H. PERRIN & T. Q. HILDEBRANT.

Harvester-Rakes.

No. 147,972. Patented Feb. 24, 1874.

Fig. 1

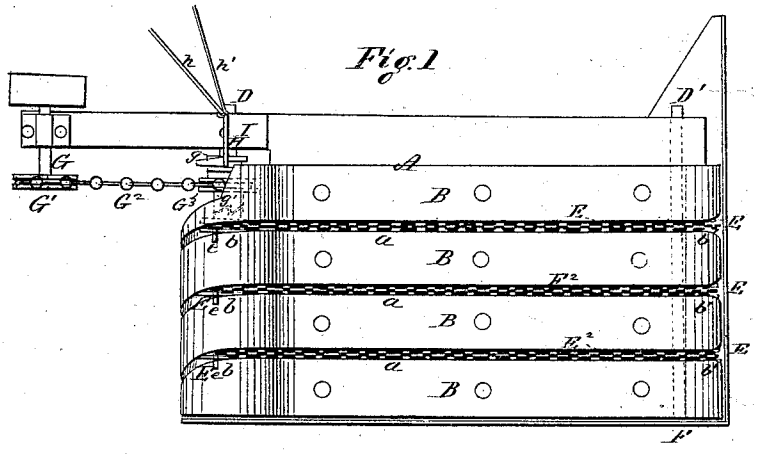


Fig. 2

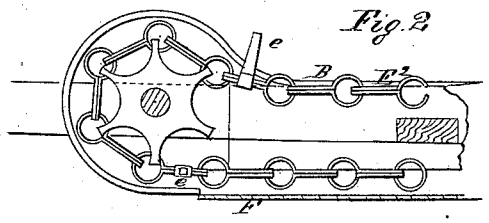
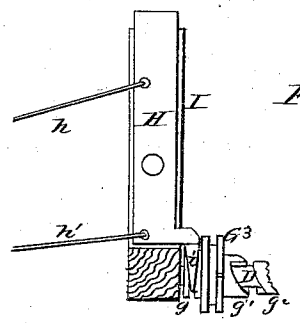


Fig. 3



WITNESSES

J. B. Connolly

Anthony Connolly

By

INVENTOR

Henry Perrin

Thomas Q. Hildebrant

Connolly Bros

Attorneys.

UNITED STATES PATENT OFFICE.

HENRY PERRIN AND THOMAS Q. HILDEBRANT, OF WILMINGTON, OHIO.

IMPROVEMENT IN HARVESTER-RAKES.

Specification forming part of Letters Patent No. **147,972**, dated February 24, 1874; application filed December 11, 1873.

To all whom it may concern:

Be it known that we, HENRY PERRIN and THOMAS Q. HILDEBRANT, of Wilmington, in the county of Clinton and State of Ohio, have invented certain new and useful Improvements in Grain-Carriers for Harvesters; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a plan view of our invention. Fig. 2 is a transverse sectional view of part thereof. Fig. 3 is a detail view.

Our invention has relation to a harvesting-machine having a laterally-traveling endless carrier passing underneath the platform, and provided with teeth arranged at intervals, and designed for the purpose of conveying the grain in gavels to the side of the platform. The object of our invention is chiefly to provide for the use, in connection with said carrier, of a very low platform. Said invention, therefore, consists in the construction and novel arrangement of parts embracing, essentially, a transversely-slatted platform, and a carrier composed of chains with swiveled teeth, whereby the carrier-teeth are made to assume a horizontal position in traveling along at the base of the platform, and afterward to return to their vertical position.

Referring to the accompanying drawings, A designates the grain-platform of a harvesting-machine embracing our improvements. The floor of said platform is composed of a series of strips or plates, B, of metal or other suitable material, transversely arranged and separated from each other the distance of the narrow channels or spaces *a*. At their ends said plates are cylindrically curved, as shown, and the edges so formed as to produce the spiral continuations of the spaces *a*, seen in Fig. 1 at *b b'*. Both edges of the plates may be curved at the outer ends of the platform, so as to produce an enlargement of the spaces *a* for a purpose hereinafter to be explained. Through the central points of the curved ends of the platform-floor, formed as described, pass the shafts D D', properly journaled to the frame of the platform, and provided with the channeled and studded chain wheels or pulleys E, over which pass the chains E^2, forming the endless apron or carrier. The chains are of a form commonly employed for the purpose of communicating motion, with rings formed on the links adapted to lie within the channels on the peripheries of the chain-wheels. The arrangement of the chain-wheels is such as to allow the chains to coincide with the parallel spaces *a* of the platform, along the horizontal portion of the latter. At intervals the chains are provided with swiveled teeth *e* capable of lateral movement. As the carrier moves from the outer toward the inner side of the platform, these teeth project vertically through the spaces *a*, and convey the gavels toward the inner end of said platform. As the teeth pass through the spiral portions of the spaces, they are caused to assume a horizontal position by being thrown out of line with the chain-wheels, and in such position are retained by the base F of the platform until they reach the outer end of the latter, when, as the chain passes upward, they are returned to their vertical position by the curvature of the edges of the plates B. While traveling along the upper portion of the platform the teeth are prevented from falling, and are properly guided by the parallel edges of the plates or strips. Motion is given to the carrier from the main wheels of the harvester through the medium of suitable connections including the pulley-shaft G, chain-pulley G^1 on same shaft, chain G^2, and chain-wheel G^3 on shaft D. The wheel G^3 slides upon its shaft, and is provided with a grooved collar, *g*, and a clutch section, g^1, the latter adapted to engage with a mate, g^2, with which one of the chain-wheels of the carrier is provided. The clutch mechanism is thrown into and out of gear by means of the lever H pivoted to the post I, and furnished with the projection *i* entering the groove in the collar *g*, and with two controlling-arms, *h h'*, attached, respectively, above and below the pivotal point, as shown in Fig. 3.

Having fully described our improvements, what we claim as new, and desire to secure by Letters Patent, is—

1. The slatted grain-platform A, having the

spaces *a*, with the spiral curvature *b b'*, in combination with an endless carrier having lateral movable teeth as described.

2. The slatted grain-platform having cylindrically-curved ends and spaces *a*, with spiral curvatures *b b'*, in combination with the chains E^2, laterally-movable teeth *e*, and chain-wheels E, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands.

HENRY PERRIN.
THOMAS Q. HILDEBRANT.

Witnesses:
M. H. BRACKEY,
CHAS. B. DURGGINS.