(No Model.) 2 Sheets—Sheet 1.

A. McCOLLUM.

HAY DISTRIBUTER.

No. 409,858. Patented Aug. 27, 1889.

Fig. 1.

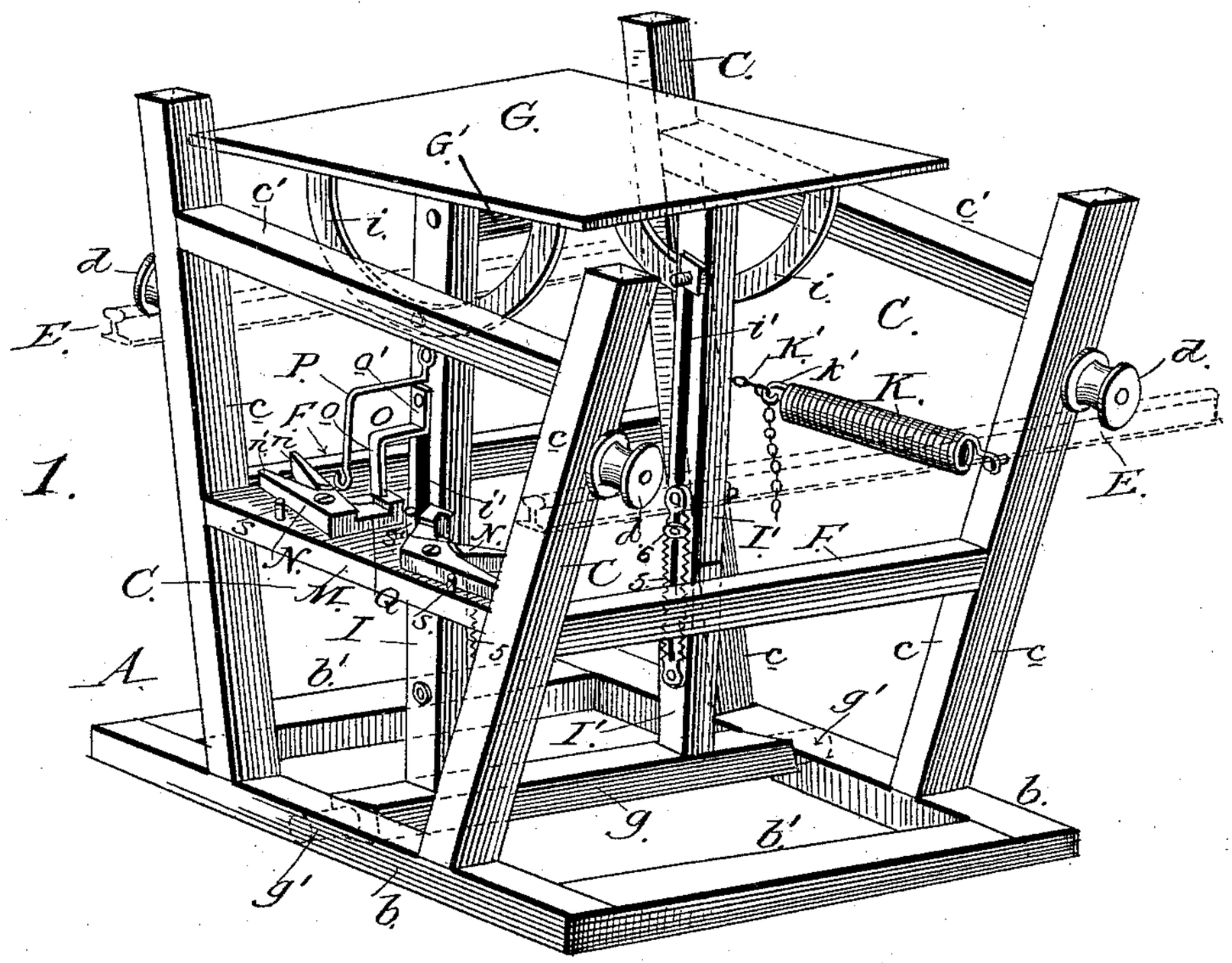
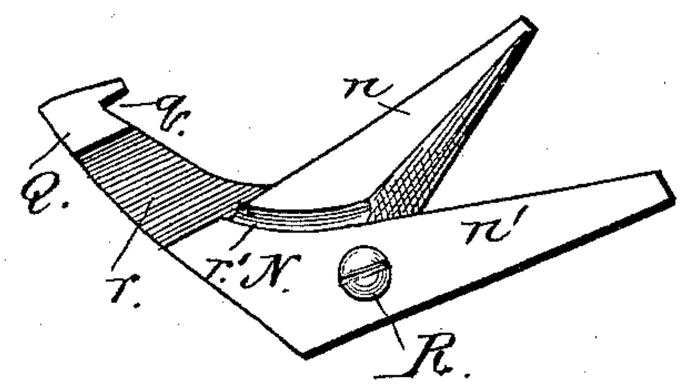


Fig. 3.



WITNESSES

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N. H. Patterson

INVENTOR

Alexander McCollum

by A. H. Evans & Co

his Attorneys

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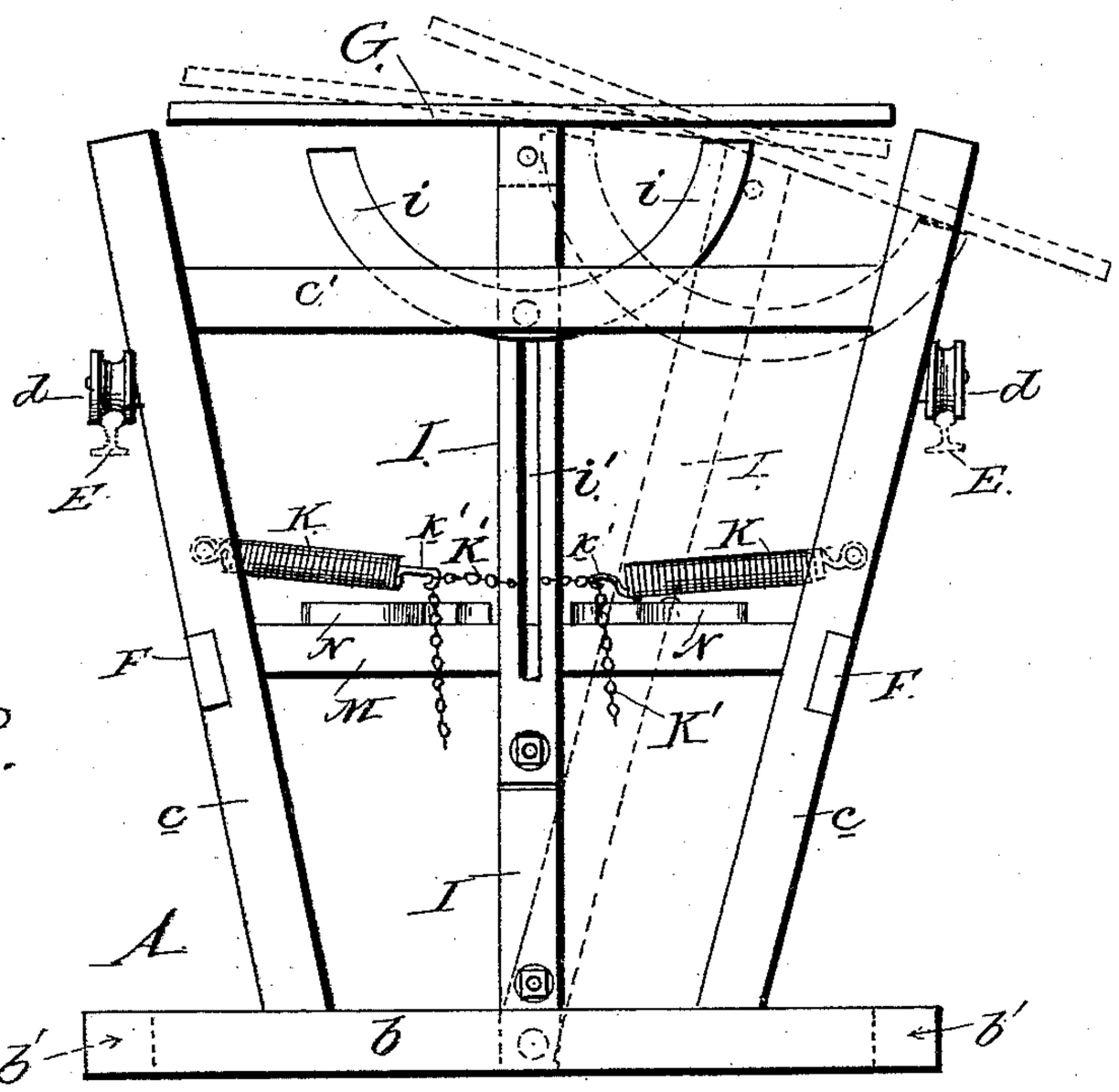

Fig. 2.

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UNITED STATES PATENT OFFICE.

ALEXANDER McCOLLUM, OF RAYMOND, IOWA.

HAY-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 409,858, dated August 27, 1889.

Application filed December 5, 1888. Serial No. 292,744. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MCCOLLUM, a citizen of the United States, residing at Raymond, in the county of Black Hawk and State of Iowa, have invented certain new and useful Improvements in Hay-Distributers, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved apparatus. Fig. 2 is a side elevation, parts being broken away. Fig. 3 is a detail of one of the levers.

This invention relates to an apparatus designed to be used in barns or in other places in connection with hay-carriers for automatically distributing the hay; and its object is to provide a simple and improved apparatus of this character possessing advantages in point of inexpensiveness, durability, ease of operation, and general efficiency.

To this end the invention consists in an apparatus, the construction of which will be hereinafter described, adapted to run upon tracks at each side the hay-carrier track and receive the hay as it is dropped from the carrier and automatically deposit it alternately at each side of the barn, or can be dropped on same side, if desired.

Referring to the drawings, A designates the frame embodying a rectangular bottom comprising the main beams *b b* and cross-beams *b' b'*.

C C designate the upwardly-divergent sides, comprising the uprights *c* and upper cross-beams *c'*. The upper ends of the sides C are provided with carrying-wheels *d*, adapted to run upon track E E, located within the barn. The sides of the frame are connected by cross-beams F F, secured to the uprights *c*.

The platform-support comprises in its construction the lower horizontal beam *g*, having its ends *g' g'* preferably reduced and formed cylindrical, said ends bearing in the cross-beams *b b* of the frame. From near the ends of the beam *g*, and projecting at right angles to the latter, are two parallel uprights I I', provided at their upper ends with semicircular bearings *i i*, secured centrally below the under side of a platform G, the latter being adapted to receive the hay as it is dropped from the carrier. The platform is rectangular in shape and has a smooth top surface. It is secured to a bar G', having its ends pivoted in the upper portions of the uprights I I', which are connected to the corners of the frame by means of the chains K' and helical springs K, said springs having a tendency to draw the platform and its supports I I' to the center of the frame A, when the same has been forced to either side by the weight of the load or charge placed upon the platform. The coil-springs are secured at their outer ends to the uprights *c* of the frame, while at their inner ends are preferably formed hooks *k'*, adapted to engage any one of the links of the chains K' to regulate the tension of the springs. The platform is normally horizontal, but in operation is slightly inclined to one or the other side of the axis of its support. It is pivoted by its bar G' to the uprights I I', so that it may tilt toward the side upon which the hay is placed, and it is prevented from tilting to the opposite side when the hay is dropped upon it by two semicircular supports *i i*, adjustably secured under the platform by bolts passing through elongated slots *i' i'*, formed longitudinally in the uprights I I' of the platform-supports.

It will readily be seen that when the platform is tilted its under surface will rest against the ends of the supports on the side toward which it is tilted, thereby permitting the load to be discharged on that side.

As before mentioned, the object of the apparatus is to automatically discharge the hay alternately upon one side and then the other as it is dropped from the carrier, and to effect this operation I employ the means which I will now proceed to describe. A horizontally-disposed flat beam M is secured at one end of the apparatus to the uprights C C, upon which are pivoted two corresponding levers N N, adapted to be engaged by the vertical portion *o* of a rod O, the ends *o' o'* of which being bent inwardly at right angles to the portion *o* and secured to the upright I of the support upon that side, and also by a spring-arm P, projecting horizontally from the same upright above the rod O, its free end portion being bent down nearly to a ver-

tical position. The levers comprise a V-shaped portion at their outer ends, the inner and outer arms n n and n' n', respectively formed thereby, being inclined outwardly, the said levers being formed with a recess or groove r', through which passes the lower end of the spring-arm P as it moves by the levers on the return movement of the platform-frame. Projecting inwardly at about right angles to the outer edge of the arms n n are arms Q Q, provided with vertical recesses q q in their outer faces, said recesses being adapted to alternately receive and retain the rod O. The levers are pivoted to the flat beam M by bolts R, passing through perforations provided through the levers near the inner termination of the arms n' n', as shown. Recesses r r are respectively formed in the upper face of the arms Q to permit the passage of the spring-arm P during the operation of the apparatus. Stops S are provided along the outer edge of the top surface of the lever-platform to limit the movement of the levers in one direction, while a lug or screw s', secured in the platform between the arms Q Q of the levers, limits the movement of the latter in the opposite direction.

The operation of the apparatus is as follows: The rod O normally rests in the recess q of the arm Q of one of the levers, and the platform, when in actual operation, is held slightly to one side of the axis g of its support. In this position the apparatus is drawn along its tracks to the desired point by means of a rope (not shown) secured to the lower portion of the frame. The hay-carrier is then loaded and drawn along its track to a point directly above the apparatus, when the load is dropped upon the platform. The latter being at one side, the axis of its support is caused by weight upon it to overcome the tension of the spring and move farther to that side of its axis until the platform is inclined sufficiently to discharge the load. During this movement the spring-arm P passes along the outer edge of the arm n upon that side until the end of said arm is reached, when the tension of the spring-arm will cause it to spring into the V-shaped space of the lever.

When the platform is in position for discharging the load, the tension of the springs K on the opposite side is exerted in a contrary direction. Thus when the load is discharged the platform is drawn back and the spring-arm P passes through the recess r' of the lever before mentioned, through the recesses r r of both levers, and engages the outer edge of the arm n of the opposite lever, the tension of the springs being sufficient to carry the platform this distance beyond the point directly above the axes of the support g and cause the platform to draw upon the tension of the springs at the opposite side in the opposite direction to that which has just been exerted. As the spring-arm moves along the edge of the arm n, against which it has been drawn by the springs, the arm Q of that lever is thrown beyond the inner edge of the lever-platform, and the recess q therein engages the rod O as the main platform recoils. The apparatus is then in position for receiving and discharging a load upon the opposite side in the manner just described.

It will be obvious that the apparatus is entirely automatic in its operation, and with it the hay can be readily and quickly stored upon both sides of the barn at the desired points without the aid of any attendant save the operator of the hay-carrier. When the sides of the barn are filled, the central portion can then be filled by dropping the hay directly from the carrier.

The uprights I I', which carry the platform, may be formed in sections and secured together by notched plates or racks 5 and engaging-nuts 6, as shown in Fig. 1, whereby the height of the platform may be varied.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus for storing hay in barns, the combination, with the frame A, of a platform pivotally mounted therein and provided upon one of its supports with a projecting rigid rod, and a spring-arm and levers upon the frame coacting with said rod and arm to permit the platform to automatically discharge the material as it is deposited thereon alternately upon one side and the other, substantially as herein described.

2. In an apparatus for storing hay in barns, the combination, with the frame having the uprights, of a platform pivotally mounted in said uprights, springs connected at the corners of the said frame and with the uprights, and adjustable chains adapted to regulate the tension of said springs, substantially as and for the purpose described.

3. In an apparatus for storing hay in barns, the combination, with the frame, of a platform pivotally mounted therein and connected therewith by springs, said platform being provided with a projecting rod upon one of the supports and with a projecting spring-arm secured above the same, and the levers pivoted upon the frame, adapted to coact with said rod and arm to permit the platform to discharge the material as it is deposited thereon alternately upon one side and the other, substantially as described.

4. In an apparatus for storing hay in barns, the combination, with the frame and the platform pivotally mounted therein and provided upon one of its supports with a rigid projecting rod and a spring-arm; of levers pivoted to the frame and comprising the inclined diverging arms and the inwardly-projecting recessed arm, said levers being adapted to coact with said rod and spring-arm, substantially as and for the purpose set forth.

5. The herein-described levers, comprising the V-shaped portion composed of inclined divergent arms, said portion being recessed, as at r', and an inwardly-projecting arm at

an angle to said portion and provided with the recesses *q* and *r*, substantially as described.

6. In an apparatus for storing hay in barns, the combination, with the frame having upwardly-diverging side and longitudinal beams secured thereto provided with wheels adapted to move upon tracks, of a platform pivotally mounted in said frame and adapted to automatically discharge the material as it is deposited thereon alternately upon one side and the other, substantially as and for the purpose set forth.

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Witnesses:
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J. M. WALKER.