G. E. WILSON.

CHAIN SICKLE.

APPLICATION FILED SEPT. 9, 1919.

1,409,507.

Patented Mar. 14, 1922.

2 SHEETS—SHEET 1.

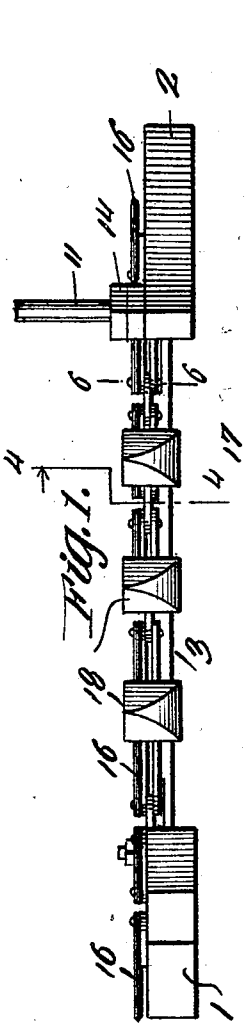


Fig. 1.

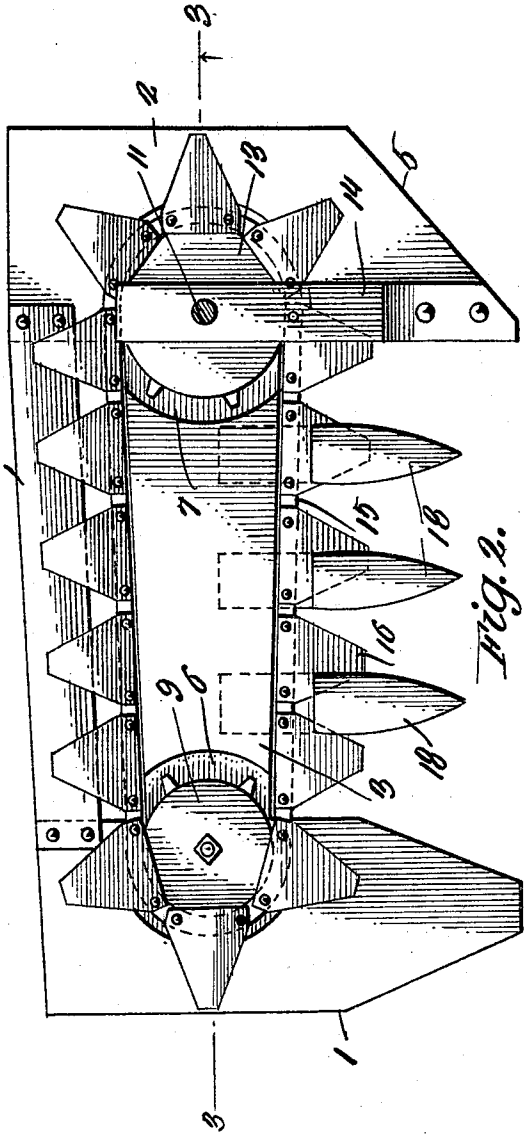


Fig. 2.

WITNESSES

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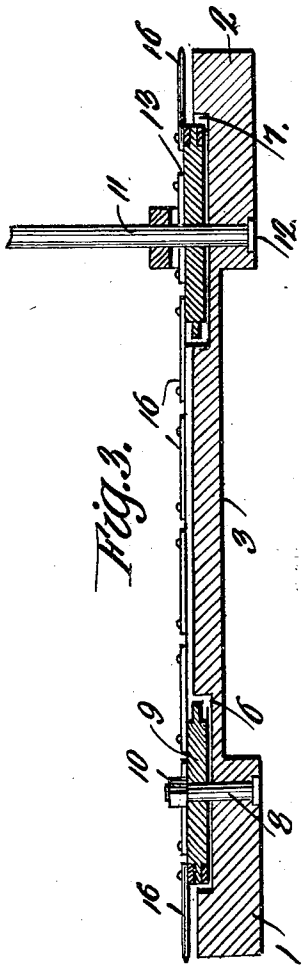


Fig. 3.



Fig. 6.

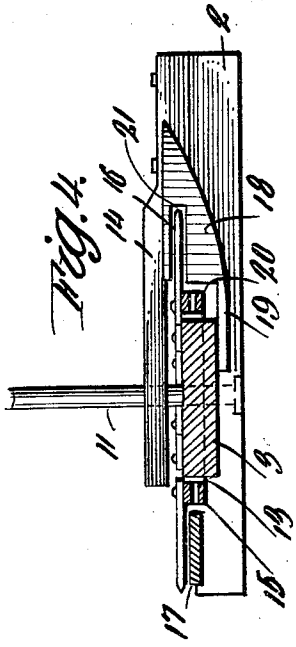


Fig. 4.

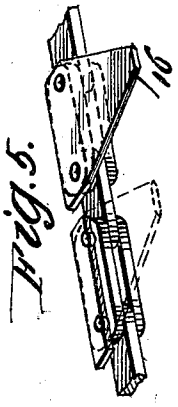


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

GARRISON E. WILSON, OF CALDWELL, KANSAS.

CHAIN SICKLE.

1,409,507. Specification of Letters Patent. Patented Mar. 14, 1922.

Application filed September 9, 1919. Serial No. 322,603.

To all whom it may concern:

Be it known that I, GARRISON E. WILSON, a citizen of the United States, residing at Caldwell, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in a Chain Sickle, of which the following is a specification.

My invention relates to new and useful improvements in sickles and more particularly to a chain sickle.

The principal object of the invention is the provision of a device of this character which is simple and inexpensive in construction and which may be driven from various types of harvesters or other machines.

Another object of the invention resides in the construction of the frame in such a manner that the parts will be assembled in compact form.

A further object consists in the provision of novel means for mounting the chain with the sickle blades thereon.

With these and other objects in view my invention consists in the novel details of construction and arrangement of parts which will be more clearly understood from the following specification and drawings in which:—

Figure 1 is a front elevation.

Figure 2 is a top plan.

Figure 3 is a longitudinal vertical section on the line 3—3 of Figure 2 looking in the direction of the arrow.

Figure 4 is a transverse vertical section on the line 4—4 of Figure 1 looking in the direction of the arrow.

Figure 5 is a fragmental detail perspective of the chain and manner of connecting the blades, and

Figure 6 is a transverse vertical section on the line 6—6 of Figure 1.

In carrying out my invention I provide runners 1 and 2 which are connected intermediate their ends by a bar 3 which is preferably integral although it will be understood that it might be made of a separate piece. As more clearly illustrated in Figures 3 and 4 of the drawings this connecting bar 3 is of less thickness than the runners 1 and 2 so that it will not contact with the ground. The runner 1 is beveled at the forward end and the runner 2 is beveled as indicated at 5. While this is the preferable shape of the runners it will be understood that they might equally as well be of other shapes.

A recess 6 is formed in the upper face of the runner 1 and end of the connecting bar 3. A similar recess 7 is formed on the upper face of the runner 2 and end of the connecting bar 3. A bolt 8 extends through the runner 1 and a sprocket wheel 9 is rotatably mounted upon this bolt and received in the recess 6. As clearly illustrated in Figure 3 of the drawings the recess 6 is of sufficient depth to receive the sprocket. A nut 10 is adapted to be received on the threaded end of the bolt 8 to hold the sprocket wheel securely in position. A shaft 11, provided with the enlarged head 12, passes through the runner 2 and carries a sprocket wheel 13 which is received in the recess 7. As stated for the recess 6 this recess 7 is of sufficient depth to receive the sprocket wheel 13. Suitable power may be applied to the shaft 11 for driving the sprocket wheel 13.

A bar 14 is secured to the forward end of the runner 2 and as shown is offset so as to extend over the sprocket wheel 13. This bar 14 is provided with an opening through which the shaft 11 is adapted to pass. This bar forms a guide and support for the shaft 11.

A sprocket chain 15, of usual construction, is adapted to pass around the sprocket wheels 9 and 13 and operate in the recesses as shown. As is more particularly illustrated in Figure 2 of the drawing the sprocket wheel 9 is preferably of less diameter than the sprocket wheel 13 so that the chain will operate at a slight angle. Blades 16 are secured to the upper edge of the chain 15 and when the chain is operated by the sprocket wheel these blades will extend over the tops of the runners 1 and 2. It will also be noted that the bar 14 is so spaced as to allow the blades to pass therebetween. A bar 17 is connected to the runners 1 and 2, at the rear end, and as shown the blades 16 operate over this bar. The bar 17 will tend to hold the blades in straight or horizontal position and prevent sagging of the chain intermediate the sprocket wheels.

Guard teeth 18 are provided for protecting the blades and properly guiding the material to be cut. These guards 18 are provided with an extension 19 adapted to be secured to the underside of the connecting bar 3. The guards are also provided with the shoulder 20 forming a space for the chain 15 to operate. A longitudinal recess

21 is formed in these guards to allow the blades 16 to operate therein.

From the above detailed description it is thought that the operation and advantages will be understood. It will be seen that I have constructed the sickle in such a manner that the parts will be compact and take up little room. At the same time it will be seen that the several parts are protected so that danger of breakage is reduced to a minimum. In operation power is applied to the shaft 11 and this operates the sprocket wheel 13 which in turn rotates the chain 15. The rotation of the chain 15 rotates the sprocket wheel 9 upon the bolt 8. The guards 18 protect the blades 16 and, as previously stated, the connecting bar 17 prevents sagging of the chain intermediate the sprocket wheels. The recesses in the runners provide sufficient space for the sprocket wheels to be received therein and for the sprocket chain to operate around the sprocket wheels.

The sickle may be used in connection with harvesting machines or any type of machine desired where power may be secured for operating the shaft 11.

The foregoing description and the drawings have reference to what may be considered the preferred, or approved, form of my invention. It is to be understood that I may make such changes in construction and arrangement and combination of parts, materials, dimensions, etc. as may prove expedient and fall within the scope of the appended claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A sickle comprising spaced runners, each of said runners having a recess formed in the upper face thereof, a sprocket wheel received in each recess, a chain surrounding the sprocket wheels, blades secured to the chain, a bar secured to one runner and overlying one sprocket wheel, and a shaft secured to one of the sprocket wheels and extending through the bar.

2. A sickle comprising spaced runners, each of which has a recess formed in the upper face thereof, a bar connecting the runners intermediate their ends, a sprocket wheel rotatably mounted in each recess, a chain surrounding the sprocket wheels, blades secured to the chain, guards secured to the connecting bar and extending over the blades, a second bar secured to the top of the rear ends of the runners, the blades adapted to pass over the tops of the second mentioned bar, and means for rotating one of the sprocket wheels.

3. A sickle comprising spaced runners, each of which has a recess formed in the upper face thereof, a bar connecting the runners intermediate their ends, a sprocket wheel rotatably mounted in each recess, a chain surrounding the sprocket wheels, blades secured to the chain, guards secured to the connecting bar and extending over the blades, a second bar secured to the top of the rear ends of the runners, the blades adapted to pass over the top of the second mentioned bar, a bracket secured to one runner and overlying one sprocket wheel, and a shaft secured to one of the sprocket wheels and extending through the bar.

In testimony whereof I affix my signature in presence of two witnesses.

GARRISON E. WILSON

Witnesses:
WM. SCRIBNER,
MOSES DIAL.