

No. 673,060.

Patented Apr. 30, 1901.

T. J. PRATT.  
HOISTING BUCKET.

(Application filed Dec. 22, 1900.)

(No Model.)

Fig 1:

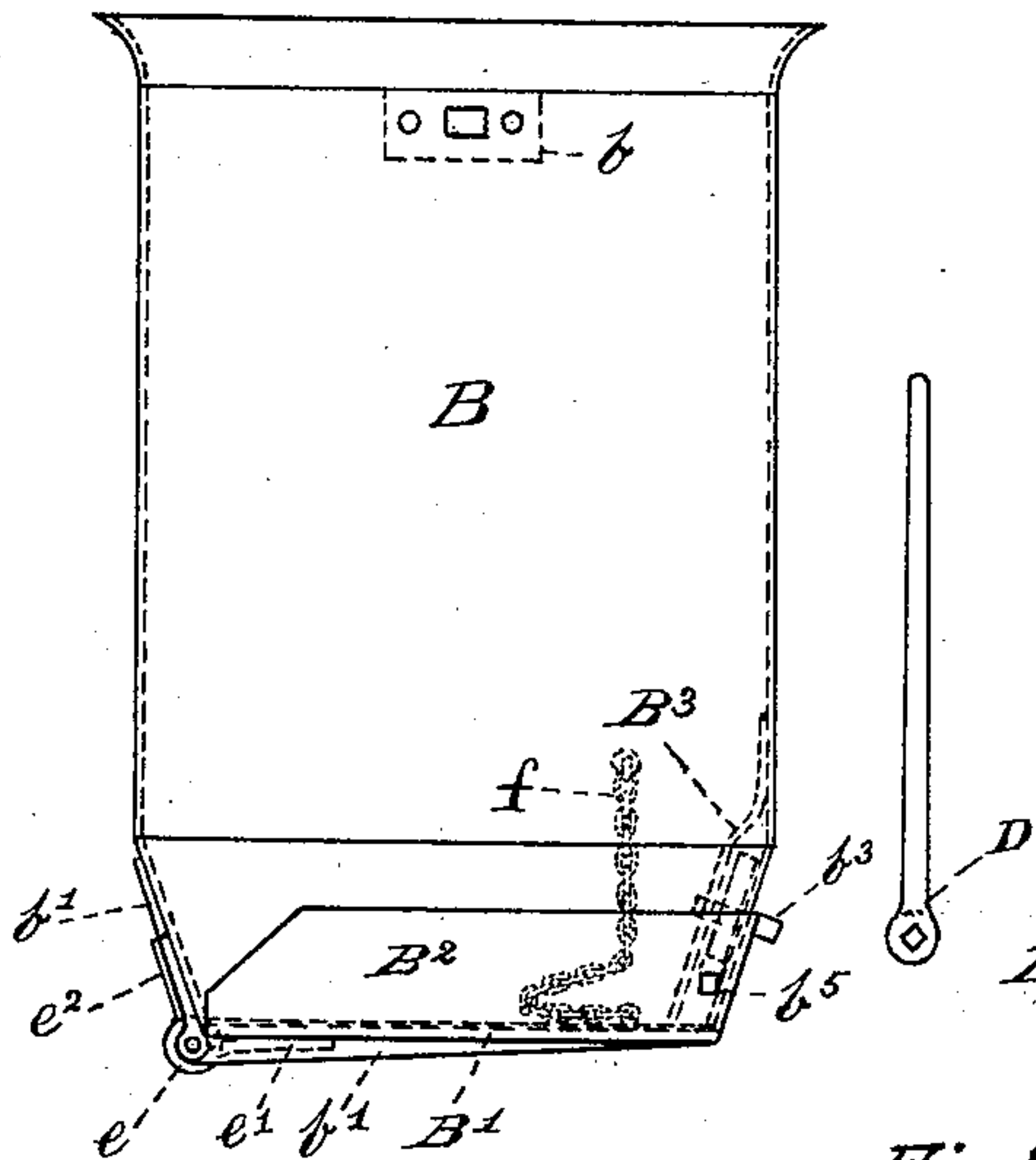


Fig 2:

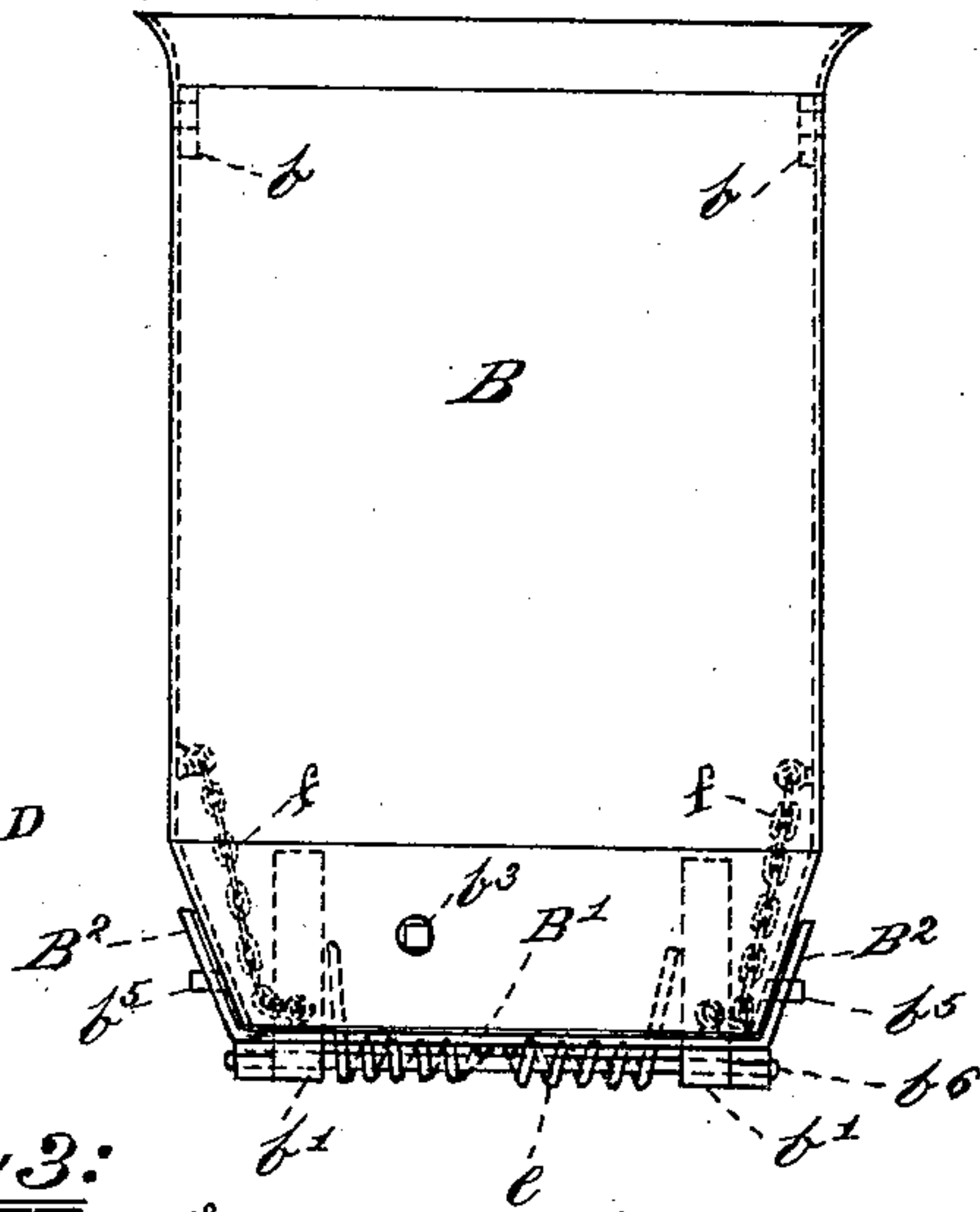


Fig 3:

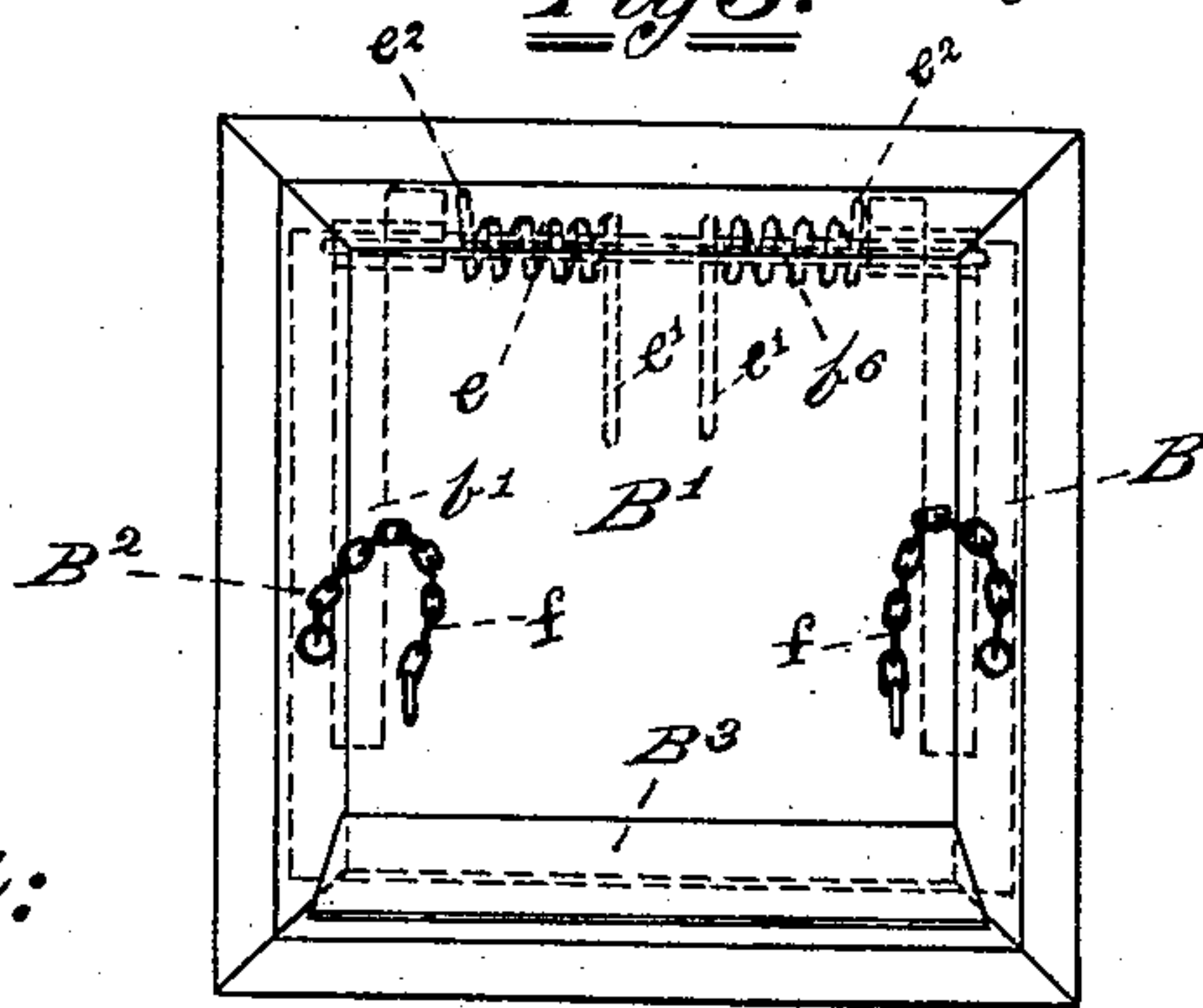


Fig 4:

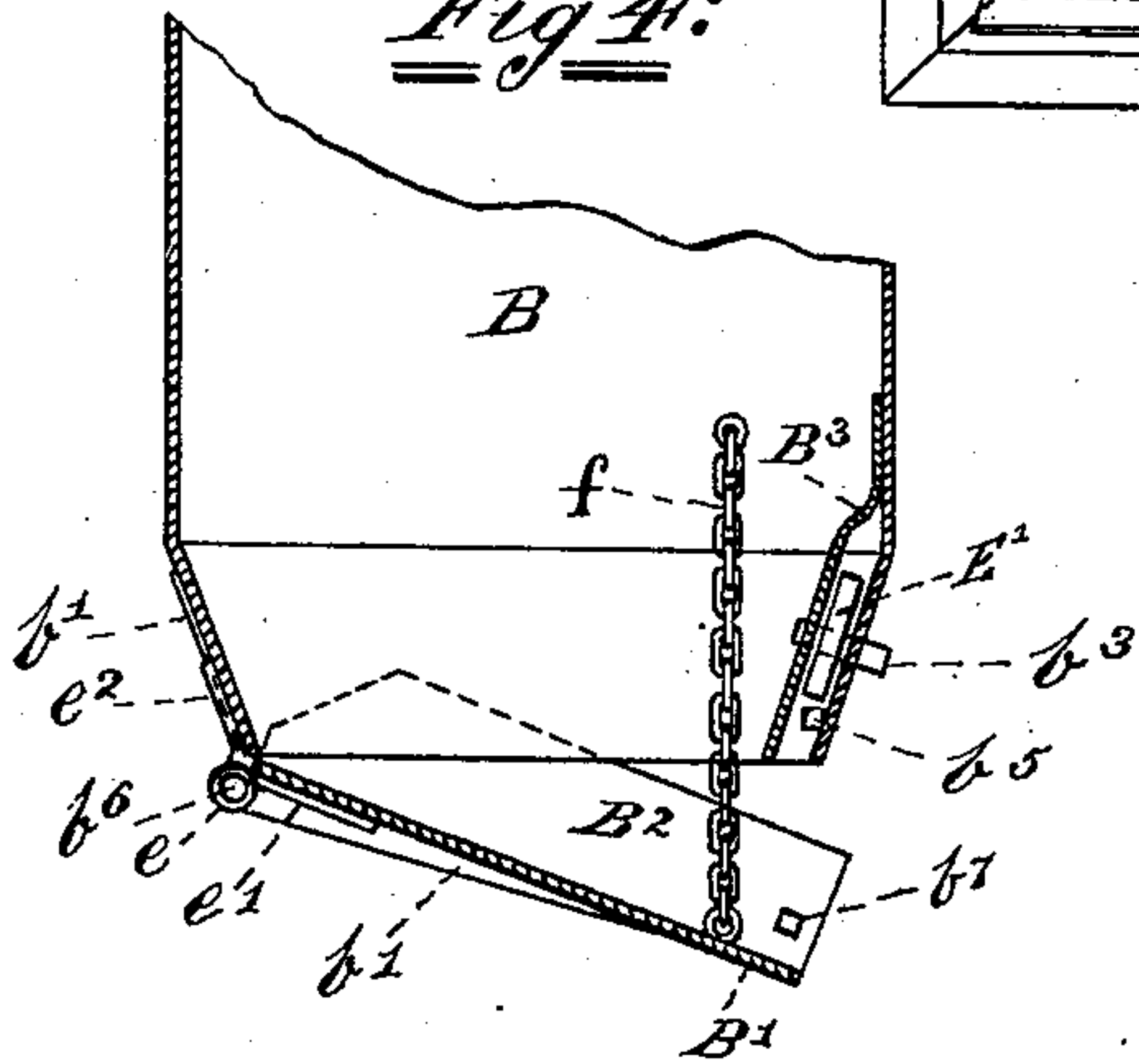
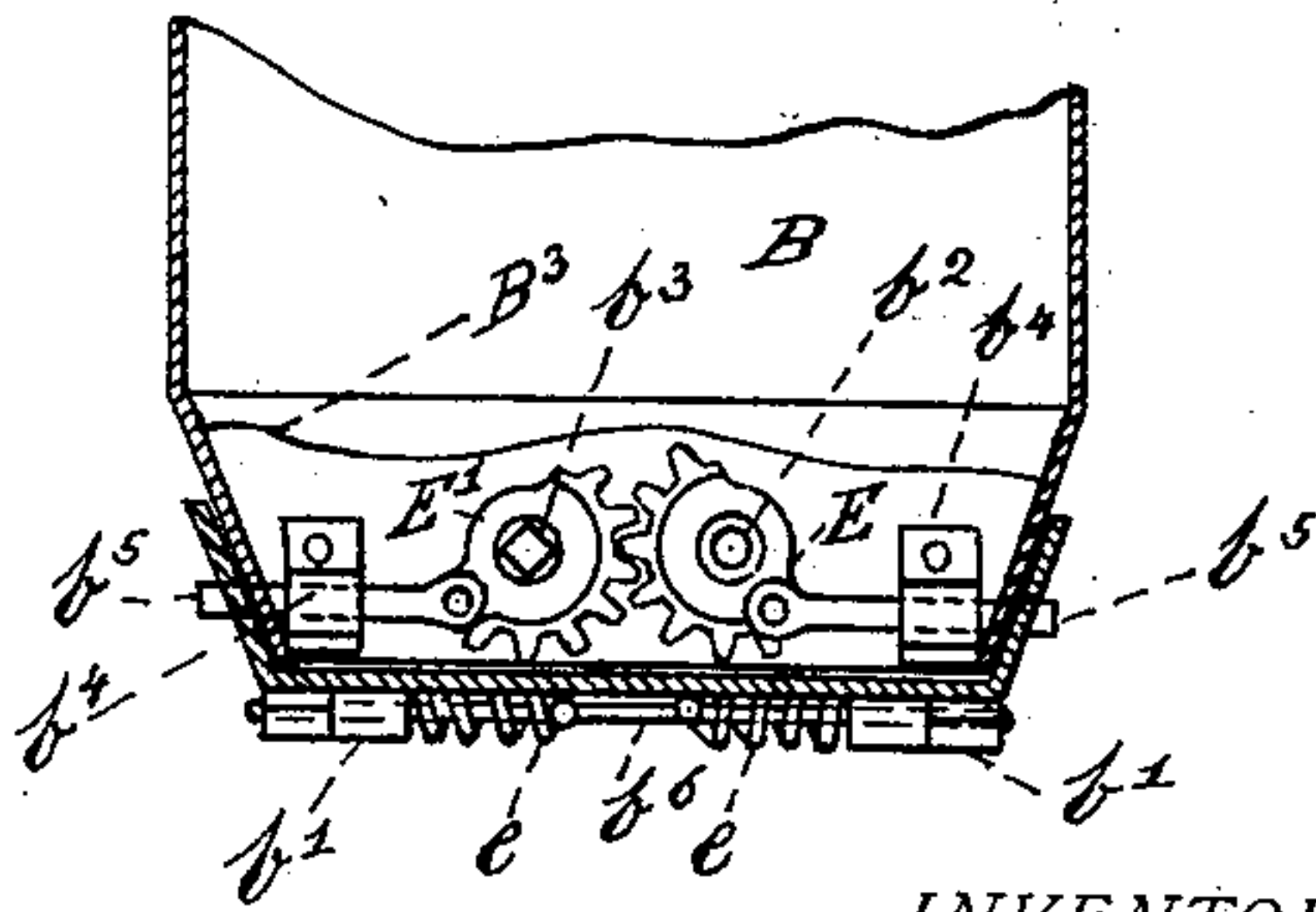


Fig 5:



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS J. PRATT, OF PATERSON, NEW JERSEY, ASSIGNOR TO JAMES A. MORRISSE, OF SAME PLACE.

## HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 673,060, dated April 30, 1901.

Application filed December 22, 1900. Serial No. 40,729. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. PRATT, a citizen of the United States, residing at 155 Oliver street, in the city of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Hoisting-Buckets, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a bucket device or bucket-receptacle for loading coal, grain, and other articles and substances into ships or vehicles; and the object is to provide a new and improved spring-actuated and chute-shaped bottom for bucket-receptacles and a locking device therefor which shall be simple and durable in construction and will facilitate the loading of ships with a saving of both time and labor.

My invention consists of the bucket-receptacle comprising certain parts and details and the combinations of same, which will be fully described hereinafter and then pointed out in the claims.

My invention may be applied to boats, barges, and railway-cars, as well as to other vehicles.

My bucket-receptacle, provided with a spring-actuated bottom having upturned sides, converting the bottom into a sort of chute, and provided with a locking device, all as will be hereinafter more fully described, and shown in the accompanying drawings, may be used in a variety of ways and for various purposes; but it is particularly designed by me for use in connection with loading and unloading devices, for which I applied for Letters Patent of the United States on August 30, 1900, and for which Letters Patent issued, dated December 18, 1900, No. 664,288.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a side elevation of my bucket closed and a key or wrench for operating the locking mechanism. Fig. 2 is a front elevation thereof; Fig. 3, a plan view of the same; Fig. 4, a sectional part side view showing bottom open and casing inclosing the locking mechanism, and Fig. 5 is a sectional part front view showing the locking mechanism.

In the drawings, B is the hoisting-bucket or bucket receptacle, the lower portion of which tapers toward the bottom B', which is hinged thereto and is provided with the spiral spring *e*, which forces the bottom B' to close when the contents of the bucket-receptacle have been discharged. The said bottom is provided with the upturned sides B<sup>2</sup>, which form a slide or chute to guide the coal or other material to its destination. A chain *f*, of strong construction, is adjustably connected with the bottom, so as to permit it to open the distance required, according to the nature of the contents of the bucket-receptacle. When the bottom is closed, it is securely locked by means of the locking device, (shown in Fig. 5 of the drawings,) comprising the segment-gears *b*<sup>2</sup>, one of which has a square-headed shaft *b*<sup>3</sup>, which is operated to insert or withdraw the bolts *b*<sup>5</sup> in or from the holes in the sides B<sup>2</sup> of the bottom B' and similar holes or openings in the lower walls of the bucket-receptacle, a key or wrench or other suitable means being employed for the purpose. The said bolts are pivotally secured to the segment-gears, which are intermeshing, and pass to the holes in the sides of the bucket and bottom through the guides *b*<sup>4</sup>, and the contents of the bucket-receptacle do not clog nor interfere in any way with the locking device, as the locking mechanism is inclosed by the covering, as shown in Figs. 1 and 4 in the drawings and as indicated by B<sup>3</sup>.

E E' represent the segment or quadrate gears, and *e* and *e*<sup>2</sup> represent the ends of the springs *e*. *b*<sup>6</sup> represents the hinge and spring pivotal bolt or rod which secures the bottom of the bucket-receptacle.

The holes for the bolts in the lower portion of the bucket-receptacle and in the side wings B<sup>2</sup> of the bottom are indicated by *b*<sup>5</sup> and *b*<sup>7</sup>, respectively. Said wings or upturned edges B<sup>2</sup> of the bottom B' are tapering in form to fit snugly against the tapered lower portion of the bucket-receptacle when the bottom is closed, so that the holes in the lower portion of the bucket and in the upturned edges of the bottom will be in alinement to admit of the shooting of the bolts through said holes, as shown.

My hoisting-bucket receptacle is provided



near the upper rim thereof with two or more reinforced holes or openings *b*, in which adjustable grip or lever tongs engage for the purpose of raising the same from or lowering the same into the barge, vessel, or vehicle being unloaded or loaded.

My invention is adapted for use in conjunction with a crane or derrick of any known construction and will perform all the functions of loading or unloading boats, cars, or other vessels or conveyances with a great saving of time and labor. It is obvious that my bucket-receptacle may be filled from the chute and that all shoveling may be dispensed with either in the filling or emptying of the same. It is also obvious that my hoisting-bucket receptacles may be made in various sizes and of many materials, which is a matter to be regulated by the nature and quantity of the material desired to be carried in them, and without departing from the essential principles of the invention.

The locking mechanism may be manipulated for the purpose of locking or unlocking the bottom either by means of a hand-key or wrench by hand directly, or indirectly by means of a rope or wire, which may be connected with said key or wrench and which may be operated from a distance.

With this description of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A bucket having four walls, and an automatically-closing spring-actuated bottom having upturned sides forming a chute through which the contents of a bucket may

be delivered, and a locking mechanism to keep said bottom closed when desired, constructed substantially as set forth.

2. In a loading or unloading device, a bucket having four walls, an automatically-closing spring-actuated bottom, and a locking mechanism to keep said bottom closed, the walls being provided with openings to be gripped by the hooks of a hoisting apparatus, said bucket being adapted to be raised from or lowered into a vessel, substantially as set forth.

3. A bucket having four walls, a hinged bottom having upturned sides forming a chute to deliver and guide in the discharging of the contents of said bucket, means for automatically closing said bottom when the bucket is empty, and means for locking and unlocking said bottom when closed, said bucket so constructed that it may be gripped by a hoisting apparatus.

4. In combination with a hoisting-bucket, a locking mechanism consisting of intermeshing gears, bolts pivotally connected with said gears, and adapted to be shot into operative relation with the bottom, a square-headed stud on one of said gears projecting through wall of bucket, and a sloping cover or casing-covering, and protecting said locking mechanism in the interior of the bucket, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. PRATT.

Witnesses:

STELLA A. HUGHES,  
JOHN F. KERR.