

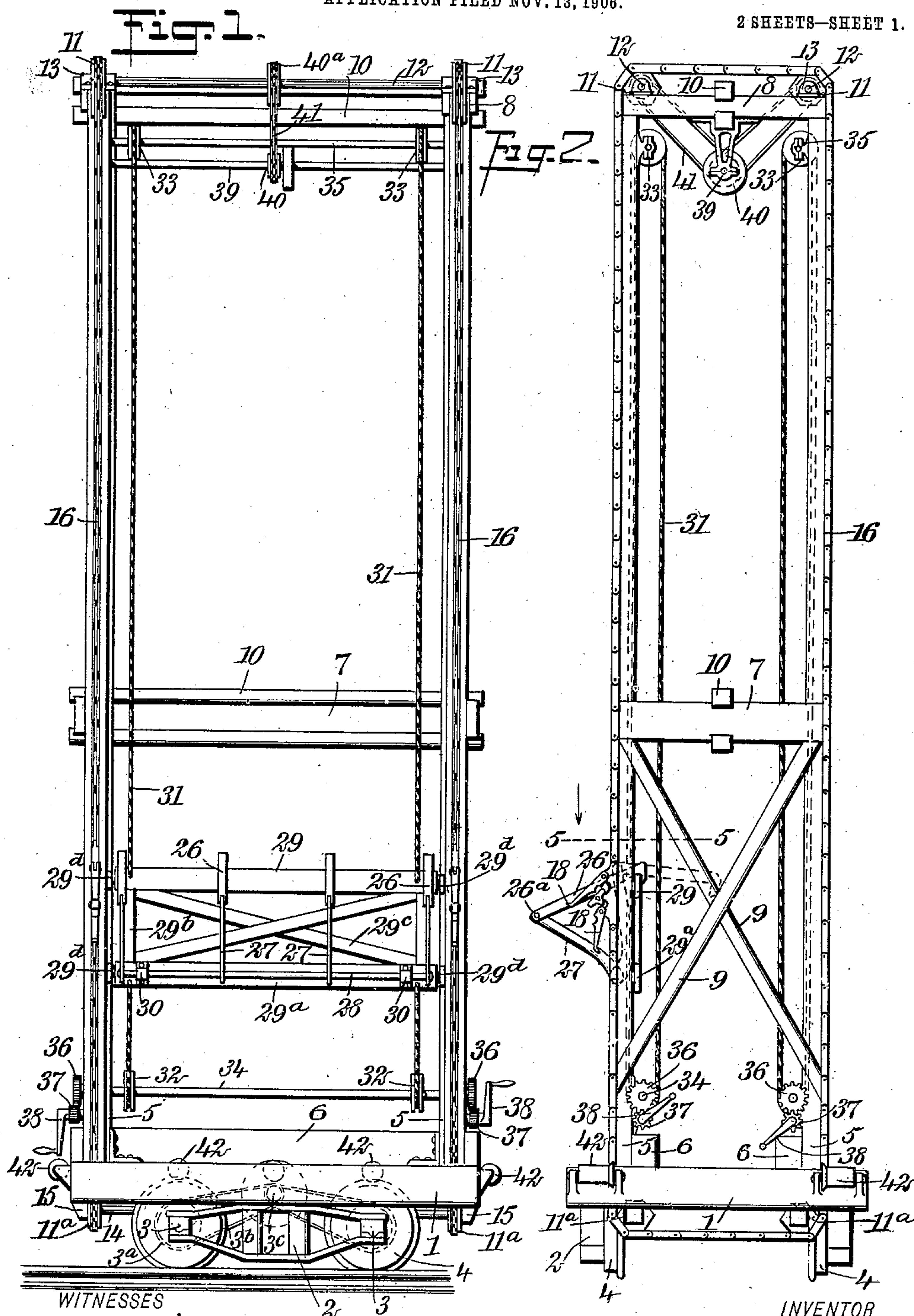
No. 855,957.

PATENTED JUNE 4, 1907.

G. A. LINDSTROM.
ELEVATOR.

APPLICATION FILED NOV. 13, 1906.

2 SHEETS—SHEET 1.



WITNESSES
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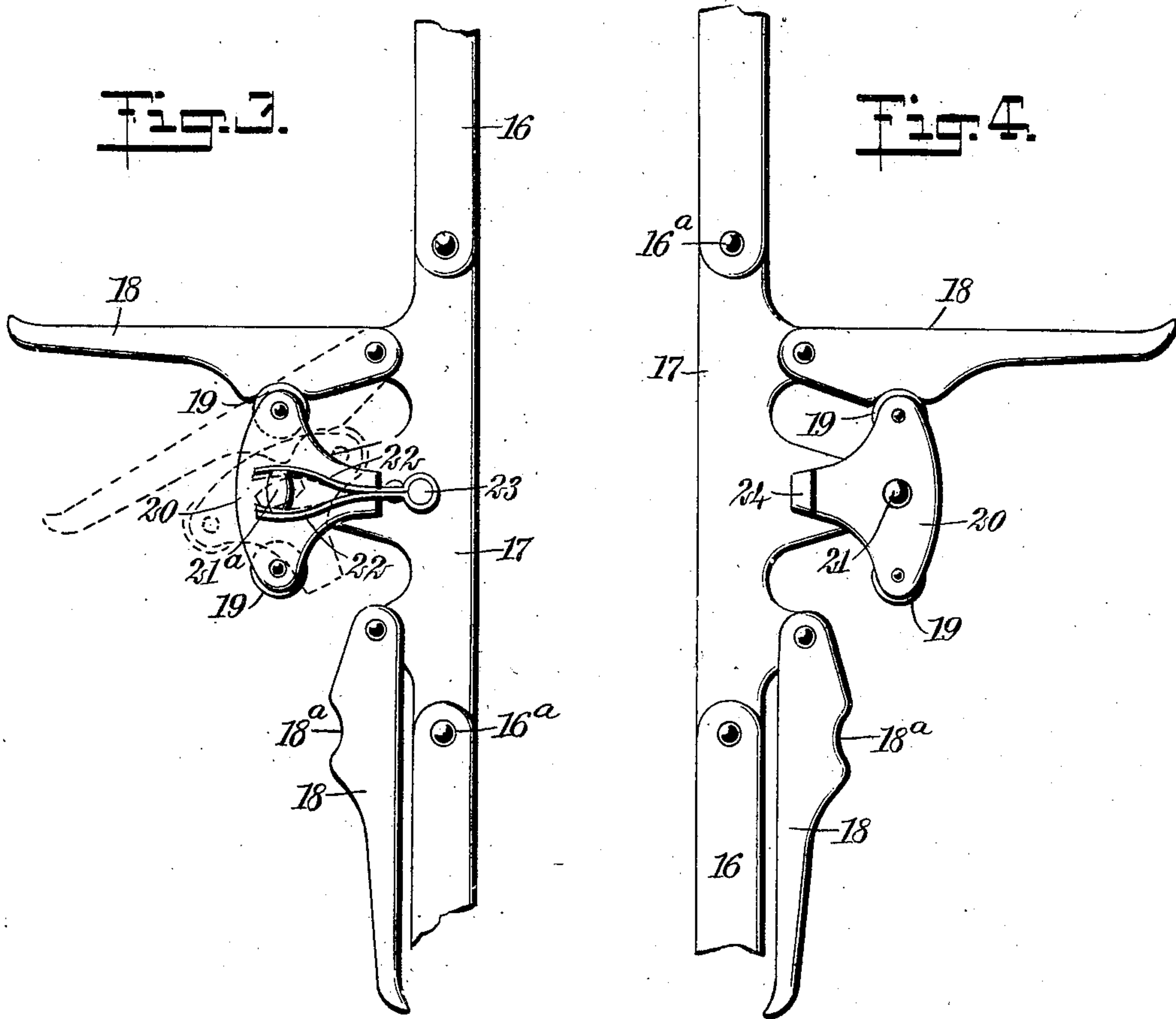
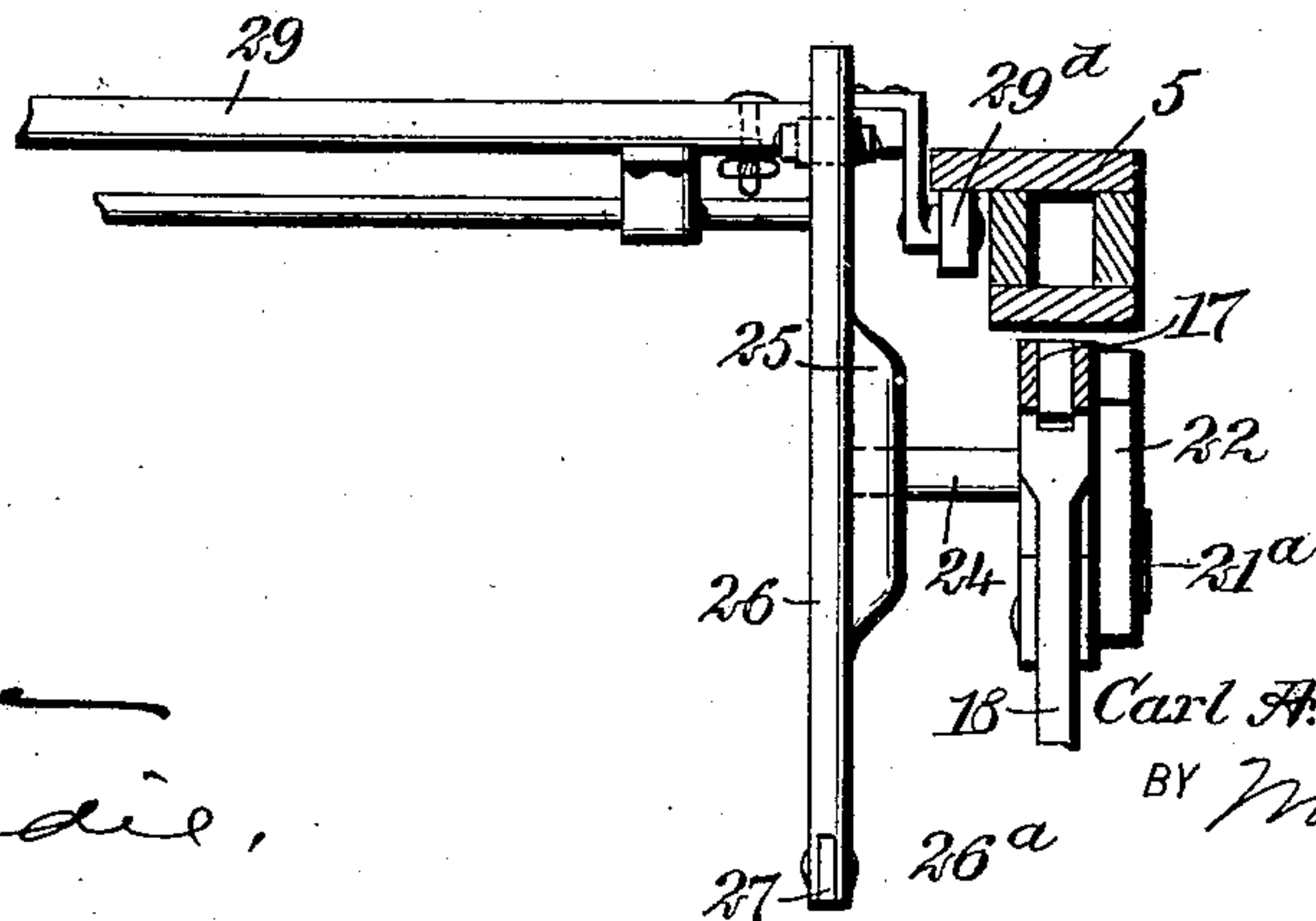


Fig. 5.



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UNITED STATES PATENT OFFICE.

CARL AUGUST LINDSTROM, OF SEATTLE, WASHINGTON.

ELEVATOR.

No. 855,957.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed November 13, 1906. Serial No. 343,188.

To all whom it may concern:

Be it known that I, CARL AUGUST LINDSTROM, a citizen of the United States, and a resident of Seattle, in the county of King and State of Washington, have invented a new and Improved Elevator, of which the following is a full, clear, and exact description.

This invention relates to elevators designed to be used for stacking lumber, and has for its object to provide means simple in construction, effective in operation and durable in use, adapted to be moved about in a yard, and to elevate and deposit lumber at any desired height to form a stack.

Other objects relating to the specific construction and the special arrangement of the several parts of my invention will be understood by the following description and the accompanying drawings, in which drawings

Figure 1 is a front elevation of a device embodying my invention; Fig. 2 is an end view thereof; Fig. 3 is a side elevation of a carrying bracket and connected mechanism; Fig. 4 is a elevation of the opposite side of the parts shown in Fig. 3; and Fig. 5 is a sectional detail taken on the line 5—5 of Fig. 2.

As illustrated in the accompanying drawings, the elevator is mounted upon a platform car 1, having a truck 2 of ordinary construction provided with the usual axles 3, and wheels 4. The main frame of the elevator is composed of uprights 5 connected together by means of cross bars 6, 7 and 8 arranged at the bottom, center and top of said main frame respectively. Diagonally extending brace bars 9 may be secured to the uprights of the main frame, if desired, and central cross bars 10 may likewise be secured to the central and top cross bars, if desired. Pulleys 11 and 11^a are mounted at the upper and lower ends of the main frame, and arranged in double series, one series on each side of the main frame, as shown in Figs. 1 and 2. The pulleys 11 are mounted upon upper shafts 12 which are journaled in suitable bearing boxes 13 supported upon the upper cross bars 8, and the lower pulleys 11^a are mounted on the shafts 14 journaled in bearing boxes 15 secured to the under portion of the main frame, or platform of the car. An endless conveyer is mounted upon said pulleys on each side of the main frame, and consists of a plurality of overlapping links 16 pivotally connected together to form the body or main portion of the belt or conveyer.

Bracket links 17 are arranged in the end-

less chain by being connected at their ends with the links 16 by means of pivot pins 16^a. The bracket links 17 are provided with brackets 18 pivoted to the bracket links at their inner ends, and provided with a notch or depression 18^a adapted to engage rollers 19 pivoted on opposite ends of a bracket head 20, which in turn is pivoted to the bracket links 17 by means of a pivot pin 21. The bracket head 20 is preferably constructed of parallel similar sections spaced apart so as to receive the rollers 19, and one side of the bracket head 20 is provided with an auxiliary head 21^a flattened on its ends, which engage the free ends of leaf springs 22. The opposite ends of said springs are rigidly secured to the bracket links 17 by being fastened to a pin 23 or other portion of the link bracket. The opposite side of the bracket head is provided with a lug 24 which extends out laterally from the side of the head 20 and is adapted to bear against a projecting ledge 25 formed on the sides of skids 26. These skids 26 are pivoted at their outer ends to supporting bars 27 by means of pivot pins 26^a, as shown in Fig. 2. The brackets 27 are pivotally mounted at their lower ends on a cross bar 28 which is mounted upon the lower bar 29^a of a skid frame and journaled in bearing boxes 30 secured to said bar, as shown in Fig. 1. The inner ends of the skids 26 are freely connected with the upper bar 29 of the skid frame by being constructed in the form of a hook adapted to clamp the back of said upper bar of the frame when the skids are projected forward, or to be readily released therefrom when the skids are retracted, as indicated by dotted lines in Fig. 2.

The skid frame consists of the cross bars 29 and 29^a, end bars 29^b, and brace bars 29^c, and is preferably provided with rollers 29^d which bear against the uprights of the main frame as the frame is raised and lowered. The frame, however, may be of any suitable construction. The skid frame is mounted on cables 31 which wind around pulleys 32 and 33 secured to shafts 34 and 35 respectively. The shaft 34 is provided on its ends with gears 36 which mesh with pinions 37 connected with crank arms 38. A pawl of any desired construction may be connected with either the gears 36 or the pinions 37, so as to hold the skid frame at any desired elevation. If desired, however, in order to make the skid frame more stable on the main frame, the sides of the skid frame may be provided

with apertures adapted to receive locking bolts when inserted therein, and connected with the uprights of the main frame. Pulleys 3^a, indicated in dotted lines in Fig. 1, may be mounted upon the axles 3 and connected by means of chains or belting 3^b with a driving shaft 3^c connected with an electric motor in any suitable manner, so that the car supporting the elevator may be operated by means of electric power. Similarly, a central transverse shaft 39 may be mounted on the upper end of the main frame, and provided with pulleys 40 connected with pulleys 40^a on the shaft 12 by belts or chains 41. By connecting the shaft 39 with an electric motor the endless conveyers may be operated thereby. The front and back of the main frame of the elevator are preferably provided with a series of rollers 42 upon which planks and timbers may be rolled into the path traveled by the endless conveyer.

When the device is in use and it is desired to remove timber from a car and stack it in a yard, the car is placed upon the same track as the elevator car and may be operated by said elevator car when electric current is used, and the lumber taken from the car and moved onto the rollers 42 attached to the front of the main frame. As the endless conveyers rotate over their supporting pulleys, a series of brackets 18 arranged in parallel relation to each other move across the under portion of the main frame and come up between the rollers 42 and under the lumber supported thereon. The continued movement of the endless conveyers lifts the lumber from the rollers 42 and carries it upward to the desired height. As the load of lumber moves upward it presses against the under side of the brackets 27, forcing said brackets backward on their pivotal lower ends, as illustrated by dotted lines in Fig. 2. As the load of lumber passes by the brackets 27 said brackets drop forward automatically, and the ledge 25 formed on the sides of the skids 26 strikes the projecting lug 24 of the bracket head 20 and trips said head into the position illustrated in Fig. 2, thereby taking away the support from the brackets 18 and permitting the lumber to slide off said brackets. As the lumber slides off from the brackets 18 it falls on the inclined skids 26 from which it falls in the place desired. If it is desired to deposit the lumber from the skids 26 on to a stack which is being built up, the skid frame is set at the desired height by rotating the cables 31 on their supporting pulleys 32 and 33, so as to raise or lower the skid frame, as desired and the frame may be retained in such position as hereinbefore described, either by means of pawls connected with the gears 36 and pinions 37, or by the use of pins extending through said skid frame into the uprights of the main frame. The bracket links 17 and

the bracket heads 20 are made double in construction, and the brackets are disposed oppositely to each other, as shown in Fig. 3, so that the lumber may be raised and carried by the elevator from either side of the main frame. Thus, when the endless conveyer is moving upward on the left side of the main frame, as shown in Fig. 2, the upper bracket 18 is in use and supported by the bracket head 20, and the bracket immediately below is idle, as shown in Fig. 3. When it is desired to raise lumber on the opposite side of the car, the conveyer is rotated in an opposite direction, and as the conveyer moves upward on the right side of the main frame, as shown in Fig. 2, the lower bracket, shown in Fig. 3, becomes the supporting bracket and the upper bracket 18 of said figure remains idle.

In the construction herein shown and described, I have embodied my invention in its preferred form, but I do not desire, however, to be limited to such construction, inasmuch as my invention is generic in its nature and includes within its scope other devices having similar capabilities.

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

1. Oppositely disposed endless carriers provided with brackets supported upon pivoted heads, in combination with an intermediate vertically adjustable skid.

2. The combination with oppositely arranged endless carriers provided with brackets supported on pivoted heads, of a series of rollers arranged in a line transversely of the path of said carriers, and a vertically adjustable skid.

3. The combination with oppositely disposed endless carriers provided with pivoted brackets supported on pivoted heads, of a vertically adjustable skid frame intermediate said conveyers adapted to move transversely of the path of said carriers.

4. The combination with oppositely arranged endless conveyers provided with brackets supported on pivoted heads, of a vertically adjustable skid intermediate said conveyers adapted to move transversely of the path of said conveyers, and mechanism connected with said brackets adapted to trip the supporting heads of said conveyer brackets.

5. The combination of oppositely disposed endless conveyers, a vertically adjustable skid adapted to move transversely of the path of said conveyers, brackets pivoted to said conveyers and provided with a retaining notch, a bracket head pivoted to said conveyer adapted to engage said notch, and a spring connected with said head adapted to hold the end of said head normally in engagement with the notch of said bracket.

6. The combination with oppositely dis-

posed endless carriers provided with brackets reversely arranged and oppositely disposed to each other, of an intermediately pivoted head adapted to support the bracket
5 arranged above said head.

7. The combination with oppositely disposed endless conveyers provided with brackets supported upon pivoted heads, a vertically adjustable skid frame, a skid piv-
10 otally mounted on said frame and adapted

to move transversely of the path of said conveyers, and means for rotating said conveyers to the right or left.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

CARL AUGUST LINDSTROM.

Witnesses:

WALTER B. BEALS,
SAML. S. CARLISLE.