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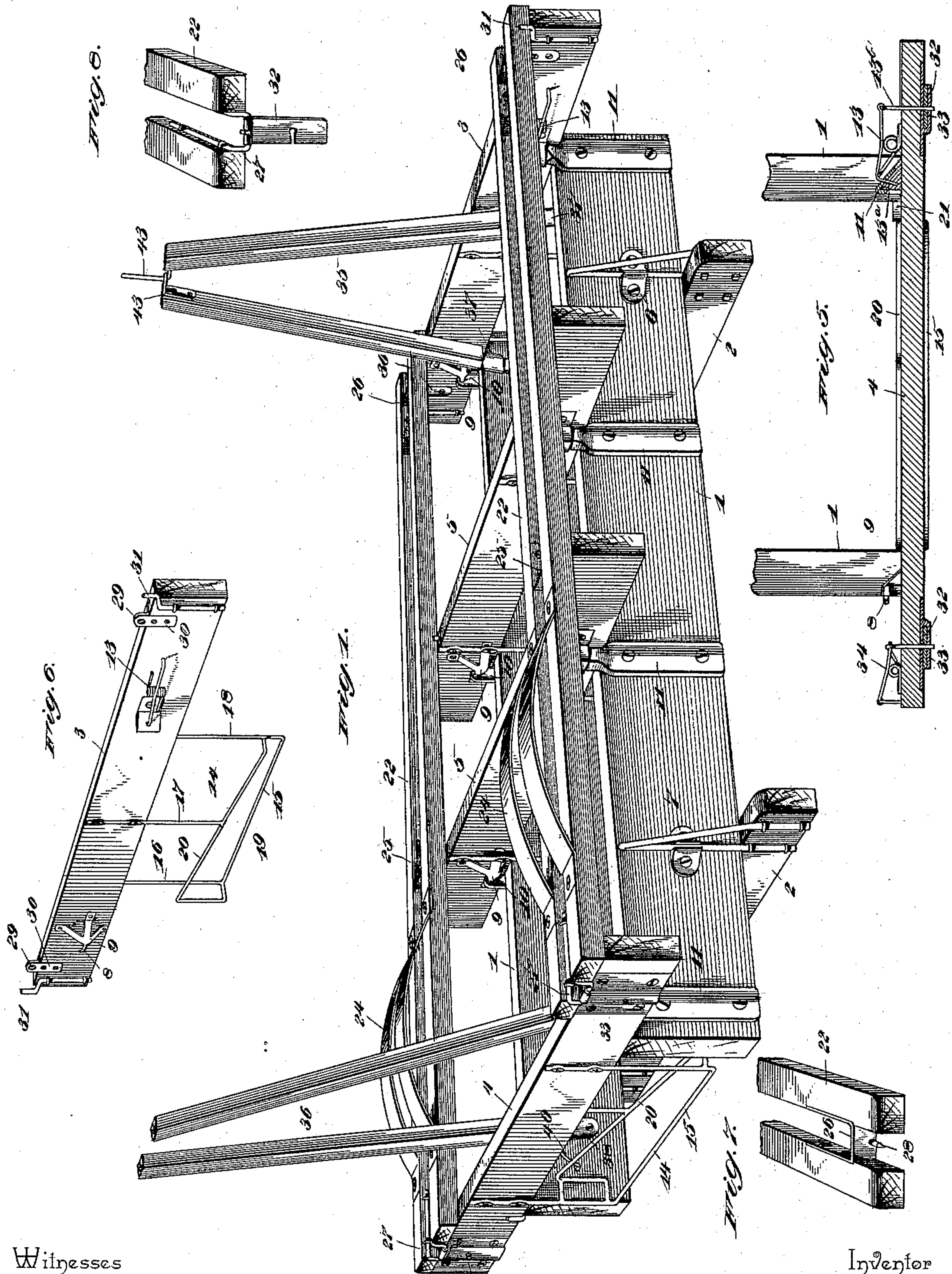
Patented Oct. 18, 1898.

E. TROY.
HAY RACK.

(Application filed May 31, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

W. F. Doyle

J. H. Riley

By *his* Attorneys,

Inventor

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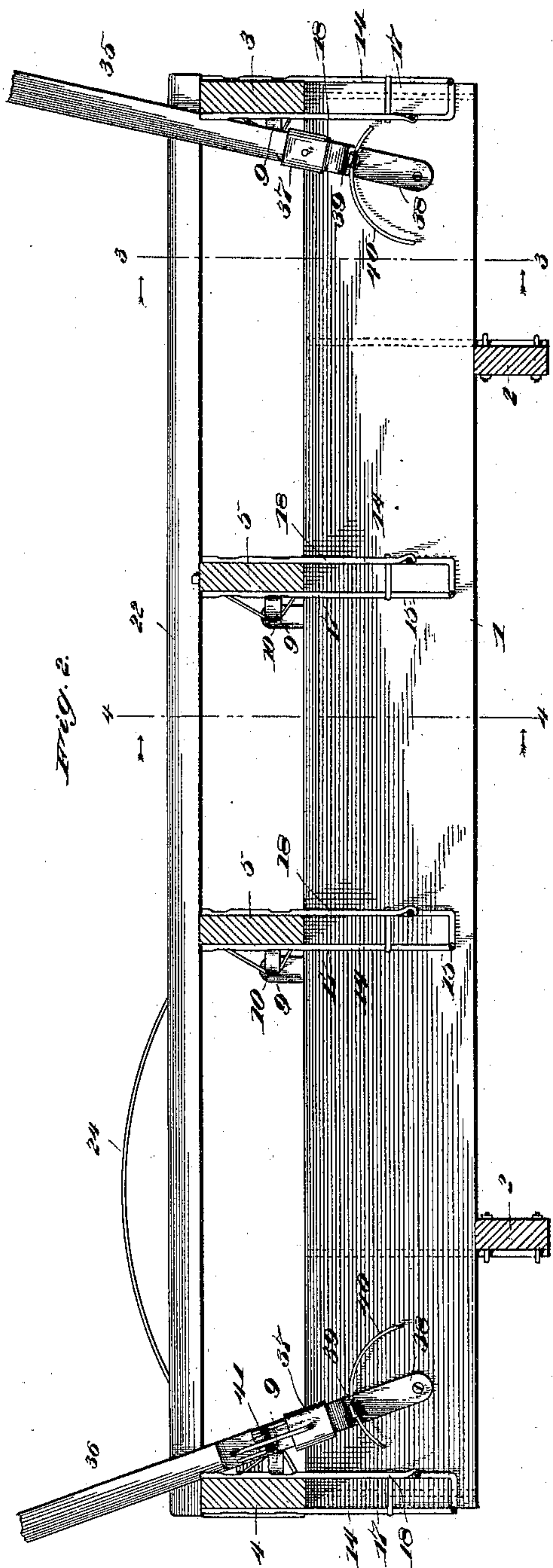
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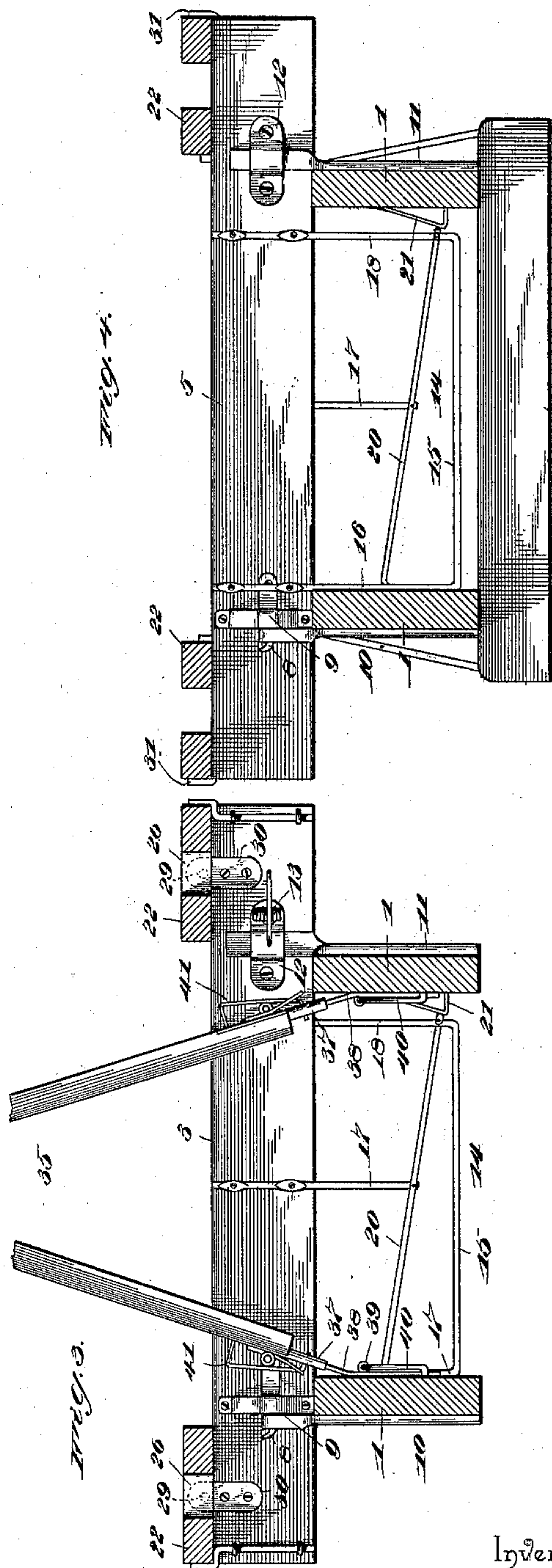
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UNITED STATES PATENT OFFICE.

EDWARD TROY, OF LACEY, IOWA.

HAY-RACK.

SPECIFICATION forming part of Letters Patent No. 612,533, dated October 18, 1898.

Application filed May 31, 1898. Serial No. 682,209. (No model.)

To all whom it may concern:

Be it known that I, EDWARD TROY, a citizen of the United States, residing at Lacey, in the county of Mahaska and State of Iowa, have invented a new and useful Hay-Rack, of which the following is a specification.

The invention relates to improvements in hay-racks.

The object of the present invention is to improve the construction of hay-racks and to provide a simple, strong, and durable one of inexpensive construction adapted to be readily placed on and removed from the running-gear of a wagon and capable when not in use of being compactly arranged to facilitate storing and shipping.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a hay-rack constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view on line 3 3 of Fig. 2. Fig. 4 is a similar view on line 4 4 of Fig. 2. Fig. 5 is a horizontal sectional view of the rear end of the hay-rack. Fig. 6 is a detail perspective view of the front cross-bar. Fig. 7 is a detail perspective view of the front end of one of the side portions of the hay-rack. Fig. 8 is a similar view of the rear end of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 1 designate longitudinal sills designed to be mounted on the bolsters 2 of a running-gear and connected by front and rear cross-bars 3 and 4 and intermediate cross-bars 5, and the said sills are provided at their outer faces with brackets 6 and 7 to receive the standards of the bolsters 2. The cross-bars are provided at one side of the hay-rack with hooks 8, consisting of an engaging portion and a body portion 9, provided with arms arranged at an angle to each other and offsetting the engaging portion from the cross-bars, and the said hooks 8 engage perforations or eyes of metal bars 10, secured to the outer face of one of the sills and projecting above the upper edge of the same. The other longitudinal sill

is provided at intervals with bars 11, projecting above the sill and fitting in loops or keepers 12 of the adjacent ends of the cross-bars and secured in such engagement by spring-catches 13, mounted on the end cross-bars and provided with arms 13^a, which pass through perforations of the loops and engage registering perforations of the bars 11. Each spring-catch, which is provided with an intermediate spring-coil, is preferably fulcrumed between its ends, and its outer portion 13^b is adapted to be readily depressed when it is desired to withdraw the inner engaging portions from the loops and the bars. Spring-catches may, if desired, be mounted on each of the cross-bars, or they may be arranged only at the ends of the hay-rack.

Each cross-bar is provided with a depending frame 14, interposed between the sills and adapted to hold the same firmly against the standards of the bolsters and prevent them from moving inward toward each other. This frame consists of a lower loop 15 and supporting-arms 16, 17, and 18, arranged at the ends and center of the loop and secured to the cross-bar at opposite sides thereof, as shown. One side 19 of the loop is straight and connects the lower ends of the arms 16 and 18, and the other side 20 is substantially L-shaped and is connected with the side 19 by a short transverse portion. One arm of the L-shaped side of the loop is disposed at a slight inclination and the other arm is vertical, and this latter arm and the supporting-arm 16 bear against the inner face of the adjacent end sill. The other end of the frame engages an inclined face of a substantially wedge-shaped casting 21, secured to one of the sills and adapted as the frame is forced downward between the sills to cause the latter to be spread by the frame and held tightly against the standards of the bolsters.

The cross-bars support side portions 22, which are provided at their rear portions with wheel-guards 24 and which are composed of longitudinal bars or rails spaced apart, as shown, and connected by central and end braces 25 and 26 and by a rear loop 27. The central brace 25, which is constructed of metal, consists of a transverse portion and a pair of arms arranged at the ends of the transverse portion and extending longitudi-

nally of the hay-rack in opposite directions and secured to the inner faces of the longitudinal bars or rails.

The end brace 26, which is substantially rectangular, is composed of a transverse portion and a pair of parallel sides or arms extending inward from the transverse portion and secured to the inner edges of the longitudinal bars or rails. The transverse portion of the brace 26, which is arranged at the front end of the hay-rack, carries a projecting stud or pin 28, adapted to engage an eye 29 of a plate 30, whereby the side portion 22 is secured to the front cross-bar, and the latter is provided at its ends with upwardly-extending projections 31, preferably formed by hooks and located at the outer edges of the side portions 22.

The loop 27, which is located at the rear end of the hay-rack, has a depending outer portion forming a pintle and hinging a tongue 32 to the rear end of the side portion 22. This tongue fits in a vertical socket 33 of the rear cross-bar and is provided with a perforation or recess registering with a corresponding perforation or recess of the socket and the cross-bar. The cross-bar is provided near each end with a socket 33, which is open at its outer side to facilitate introducing the tongue into the same, and the said tongue is secured in the socket by a spring-catch. One of the tongues is engaged by the outer portion 13^b of the catch 13, and the other tongue is engaged by a catch 34, similar to those before described.

The hay-rack is provided with front and rear standards 35 and 36, which are provided at their lower ends with sockets 37, adapted to engage pivoted arms or bars 38, whereby the standards may be adjusted to a position against the cross-bars or folded inward. The bars or arms 38 are pivoted at their lower ends and are provided between their ends with eyes 39, which receive curved guides 40, mounted on the inner faces of the sills and suitably secured to the same. The upper ends of the pivoted arms or bars are provided with perforations adapted to register with corresponding perforations of the sockets and to be engaged by spring-catches 41.

One of the front standards is provided at its upper end with an L-shaped piece 42, forming a horizontal arm, which is provided with a perforation adapted to receive an L-shaped rod 43, mounted on the other front standard and having one portion arranged horizontal and the other vertical. The horizontal portion of the rod is preferably provided with a depending extension or arm, whereby it is attached to the standard.

The invention has the following advantages:

The hay-rack, which is adapted to be readily mounted on and removed from the running-gear of a vehicle, is simple and comparatively inexpensive in construction and possesses great strength and durability, and

when it is taken apart it may be compactly stored and easily shipped.

The parts are detachably interlocked in a positive and reliable manner and cannot become accidentally disconnected through the jolting and straining of the parts incident to traveling over a rough road-bed.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. A hay-rack, comprising a pair of longitudinal sills provided at intervals with projecting portions, the projecting portions at one side being provided with eyes, cross-bars mounted on the sills and provided near one end with hooks engaging the said eyes, loops mounted on the cross-bars at the other side of the rack and receiving the adjacent projections, and means for retaining the loops and the projections in their engagement, substantially as described.

2. A hay-rack comprising longitudinal sills, bars arranged at intervals and projecting upward from the sills and provided at one side of the rack with eyes, cross-bars mounted on the sills and provided at one side of the rack with hooks to engage said eyes and having loops or keepers at the other side of the rack to receive the adjacent projecting bars, and the side portions composed of longitudinal bars or rails interlocked with the end cross-bars, substantially as described.

3. A hay-rack, comprising longitudinal sills, bars projecting upward from the sills and provided at one side of the rack with eyes, cross-bars provided with hooks engaging the eyes and located at one side of the rack, loops or keepers mounted on the cross-bars at the other side of the rack and receiving the projecting bars, catches mounted on the end cross-bars at one side of the rack and locking the adjacent keepers or loops and the bars together, and the side portions 22 arranged on the upper edges of the cross-bars and interlocked with the end ones, substantially as described.

4. In a hay-rack, the combination of the end cross-bars, an eye arranged on one of the cross-bars, a socket mounted on the other cross-bar, the side portion 22 provided with a projection located at one end of the rack and engaging said eye, a tongue mounted on the side portion at the other end of the rack and fitting in the said socket, and a catch detachably locking the tongue in the socket, substantially as described.

5. In a hay-rack, the combination with a cross-bar and a side portion, of a socket mounted on the cross-bar and open at the top and one side, a tongue mounted on the side portion and fitting in the socket and adapted to be disengaged therefrom by sliding the side portion laterally, and a catch for locking the tongue in the socket, substantially as described.

6. In a hay-rack, the combination of a cross-bar having a loop or keeper at one side and provided at the other with a socket, a sill supporting the cross-bar and having a projection fitting in the loop or keeper, a side portion provided with a tongue arranged in the socket, and a catch fulcrumed between its ends and having one end arranged to lock the tongue in the socket, the other end of the catch securing the projection in the loop or the keeper, substantially as described.

7. In a hay-rack, the combination of a pair of sills, a wedge carried by one of the sills, a cross-bar, and a frame depending from the cross-bar, interposed between the sills and engaged by the wedge, whereby the frame is caused to spread the sills, substantially as described.

8. In a hay-rack, the combination of a pair of sills, a wedge mounted on one of the sills at the inner face thereof, a cross-bar, and a frame comprising depending arms secured to the cross-bar, and a loop carried by the arms, interposed between the sills and engaging the wedge, substantially as described.

9. In a hay-rack, the combination of a pair of sills, a cross-bar, and a frame depending from the cross-bar and comprising arms arranged at the center and ends of the frame, and a loop carried by the arms and having a straight side and a substantially L-shaped side extending upward and forming a vertical arm at one end of the frame, substantially as described.

10. The combination in a hay-rack, of a

frame, a bar pivoted at its lower end to the frame and provided with an eye, a folding standard mounted on the bar and adapted to swing upward and downward to arrange it in an upright position and to fold it upon the frame, and a curved guide mounted on the frame and passing through the eye, substantially as described.

11. In a hay-rack, the combination of a pivoted bar, and a standard provided at its lower end with a socket to receive the bar, and having a catch engaging the bar, and retaining the standard on the same, said standard being adapted to swing on the pivoted bar to arrange it in an upright position and to fold it upon the hay-rack, substantially as described.

12. In a hay-rack, the combination of a frame, a bar pivoted to the frame and provided with an eye, a curved guide mounted on the frame and passing through the eye, and a folding standard adapted to swing upward and downward with the bar, provided at its lower end with a socket to receive the same, and having a catch engaging the bar and retaining the standard thereon, substantially as described.

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

EDWARD TROY.

Witnesses:

JOSEPH ROBERTS,
R. P. DAZE.