No. 767,244. PATENTED AUG. 9, 1904.

J. RIEG.

SIDEWALK ELEVATOR.

APPLICATION FILED AUG. 21, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 2.

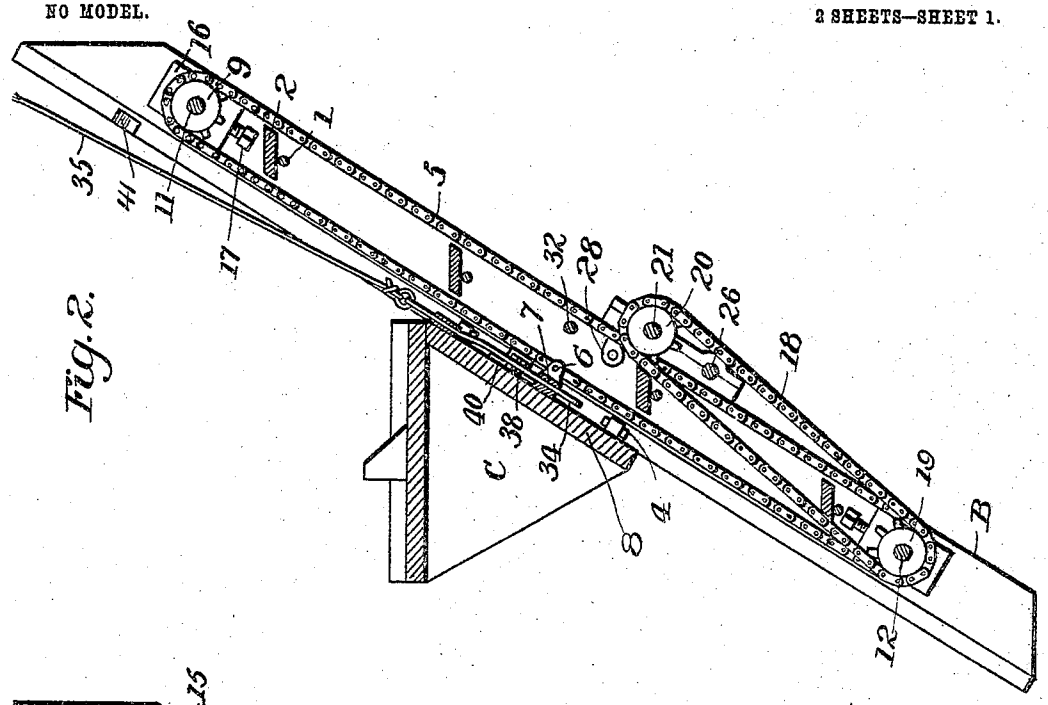
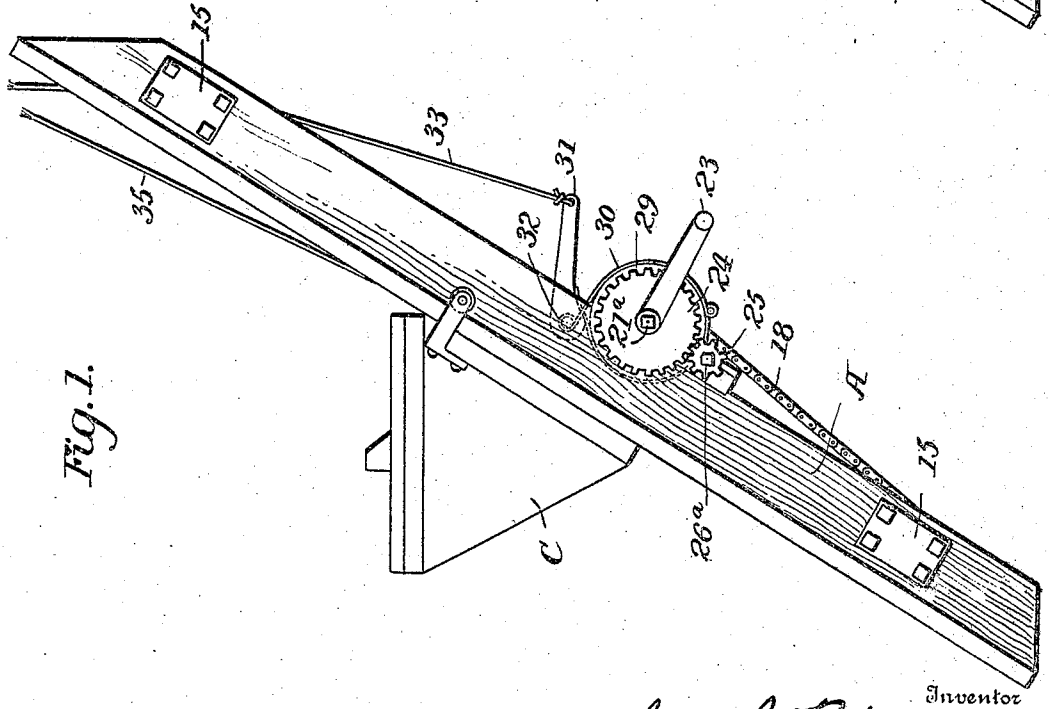


Fig. 1.



Witnesses

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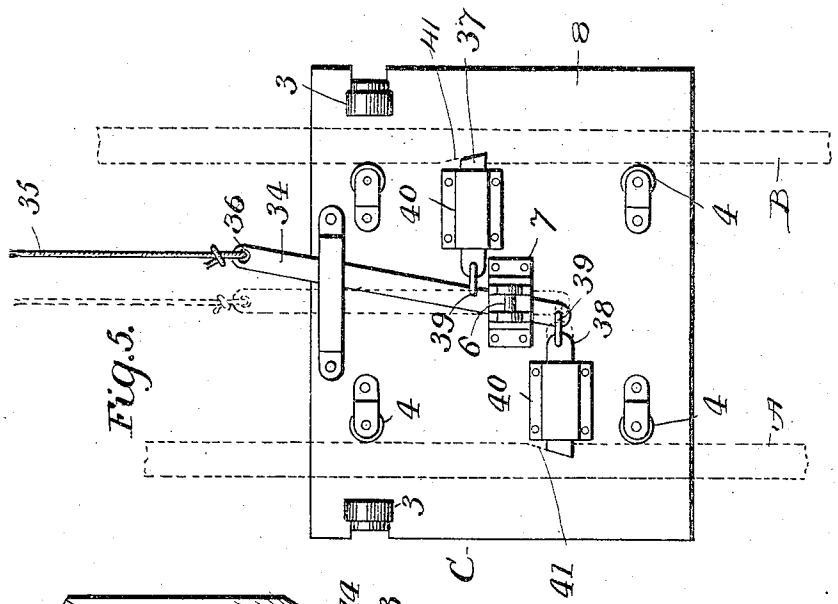
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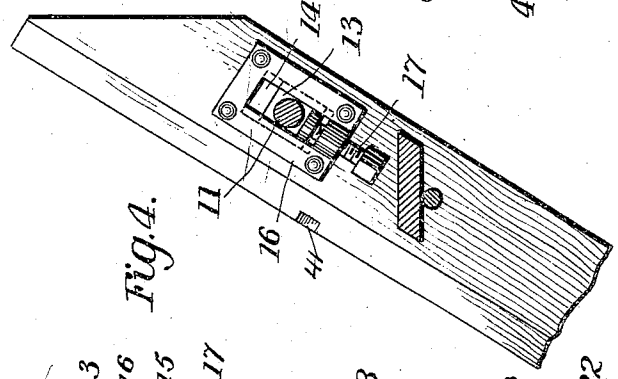
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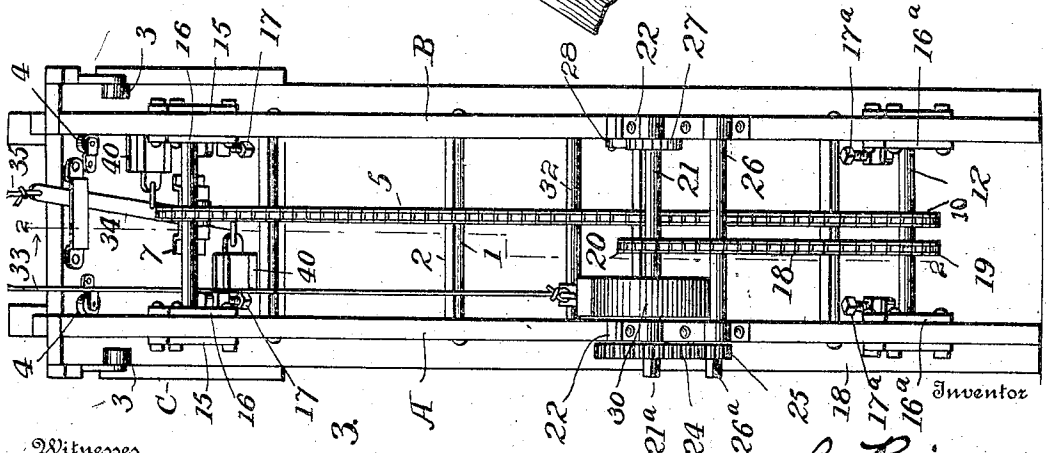
SIDEWALK ELEVATOR.

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NO MODEL. 2 SHEETS—SHEET 2.







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UNITED STATES PATENT OFFICE.

JACOB RIEG, OF WILKESBARRE, PENNSYLVANIA.

SIDEWALK-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 767,244, dated August 9, 1904.

Application filed August 21, 1903. Serial No. 170,296. (No model.)

To all whom it may concern:

Be it known that I, JACOB RIEG, a citizen of the United States, residing at Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Sidewalk-Elevators, of which the following is a specification.

My invention comprises improvements in sidewalk-elevators adapted to facilitate the raising and lowering of goods, the details of which will be pointed out in the following specification, taken in connection with the accompanying drawings, in which—

Figure 1 is a side view of the elevator. Fig. 2 is a longitudinal section on the line 2 2 of Fig. 3. Fig. 3 is a view showing a rear elevation of the elevator. Fig. 4 is an inner side view of the upper part of one of the guideways, showing an adjustable bearing for the upper sprocket-wheel shaft, the latter being shown in cross-section; and Fig. 5 is a rear view of the platform, illustrating the locking device for the platform, the guideways being shown in dotted lines.

Referring to the drawings, A and B indicate a pair of parallel skids or guideways suitably held together by bars 1 and cross-pieces 2, the latter forming steps by means of which the device may be used as an ordinary step-ladder. A platform C is movable upon the guideways and is guided thereon by suitably-arranged wheeled guides 3 and 4, carried by the platform. The platform is connected to an endless sprocket-chain or carrier 5 by means of a horizontally-arranged pin 6, which is secured to a metal block 7 upon the back 8 of the platform. The endless sprocket-chain 5 extends around sprocket-wheels 9 and 10, arranged upon sprocket-wheel shafts 11 and 12, arranged at the upper and lower ends of the guideways, respectively. These shafts extend horizontally between the parallel guideways and are journaled in bearings which are adjustable, so that the shafts may be moved toward and from one another to adjust the slack in the chain.

In Fig. 4 I have shown one of the bearings 13 for the upper shaft 11, which bearing is arranged within a recess 14 in the guideway and is held therein by a guide-plate 15 upon the outer side of the skid and a slotted guide-plate 16 at the inner side of the skid. The bearing is adjustable longitudinally of the skid by a suitable adjusting-screw 17, arranged in the lower end of the guide-plate 16 and supporting the bearing 13. The bearing for the opposite end of the shaft is similarly constructed and arranged. The bearings for the lower sprocket-wheel shaft 12 are also the same in construction, but adjustable downwardly by means of adjusting-screws 17^a, fitting in the upper ends of slotted guide-plates 16^a.

The endless sprocket-chain or carrier 5 is moved to raise and lower the platform by means of a chain 18, passing around a sprocket-wheel 19, secured upon the adjustable shaft 12, and a sprocket-wheel 20, secured upon a driving-shaft 21, which latter is mounted in fixed bearings 22, secured to the skids or guideways intermediate of the shafts 11 and 12. This driving-shaft is provided with a squared or otherwise angular end 21^a, upon which a hand-crank 23 may be fitted to rotate the shaft, and thus raise or lower the platform. In order to provide sufficient leverage for raising very heavy loads, a gear 24 is arranged upon the driving-shaft and a small pinion 25, upon a crank-shaft 26, meshes with said gear. This crank-shaft is also provided with an angular end 26^a, upon which the hand-crank 23 may be fitted to operate the elevator. A toothed wheel 27 is secured to the shaft 21, and a pivoted holding-pawl 28 may be made to engage this wheel to prevent backward or downward movement of the platform when heavy loads are being raised. A brake-wheel 29 is also secured to the shaft 21, and this wheel is surrounded by a brake-band 30, which is applied or released by means of a lever 31, to which one end of the brake-band is connected. The opposite end of the brake-band is connected to a rod 32, upon which the lever 31 is pivoted. The purpose of this brake is to retard the movement of the platform in lowering goods from the sidewalk, and the brake may be applied either by grasping the lever 31 and moving the same upward or by pulling the lever upward by means of a rope or cable 33, which is attached to the lever.

A lever 34 is pivotally secured to the block 7 upon the back of the platform and projects

upwardly between the guideways. A rope or cable 35 is detachably connected to an eye 36 in the upper end of this lever, and locking-bolts 37 and 38 are connected by links 39 to the lever above and below its pivotal point, respectively. These locking-bolts are arranged in horizontal guide-blocks 40, and when the lever 34 is in its vertical position, (shown in dotted lines in Fig. 5,) the bolts are drawn into the guide-blocks out of contact with the guideways A and B. When, however, the platform is raised to the top of the guideways and the lever moved to the right, as shown in Fig. 5, both bolts are projected into recesses 41 in the skids A and B, and the elevator is thus locked against downward movement.

In lowering material from the sidewalk to the basement, the elevator may be operated by a person upon the sidewalk, the load being retarded in its descent by pulling upward upon the brake-rope 33, and the empty platform may be raised by pulling upward upon the hand hoisting-rope 35. When the platform has been brought to the surface of the sidewalk, the latter rope is moved sidewise and the elevator is thereby locked, as shown in Fig. 5.

In hoisting material from the basement to the sidewalk the crank-arm is applied to either of the shafts 21 or 26 and the holding-pawl may be thrown into engagement with the wheel 27 to prevent backward movement of the load. A person in the basement may also operate the elevator to lower goods into the basement by grasping the brake-lever and moving it upward to retard the descent of the platform.

In order to take up the slack in both of the chains 5 and 18, it is necessary to have at least two of the shafts mounted in adjustable bearings. Thus, for instance, the slack in the chain 18 is taken up by the downward adjustment of the lower sprocket-wheel shaft 12 and the slack in the chain 5 is taken up by the upward adjustment of the shaft 11.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In a sidewalk-elevator, a pair of parallel guide-rails having recesses in their adjacent sides, a platform movable thereon, a lever pivotally secured to the back of the platform and normally extending in an upward direction parallel with the guide-rails, and a pair of horizontally-movable bolts arranged at opposite sides of the lever, said bolts being connected to the lever above and below its pivotal point, respectively, and adapted to engage the recesses in the adjacent sides of the guide-rails when the lever is moved in one direction from its normal position, and a hoisting rope or cable connected to the upper end of the lever.

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

JACOB RIEG.

Witnesses:
W. L. RAEDER,
W. C. OLDS.