(No Model.)

2 Sheets—Sheet 1.

J. H. WISEHEART.

ELEVATOR.

No. 335,408.

Patented Feb. 2, 1886.

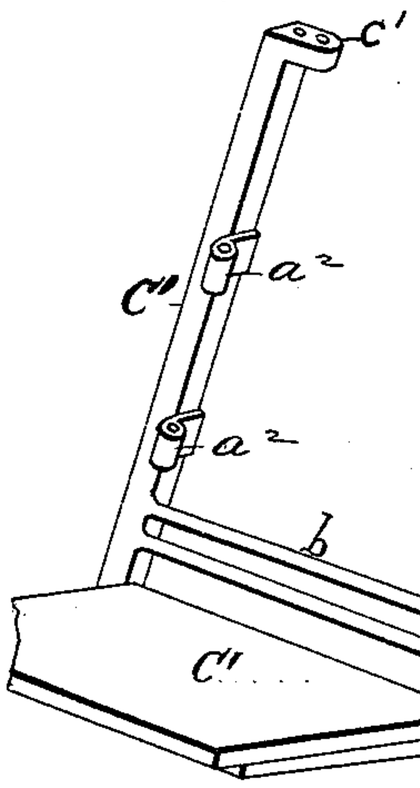

Fig 1½

Fig 2.

Fig 1.

Witnesses

Wm. A. Rosenbaum

H. A. Daniels.

Inventor

Jacob H. Wiseheart

By his Attorney W. Burris

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

J. H. WISEHEART.

ELEVATOR.

No. 335,408. Patented Feb. 2, 1886.

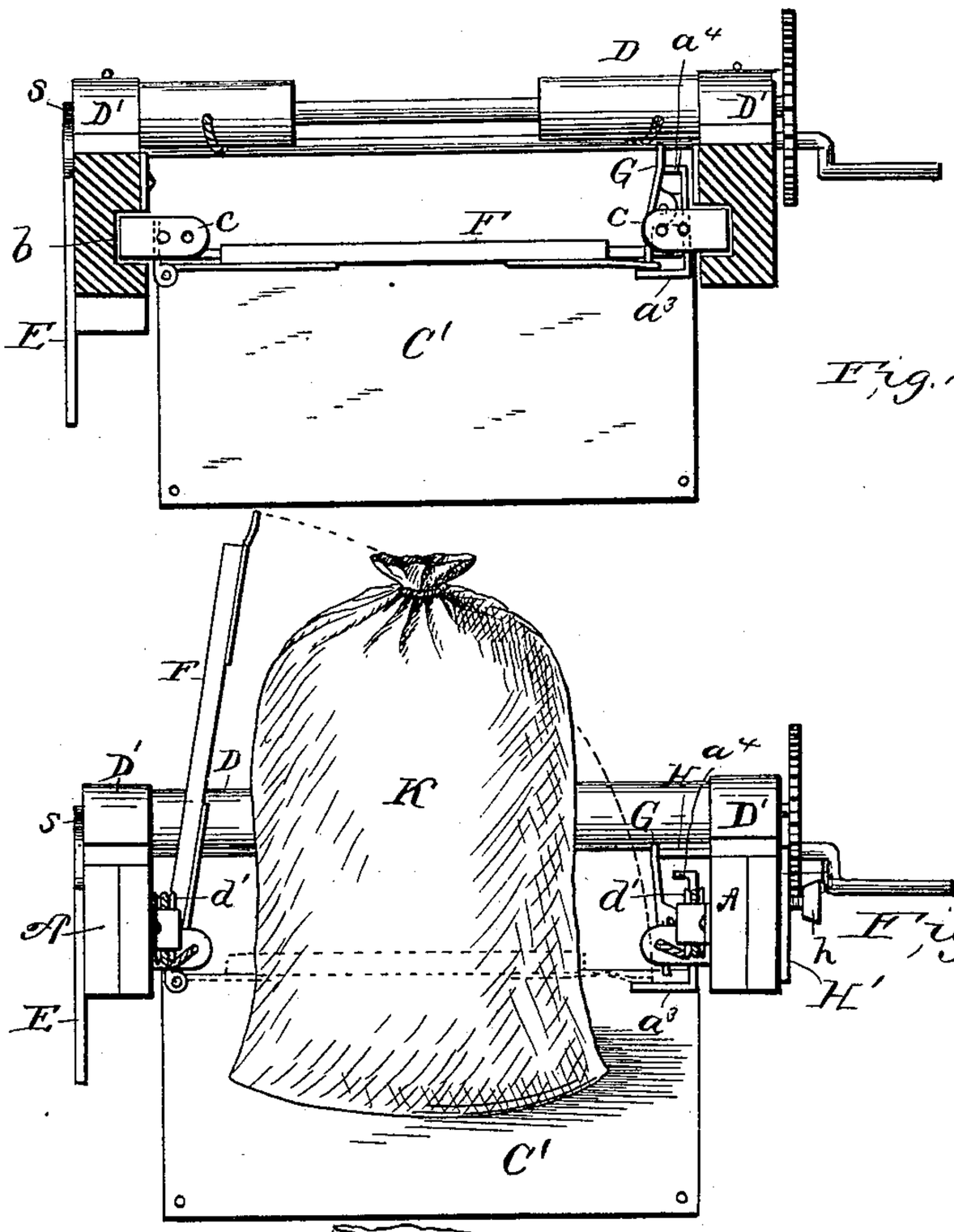

Fig. 2½

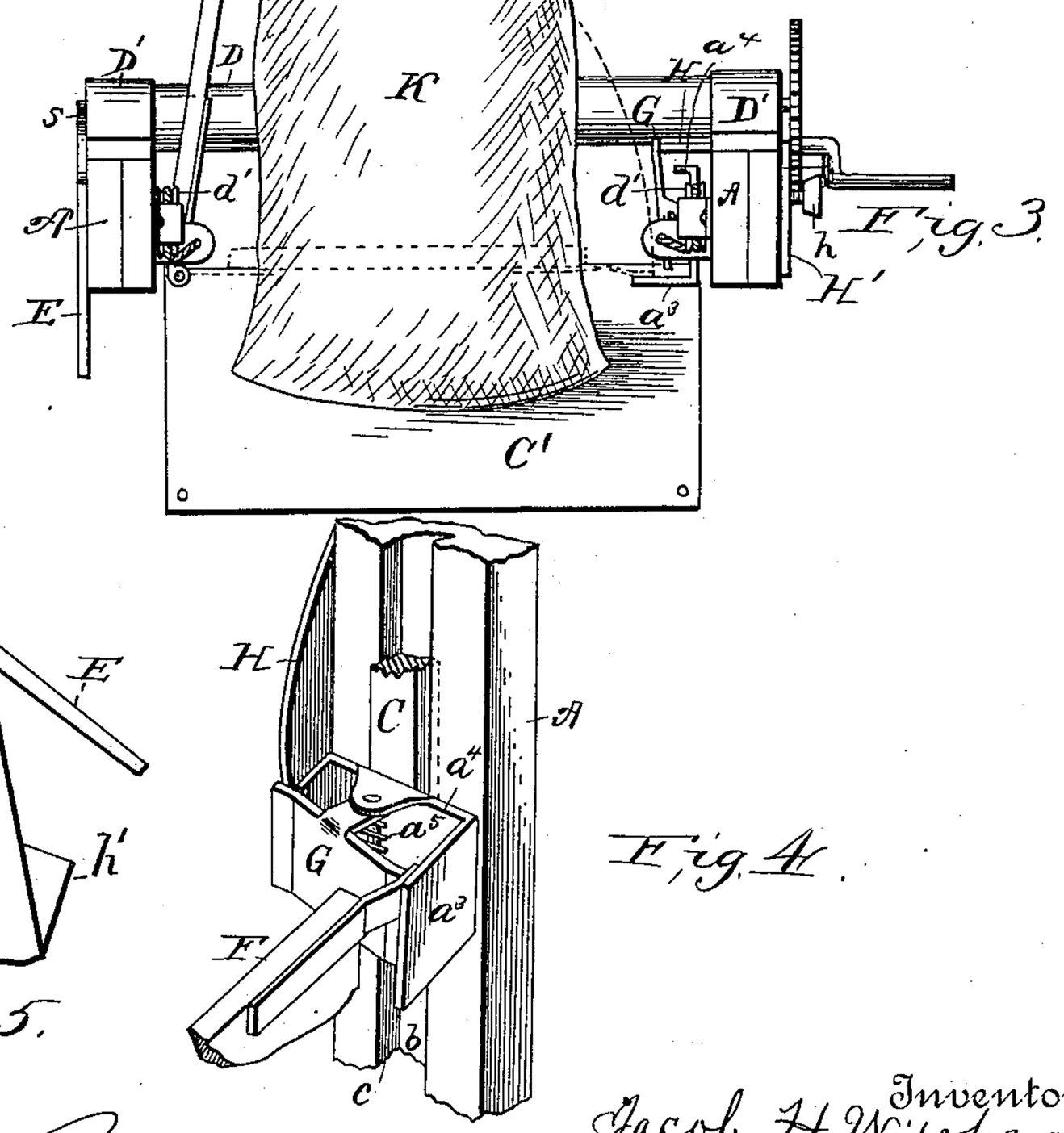

Fig. 3.

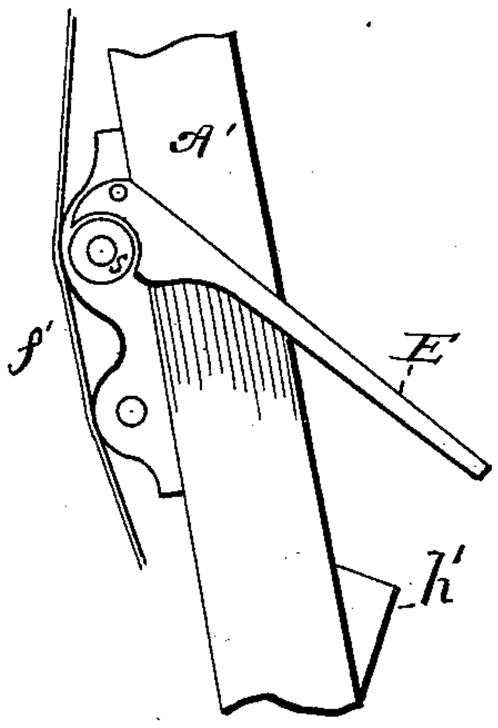

Fig. 5.

Fig. 4.

Witnesses

Wm. H. Coombs

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UNITED STATES PATENT OFFICE.

JACOB H. WISEHEART, OF CHICO, ASSIGNOR OF ONE-HALF TO JOSEPH ASBURY BRUNER, OF SAN RAFAEL, CALIFORNIA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 335,408, dated February 2, 1886.

Application filed December 15, 1885. Serial No. 185,691. (No model.)

To all whom it may concern:

Be it known that JACOB H. WISEHEART, a citizen of the United States of America, residing at Chico, in the county of Butte and State of California, have invented certain new and useful Improvements in Devices for Elevating and Handling Sacks of Grain, Flour, or other Articles, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is the construction of improved devices for handling sacks of grain, bales of hay and cotton, boxes, and other articles to be elevated and lowered in barns, ware and store houses, or to be loaded onto wagons; and the invention consists of skids provided with hoisting, tripping, and braking devices, and carriage-ways, and a carriage adapted to run in ways between the skids, all constructed as hereinafter more fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective of my improved elevator. Fig. 1½ is a perspective of the carriage-frame detached. Fig. 2 is a perspective of the tripping devices attached to one of the skids. Fig. 2½ is a cross-section on line *x x* of Fig. 1. Fig. 3 is a top view showing the hinged fly open and an elevated sack being discharged from the carriage. Fig. 4 is a perspective of a portion of a skid, showing a portion of the carriage, the trip-plate, the fly, and its spring-latch. Fig. 5 is a partial side elevation showing the brake devices.

A A′ designate the skids, secured together by cross-ties B. It is evident that these skids and ties may be constructed of any suitable material and of any required size. For ordinary purposes the skids may be made of hard wood two inches in thickness, any desired width, and about sixteen feet in length, and placed about twenty inches apart. The ties may be made of round, square, or flat iron having bifurcated ends provided with holes to receive the bolts *a*, by which they are securely fastened to the skids, so as to firmly hold them in position in relation to each other.

C C′ designate the side bars of the elevator-carriage, which bars are connected and stayed by the cross-bars *b*, and are constructed to run in the grooves *c*, formed in the inner sides of the skids. The principal pressure of the carriage against the walls of the grooves being on the back of the side bars, owing to the usually inclined position of the skids when in use, the inner faces of the skids, back of the grooves, are provided with metallic plates *a′*, placed so that their edges form bearings for the side bars, to prevent the bars from wearing away the wooden substance of the skids. Similar plates may be placed on both sides of the grooves. The upper ends of the side bars are provided with inwardly-projecting lugs *c′*, having holes to receive the ends of the hoisting cords or chains. The lower portions of the side bars are provided with bracket-arms c^2 to support the carriage-platform C′.

D designates a winch journaled in bearings D′, attached to the skids and operated by a crank, *d*, the shaft of which is provided with a cog-wheel, *n*, arranged to gear with the wheel *m*, attached upon one end of the winch-shaft. One end of the winch-shaft is provided with a friction-roller, *s*.

E is a brake-lever pivoted to the outside of the skid A′ in position to be pressed against the friction-roller, for regulating the descent of the carriage. The carriage is hoisted and lowered by means of the winch and the hoisting cords or chains *b′*, attached at one end to the winch and extended over the sheaves *d′*, pivoted to the inner upper portions of the skids, and the other ends of the hoisting-cords are fastened to the lugs *c′* of the carriage-bars.

F designates a fly hinged to the lugs a^2 on the side bar, C′, and said bar is provided with a spring, *f*, at the hinge, adapted to automatically close the fly against the stop-plate a^3, formed on the plate a^4, which is attached to the carriage-bar C. The fly is fastened automatically in its closed position by the catch G, pivoted to lugs on the plate a^4, the back end of which catch is extended backward, so as to engage the edge of the trip-plate H as the carriage is hoisted, for the purpose of automatically releasing the fly for discharging the elevated articles from the carriage. The

catch G is provided with a spring, a^5, to enable it to automatically fasten the fly in its closed position.

H designates the trip-plate, attached to or formed on the clasp-plate H′, constructed to extend and fit partly around the skid A, to which the plate A′ is adjustably attached by the set-screw *h*, having threaded bearings in the plate. One or both of the skids may be provided with step-blocks *h*′, attached in position to enable a person using these steps for one foot and the cross-ties B for the other foot, to readily ascend and descend on the elevator, as on a ladder, which is often very convenient and desirable, especially when one person alone may be using the elevator.

When the machine is used for lowering articles, the tripping devices may be removed from the skid and the fly allowed to remain fastened in its closed position.

The speed of the descent of the carriage may be readily regulated, as desired, by pressing the brake-lever against the friction-roller on the end of the winch-shaft.

Suitable devices (not shown) may be employed for throwing the pinion on the crank-shaft out of gear with the gear-wheel on the winch-shaft to avoid revolving the crank while the carriage is descending.

For handling large and heavy articles, the gear-wheels and all the other parts of the elevator may be made proportionately larger and stronger, as herein specifically set forth.

The elevator in use may be placed in a vertical or in an inclined position, preferably slightly inclined backward, with the fly side in the direction of the storage-room. The tripping device being adjusted on the skid in position to automatically remove the catch G from the fly at the required point for the discharge of the elevated article, a sack of grain, K, or other article to be elevated is placed on the platform C′, leaning against the fly, when desired to be automatically discharged, and the carriage is then elevated by turning the winch-crank. As the carriage ascends the back end of the catch strikes and slides up the trip-plate H till the forward end of the catch is moved away from the fly, allowing it to open and the elevated article to be discharged from the carriage, which is then allowed to descend as rapidly as desired, the speed of its descent being regulated by the brake devices. As soon as the elevated article is discharged from the carriage, the fly is automatically closed against the stop-plate a^8, and, as the carriage descends, the catch G slides off the trip-plate and automatically moves into position to fasten the fly in its closed position, ready for the carriage to be reloaded. The skids may be strengthened by stay-rods *f*′, attached to the ends of the skids and extended through the supporting eye-bolts b^3, fastened to the skids.

L L designate bars pivoted at their upper ends to the upper portions of the skids, to support the elevator in position for hoisting articles onto a wagon.

It is evident that the machine may be readily adapted to be operated by a belt or other suitable mechanism (not shown,) run by power.

Constructed as set forth, this elevator combines lightness, cheapness, and strength, and may be readily transported, and is especially adapted for use by farmers and persons handling in storing and shipping, sacks, bales, and other heavy articles in barns and warehouses, and in loading such articles onto wagons.

With this machine three men can, with comparatively little physical exertion, handle more heavy articles than ten men can handle by hand merely.

The elevator is also adapted to be employed, in cases of emergency, as a fire-escape ladder. When it is to be used for that purpose, the tripping devices may be removed, and guard-railings f^2, prepared and kept for that purpose, may be readily attached around the platform C′, as shown in Fig. 1 of the drawings.

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

1. The combination of the elevator-skids A A′, connected by ties B, and provided with carriage-ways, the carriage adapted to run in the ways between the skids, and provided with the platform C′, the hinged fly F, and means, as set forth, for automatically opening, closing, and fastening the fly, and means, as set forth, for hoisting and lowering the carriage, substantially as and for the purposes described.

2. The combination of the elevator-skids A A′, connected by cross-ties B, and provided with the carriage-ways *c* and the ladder-steps *h*′, the carriage adapted to run in the ways between the skids and provided with the platform C′, the hinged fly F, and means, as set forth, for automatically opening, closing, and fastening the fly, and means for hoisting and lowering the carriage, substantially as and for the purposes described.

3. The combination of the skids A A′, connected by cross-ties B, and provided with the carriage-ways *c*, the carriage adapted to run in the ways between the skids, and provided with the platform C′ and the guard-rails f^2, the hinged fly F, and means, as set forth, for closing and fastening the fly, and means for hoisting and lowering the carriage, substantially as and for the purposes described.

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

JACOB H. WISEHEART.

Witnesses:
C. A. LEAMAN,
J. T. DALY.