(No Model.)

A. L. MIDDLETON

ENDLESS CARRIER.

No. 387,727. Patented Aug. 14, 1888.

Fig. 1.

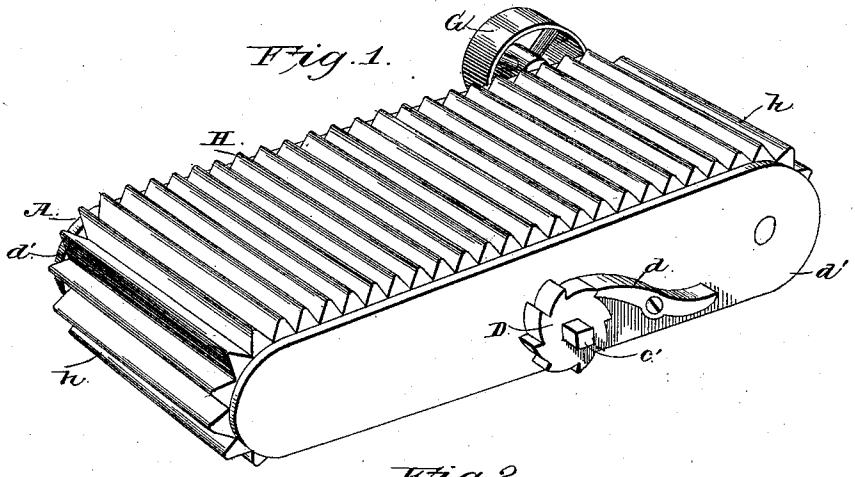


Fig. 2.

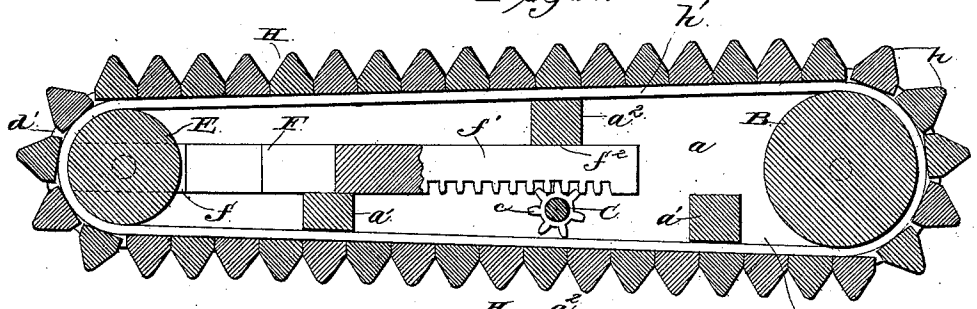


Fig. 3.

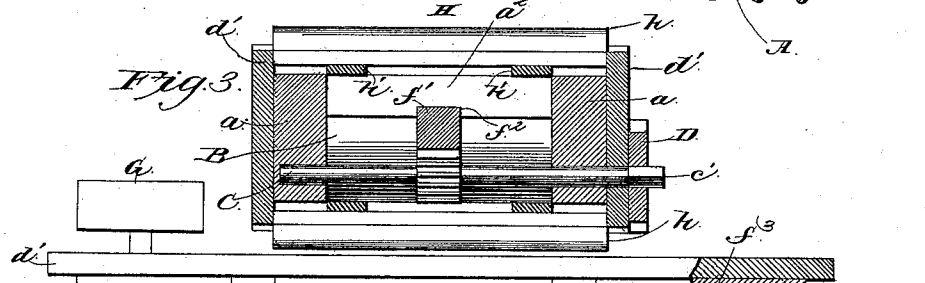
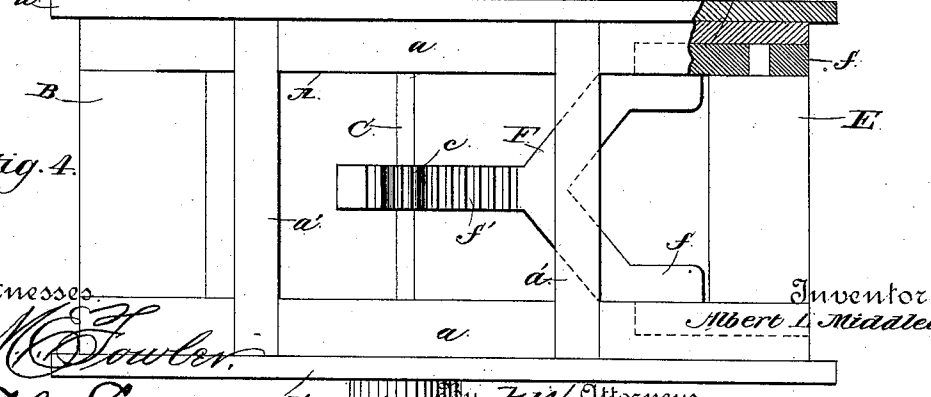


Fig. 4.



Witnesses.

M. Fowler.

E. G. Siggers.

Inventor

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by his Attorneys.

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UNITED STATES PATENT OFFICE.

ALBERT L. MIDDLETON, OF FERTILE, MINNESOTA.

ENDLESS CARRIER.

SPECIFICATION forming part of Letters Patent No. 387,727, dated August 14, 1888.

Application filed April 3, 1888. Serial No. 269,469. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. MIDDLETON, a citizen of the United States, residing at Fertile, in the county of Polk and State of Minnesota, have invented a new and useful Improvement in Endless Carriers, of which the following is a specification.

The invention relates to endless carriers, pertaining more especially to improvements in the bands thereof; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 represents a perspective view of an endless carrier embodying the invention and showing the ratchet and pawl. Fig. 2 represents a central longitudinal section of the same. Fig. 3 represents a central transverse section, facing the larger roller. Fig. 4 represents a reversed plan of the frame and rollers, a part of the frame being broken away to show one bearing of the movable roller.

Referring to the drawings by letter, A designates the frame of the carrier, composed of the thick side pieces, *a a*, rounded at their ends, the transverse bars *a' a'*, connecting the lower edges of the side pieces at about equal distances from the ends thereof, and the transverse bar a^2, connecting the upper edges of the side pieces about centrally but slightly nearer the larger ends.

B is the larger roller journaled in the larger ends of the side pieces, concentric with the rounded edges thereof, and having a diameter equal to that of said rounded edges, which serve as part of the guides for the band or apron hereinafter described, the straight and smaller rounded edges of the side pieces being the remainder of said guides.

C is a transverse shaft journaled in the side pieces, *a*, immediately below the bar a^2. The central part of said shaft is formed into a pinion, *c*, and one end, *c'*, is extended outward and squared for the attachment of a ratchet-wheel, and for the attachment of a wrench outside of said wheel. The ratchet-wheel D is engaged by a pawl, *d*, pivoted to the side board, *d'*, on the corresponding side, which pawl may or may not be controlled by a spring. The said side boards are secured to the outer surfaces of the sides *a*, outside of which they project all around, resting against the edges of the apron and preventing the latter from slipping laterally.

E is the smaller roller having a diameter equal to that of the smaller rounded ends of the side pieces and journaled in the straight parallel legs *f* of the fork F, the central longitudinal shank of which is a rack-bar, *f'*, which engages the pinion *c*, formed on the shaft C, and which rests in the seat f^2 in the transverse bar a^2. The legs *f* slide in corresponding guide-grooves f^3 in the inner surfaces of the side bars, *a*, so that by turning the shaft C with a wrench the smaller roller can be moved from the larger roller and the distance between the two adjusted, the ratchet and pawl retaining the smaller roller at the point of adjustment.

G is a pulley on one of the extended journals of the larger roller. By means of said pulley and a suitable band the said roller can be rotated from any proper motor and the apron H caused to travel. The said apron consists of the similar transverse bars, *h h*, of wood or other suitable rigid material, of proper dimensions and triangular in cross-section, which bars have their bases secured, with the edges thereof adjoining, to the endless belts *h' h'*, of leather or other suitable strong flexible material. The said belts pass around the rollers and compose the foundation of the apron, so that when the smaller roller is moved away from the larger roller the said belts are stretched and the apron tightened.

It is evident that a carrier-apron constructed as described will be strong, durable, and efficient, outlasting many aprons of ordinary construction. Moreover, the bars will perform all the functions of the slats or buckets usually secured to canvas aprons.

The device may be used as a butt-evener. When so used, it is placed on edge, adjoining the platform of a harvester or self-binder, and the pulley G is replaced by a bevel gear-wheel which meshes with a similar wheel on the extended journal of the upper roller of the carrier. The device then evens the butts as the grain passes over the platform. It is not de-

sired, however, to limit the device to this one use.

Having described my invention, I claim—

1. In a carrier, the combination of the apron H with the main frame A, the larger end roller, B, journaled in one end of the main frame, the transverse shaft C, having the pinion *c*, the ratchet D, and pawl *d*, the fork F, having the rack-bar *f'*, engaging the pinion *c*, and the parallel legs *f f*, sliding in guide-grooves in the inner surfaces of the sides of the main frame, and the smaller end roller, E, journaled in and between said legs, substantially as specified.

2. In a carrier, the combination of the apron H, the frame A, the fixed roller B, the adjustable roller E, and the means for adjusting said roller E, comprising the fork F, having the rack-bar *f'*, the pinion *c* on shaft C, and the pawl and ratchet, as set forth.

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

ALBERT L. MIDDLETON.

Witnesses:
A. BODDY,
GEO. W. ELLIS.