

No. 826,877.

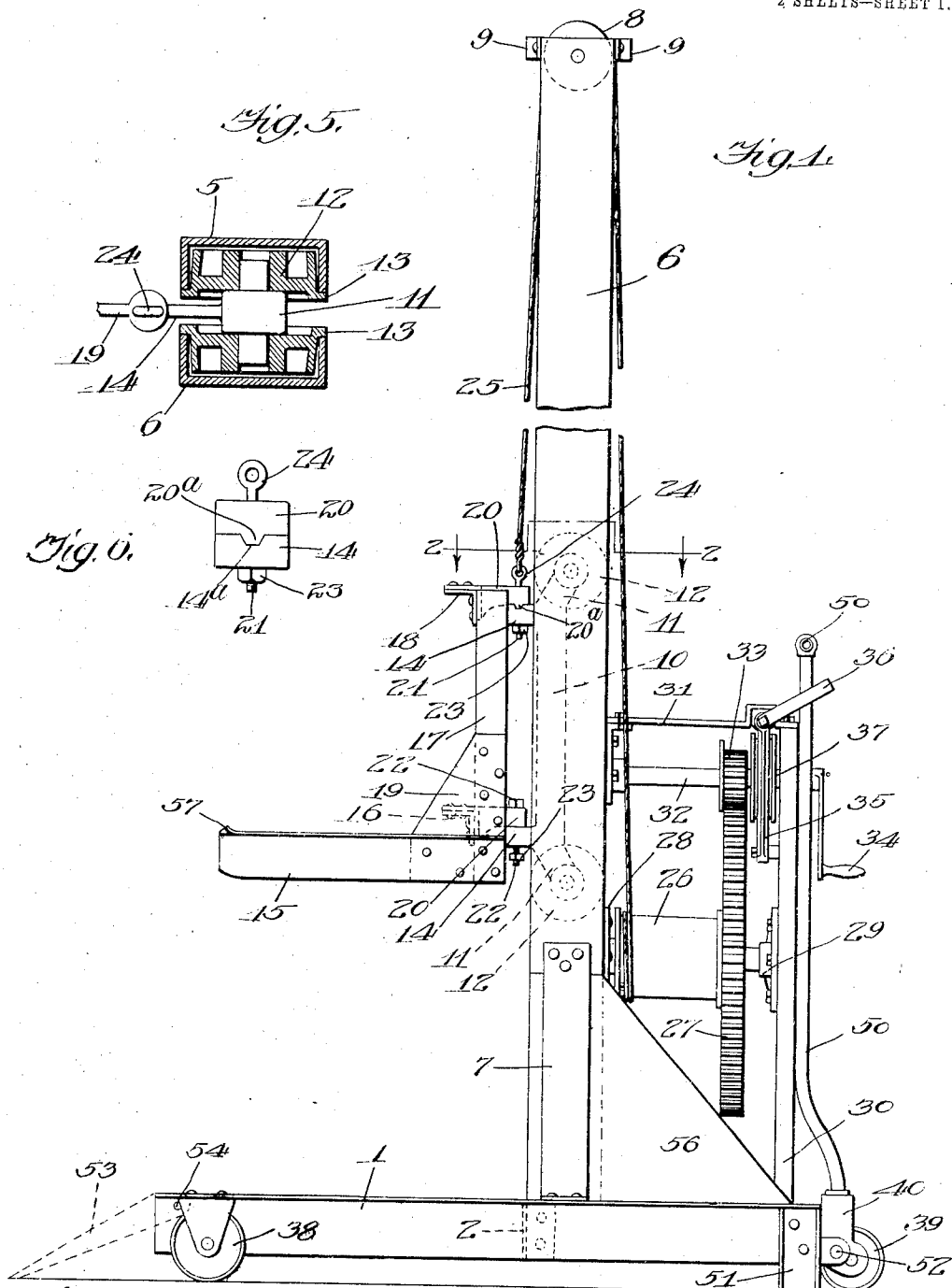
PATENTED JULY 24, 1906.

W. B. PAVEY.

ELEVATOR FOR BARRELS AND THE LIKE.

APPLICATION FILED JAN. 15, 1906.

2 SHEETS—SHEET 1.



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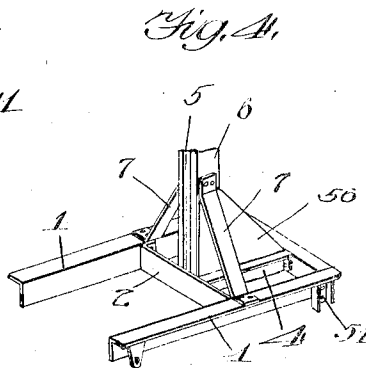
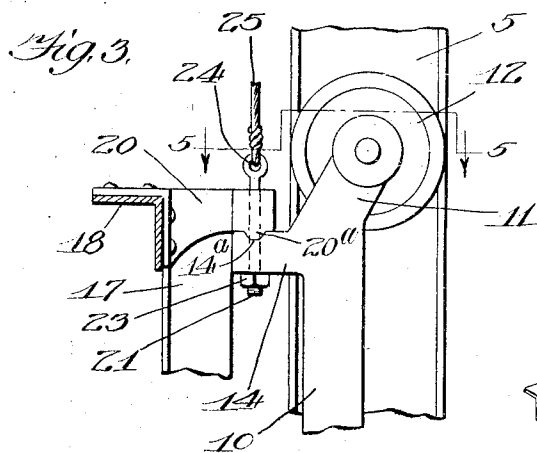
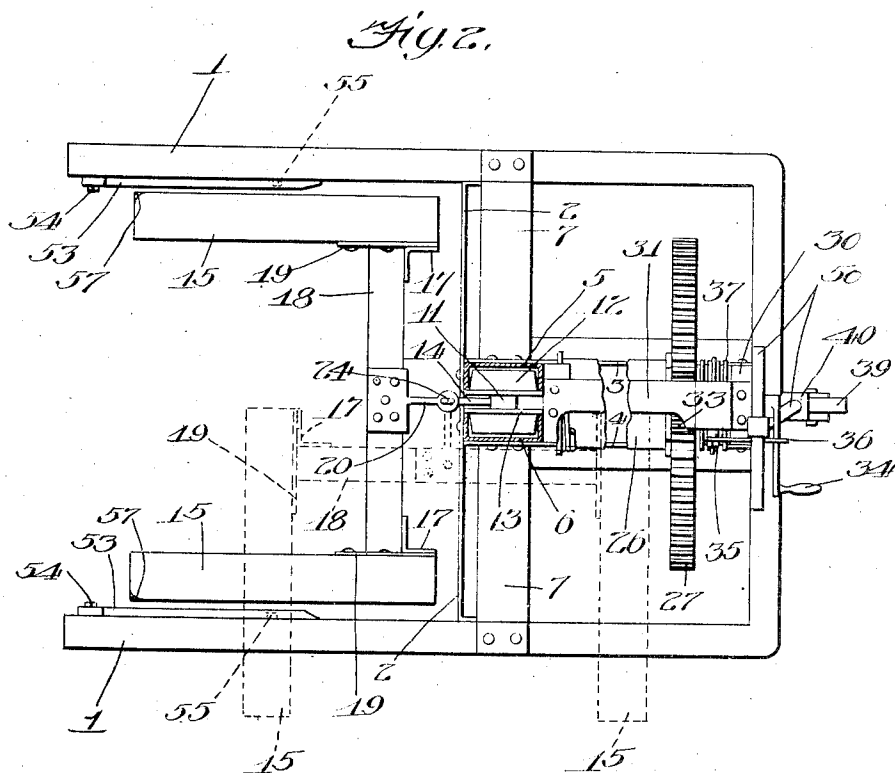
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM B. PAVEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO ECONOMY ENGINEERING CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ELEVATOR FOR BARRELS AND THE LIKE.

No. 826,877.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed January 15, 1906. Serial No. 296,044.

To all whom it may concern:

Be it known that I, WILLIAM B. PAVEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Elevators for Barrels and the Like, of which the following is a full, clear, and exact specification.

This invention relates to elevators for barrels and the like, and more particularly to that class of elevators for stacking barrels.

The object of the same is to construct an improved elevator of this character which is provided with a platform adapted to swing on a vertical pivot for receiving or delivering the barrel at any desired angle.

A further object is to construct an improved elevator of this character in which the platform will be so mounted as to travel into close proximity to the floor without coming in contact with any of the supports or braces for the standard.

A further object is to construct an improved device of this character which shall be simple and durable in construction, cheap to manufacture, and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear the invention consists in certain features of novelty in the construction, combination, and arrangement of the several parts hereinafter more fully set forth and claimed, and shown in the accompanying drawings, illustrating an example of the invention, in which—

Figure 1 is a side elevation of a machine of this type constructed in accordance with the principles of this invention. Fig. 2 is a transverse section on line 2 2 of Fig. 1, partly broken away, looking in the direction of the arrows and showing in dotted lines the platform swung around to one side of the standard. Fig. 3 is an enlarged detail elevation of the top pivot and bearing of the platform. Fig. 4 is a detail perspective view of the base-frame and lower portion of the standards and braces therefor. Fig. 5 is a transverse section on the line 5 5 of Fig. 3 looking in the direction of the arrows. Fig. 6 is an enlarged detail view of the platform-lock.

Referring more particularly to the drawings, in which similar reference-numerals designate the same parts throughout the several

views, the numeral 1 designates a base constructed, preferably, of angle-iron bent, preferably, into a U shape, the open end being located at the front of the machine, and 2 designates a transverse brace secured across the base-frame, preferably midway of the length thereof, for strengthening the same and holding the sides thereof in a proper position.

Secured within the frame and between the rear end thereof and the cross bar or brace 2 are spaced longitudinal bars 3 and 4, and between these bars and adjacent the cross-bar 2 are arranged two vertical standards 5 and 6, which are constructed of channel-iron so arranged that their channeled faces are adjacent each other and with their edges spaced from each other. These standards are supported by the bars 2, 3, and 4 and the braces 7, which are bolted or otherwise secured at one end thereto, and the other end is secured to the top of the side bars of the base-frame 1.

Journaled across the top of and between the standards 5 and 6 in suitable bearings is a pulley-wheel 8, and 9 designates bands secured to and extending across the tops of the standards to serve as braces and securing means for the tops thereof and as guides for the elevating rope or cable.

A carrier-frame 10 is adapted to move between the standards 5 and 6 and is provided with rearwardly-projecting bearings 11 at the top and bottom thereof, and journaled in these bearings 11 are suitable axles carrying antifriction-pulleys 12, each of which is provided with a tapering periphery and a flange 13, and said pulleys are adapted to travel in the channels of standards, so that the face of the flanges 13 will engage and bear against the edges of the channels in said standards. This carrier-frame is preferably provided with two forwardly-projecting ears 14, having vertically-alined apertures for a purpose set forth.

The numeral 15 designates the side bars of a movable platform, which are preferably spaced and held apart by means of a connecting cross-bar 16.

Secured to the side and at a point to engage the cross-bar 16 are uprights 17 of any desired height, and connecting the upper ends of these uprights is another cross-bar 18. This platform may be constructed of

any desired material, preferably angle-iron, suitably braced and fastened, and 19 designates corner-plates secured at the base of the uprights 17 and to the side bars 15.

5 Secured to the bars 16 and 18 are rearwardly-projecting brackets 20, which are provided with vertically-alined apertures, and the platform is adapted to be placed
10 against the carrier-frame 10 in such a position that the apertures in the rearwardly-projecting brackets 20 will register with the apertures in the forwardly-projecting ears 14, and 21 and 22 are bolts or pintles passing through the registering apertures to form a
15 vertical pivot for the platform and are held in position in any suitable manner, preferably by means of nuts 23, engaging the lower threaded ends thereof. The upper bolt or
20 pintle 21 is preferably provided with an eye 24, through which passes the end of a rope or cable 25, which is secured in any desired manner and which passes beneath the guides 9, over the pulley 8 at the upper end of the standards 5 and 6, and down to and around a
25 drum or windlass 26, which is provided with a gear 27. Said drum is journaled in suitable bearings 28 and 29, secured, respectively, to the standards 5 and 6 and to a support 30, the lower end of which is secured to
30 the base-frame 1, and the upper end is held in proper position by means of a bar or brace 31, extending therefrom to the standards 5 and 6.

A shaft 32, provided with a gear 33 and
35 crank 34, is journaled in suitable bearings carried by the standards 5 and 6 and support 30, and said gear meshes with the gear 27, through the medium of which the drum 26 is revolved to wind the cable 25 thereon, and
40 thereby raise or lower the platform.

A band-brake 35, provided with an operating-handle 36 and cooperating with a pulley 37, all of the ordinary construction, may be provided to regulate the speed and to assist
45 in holding the platform at any desired height.

Secured to the front of the base-frame are casters 38 of any desired construction, and 39 is a caster journaled at the rear of the frame in a pivotal bearing 40, and 50 is a handle secured to the bearing and is adapted to raise
50 the caster 39 from the floor to permit the feet or legs 51, which are secured to the rear of the base-frame, to rest upon the floor when the handle 50 is raised to turn the bearing 40
55 and caster 39 about its journal or pivot 52. When the handle 50 is lowered, the caster 39 will raise the feet 51, and the elevator may be transported to any desired place by means of
said handle.

60 Suitable skids 53 are pivoted, as at 54, to the front of the side bars of the base-frame 1, and said skids are adapted to be turned back on their pivots out of the way to permit transportation and into such a position that
65 they will rest upon and be supported by

means of the radial projecting lugs or pins 55, carried by the base-frame 1.

If desired, and in order to further brace and support the standards 5 and 6, connection or gusset plates 56 may be secured to the
70 lower portion of the standards and the bars 3 and 4.

In use the elevator is transported to the desired place, the handle 50 raised to the position shown in Fig. 1, when the machine will
75 be lowered and allowed to rest upon the feet or legs 51, which will prevent the frame from accidentally moving. The skids 53 are then turned upon their pivots 54, so that the forward ends will rest upon the ground or floor, 80 forming an incline up which the barrel may be rolled and onto the arms or bars 15 of the platform when the latter are at their lowest point and flush with the top of the sides of the base-frame. The crank 34 is then turned, 85 transmitting motion to the drum 26, which winds up the cable or rope 25 and raises the platform with the barrel thereon to the proper height, at which point it may be held by the brake 35. In order to prevent the
90 barrel from rolling off of the arms 15, the front ends thereof are preferably turned slightly upward, as at 57, to form stops.

When the barrel is in its elevated position, and if desired, or if it should be necessary to
95 discharge the barrel therefrom at an angle in order to properly place the same upon the pile or stack or to deliver it onto a conveyer, the platform may be swung about the vertical pivots formed by the brackets 20, ears 100 14, and pintles 21 and 22 to either side of the standard or at any desired angle.

After the barrel has been discharged therefrom the platform may be lowered by releasing
105 the handle 36 and its speed controlled by means of the band-brake 35.

It will be seen that the carrier-frame 10, moving between the standards 5 and 6, will properly guide the platform, while the pulleys 12 will form bearings and serve to reduce
110 the friction, their only point of contact with the standards being the engagement of their peripheries and the flanges 13 with the edges and the inner faces of the channels formed in the standards 5 and 6. 115

It will also be seen that with an elevator thus constructed the platform will be permitted to be lowered entirely to the ground and within the base-frame, as the carrier and guiding-frame are completely protected and
120 will not contact with any of the braces or supports throughout its entire path of movement.

If desired, and in order to prevent the platform from swinging about its pivot until the
125 desired height has been reached and to hold the same in position, there is provided a locking device. Any suitable device may be employed for this purpose; but a simple and effective form is to provide a notch or recess 130

(or series of notches) 14* in one of the ears 14 and a coacting lug or projection 20*, carried by the adjacent face of the bracket 20, which is adapted to enter the recess 14*. Said notch and projection are of such a shape as to firmly hold the platform in the proper position and yet permit the same to become disengaged when a reasonable strain is exerted thereon to turn the platform.

It is to be understood that it is not desired to be limited to the exact sizes, proportions, materials, arrangement, and construction of the several parts, as numerous changes may be made without departing from the spirit of the invention.

What is claimed as new, and desired to be secured by Letters Patent, is—

1. An elevator containing a vertically-movable carrier, a platform connected thereto by vertical pivots and interengaging means on the carrier and platform for preventing the movement of the latter about its pivots.

2. An elevator containing a vertically-movable and horizontally-swinging platform and means yieldingly holding the platform against horizontal movement.

3. In an elevator, the combination of a standard, a carrier-frame, a platform connected to said carrier and adapted to be swung in a horizontal relation thereto, means for raising the carrier and platform and cooperating means on the carrier and platform for preventing horizontal movement of the platform.

4. In an elevator, the combination of a standard, a frame slidably engaging the standard, a platform secured to the frame by means of a vertical pivot, means for raising the frame and platform, said platform being adapted to be moved about the standard on its vertical pivot and means for yieldingly restraining the movement of the platform about its pivot.

5. In an elevator, the combination of spaced standards, a carrier-frame vertically movable between and extending beyond the standards, and provided with a recess, a platform connected to the extended portion of the frame by vertical pivots, and a projection on the platform adapted to be seated in the recess, said projection and recess being adapted to be disengaged to permit the platform to be moved about the pivots in a horizontal direction in relation to the movement of the carrier-frame.

6. In an elevator, the combination of spaced standards, the adjacent faces thereof being channeled, a carrier-frame vertically movable between and extending beyond the standards, antifriction-rollers journaled in the frame and movable in the channels, a platform, vertical pivots connecting said platform to the frame remote from the standards, whereby said platform may be horizon-

tally swung about the standards on said pivots and means for locking the platform against horizontal movement.

7. In an elevator, the combination of spaced standards having their adjacent faces channeled, a carrier-frame vertically movable between the standards, flanged rollers journaled to the frame and movable within the channels with one face of the flange engaging the edges of the channels, a platform pivoted to the frame and means for locking the platform against pivotal movement.

8. In an elevator, the combination of spaced standards, a pulley journaled between the standards at the upper end thereof, a carrier-frame standing between the standards and provided with antifriction-rollers, a platform connected to the carrier-frame by vertical pivots and independent of the standards, interengaging means on the carrier and platform for restraining the movement of the latter about its pivots and a cable passing over the pulley, one end of which engages the frame for moving said frame and platform.

9. In a portable elevator, the combination of a base-frame, spaced standards secured thereto, a pulley journaled between the standards near the upper ends thereof, a carrier-frame between the standards and engaging only the adjacent faces thereof, a platform pivoted to the carrier-frame and out of engagement with the standards, a cable passing over the pulley and with one end secured to the carrier-frame, and means engaging the other end of the cable whereby the frame and platform may receive an unobstructed movement the entire length of the standards.

10. In a portable metallic elevator, the combination of a substantially U-shaped base-frame, a transverse bar secured across the frame midway of the length thereof, spaced bars secured between the transverse bar and the rear of the frame and parallel with the sides thereof, spaced standards secured between the parallel bars and adjacent the transverse bars, braces secured to the sides of the standards and engaging the sides of the frame, a carrier-frame between the standards, a platform pivoted to the carrier, a pulley journaled between the standards near the upper end thereof, a cable passing over the pulley, one end thereof engaging the carrier-frame, and means engaging the other end of the cable for moving the carrier and platform.

11. In a portable metallic elevator, the combination of a base-frame having an open front end, a brace-bar extending across the frame, spaced bars secured across the frame and engaging the transverse bar, and the closed end of the frame, skids pivoted to the open end of the frame, spaced standards standing between the spaced and transverse bars, braces engaging the sides of the standards and top of the base-frame, a carrier be-

tween the standards, a platform connected to the carrier, and means for moving the carrier and platform, said platform being adapted to enter the base-frame so that the top thereof
5 will be flush with the top of the frame.

12. In a portable elevator, the combination of a base-frame, a standard secured thereto, a platform mounted on the standard for vertical and horizontal movement; and means
10 for moving the platform vertically, the forward extremities of the platform being disposed above the plane of its top, said plat-

form being adapted to enter the base-frame with its top flush with the top of the said frame.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 14th day of November, A. D. 1905.

WM. B. PAVEY.

Witnesses:

FRANCIS A. HOPKINS,
J. H. JOCHUM, Jr.