O. COOLEY.

RAKE ELBOWS FOR HARVESTERS.

No. 195,092. Patented Sept. 11, 1877.

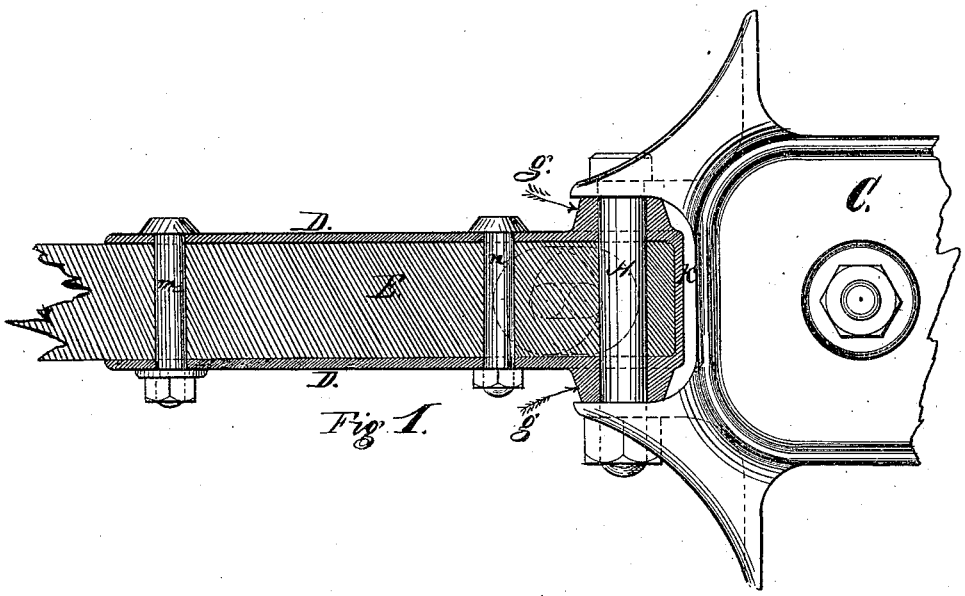

Fig. 1.

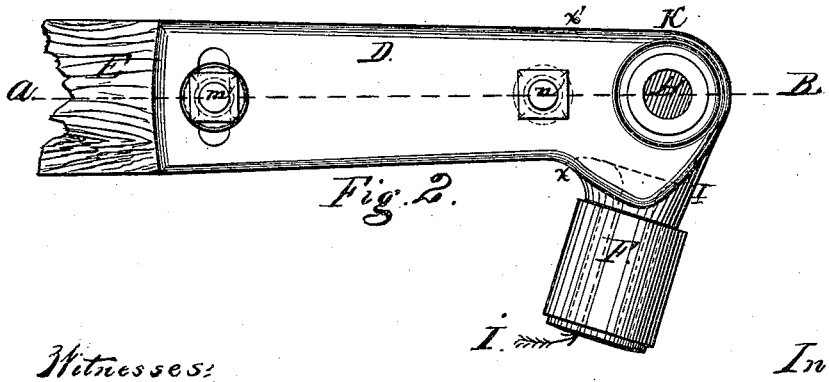

Fig. 2.

Witnesses:

C. A. Sherwood

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UNITED STATES PATENT OFFICE.

ORVILLE COOLEY, OF BROCKPORT, NEW YORK, ASSIGNOR TO JOHNSTON HARVESTER COMPANY, OF SAME PLACE.

IMPROVEMENT IN RAKE-ELBOWS FOR HARVESTERS.

Specification forming part of Letters Patent No. **195,092**, dated September 11, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that I, ORVILLE COOLEY, of Brockport, in the county of Monroe and State of New York, have invented a new and Improved Rake-Elbow for Harvester-Rakes; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a section plan through line A B of Fig. 2, showing the elbow and rake-arm as connected to the rake-head; and Fig. 2 is a side elevation of the rake-arm and elbow detached from the rake-head.

Similar letters of reference in the accompanying drawings denote the same parts.

The object of this invention is to improve the means for attaching the rake-arms to the rake-heads of harvesters, so as to secure greater strength and durability of the parts, and greater convenience and economy in the manufacture.

Heretofore it has been customary to attach two independent metal plates to the end of the rake-arm, one on each side, and to make one of said plates in the form of an elbow, the bent end of which bears on the track and governs the movements of the rake-arm. These two plates have been connected by bolts extending through the wooden rake-arm, and the extreme end of the rake-arm has not been incased nor otherwise protected than by the side plates referred to.

The disadvantages of such construction were that two plates had to be provided instead of one, thus increasing the cost of construction and the inconvenience of manipulation; that the end of the wooden arm was inadequately protected from liability to split; and that the elbow, which bears on the track, was brought in vertical line with one side of the rake-arm, so that the application of power to it produced a torsion or twisting of the rake-arm, which directly tended to loosen the bolts and split the wood.

The main features of my invention, by which these disadvantages are obviated, consist, first, in casting the two side plates in one piece, by connecting them together by a strap or box, which extends around, and preferably covers and incases, the end of the rake-arm; and, secondly, in forming the elbow on the connecting-casing in a vertical line with the center of the rake-arm, and directly under the same, which prevents the torsion of the arm when in use.

In the drawings, C is the revolving rake-head, and E is the wooden rake-arm, the proper connecting of which to the head is the object to be attained. D D K I is a strong metal casting, by which this connection is effected, and in which D D are the side plates, corresponding to the old side plates heretofore used, as above referred to.

K is a hollow box or casing, inclosing the end of the arm from the point x to the point x', as shown by the dotted lines of Fig. 2; and I is the elbow, formed on the part K, midway between the side plates, but enlarged at its upper end, so as to extend from one side plate to the other, thus greatly increasing the strength and durability of the casting for practical use.

Hubs $g\ g$ are also formed on the sides of the plates D, through which the pivot-bolt H extends that secures the arm to the rake-head; and transverse bolts $m\ n$ are employed, as usual, to connect the side plates and provide for the adjustment of the rake arms.

The end of the arm being incased in box K, the hole in the wooden arm, through which the bolt n extends, should be made slightly larger than the bolt, in order to permit the necessary adjustments.

The outer bolt m is adjusted in a slot in the metal plates, as usual.

The bearing-surface of the elbow I is provided with the usual friction-sleeve F.

I claim as my invention—

1. The iron casing composed of the parts D K I g, cast in one piece, and adapted for attachment to the rake-arms, and having the friction-sleeve F, surrounding and permanently attached to the casting I, substantially as described.

2. The rake-arm E, constructed as described, combined with the socket D I, adjusting-bolt m, and pivot-bolt n, the arm extending past the pivot-bolt within the socket and abutting against the casing K, substantially as described.

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Witnesses:
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