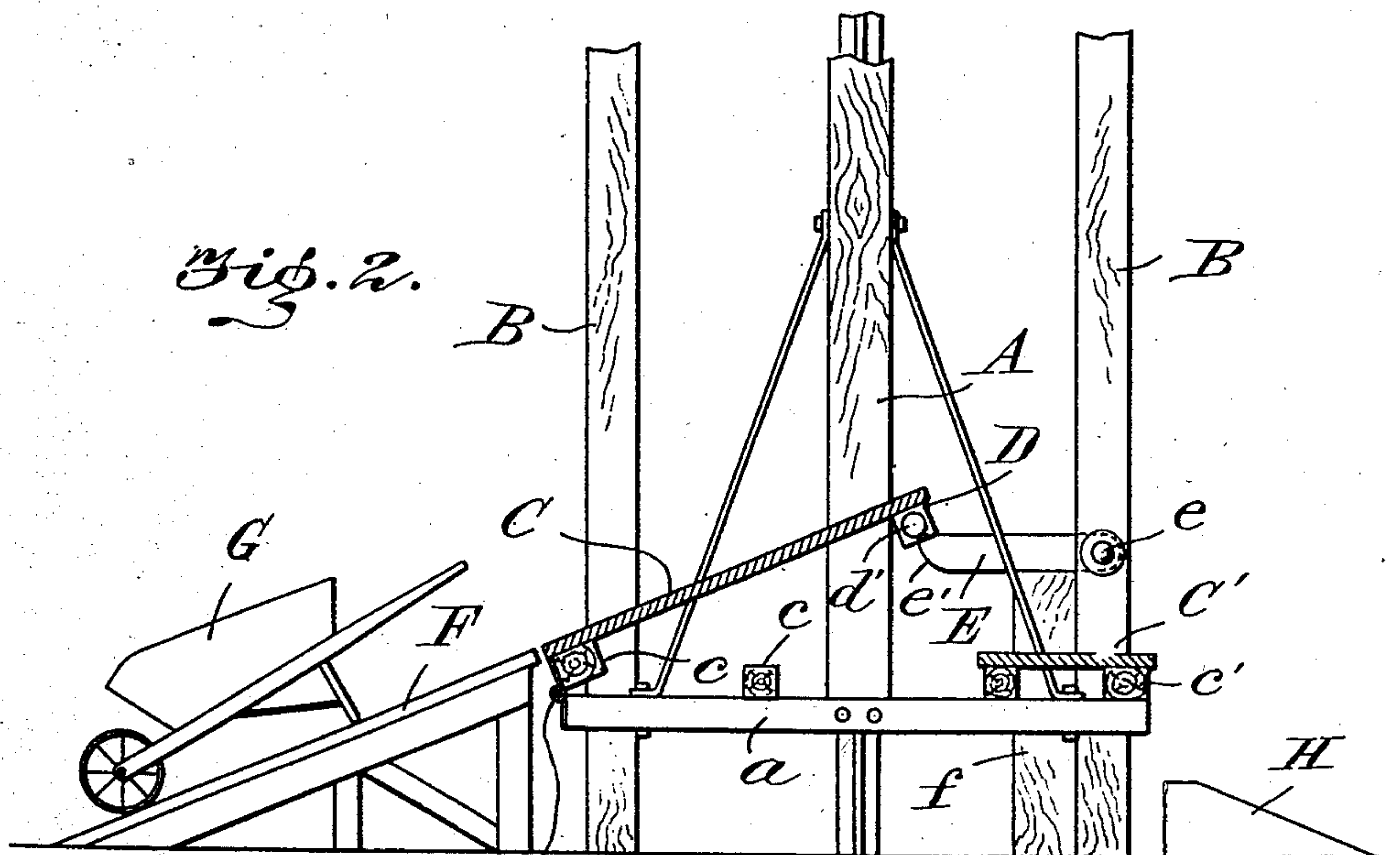
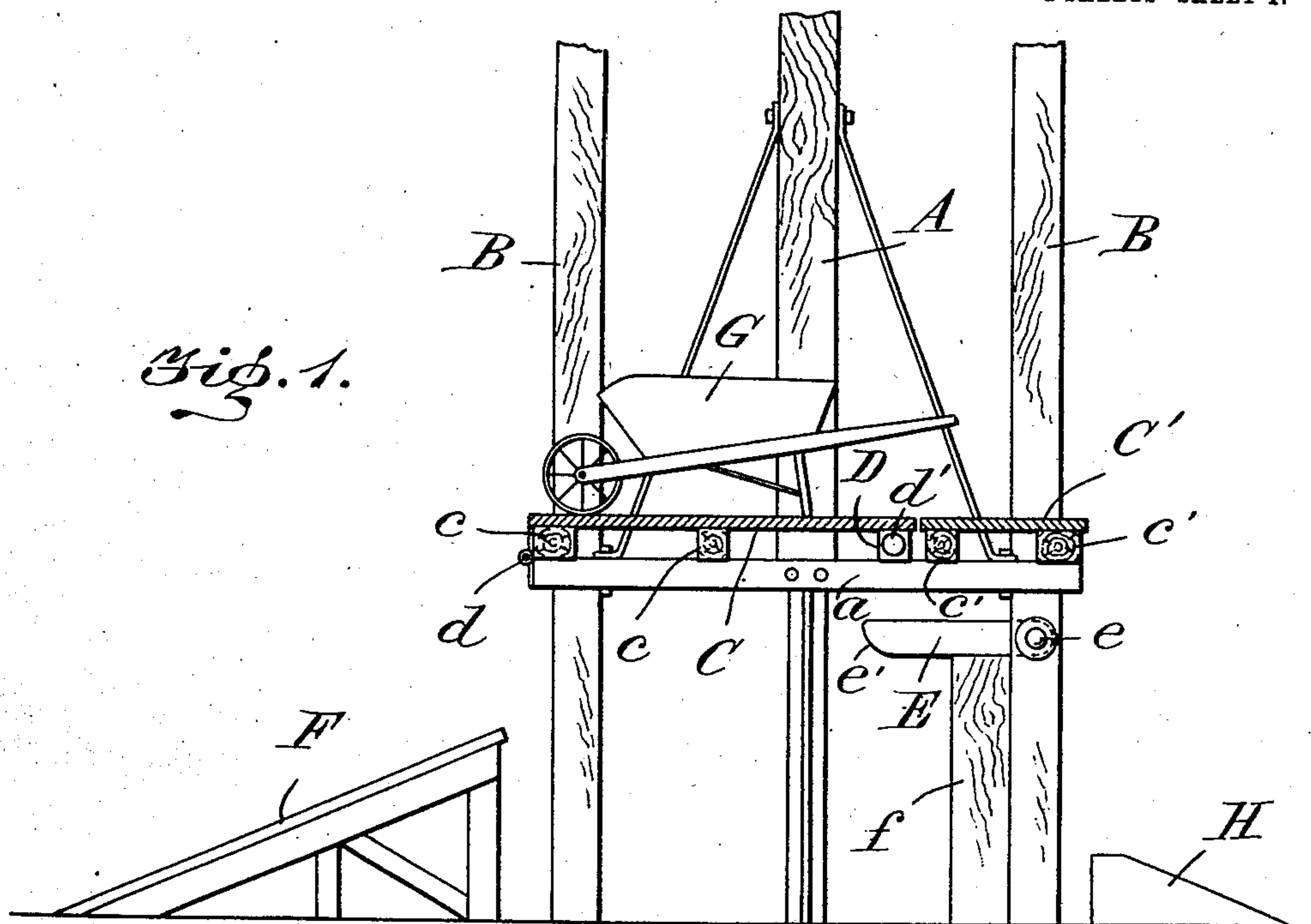


O. A. GREEN.
 AUTOMATIC LOAD DISCHARGING ELEVATOR.
 APPLICATION FILED JULY 27, 1908.

923,355.

Patented June 1, 1909.

2 SHEETS—SHEET 1.



WITNESSES

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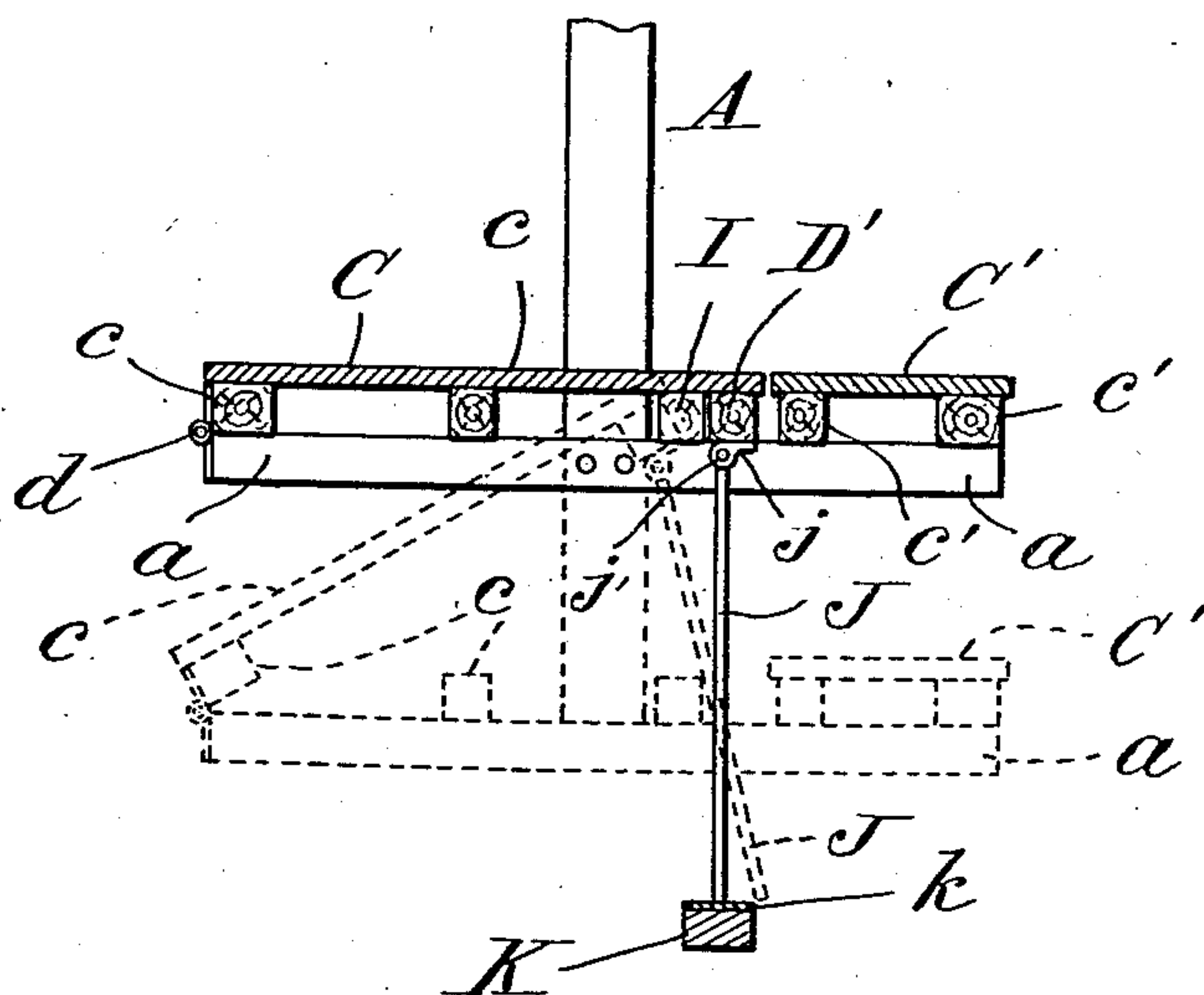
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2 SHEETS—SHEET 2.



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OLLIE A. GREEN, OF NEW YORK, N. Y.

AUTOMATIC LOAD-DISCHARGING ELEVATOR.

No. 923,355.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed July 27, 1908. Serial No. 445,610.

To all whom it may concern:

Be it known that I, OLLIE A. GREEN, a citizen of the United States, residing in the city of New York, borough of Bronx, and State of New York, have invented a certain new and useful Automatic Load-Discharging Elevator, of which the following is a specification.

This invention is an elevator for transporting a load of materials or merchandise from one level to another; and it appertains more particularly to an elevator employed for lifting building materials, such as bricks, mortar and the like, from the ground to upper stories of a building in process of construction. In an elevator of this class it is customary to carry empty wheel barrows, or other portable carriers, from the building to the ground, and in order to save time and labor, a demand has arisen for an elevator wherein the load will be discharged automatically as the car or cage approaches the ground.

The object of this invention is to automatically discharge a wheel barrow, or other portable carrier, from an elevator car when said car descends to an unloading position. This object is attained by a simple and efficient device adapted to discharge the load without attention on the part of the engineer or of a laborer at the foot of the elevator, whereby a saving of time and labor is secured.

The invention embodies an elevator car provided with a divided platform, one section of which is fixed and the remainder is hinged or pivoted so as normally to lie flush, or substantially so, with the fixed portion. Said hinged portion of the platform is capable of moving upwardly to an inclined position for the purpose of discharging the load from the car. With said hinged section of the platform is associated tripping devices which are so constructed and arranged as to lift the hinged section as the car approaches a certain point of its movement toward the bottom of the elevator, but these tripping devices operate to clear themselves automatically so that the car can descend to the lowest limit of its travel without hindrance from them.

In the accompanying drawings I have illustrated different practical embodiments of the invention, but the constructions shown therein are to be understood as illustrative,

only, and not as defining the limits of the invention.

Figure 1 is an elevation, partly in section, showing the lower portion of an elevator, with the cage or car descending to its unloading position. Fig. 2 is a view similar to Fig. 1 with the parts in the position they assume when automatically unloading a wheel barrow or other portable carrier from a car. Fig. 3 is a plan view of the elevator, and Fig. 4 is a view in side elevation, partly in section, illustrating another embodiment of the invention.

In the construction shown in Figs. 1, 2, and 3 of the drawings A designates an elevator car or cage, and B are elevator guides between which the car, A, is adapted to travel in a vertical direction. The car and the guides may be of any usual or preferred construction, and I do not consider it necessary to enter into a detailed description of the common and well known devices.

An important feature of the invention is a novel construction of the platform for the car or cage, A. The base, *a*, of said car is shown as consisting of timbers framed together in any usual way, and on this base is positioned a divided platform consisting of sections, C, C'. Section, C', is provided with cross pieces, *c'*, secured firmly to base, *a*, of the car, whereas section, C, is provided on its underside with cross pieces, *c*, one of which is connected hingedly or pivotally at *d* to base, *a*, of car A. Normally hinged platform section, C, is lowered to assume a horizontal position and substantially flush with fixed platform section, C', as shown in Fig. 1, and the cross pieces, *c*, of said hinged section, C, rest upon base, *a*, thus supporting platform section, C, in a firm position.

Hinged section, C, is provided, also, with a cross piece, D, which is secured to the underside of the platform at or near its free edge. The end portions of said cross piece, D, are preferably reduced in size and extend beyond the sides of platform section, C, substantially as shown in Fig. 3.

E, E, designate trips which are supported in the path of the extended end portions, *d'*, of cross piece, D. Said trips are positioned near the lower part of the elevator, and as shown the trips are pivotally supported on certain of the elevator guides, B, by means of bolts, *e*, whereby the trips are yieldable in one direction. The trips are prevented from

yielding or giving in a downward direction by means of suitable stops, *f*, shown in the drawings in the form of short posts which are disposed below the trips for the latter to rest thereon in the normal position of the parts. The trips are provided with rounded front ends at *e'*, and said strips are of such length that the cross piece, *D*, is adapted to clear them when platform section, *C*, is raised to an inclined dumping position, whereby the platform section, *C*, may lower itself to a horizontal position after discharging a wheel barrow therefrom and during the period that the car settles to its lowest position between the elevator guides.

F designates a runway which occupies an inclined position at one side of the elevator guides, and at a certain point in the descent of the car the platform section, *C*, is adapted to be raised to a horizontal inclined position whereby a wheel barrow, such as *G*, may run off platform section, *C*, and upon the inclined runway, *F*, substantially as shown in Fig. 2.

The operation may be described as follows: With the elevator car at the bottom of the guides, platform section, *C*, rests upon base, *a*, and is substantially flush with platform section, *C'*, so that a wheel barrow or other load may be run up incline, *H*, for the purpose of depositing the load upon the car. When the car ascends trips, *E*, are free to move upwardly on pivots, *e*, and the car can pass without hindrance from said trips. On the descent of the car, *A*, and as it travels toward the bottom of the elevator well or guide, substantially as shown in Fig. 1, the trips, *E*, are in the path of cross piece, *D*. An empty barrow, *G*, having been deposited upon platform section, *C*, prior to the descent of car, *A*, the parts are in the position shown in Fig. 1 just prior to reaching trips, *E*. Now as the car continues to move downwardly, the end portions, *d'*, of cross piece, *D*, engage with trips, *E*, and as the car continues to descend platform section, *C*, is raised to the inclined position shown in Fig. 2, whereby the section, *C*, is adapted to align with the inclined runway, *F*, whereupon the wheel barrow, *G*, or other load is adapted to move by gravity over inclined platform section, *C*, and runway, *F*, thus automatically discharging the load from the car. As the car continues to settle toward its lower limit of movement in the elevator well, the cross piece, *D*, of said platform section, *C*, will clear the trips, *E*, whereupon the hinged section, *C*, will drop or fall by gravity upon base, *a*, and thus assume its normal flush relation to platform section, *C'*. From this description it will be noted that platform section, *C*, is lifted automatically on the descent of the car, the load is discharged automatically from said car, and platform section, *C*, is returned to its normal position,

all of the operations being performed without any attention on the part of the engineer or a laborer stationed at the foot of the elevator.

The beveled or rounded ends, *e'*, of trips, *E*, facilitate the clearance of end portions, *d'*, of cross piece, *D*, on the upward movement of the cage. Although I have shown two trips, *E*, in the path of a projection on a hinged platform section, it will be understood that I may employ only one trip and one projection on hinged platform section for the purpose of raising the latter on the descent of the car.

In Fig. 4, I have shown another embodiment of means for automatically raising platform section, *C*, to an inclined position on the descent of the car, *A*. A cross piece, *D'*, is secured to the underside of hinged section, *C*, said cross piece being minus the extended end portions, *d'*, of the cross piece, *D*, shown in Figs. 1, 2, and 3. On base, *a*, of car, *A*, is secured a cross piece, *I*, adapted to lie alongside of cross piece, *D'*, when section, *C*, is lowered to its horizontal position and in line with section, *C'*, as shown in full lines in said Fig. 4.

Secured rigidly to the underside of cross piece, *D'*, is a bracket or plate, *j*, and to this bracket or plate is connected a leg, *J*, by means of a pivotal bolt, *j'*. Said leg, *J*, depends a suitable distance below car, *A*, and in the path of said pivotal leg is a stop, *K*, herein shown in the form of a block adapted to rest at the bottom of the elevator and in a position for engagement with said pivoted leg. Said block may be composed of any suitable material, but in case wood is employed, it is preferable to provide it with a metallic facing, *k*.

As the car, *A*, reaches a position for discharging a load from platform section, *C*, leg, *J*, engages with stop, *K*, so that on the descent of the car, platform section, *C*, and its load will be raised to an inclined discharging position, as shown in dotted lines in Fig. 4. When platform, *C*, is raised, the leg, *J*, engages with cross piece, *I*, which is fixed to base, *a*, and leg, *J*, is thus thrown by engagement with said cross piece, *I*, into the inclined position shown in dotted lines in Fig. 4, whereby the lower end of said leg will clear stop, *K*, and permit platform, *C*, to resume its horizontal position as the car settles to the bottom of the elevator well. On the ascension of the car, the leg, *J*, drops by gravity to its vertical position so as to be in condition for engagement with stop, *K*, on the next downward movement of the car, thus insuring the continued automatic operation of the load discharging mechanism.

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

1. In a load discharging elevator, a car,

the platform of which is composed of a fixed section and a hinged section, said hinged section being adapted for upward movement from a normal horizontal position, and means for tilting the hinged section of platform at a certain point in the downward movement of said car.

2. In a load discharging elevator, a car provided with a platform composed of a fixed section and a hinged or pivoted section, the latter being normally in substantially flush relation to said fixed section, and means operating on the descent of said car for tilting the hinged platform section to an inclined position.

3. In a load discharging elevator, a car the platform of which is hinged or pivoted for upward movement from a normal position, and a trip in the path of said car for tilting the platform to an inclined position on the descent of the car, said trip being yieldable in one direction.

4. In a load discharging elevator, a car the platform of which is hinged or pivoted for upward movement from a normal position, a trip in the path of said hinged platform section and adapted to move the same to an inclined position on the descent of the car, and means for retaining the trip in position on the descent of the car, said trip being yieldable to the car on its ascent.

5. In a load discharging elevator, a car, a hinged platform thereon, said platform having a projection, a pivoted trip in the path of said platform projection, and means for retaining said trip in fixed position on the descent of the car.

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

OLLIE A. GREEN.

Witnesses:

H. I. BENHARD,
MARGARET C. POWELL.