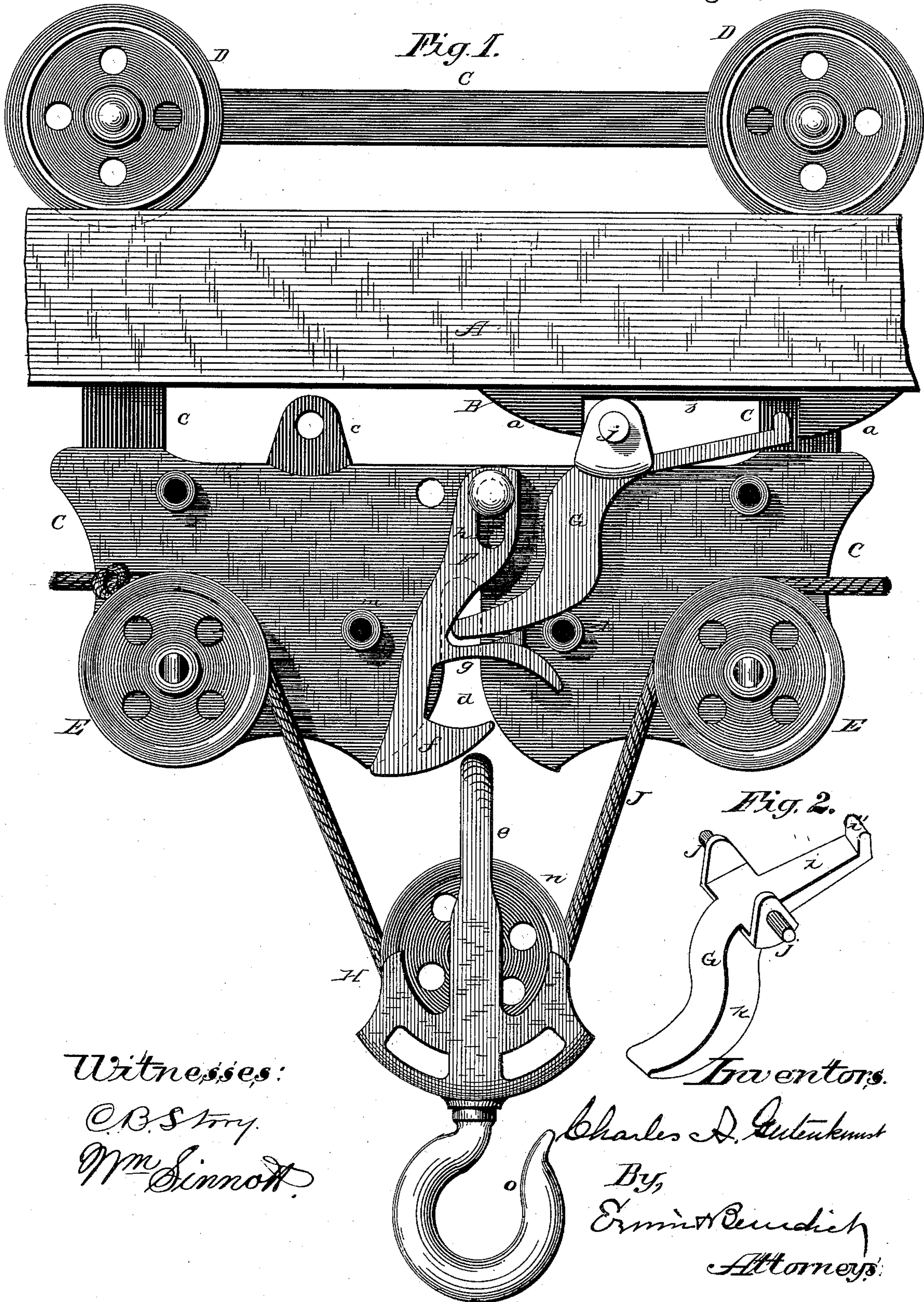


(No Model.)

C. A. GUTENKUNST.
REVERSIBLE HAY CARRIER.

No. 302,907.

Patented Aug. 5, 1884.



Witnesses:

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UNITED STATES PATENT OFFICE.

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REVERSIBLE HAY-CARRIER.

SPECIFICATION forming part of Letters Patent No. 302,907, dated August 5, 1884.

Application filed June 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GUTENKUNST, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Reversible Hay-Carriers; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention, to be hereinafter distinctly claimed, relates to improvements in reversible hay-carriers adapted to travel on a track in either direction from the retaining-bracket; and it pertains especially to the device for locking the carrier in a fixed position while elevating the fork and its load of hay, and for holding up the tackle and fork, with its load, while carrying and discharging the hay.

In the accompanying drawings, Figure 1 is an aside view with one side of the frame removed, showing the operative parts in the position they assume when the carrier is locked and the tackle is disengaged and being lowered or elevated. Fig. 2 is a detail view.

Like parts are indicated by the same letters in the views.

A is the supporting rail or track upon which the carrier travels. To this rail, on its under side, over the point at which the hay is to be elevated, is rigidly affixed the bracket B, provided at each end with inclines *a a*, from the rail downwardly and inwardly, and with a recess, *b*, having vertical faces, said recess being adapted to receive, and said faces to bear against and hold, the arm of a lever, hereinafter described. C is the frame of the carrier, provided with the wheels D D, upon axles rigid to the upper part of the frame C, which wheels travel upon the rail A, and support the carrier pendent therefrom, with its operative parts, beneath the said rail. Said frame is also provided with the pulleys E E upon axles in the lower part of the frame C, upon which pulleys the elevating-rope is adapted to run. Said frame is also provided with the perforated ears *e*, adapted for the support of the lever G.

In the lower central part of the frame C is an upwardly-extending flaring-mouthed recess, *d*, adapted for the reception of the bail *e* of tackle H. The gravity-latch F is provided at its lower extremity with the upwardly-curved hook *f*, and preferably, but not necessarily, with the finger *g*, and at its upper extremity with the vertical slot *h*. This gravity-latch F is suspended by a pivot through said slot *h*, which pivot is rigidly affixed in the upper part of the lower portion of the frame C, a little to one side of an imaginary vertical extension of the recess *d*, said gravity-latch being adapted to oscillate and slide upwardly and downwardly freely on said pivot.

The lever G consists of the arm *i*, terminating at its free end in a lug, *i'*, (which lug may be dispensed with if it is desired to have the carrier travel only one way on the rail from the bracket,) ears and pivots *j j*, and arm *k*. This lever G, by its pivots *j j*, is pivoted in the lugs *c c* in the upper part of said lower portion of the frame C.

The relative positions of the latch F and lever G in the carrier are such that the free outer end of arm *k* is between the finger *g* and the inclined body of the latch, as shown in Fig. 1, so that when the arm *k* moves upwardly it strikes against the latch and forces it backward, and when said latch is forced upwardly by the bale *e* against finger *g* the finger *g* strikes against and carries the arm *k* upwardly with said latch. The ears *j j* are adapted to straddle and pass freely by the bracket B. The arm *k* of lever G is estopped from falling too low by the guard at *l*, and the latch F is withheld from too great a backward movement by a guard at *m*.

I cast the frame C with four perforated lugs, *c*, thereon—two on each side piece—one, as shown in Fig. 1, at *c*, and the other located behind and in range of the ear *j*, as said ear is shown in Fig. 1, said lugs being adapted to support the lever G at that point. The duplicate ears *c* are only used when it is desired, for any reason, to reverse the direction of movements of lever G and latch F, when they may be shifted to the opposite side of the recess *d*.

The tackle H, composed of bail *e*, pulley *n*, and fork-supporting hook *o*, is adapted to travel on and be elevated by the elevating-

rope J. The rope J is made fast at one end of the carrier, and at the other end of said carrier said rope is supported by and runs upon the pulley E, while the tackle H travels 5 and is elevated and lowered on said rope between said point of attachment to the carrier and the opposite pulley E.

The latch F is so weighted and suspended from the pivot through slot *h* that by its own 10 gravity the hook *f* hangs horizontally across the lower part of recess *d*. The passage-way of the tackle-bail *e* as it passes upwardly into the carrier and the under side of said hook *f* is so inclined upwardly toward its outer or 15 free end that, when the bail of the tackle as it is elevated strikes against said incline, the latch is forced backward, allowing the bail to pass the point of the hook and strike against the finger *g*, and force the latch F upward on 20 the pivot in slot *h*, carrying with it the free end of arm *k* of lever G, thereby forcibly depressing the free end of arm *i* of said lever downwardly and out of the recess *b*, thereby disengaging said lever from contact with the 25 bracket B, and leaving the carrier free to travel on the rail A, as drawn by the force acting on rope J, while, upon the rope slackening so as to release the bail of the tackle from contact with the finger *g*, the latch F by its 30 gravity swings forward upon the instant, causing the hook *f* to engage within the bail *e*, and thereby support the tackle H, in which position it remains until the forkful of hay having been discharged, and the carrier drawn 35 back by power applied at the other end of the rope J, (or other suitable means,) the carrier is again brought to the bracket B, when the free outer end of the arm *i* of lever G, as the carrier travels toward and past said bracket, 40 impinges against the incline *a* of said bracket and is borne down, thereby carrying the other arm, K, upward and outward against the latch F, whereby said latch is forcibly pressed backward, and the hook *f* is withdrawn from sup- 45 porting the bail *e*, and the tackle H, being thus

disengaged, drops by its own weight and the weight of the sustained fork to the load of hay beneath, while the end of arm *i*, having passed the incline *a*, is by the gravity of the arm *k* and latch F carried upward into the recess *b*, and the end lug, *i'*, engaging against the 50 sides of said recess, locks the carrier in its position until again released by the upward force of the uplifted tackle H.

What I claim as new, and desire to secure 55 by Letters Patent, is—

1. In hay-carriers, the single gravity-latch F, provided with upwardly-inclined hook *f*, finger *g*, and slot *h*, lever G, and frame C, in combination with tackle H and supporting- 60 rail A, having bracket B affixed thereto, substantially as and for the purpose specified.

2. In hay-carriers, the lever G, provided with arm *k*, arm *i*, and ears and pivots *j j*, the gravity-latch F, and frame C, in combination 65 with the supporting-rail A, provided with the rigidly-affixed bracket B and tackle H, substantially as and for the purpose set forth.

3. In hay-carriers, the lever G, having arms *i* and *k*, and pivots *j j*, gravity-latch F, and 70 frame C, in combination with supporting-rail A, provided with rigidly-affixed bracket B, and tackle H, substantially as and for the purpose set forth.

4. In hay-carriers, the frame C, having 75 wheels D D, pulleys E E, recess *d*, lugs *c*, and guards *m* and *l*, gravity-latch F, provided with hook *f*, finger *g*, and slot *h*, and lever G, having arm *k*, pivots *j j*, arm *i*, and lug *i'*, in combination with supporting-rail A, bracket B, 80 having inclines *a a* and recess *b*, rope I, and tackle H, having bail *e*, and pulley *n*, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. GUTENKUNST.

Witnesses:

W. E. STORY,
WM. SINNOTT.