

(No Model.)

3 Sheets—Sheet 1.

J. M. COOK & J. E. MATEER.
CARRIER FOR FEED CUTTERS.

No. 575,593.

Patented Jan. 19, 1897.

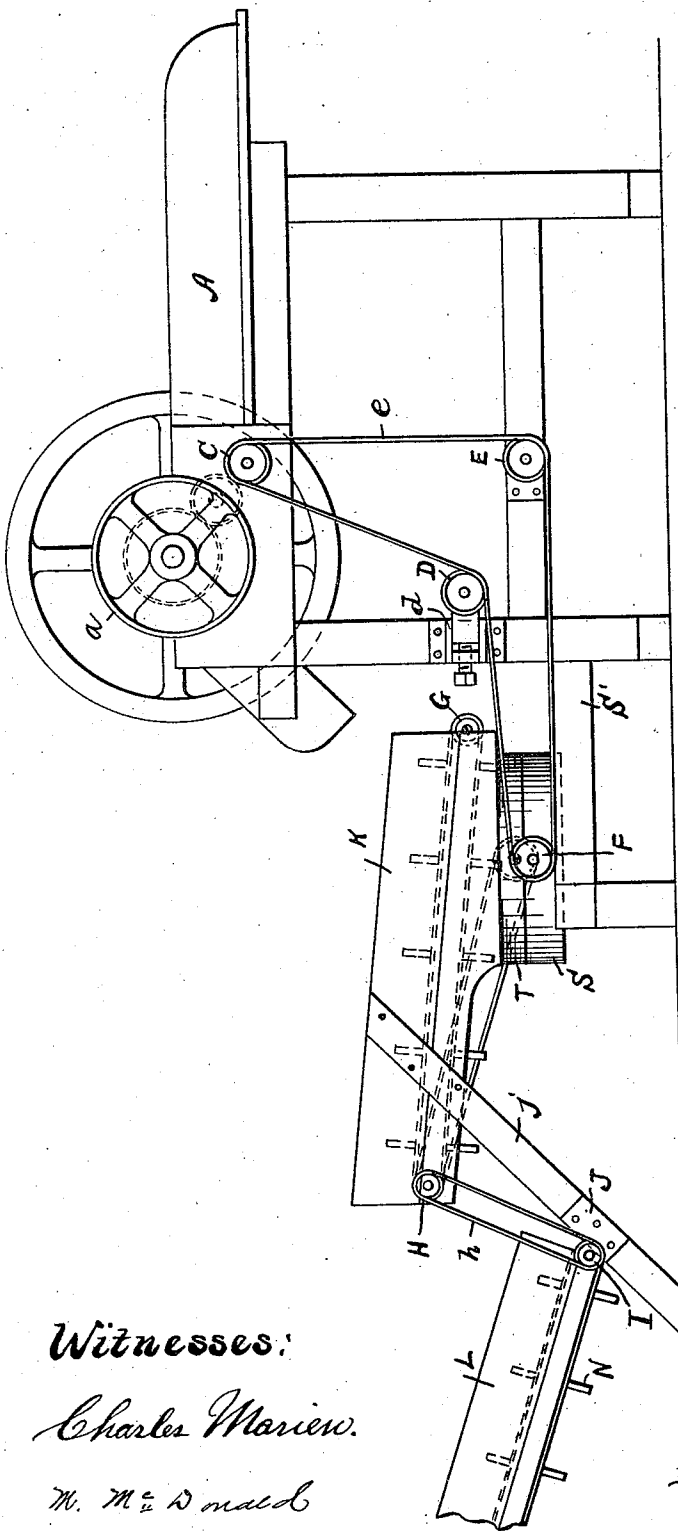


Fig. 1.

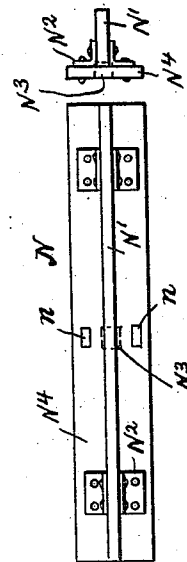


Fig. 4.

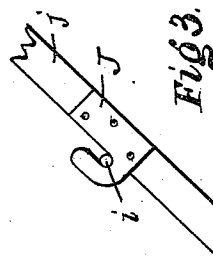


Fig. 3.

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3 Sheets—Sheet 2

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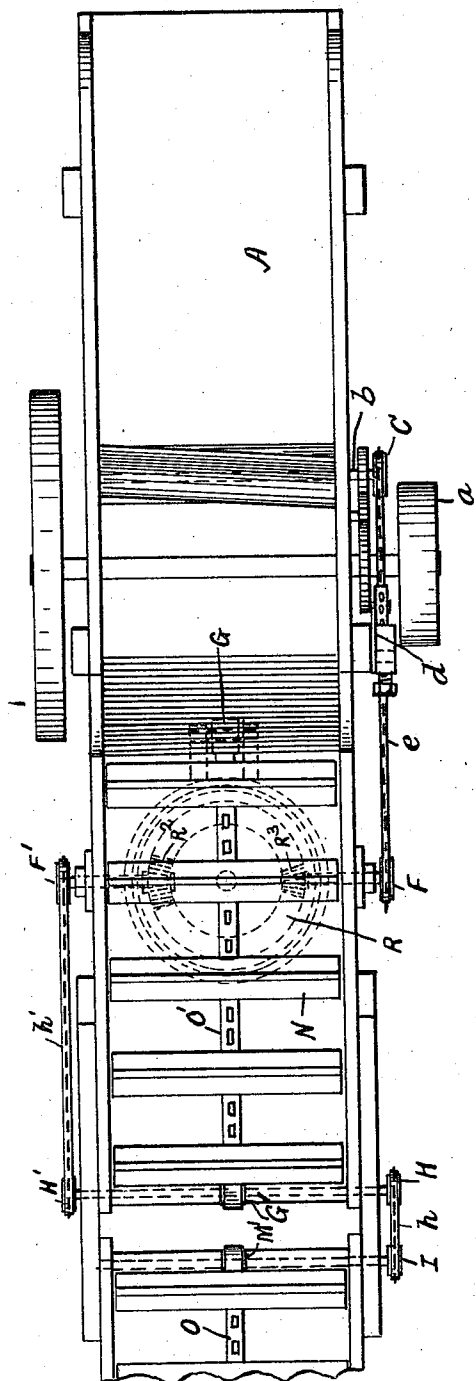


Fig. 2.

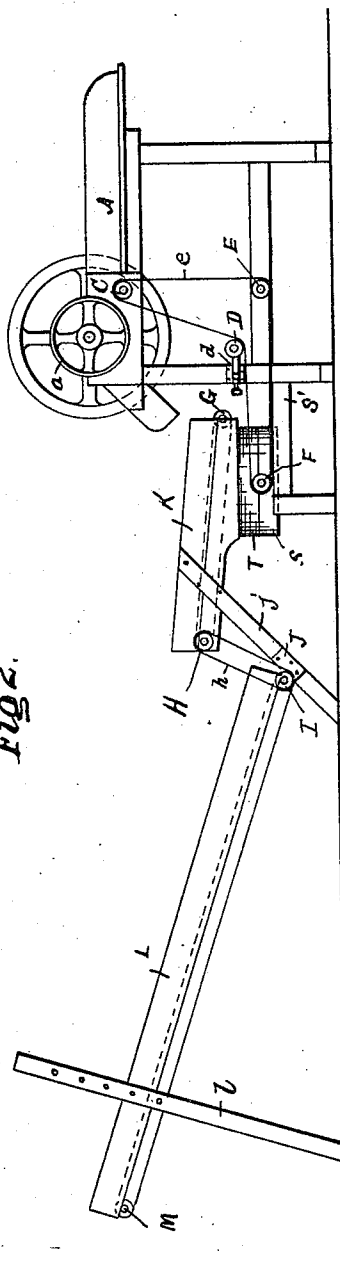


Fig. 8.

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3 Sheets—Sheet 3.

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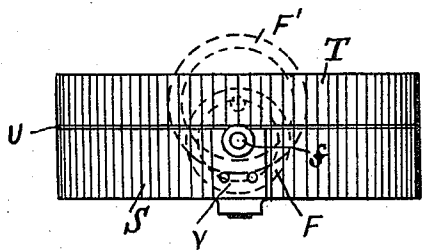


Fig 6.

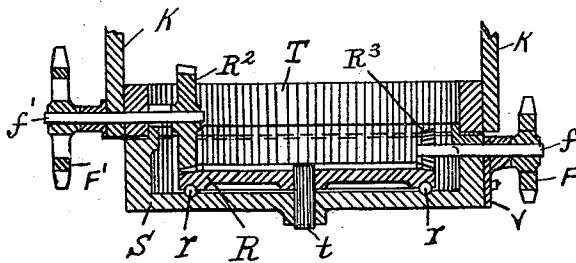


Fig 5.

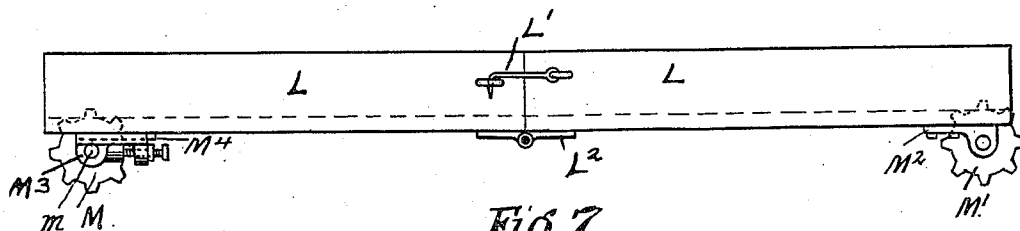


Fig 7.

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UNITED STATES PATENT OFFICE.

JAMES MURRAY COOK AND JAMES EDWIN MATEER, OF MOUNT GILEAD,
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CARRIER FOR FEED-CUTTERS.

SPECIFICATION forming part of Letters Patent No. 575,593, dated January 19, 1897.

Application filed February 24, 1896. Serial No. 580,495. (No model.)

To all whom it may concern:

Be it known that we, JAMES MURRAY COOK and JAMES EDWIN MATEER, citizens of the United States, residing at Mount Gilead, in the county of Morrow and State of Ohio, have invented certain new and useful Improvements in Carriers for Feed-Cutters; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to the class of carriers that are used in connection with feed-cutters to carry away the cut feed from the cutter and elevate it, delivering it to bins or to a vehicle, as may be desired; and it consists of certain devices and combinations of mechanical devices, as will be more fully described hereinafter.

The object of our invention is to provide a carrier for a feed-cutter that will deliver the cut feed at any point or angle within a radius of a half-circle, which may be changed to deliver the cut feed at any of such points while in operation, and which may be changed to deliver higher or at various desirable elevations while in operation.

A further object is to provide a carrier of this description that is adaptable to any style of feed-cutter.

With these objects in view our invention is furthermore of few parts, cheaply constructed, and is durable and economical in use.

Referring to the drawings, Figure 1 represents a side elevation of our carrier, having the outer end broken away, attached to a cutter. Fig. 2 is a top view of same. Fig. 3 is a side view of the lower portion of a leg. Fig. 4 is a plan and end view of a flight. Fig. 5 is a sectional view through center of swivel or turn-table and gearing, and Fig. 6 is a side elevation of same. Fig. 7 is a side view of elevating-carrier. Fig. 8 is a side elevation of carrier complete attached to a cutter.

In the drawings, A designates a feed-cutter which is driven by any suitable power preferably applied through means of a belt ap-

plied to the pulley *a*, secured to a suitable shaft, to which are attached suitable gear-wheels or sprocket-wheel connecting with similar wheels secured to a counter-shaft *b*, the latter being driven thereby. A suitable frame *S'* is attached to the frame of the cutter and may be detachable for convenience in transporting the machine.

A base *S*, preferably circular in form, having a circular upturned rim, at the top of which is a guide-flange, is permanently secured to the frame *S'*. This base may be made of any suitable material, but I preferably make it of cast-iron. At the upper side of the bottom of the base is an annular semicircular groove to receive spherical rollers *r*. The center of the bottom has a hole to receive a center pin, and suitable apertures may be made in the bottom to allow dust to drop through.

R is a circular plate or wheel having the center pin *t* in its center, which is revoluble in the central hole in the base below. The wheel *R* has at its under side an annular semicircular groove corresponding to the groove in the base below and rests upon the balls *r*. The upper face is provided with gear-teeth arranged in a circle with bevel-faces forming a horizontal bevel gear-wheel.

At one side of the base is mounted a bracket *V*, in which is journaled a shaft *f*, set transversely with the cutter-frame. At the outer end of the shaft a sprocket-wheel is secured thereto, and secured to the inner end of the shaft is a bevel-pinion *R*³, meshing with the gear-wheel *R* to drive it. A rotative part *T* or circumferentially-adjustable turn-table, to which is permanently attached the rotative or swivel carrier *K*, has at its under side an annular bearing-surface resting upon and rotatively supported at *U* by the upper surface of the rim of the base, the guide-flange on the latter keeping it central.

Through one side of the part *T*, in a suitable hole, is journaled a shaft *f'*, having secured to its outer end a sprocket-wheel *F'* and to its inner end a bevel-pinion *R*², meshing with the gear-wheel *R*, by which the pinion is driven, while the latter may be carried around with the part *T* to any relative degree within a half-circle.

At the outer elevated end of the frame of the swivel-carrier K is a rotatable shaft suitably mounted, having at one end a sprocket-wheel H and at the opposite end a sprocket-wheel H', while at its center it has a sprocket-wheel G', all secured permanently to said shaft. At the opposite end of said carrier is a sprocket-wheel G, fixed to a suitably-mounted rotating shaft. Mounted on the sprockets G and G' is a drag-chain O', to which are secured carrying-flights N, the chain and flights being hereinafter more fully described. The carrier K is provided with a suitable bottom upon which the chain and flights slide and carry the feed. A pair of legs *j* are attached to the carrier K to support its outer end and hold it in any desired position. They are each provided with a hook-bracket J for supporting the lower end of the extension and elevating-carrier L, the latter being supported at its outer end at any desired elevation by means of legs *l*, upon which it is adjustable by means of suitable pins and holes to suit.

In constructing our carrier L it is made so as to be readily detachable from the driving-carrier K. A suitable floor and sides are provided, and at the lower inner end of the frame is suitably mounted in brackets M² a rotatable shaft *i*, extending across the frame so that the ends rest in the hook-bearings of the brackets J. At one end of the shaft is fixed a sprocket-wheel I and at the center of the shaft a sprocket-wheel M'. At the opposite elevated end is a short rotatable shaft *m*, mounted in adjustable brackets M³, slidable on a base M⁴ and controlled by means of a suitable screw, so that the slack in the carrier-chain may be taken up. At the central part of the shaft *m* is secured thereon a sprocket-wheel M. In some cases the carrier L is made to fold, as shown in Fig. 7, by means of hinges L², and is prevented from folding by a hook L' at each side, hung to a staple or eye on one part and engaging with another suitable staple on the other part.

The carriers K and L are provided with our improved flights, connected by one chain for each carrier. Each flight N consists of a slat N¹ lying flat and a vertical slat N', the two being secured together by means of angle-pieces N². The chains O O', composed of short sections, are connected in the holes *n* in the slats N⁴, and a suitable recess N³ is cut out to admit the sprocket-teeth when passing over the sprocket-wheels at each end of the frame.

At one end of the shaft *l* is secured a sprocket-wheel C, and at a suitable part on the frame of the cutter is hung a sprocket-wheel E; also at another suitable part of the frame is hung a sprocket-wheel D to a suit-

able bracket *d*, in which provision is made for adjustment by means of a screw.

In practical use a sprocket-chain runs over to the wheels C E F D. A similar chain connects the wheels F' and H', and a like chain connects the wheels H and I. A chain carrying flights runs over the wheels G G', and a like chain and flights run over the wheels M M'. Motion is thus transmitted by the sprocket-wheel C to the wheel F, the wheel R, the wheel F' H', chain O', wheels H and I, and chain O simultaneously. When desirable to move the delivery end of the carrier around to any desired angle, the legs are simply lifted slightly from the ground, when the carrier may be readily moved, and when again rested is sufficiently secured.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a carrier for feed-cutters, the combination of the base comprising the fixed portion S and the movable portion T, the gear-wheel R, the center pin *t*, the balls *r*, the shaft *f* mounted in the fixed portion, the wheel F, the gear-wheel R³ meshing with the wheel R, the shaft *f'*, the wheel F', the gear-wheel R² meshing with the wheel R, the carrier mounted on said base, the elevating-carrier operatively connected to said carrier, and suitable means whereby said wheel F may be driven, substantially as shown and described.

2. In a carrier for feed-cutters, the combination of the base, the lower fixed portion of which has an annular ball-bearing groove at the upper side of its bottom and a raised annular flange around its bottom; the horizontal gear-wheel having at its under side an annular ball-bearing groove and at its upper side bevel gear-teeth; balls in said grooves; a central pin on which the horizontal wheel is mounted; a shaft mounted horizontally in said lower portion; a bevel gear-wheel mounted on said last-mentioned shaft and engaging said horizontal gear-wheel; the upper portion of said base supported rotatably upon said lower portion; a shaft mounted horizontally therein; a bevel gear-wheel on the inner end of the latter shaft and engaging said horizontal gear-wheel, and suitable wheels at the outer ends of said shafts whereby motion may be received by the lower and transmitted by the upper of said wheels, substantially as shown and described.

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

JAMES MURRAY COOK.
JAMES EDWIN MATEER.

Witnesses:
J. W. PUGH,
C. H. WOOD.