2 is a miter wheel 22 adapted to be driven by a suitable shaft carrying a pinion meshing with said miter wheel and actuated in the usual way by the movement of the vehicle.

Pivotally mounted on the outer face of the extension 6 and adjacent the upper edge thereof is a door 23 substantially the length of the entire casing and of a width sufficient to extend beyond the opening between the inner end of the guards and extensions 6 and adapted to rest upon the upper face 10 of the nose the function of this door is to provide a means of access to the cutters and actuating mechanism.

What is claimed is:—

In a device of the class described, a casing, said casing having a forward wall and a rear wall which latter extends above the former, guard teeth secured to the casing and extending forwardly from the forward wall thereof, each of the said teeth being formed with a rearwardly extending guard portion having its upper edge above the said forward wall, the side edges of the guide portions of the teeth at their said rear portions being in mutual contact throughout the length of the device, and a cap plate hinged to the upper edge of the rear wall of the casing and resting solely at its free edge upon the rear edge portion of the said guard portions of the teeth.

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

CLARENCE S. JOHNSTON.

Witnesses:

J. M. O'NEIL,

M. J. HUGHES.