(No Model.)

# B. A. KENNEDY & J. F. STEWARD.

## BUNDLE CARRIER.

No. 358,934. Patented Mar. 8, 1887.

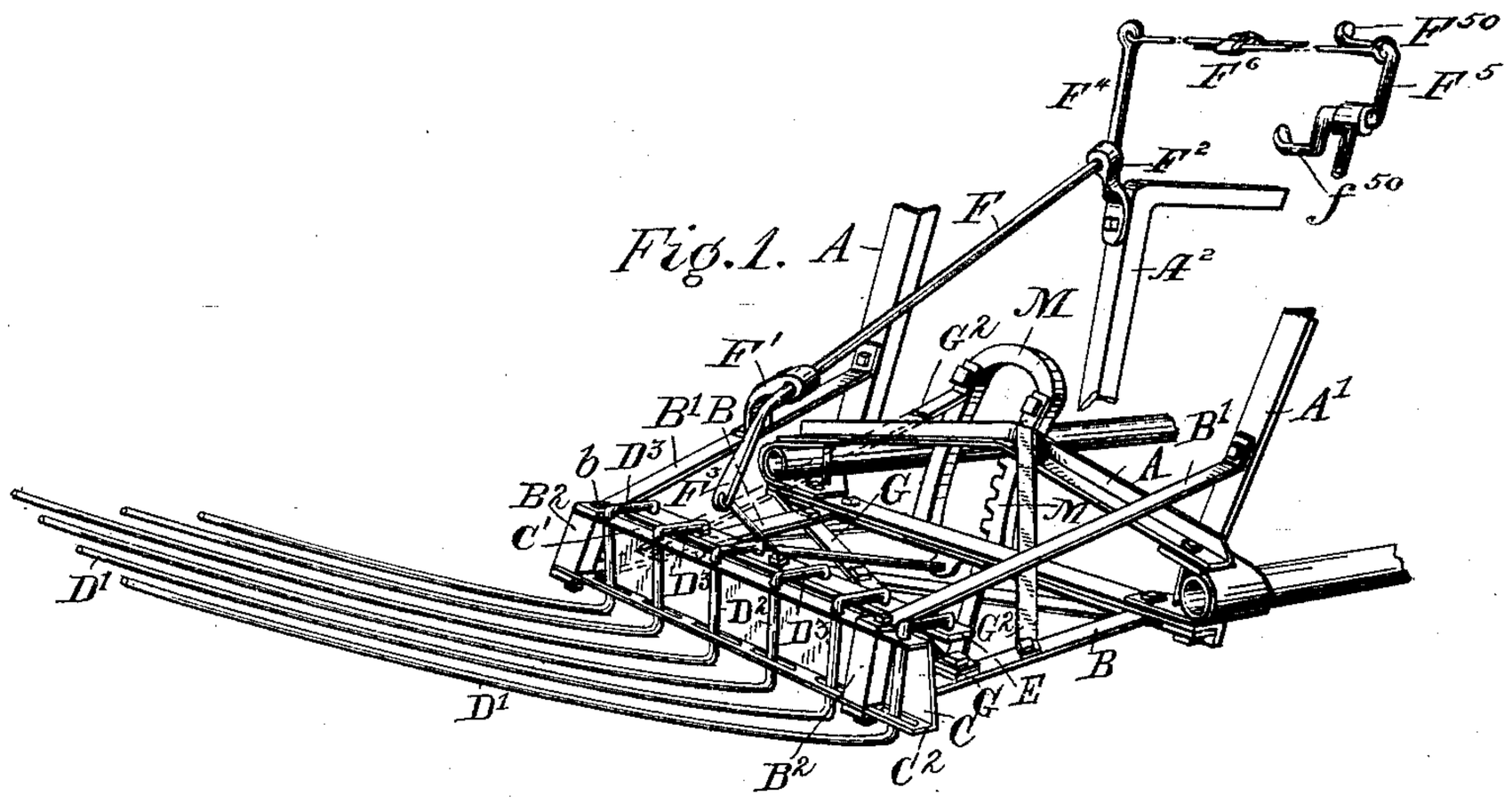


Fig. 1.

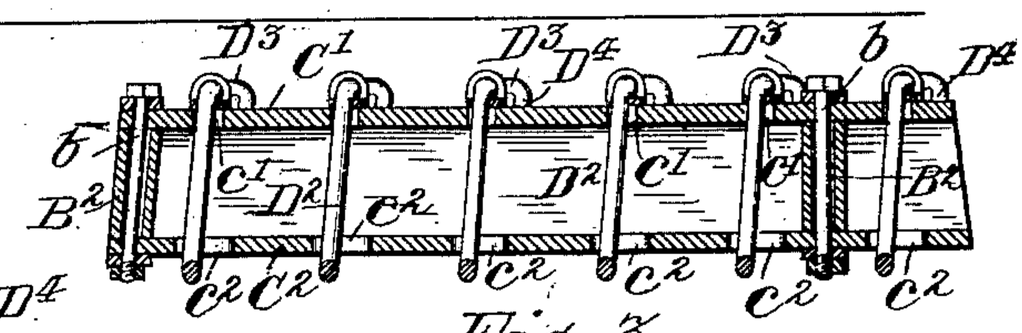


Fig. 3.

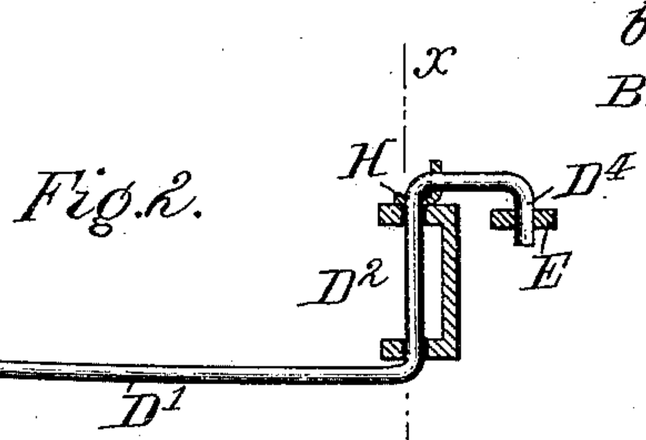


Fig. 2.

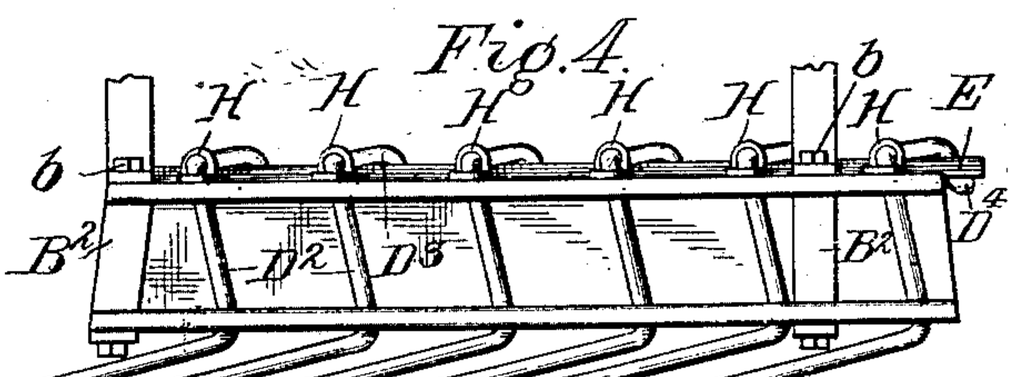


Fig. 4.

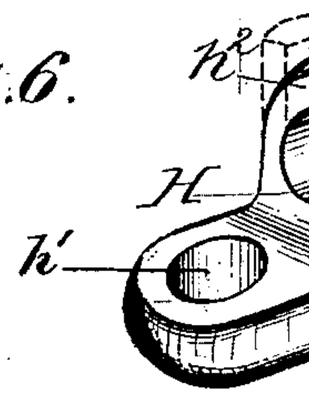


Fig. 6.

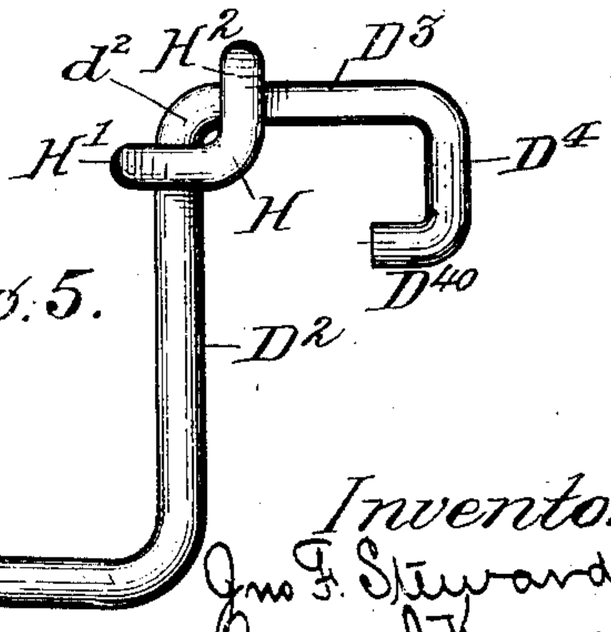


Fig. 5.

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# UNITED STATES PATENT OFFICE.

BURR A. KENNEDY AND JOHN F. STEWARD, OF CHICAGO, ILLINOIS.

## BUNDLE-CARRIER.

SPECIFICATION forming part of Letters Patent No. 358,934, dated March 8, 1887.

Application filed July 22, 1886. Serial No. 208,795. (No model.)

*To all whom it may concern:*

Be it known that we, BURR A. KENNEDY and JOHN F. STEWARD, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bundle-Carriers, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to improvements in the details of the structure of bundle-carriers of the general character shown in pending application of Kennedy and Steward, filed July 27, 1885, Serial No. 172,762.

In the drawings, Figure 1 is a perspective of a bundle-carrier and the outer portion of the harvester-frame to which it is attached, as seen from the front outer quarter. Fig. 2 is a transverse vertical section. Fig. 3 is a vertical section through line Y X on Fig. 2. Fig. 4 is a stubble-side elevation of the bundle-carrier when in the position for dumping. Fig. 5 is a detail elevation of one of the arms of the carrier, showing a stop thereon. Fig. 6 is a detail perspective of such stop detached from the arm.

A is a trussed frame, constituting the stubble end of a harvester-frame. The segment M constitutes the strut of said trussed frame, besides serving the usual purpose of guiding the drive-wheel in the vertical adjustment of the machine.

A′ A′ are upright posts rigid with the truss A.

B B are metal bars bolted to the truss or frame bar A and projecting outward across the line of travel. B′ B′ are similar bars bolted to the uprights A′ A′.

C is a bar of channel-iron set edgewise—that is, with its flanges C′ and C² horizontal—and the channel opening outward. It is secured to the outer ends of the bars B and B′ by the bolts *b*, passing through both the flanges C′ and C², and through the ends of two of the bars, B, above the upper flange, and through ends of the remaining bars B, below the lower flange, the blocks B² being placed between the flanges to resist the compression of the bolts and give them firm grasp on the bars.

The bundle-carrying arms comprise the horizontal portion D′, the vertical or pivotal portion D², the short horizontal portion D³, and the inner vertical portion, D⁴.

E is the shifting-bar, which is vertically pierced to receive the ends of the vertical portions D⁴ of the carrier-arms and upheld by the hooked portion D¹⁰ at the end of two or more of them.

F is a cranked rock-shaft, which is connected to suitable mechanism for shifting the bar E lengthwise to cause it to swing the carrier-arms about their axial portions D², in order to fold them together when the load is to be dumped. As illustrated, said rock-shaft is journaled in bearings provided in the bracket F′, secured to the rear bar, B′, and in the bracket F², secured to any convenient part of the harvester-frame, as to a post, A². It has the oblique crank-arm F³, extending stubbleward from the first-mentioned bearing, and the end of said crank-arm is linked to the shifting-bar E. Grainward beyond its second-mentioned bearing it has the crank-arm F⁴, which is connected to the foot-lever F⁵ by the link F⁶, suitably pivoted on any convenient part of the frame, so that by the pressure of the foot on one pedal, $f^{50}$, the carrier may be dumped, and by pressure on the other pedal, F⁵⁰, it may be restored to position to receive and carry the bundles.

The bearings of the axial portions D² of the carrier-arms are obtained in the two flanges C′ and C² of the channel-iron C. The apertures *c*′ in the upper flange, C′, are large enough merely to allow the carrier-arms free movement as they turn therein and to permit the slight change of direction of the axial portions D², which occurs when the bundle-carrier is folded and ready for dumping. The apertures *c*² in the lower flange, C², are elongated, as shown, the rear end of each aperture being slightly rearward of the vertical line passing through the corresponding aperture in the upper flange, so that the forward end of said elongated aperture *c*² is forward of that vertical line a distance almost equal to the entire length of the aperture.

When the carrier-arms are in the positions shown in Fig. 1—that is to say, in position to retain a load—the axial portions D² of the sev-

eral arms rest each at the extreme rear of the aperture $c^2$, which forms their lower bearings, and the portions D′ extend very slightly forward of positions at right angles to the bar C, so that the weight of any load resting upon any of said horizontal arms tends to hold the axial portions in the positions described. When, however, the shifting-bar E is moved forward, causing the arms D′ to swing rearward as soon as they pass, respectively, positions extending from the bar C at right angles thereto, the weight of the load upon them tends to throw their axial portions $D^2$ to the forward end of the slots $c^2$, respectively, thereby allowing the ends of the arms D′ to drop upon the ground and trail rearward, and thus discharge their load. The same action of the carrier-arms occurs whenever an obstruction is met which forcibly moves said arms sufficiently rearward to carry them past their centers respectively.

In order that the frame composed of the four bars B B, B′ and B′ and the channel-iron C may be sufficiently rigid to prevent its distortion by encountering slight obstructions or by dragging upon the ground, as would occur when the wheel runs in a deep furrow, we provide the brace-bar G, secured to the lower forward bar B as far outward as it can be without interfering with the movement of the shifting-bar E, and extending thence rearward and inward beyond the rear lower bar B, to which it may be bolted, if desired, and secure it at the rear end to the rearmost available point on the truss or end bar of the harvester-frame.

To prevent bending the bars B upward, as well as to further brace them against rearward distortion, we provide the braces $G^2$, which are secured to the lower bars B, as far outward as convenient, and thence extended to the outer segment, M, to which they are fastened as high as possible, thus bracing diagonally downward, one rearward and the other forward.

The carrier-arms are usually made of steel rod, bent into the form described, and their several bends are preferably not made sharply angular but rounded. In order therefore that their positions in their bearings in the bar C should be exact and uniform, and particularly in order that they may not cramp in the upper bearing, $c'$, when they are rocked therein, as described, we provide the clip H, which is composed of the two wings H′ and $H^2$, substantially at right angles, the former having an aperture, $h'$, through which the carrier-arm may be inserted, so that the clip may be moved on the arm to the angle $d^2$ at the upper end of the axial portion $D^2$, in which position the wing $H^2$ bears against the under side of the horizontal part $D^3$. Said wing $H^2$ has the two lugs $h^2$, which may be bent up around the part $D^3$, and, if desired, may be firmly clamped thereon. The wing H′ thus forms a square shoulder or stop above the flange C′ of the channel-iron C, and renders exact and uniform the position of the carrier-arms in their bearings.

In order that the lugs $h^2$ may be sufficiently flexible to be bent as described, the entire clip is made of malleable iron or cut and folded from sheet metal. Obviously both wings of the clip H might be made as we have described the wing $H^2$, the lugs when bent together around the rod becoming in effect an apertured wing, as H′.

We claim—

1. In combination with the harvester-frame, the bundle-carrier frame comprising four bars, as B B B′ B′, extended rigidly outward from the stubble end of the harvester-frame, and the channel-iron secured to the outer ends of said bars, having its lips horizontal and the intermediate web vertical, and the carrier-arms journaled in the said horizontal lips, substantially as set forth.

2. In combination with the harvester-frame, the bundle-carrier frame comprising four bars, as B B B′ B′, extending rigidly outward from the stubble end of the harvester-frame, and a bar, as C, secured to the outer end of the bars B B B′ B′, having its lips horizontal and the intermediate web vertical, and the carrier-arms journaled in the said horizontal lips and a brace-bar, as G, secured at its forward end to one of the forward bars B near its outer end and at the rear end to the rear outer portion of the harvester-frame, substantially as set forth.

3. In combination with a trussed frame forming the stubble end of the harvester-frame, the bundle-carrier comprising the four bars B B B′ B′, extended rigidly outward from said truss, and a bar, as C, secured to their outer ends, and braces, as $G^2$, secured to the trussed frame near its widest part and to the outer ends of the lower bars, B, substantially as set forth.

4. In combination with the bundle-carrier arms formed and adapted to operate substantially as described, the channel-iron bar C, fixed with its web vertical and its flanges horizontal and having the apertures $c'$, and in its lower flange the elongated apertures $c^2$, constituting, respectively, the upper and lower bearings for the carrier-arms.

5. In combination with the carrier-arms having the vertical axial portions $D^2$ and the horizontal portion $D^3$, the angular clips H, having the apertured wing H′, and the wing $H^2$, at an angle with the wing H′, and provided with the flexible lugs $h^2$, substantially as set forth.

In testimony whereof we have hereunto set our hands, this 9th day of July, A. D. 1886, in the presence of two witnesses, at Chicago, Illinois.

BURR A. KENNEDY.
JOHN F. STEWARD.

Witnesses:
H. J. NEEL,
WM. D. PORTER.