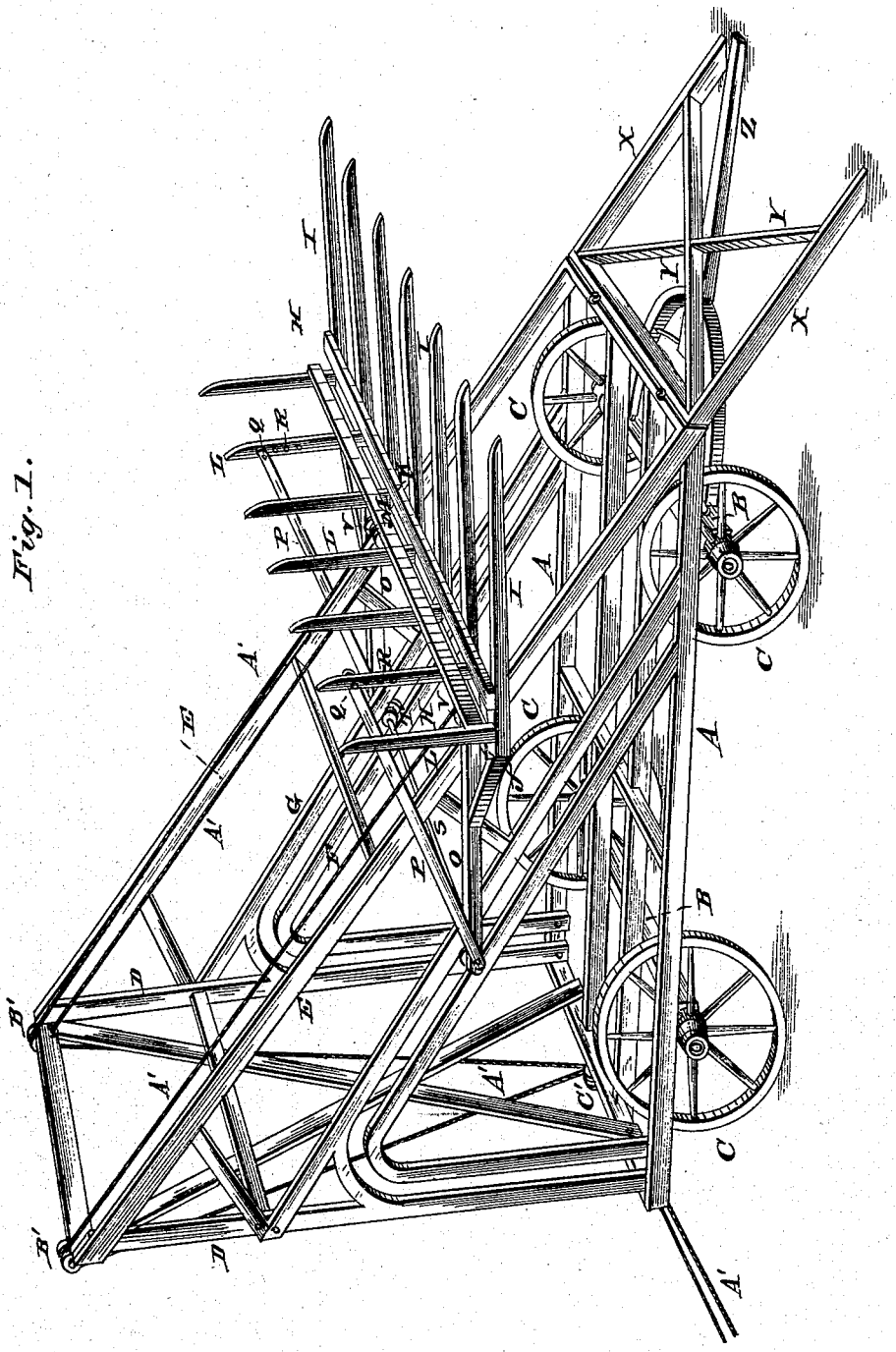
(No Model.) 2 Sheets—Sheet 1.

J. DAIN, Jr.

HAY STACKER.

No. 262,012. Patented Aug. 1, 1882.

Fig. 1.



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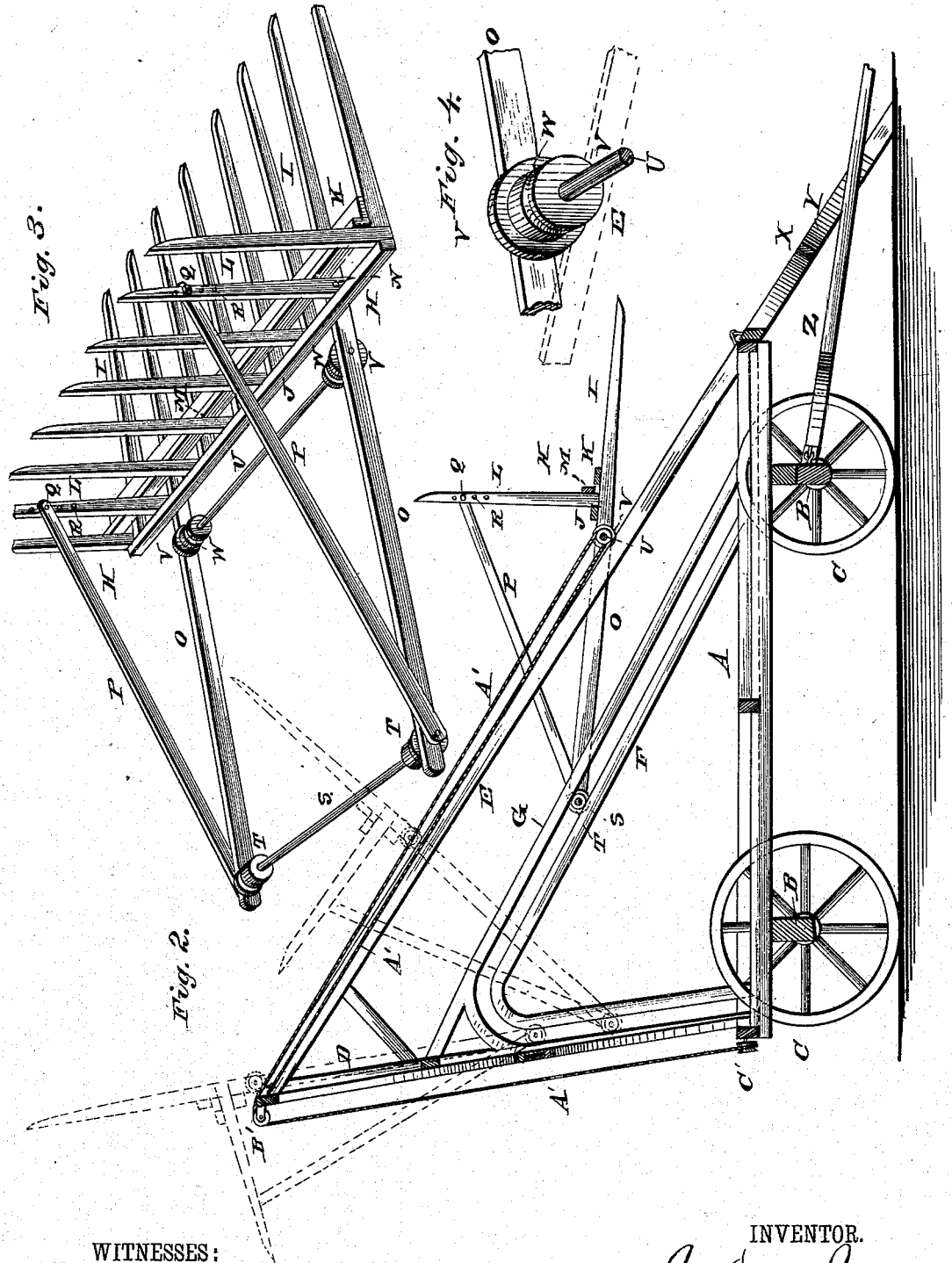

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UNITED STATES PATENT OFFICE.

JOSEPH DAIN, JR., OF MEADVILLE, ASSIGNOR TO JOHN H. ONSTOTT AND JOHN COOMBS, OF SPRINGFIELD, MISSOURI.

HAY-STACKER.

SPECIFICATION forming part of Letters Patent No. 262,012, dated August 1, 1882.

Application filed April 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DAIN, Jr., of Meadville, in the county of Linn and State of Missouri, have invented certain new and useful Improvements in Hay-Stackers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view of my improved hay-stacker. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a detail view in perspective of the carrier, and Fig. 4 is a detail view in perspective of one of the grooved and flanged pulleys.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to that class of hay-stackers in which a carrier moving upon an inclined track is employed to elevate the hay; and it consists in certain improvements in the construction of the same which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the main horizontal frame of my improved hay-stacker, which is supported on axles B, mounted upon wheels C. The frame A is provided at its rear end with standards D, supporting the upper end of an inclined track, E.

F is another inclined track, the lower ends of the sides of which are secured to the sides of frame A, as shown. The lower track, F, diverges from the track E, being at a less angle to the frame A until near the rear standards, D, where it is curved abruptly in a rearward and downward direction to meet the horizontal frame A.

G is a guide-track, secured parallel to track F a sufficient distance above the latter to admit a wheel or roller, to be hereinafter described.

H is the carrier, which consists of two sets of teeth or fingers connected together at a suitable angle, as follows: The lower teeth, I, are framed together by cross-bars J K, and the upper teeth, L, by a cross-bar, M. Two or more of the teeth L project below the cross-bar M, and are hinged to the teeth I by bolts N, thus making the two tooth-frames adjustable in relation to each other. The lower frame, I J K, is provided with rearward-projecting arms O O, suitably braced to the outer teeth, and provided near their rear ends with pivoted braces P, the upper forward ends of which are adjustably connected by bolts Q to two of the teeth L, which are provided each with a series of openings, R, to receive said bolts. By means of these braces it will be seen that the toothed frames constituting the carrier may be adjusted at a greater or less angle in relation to each other. The rear ends of the arms O are connected by a rod or brace, S, upon which are journaled wheels or rollers T, which may be flanged, as shown, to run upon the upper side of the track F and under the guide-beam G. Said arms O are also connected just rear of the cross-bar J by another rod or brace, U, having flanged wheels V, traveling upon the upper track, E. The wheels V are made wider than the track, and they are provided near their inner edges with annular grooves W, in which the hoisting-tackle may be reeved, as will be presently described.

To the lower ends of the track-beams E, which are secured at the front end of frame A, are hinged the sides of an extension of said track, which consists of side beams, X, connected by diagonal braces Y, crossing each other, as shown. This extension, being hinged, may be folded up upon the main track while the machine is being transported from place to place. When the machine is in position for use the extension may be folded down so as to rest upon the ground without interfering with the tongue Z, which is accommodated between the diagonal braces Y.

A′ A′ are ropes attached to the upper ends of the track-beams E, reeved over the wheels V in the annular grooves W of said wheels, back over pulleys B′ at the upper corners of the track, and finally over a pulley, C′, at the rear end of the main frame, where they may be connected for the attachment of the draft.

The operation of my improved stacker will

be readily understood. The machine having been secured in position at the stacking-place, the carrier is lowered to the ground, where it rests until a sufficient quantity of hay has been placed upon it by horse rakes or gatherers. The draft is then applied and the carrier gradually elevated upon the inclined track, it being at the same time gradually tilted by the rollers working upon the lower divergent track, F. When the rollers at the rear ends of arms O pass into the downwardly-curved upper end of said track the load is tilted back to the position shown in dotted lines in Fig. 2 of the drawings. As the summit of track E is approached the rollers T again pass upward until, when the summit is reached, they nearly reach the curve of track F, where they remain while the load is being dumped. While the stack is low the toothed frames of the carrier are adjusted at a greater angle to each other, in order to permit the load to dump easily; but when the stack is being "topped off" I prefer to decrease the angle, in order that the man building the stack may take just as much as he wants of the load and send the balance back to be carried to the next stacking-place.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a hay-stacker, the herein-described frame having two divergent tracks, the upper end of the lower of which is curved downwardly to the horizontal or base frame, and guide-beams equidistant from the lower track, in combination with a carrier having two sets of wheels or rollers, traveling the one upon the upper and the other upon the lower track, as set forth.

2. In a hay-stacker, the combination, with the frame having tracks, substantially as described, of the carrier consisting of two toothed frames hinged together and adjustable in relation to each other by the braces P, pivoted upon the rod S, and bolts Q, adjustable in any one of a series of perforations, R, in the teeth L of the upper frame, and equipped with rollers adapted to travel upon the tracks of the frame, as set forth.

3. The combination of the frame having inclined tracks, the carrier having flanged rollers V, provided with annular grooves W, and the draft-ropes secured at the upper corners of the track and reeved over said grooved wheels or rollers, as set forth.

4. The combination of the frame A, having axles and wheels B C, tongue Z, and inclined track E, with the extension hinged to the lower end of said inclined track, and consisting of sides X, connected by diagonal braces Y, as set forth.

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

JOSEPH DAIN, JR.

Witnesses:
WM. BAGGER,
JNO. H. ONSTOTT.