

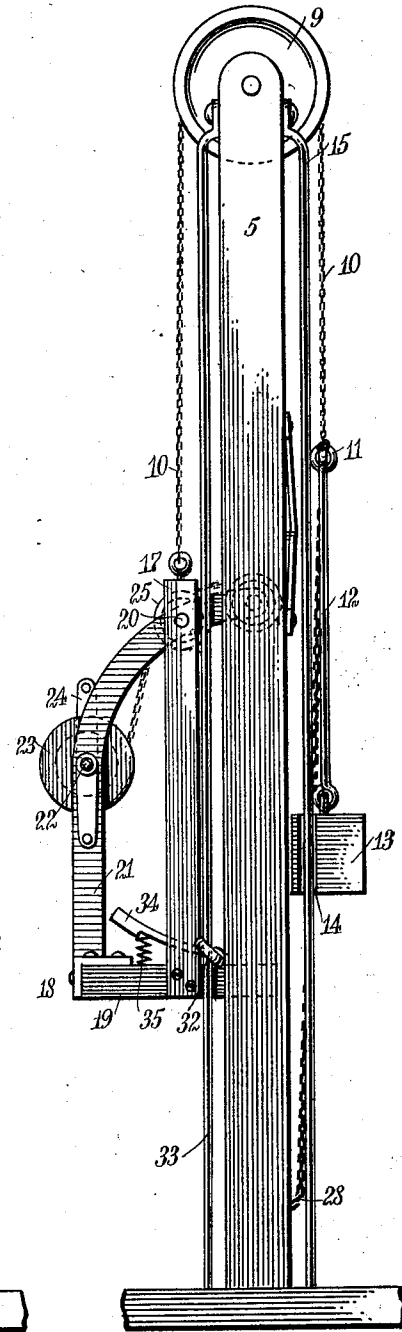
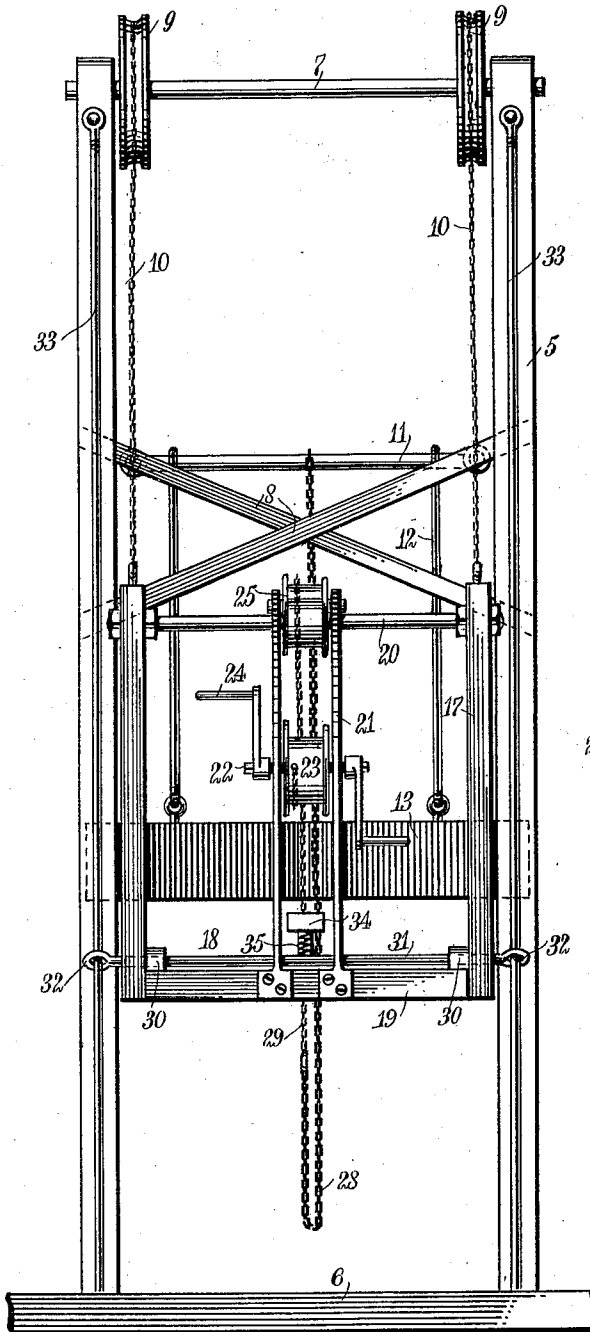
F. SCHWARZ.
ELEVATOR.

APPLICATION FILED OCT. 14, 1910.

Patented Aug. 15, 1911.

2 SHEETS—SHEET 1.

1,000,953.



WITNESSES
John Beignton
E. B. Marshall

Fig. 1

Fig. 2

INVENTOR
Frederick Schwarz
BY *Mumolo*
ATTORNEYS

F. SCHWARZ.
ELEVATOR.

APPLICATION FILED OCT. 14, 1910.

1,000,953.

Patented Aug. 15, 1911.

2 SHEETS-SHEET 2.

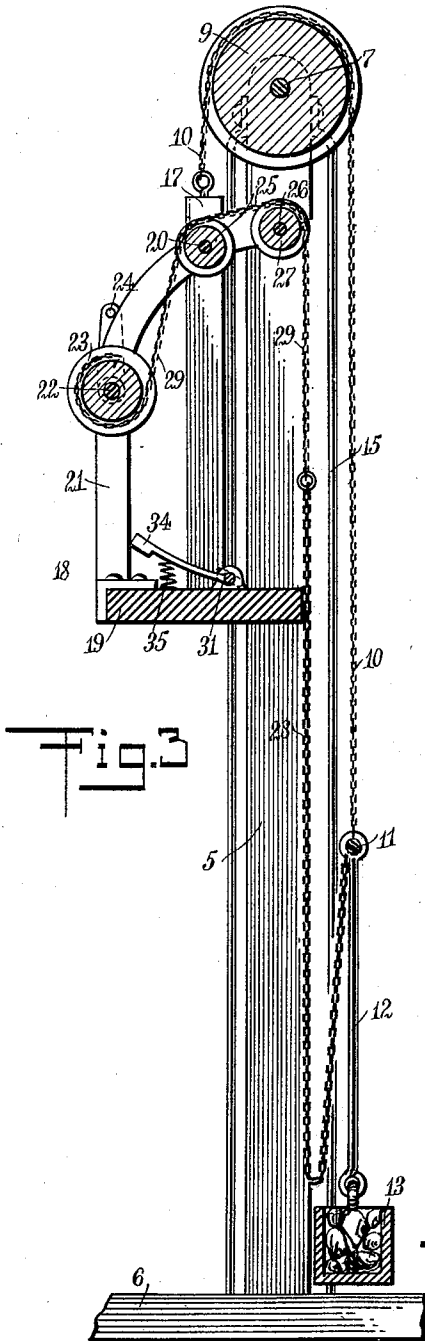


Fig. 3

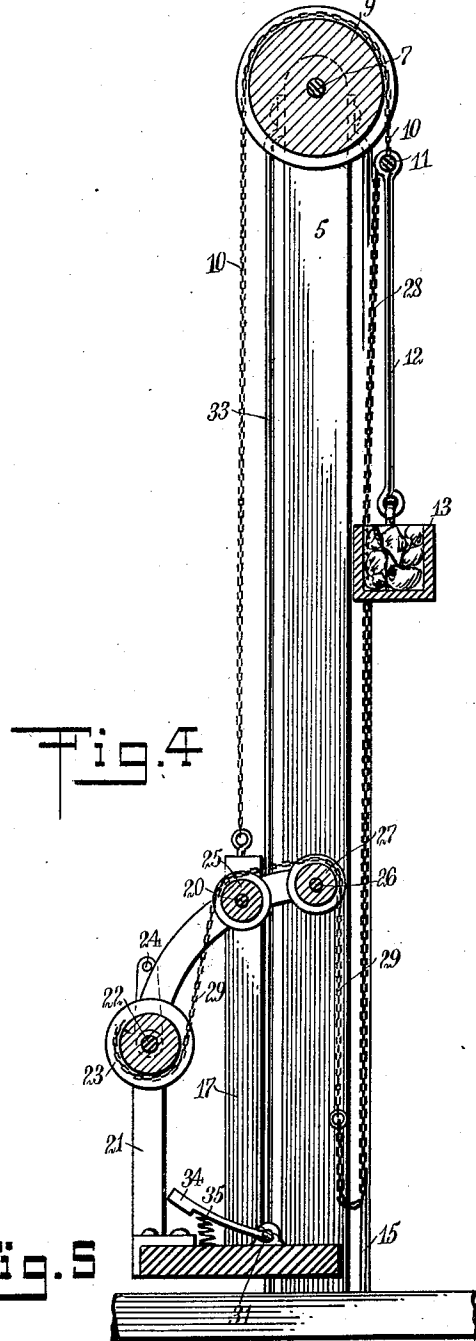
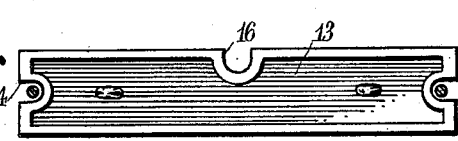


Fig. 4

Fig. 5

WITNESSES
John Berghman
E. B. Marshall



INVENTOR
Frederick Schwarz
BY Munn & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

FREDERICK SCHWARZ, OF BERNE, INDIANA.

ELEVATOR.

1,000,953.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed October 14, 1910. Serial No. 587,020.

To all whom it may concern:

Be it known that I, FREDERICK SCHWARZ, a citizen of the United States, and a resident of Berne, in the county of Adams and State of Indiana, have invented a new and Improved Elevator, of which the following is a full, clear, and exact description.

My invention relates to elevators and it has for its object to provide one having a counter weight, the cage or elevator platform being provided with a windlass adapted to wind a heavy balance chain secured to the counter weight so that the excess weight of the heavy chain may be shifted from the cage or elevator to the counter weight and back again as may be desired.

Still other objects of the invention will appear in the following complete description, in which the preferred form of my invention is disclosed.

In the drawings similar characters of reference indicate corresponding parts in all the views, in which—

Figure 1 is a front elevation of the invention; Fig. 2 is a side elevation of the invention; Fig. 3 is a side sectional elevation of the invention; Fig. 4 is a sectional view similar to that shown in Fig. 3 but with the cage or platform lowered; and Fig. 5 is a plan view of the counter weight.

By referring to the drawings it will be seen that standards 5 are provided which are secured to a base 6, and are connected at the top by a shaft 7. Cross braces 8 are provided, these cross braces connecting the standards 5 and holding them firmly relatively to each other. The shaft 7 is journaled in bearings in the upper terminals of the standards 5, and secured to this shaft 7 there are two pulleys 9, cables 10 being disposed over these pulleys 9 respectively, one set of terminals of the cables 10 being secured to a transverse member 11, connected by bars 12 with a counter weight 13. The counter weight 13 has recesses 14 at its ends in which are disposed guide bars 15. There is also a recess 16 in the counter weight 13 intermediate its ends. To the other set of terminals of the cables 10 are secured the side members 17 of the cage or platform 18. The side members 17 are secured to a floor member 19 at their bottoms and at their upper ends they are connected by a shaft 20. Extending upwardly from the floor 19 to which they are secured there are two supports 21, having bearings in which a shaft

22 is journaled, a windlass 23 being secured to this shaft 22, and a crank 24 being provided for rotating the shaft as may be desired. The shaft 20 which connects the upper ends of the side members 17 extends through openings in the supports 21, and journaled to the said shaft 20 between the supports 21 there is a pulley or roller 25. To the upper terminals of the supports 21 which extend in the direction of the path of the counter weight 13, there is journaled a shaft 26, on which a pulley or roller 27 is mounted, the pulley 27 being disposed above the floor 19 substantially the same distance as is the cross member 11 above the counter weight 13. A heavy balance chain 28 is provided having one of its terminals secured to the transverse or cross member 11, the other member of this heavy balance chain 28 being secured to a light chain 29, which is disposed over the rollers or pulleys 25 and 27, and wound around the windlass 23. To the floor 19 of the cage there are secured bearings 30 in which is journaled a rock shaft 31, rings 32 being secured to the ends of this rock shaft in which the vertical guide members 33 are disposed. These guide members 33 have their upper ends bent and secured to the standards 5, their lower ends being secured to the base 6. A lever 34 is secured to the rock shaft 31, and a spring 35 is provided for engaging the lever 34, and pressing it so that the rock shaft 31 is held yieldingly with the rings 32 which engage the guide members 33 serving as a brake.

The weight of the balance chain 28 per foot is at least twice as great as the weight per foot of either of the cables, 10, and as the weight supported by the end of the cables 10 secured to the platform or cage 18 may be made greater or less as may be desired relatively to the weight at the other side of the pulleys 9, the cage or platform 18 may be lowered or raised as required.

In operating the elevator the passenger standing on the floor of the cage 18 unwinds the windlass 23, when he desires to ascend thereby shifting a greater portion of the weight of the balance chain 28 to the counter weight, and when he desires to descend he winds up the windlass 23 thereby shifting a portion of the weight of the balance chain 28 from the counter weight to the cage or platform. The rings 32 normally engage the guide bars 33 to hold the cage or plat-

form 18 relatively thereto, and the passenger should therefore press his foot down on the lever 34 to rock the shaft 31, and turn the rings 32 to a horizontal position so that
5 when the windlass 23 is operated the cage or platform may ascend or descend as the requirements demand.

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

1. In an elevator a pulley, a support for the pulley, a cable disposed over the pulley, a cage secured to the cable at one side of the pulley, a counter weight secured to the cable
15 at the other side of the pulley, a balance chain secured to the counter weight, and a windlass mounted on the cage, the balance chain being adapted to be wound on the windlass.

20 2. In an elevator a pulley, a support for the pulley, a cable disposed over the pulley, a cage secured to the cable at one side of the pulley, a counter weight secured to the cable at the other side of the pulley, a balance
25 chain secured to the counter weight, a wind-

lass secured to the cage, and a cable lighter than the balance chain secured to the windlass at one end, and to the balance chain at the other end.

3. In an elevator a pulley, a support for the pulley, a cable disposed over the pulley, a cage secured to the cable at one side of the pulley, a counter weight having a member extending upwardly a distance, the cable at the other side of the pulley being secured to the said member, a balance chain secured to the member, a windlass mounted on the cage, a member secured to the cage and disposed thereabove substantially the same distance as the first-mentioned member extends above the counter weight, the balance chain being carried over the second-mentioned member and to the windlass to which it is connected.

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

FREDERICK SCHWARZ.

Witnesses:

AARON C. AUGSBURGER,
JOSEPH D. WINTEREGG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents.
Washington, D. C."