

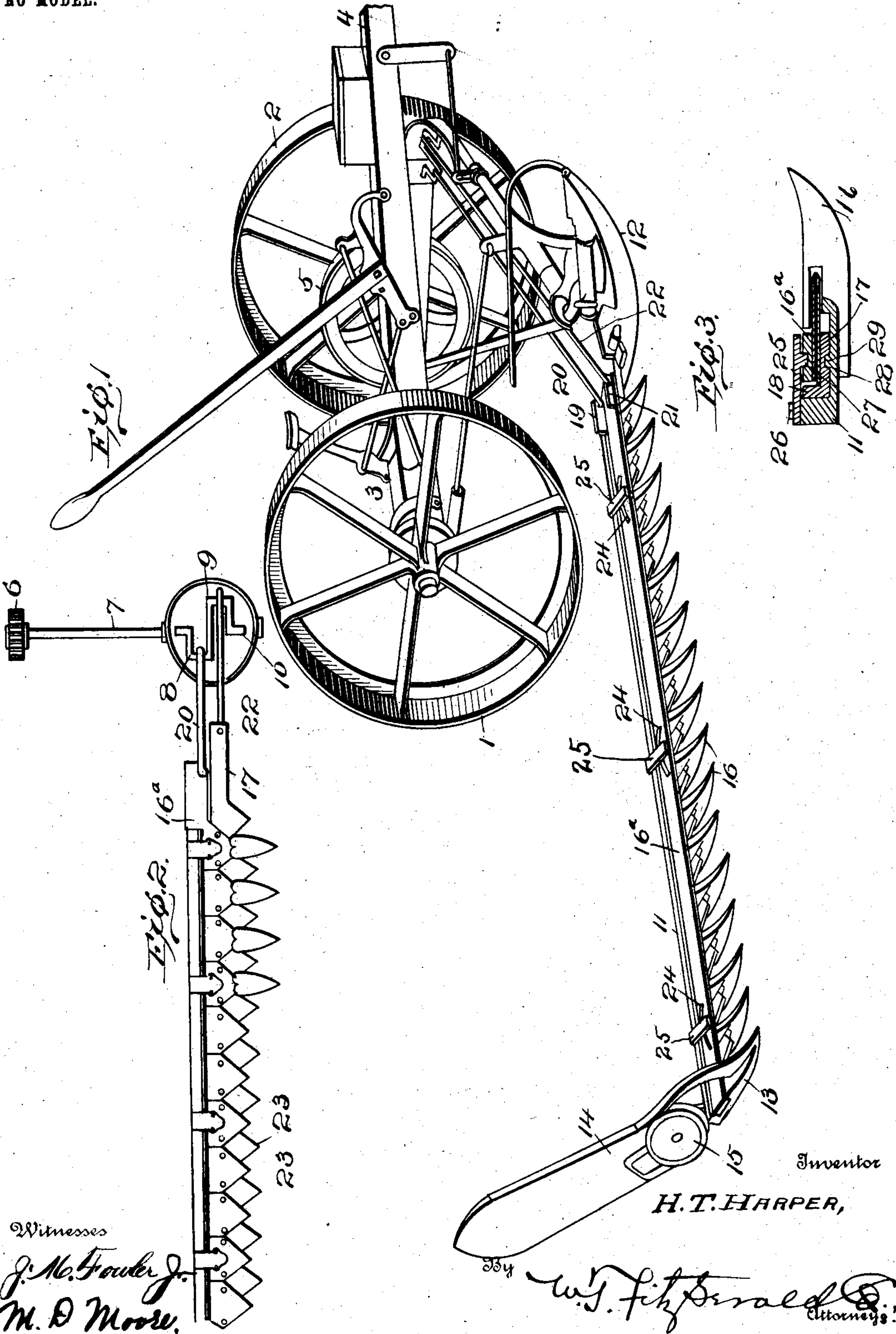
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PATENTED MAY 3, 1904.

H. T. HARPER.
REAPER, MOWER, &c.

APPLICATION FILED NOV. 12, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

HIND T. HARPER, OF FOOTVILLE, WISCONSIN, ASSIGNOR TO ELIZABETH HARPER, OF FOOTVILLE, WISCONSIN, AND WILLIAM M. ROSS, OF JANESVILLE, WISCONSIN.

REAPER, MOWER, &c.

SPECIFICATION forming part of Letters Patent No. 758,967, dated May 3, 1904.

Application filed November 12, 1903. Serial No. 180,905. (No model.)

To all whom it may concern:

Be it known that I, HIND T. HARPER, a citizen of the United States, residing at Footville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Reapers, Mowers, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to reapers, mowers, and the like; and it consists of certain novel features of construction and combination of parts, the preferred form whereof will be hereinafter clearly set forth.

The object of my invention, among others, is to provide means for applying the power direct to the sickles, two of which are employed, the power being applied in such a way as to insure against all lost motion.

A further object of my invention is to direct the sickles in such a manner that they will prove reliably efficient in the performance of their office of cutting hay, grain, or the like.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a perspective view of my invention complete. Fig. 2 is a top plan view of a finger-bar and driving mechanism therefor, while Fig. 3 is a transverse section of the finger-bar and the cooperating sickle.

For convenience of reference to the various details of my invention and accessories required to show a practical application thereof to use numerals will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 and 2 are the carrying-wheels of the machine proper, while 3 designates the axle properly connected with the tongue or member 4, to which the draft-animals are secured in the usual manner.

5 designates a housing for the gear-wheel secured to the master-wheel 2, as is common,

whereby the gear-wheel will be rotated to drive the gear 6, secured rigidly to the crank-shaft 7, said shaft being mounted in suitable bearings and having at its outer end the compound or double cranks 8 and 9 and also having the extreme forward terminal 10, adapted to rotate in a suitable holder or bearing-seat located upon a contiguous part of the frame. I also provide the finger-bar 11, having at one end the guiding-shoe 12 and upon the opposite end the nose-section 13 and the grain or hay directing member 14 common to all mowers. The nose-section 13 also has the carrying or supporting wheel 15. The finger-bar 11 is so constructed as to be provided with the usual guards 16, spaced a proper distance apart and adapted to receive the forwardly-projecting cutting-blades of the upper and lower sickles, (respectively designated by the numerals 16^a and 17.) The sickle 17 is bent upward at its rear edge, as indicated by the numeral 18, whereby a proper extension 19, carried by the inner end of the flange 18, may be connected to the crank 8 by means of the pitman-rod 20. The sickle 16^a is also provided upon its inner end with the extension or rib 21, whereby the sickle may be connected with the crank 9 by means of the pitman-rod 22, as clearly shown in Fig. 1. In Fig. 2 I have shown the sickle 17 as connected to the crank 9 by the pitman-rod 22, while the sickle 16^a is connected with the crank 8 by the pitman-rod 20, it being understood that either of the cranks 8 or 9 may be employed to drive either of the sickles, as may be preferred by the manufacturer. It will thus be seen that the sickles are so disposed that they will be reciprocated oppositely to each other, and thereby insure that since the cutting-blades 23 of the sickles lie in close engagement with each other the hay or the like will be easily severed, thereby avoiding the strain commonly placed upon a single sickle cooperating with the sickle-guards. If desired, the two sickles may each be given a slight forward and backward movement incidentally with their reciprocatory movement. This I am able to accomplish by providing in each of the sickles a suitable groove or slot 24, slightly curved, as

shown in Fig. 1. I also provide the forwardly-projecting clip 25, secured to the finger-bar 11, as by the bolt 26, said clip having upon its under side a lug 27, adapted to take
 5 into the slot 24. In like manner I form a curved slot 28 on the under side of the sickle 17 and also form on the contiguous part of the finger-bar 11 the lug 29, adapted to fit in the slot 28, and since the slots 24 and 28 are
 10 slightly curved it follows that they may be freely reciprocated by their respective pitman-rods 20 and 22 and at the same time will have a slight forward and backward movement, thereby imparting a shearing move-
 15 ment to the sickle-knives 23 as they pass each other, the result being that the hay or the like will be much more easily severed with the application of a very small amount of power. I prefer, however, to manufacture
 20 my invention by employing or wholly omitting the curved grooves 24 and 28 and coöperating lugs 27 and 29, employing said parts or not, as I may find most desirable in practice.

25 It will thus be seen that I have provided a very simple, cheap, though reliably efficient cutting appliance whereby two coöperating sickles and a single finger-bar are used, and while I have described the preferred combi-
 30 nation and construction of parts deemed necessary in materializing my invention I wish to comprehend in this application all substitutes and equivalents that may be considered as fairly falling within the scope of my invention.

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

1. The herein-described attachment for

reapers, mowers, or the like, comprising the combination with the carrying-wheels and 40 driving mechanism, of a finger-bar, a pair of sickles 16^a and 17 operatively mounted in said finger-bar, said driving mechanism for the sickles comprising the double cranks 8 and 9 and suitable means to connect said cranks each 45 with its respective sickle, a plurality of clips 25 secured to the rear edge of said finger-bar and projecting forwardly, lugs 27 carried on the under side of said clips, a curved slotted opening in the sickle 16^a, into which said lugs take 50 lugs 29 carried by the finger-bar and curved slotted openings in the sickle 17 into which the lugs 29 take whereby, when a longitudinal movement is given to said sickles, said lugs and slots will impart an alternately for- 55 ward and rearward movement thereto, substantially as set forth.

2. In mowers, reapers, or the like, a finger-bar having a seat for two reciprocating sickles located one above the other, lugs 29 formed 60 in said seat, curved grooves in the lower sickle to receive said lugs and a plurality of clips 25 carried by the finger-bar and projecting over the upper sickle and having depending lugs 27, curved grooves in the upper sickle to re- 65 ceive said lugs, whereby, when said sickles are reciprocated, they will each have imparted thereto by said lugs and coöperating slots an alternately forward and rearward movement, as set forth. 70

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

HIND T. HARPER.

Witnesses:

A. J. SNYDER,
 R. C. EVANS.