

No. 803,901.

PATENTED NOV. 7, 1905.

W. HEFFRON.
EXCAVATING BUCKET.
APPLICATION FILED MAR. 27, 1905.

2 SHEETS—SHEET 1.

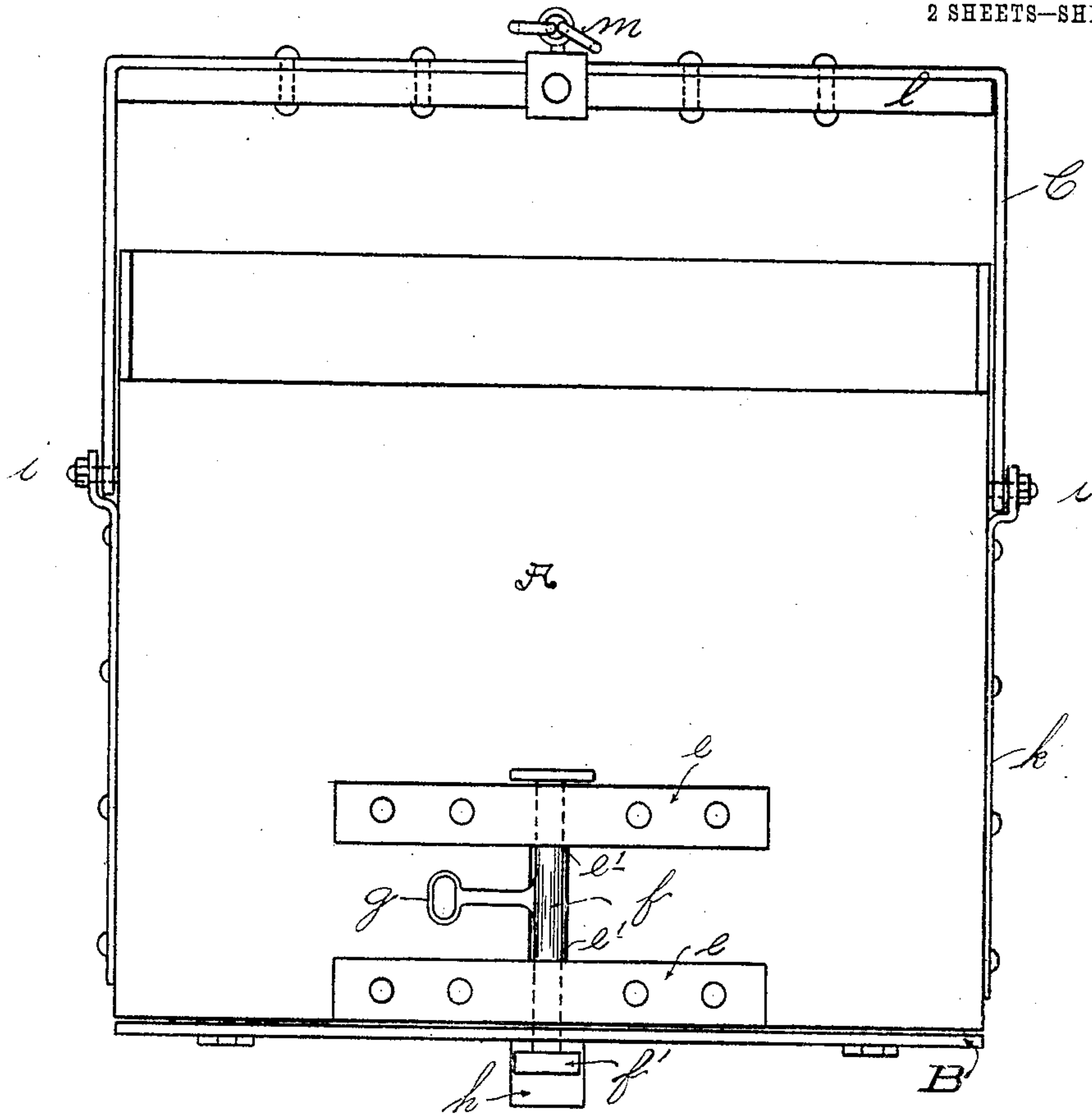


Fig. 1.

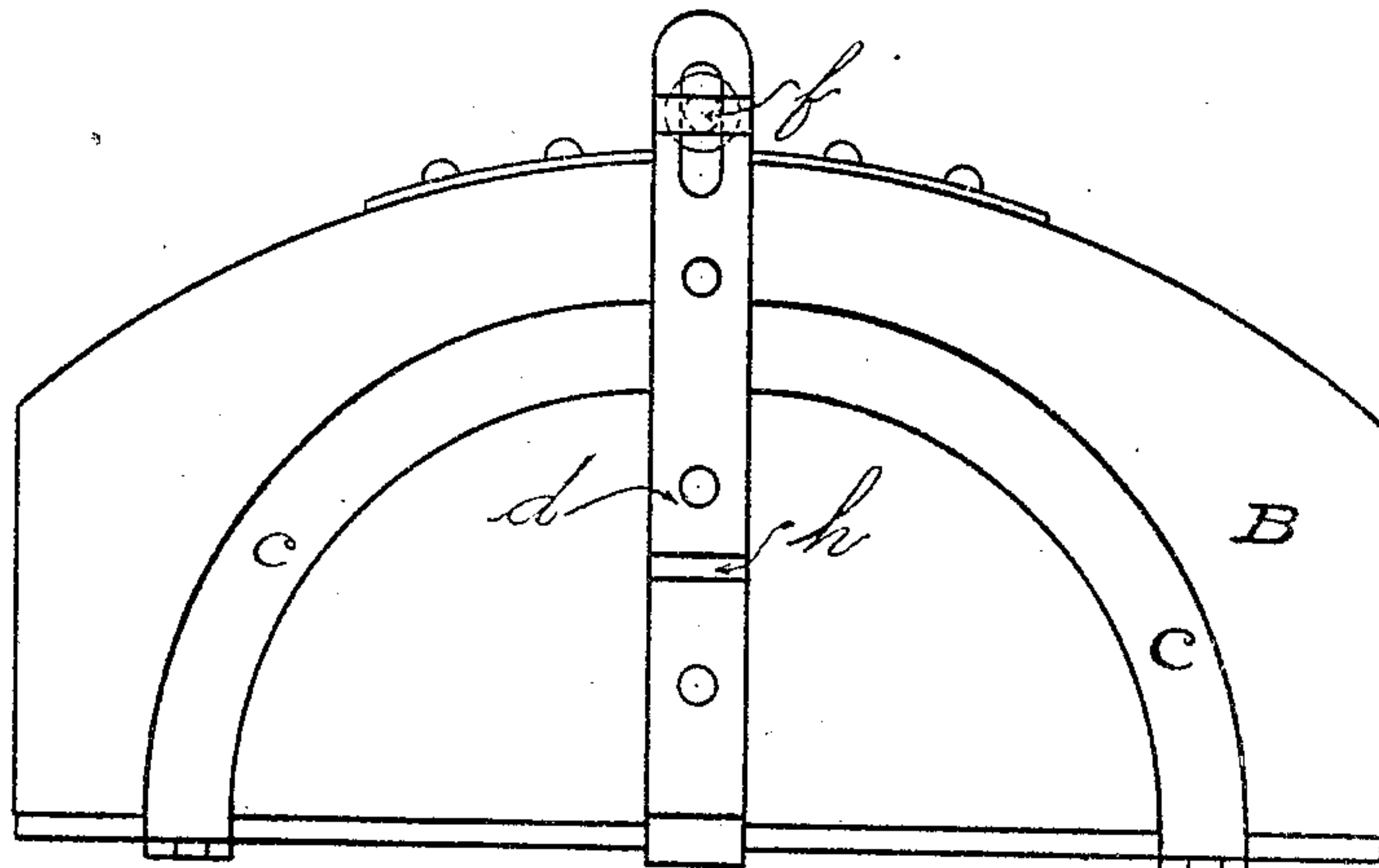


Fig. 2.

Witnesses.
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2 SHEETS—SHEET 2.

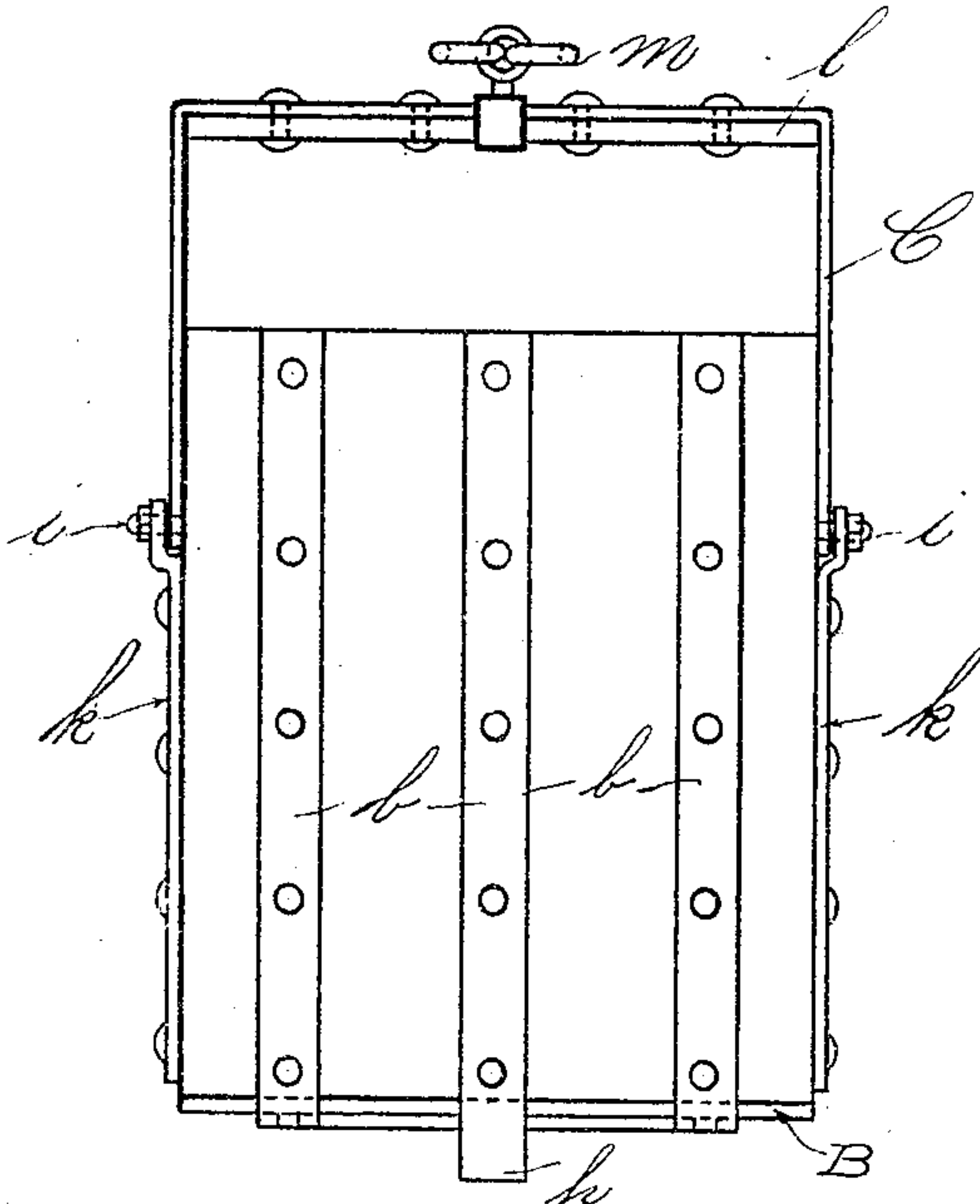


Fig. 3.

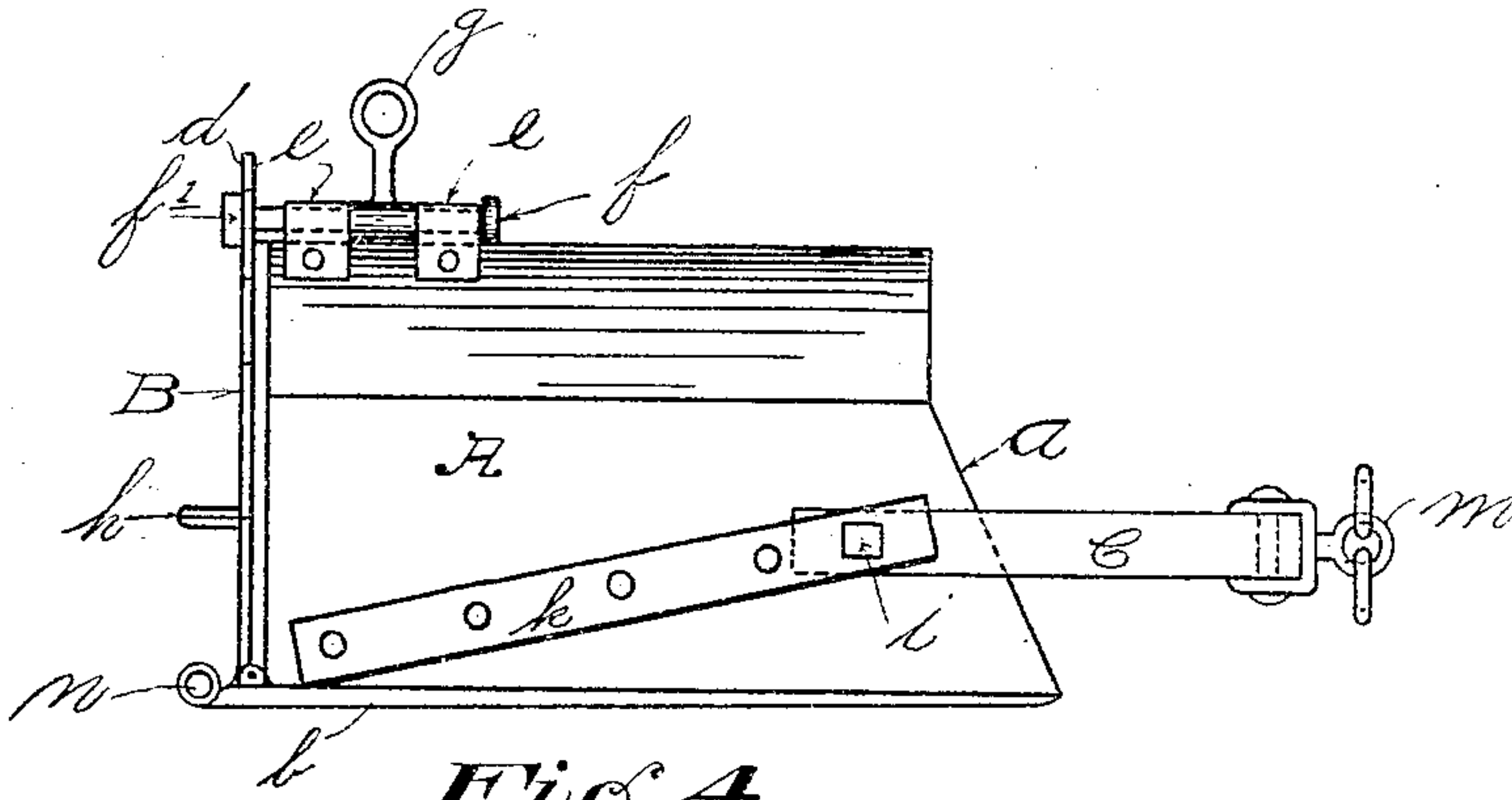


Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

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EXCAVATING-BUCKET.

No. 803,901.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed March 27, 1905. Serial No. 252,377.

To all whom it may concern:

Be it known that I, WILLIAM HEFFRON, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Excavating-Buckets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of my specification.

My invention relates to excavating-buckets, and has for its object the production of a construction which shall possess the requisite strength necessary to stand the strains to which the same is subjected and one so constructed that it may be readily manipulated, as will more fully hereinafter appear.

In the drawings, Figure 1 is a top plan view of my improved bucket. Fig. 2 is a rear end elevation. Fig. 3 is a bottom plan view, and Fig. 4 is a side elevation thereof.

Like letters of reference indicate identical parts in the respective figures.

A is the bucket, comprising top, bottom, and sides, the top being preferably shown as arched or curved, (see Figs. 2 and 4,) the bucket being constructed of suitable metal and may be made with the bottom and sides formed integral with each other, while the top may be riveted or in any other suitable manner secured to the sides. The forward end of the bucket is preferably provided with the slope or bevel, as at *a*, and the bottom at its forward end preferably given a more or less sharp edge. The rear end of the bucket comprises a flap or lid B, which is hinged at its bottom to the bottom of the bucket in a well-known manner by having portions of the bottom edge of the flap or lid B bent upward upon itself and providing the bottom with straps or portions *b*, whose ends are also bent to form a channel similar to that formed by the portions of the flap or lid bent upon themselves, through which a pin is passed, preferably extending from side to side. As this is a well-known method of hinge I do not enter into a further detail description thereof. For the purposes of reinforcement and also to form runners for the bucket I prefer to extend the straps *b* along the bottom of the bucket to within a short distance from the front edge. As these straps are made of metal, it will be seen that they will take considerable wear off the bottom of the bucket, and by having them extend to within a short distance of the front edge the

front ends of the straps may act as a fulcrum when the rear end of the bucket is slightly tilted upward. By using the forward ends of the straps as a fulcrum the proper tilt is given the bucket when it is first being drawn forward in order that it may take into the soil or matter it is desired to remove. In order that the flap or lid B may also be given sufficient strength, as when the bucket is filled and lifted up its entire load will be thrown and the strain placed on the flap or lid B, I provide the reinforcing-strap *c*, which may be riveted or in any other manner secured thereto. The ends of the strap *c* may form a portion of the hinge in the same manner as described when referring to the straps *b*. The flap or lid B is also provided at its center with the strap or hasp *d*, which is securely fastened thereto and extends beyond the top of the flap or lid, as clearly shown in Figs. 2 and 4. Properly secured to the top of the bucket, as by straps *ee*, is a pin or bolt *f*, whose end is provided with a flare or right-angular extension *f'*, this flare or extension being so constructed as to permit its passage through the slot in the hasp, when the bolt or pin *f* is turned to a certain position, bringing the extensions *f'* in the same vertical plane with the slot in the hasp, and then when the bucket is held up by the bail or handle C the load carried by it is thrown onto the flap or lid B, compelling it to drop down by reason of the weight of the load, and thus emptied. The pin or bolt *f* is preferably provided with extension *g*, to which may be secured a rope or chain, so that the operator can oscillate the pin *f* and bring the pin into the position where it will permit of the hasp *d* to pass over the extensions *f'* of the bolt. The bolt or pin *f* may be made of smaller diameter at the points passing beneath the straps *ee*, thus producing a shoulder, as at *e'*, thereby giving the pin or bolt *f* a bearing against the straps *ee* and sustaining it in its proper relation with the straps. The strap or hasp *d* may also be provided at a proper point, preferably slightly below the middle or center of the flap or lid B, with the shoulder or extension *h*, which can more clearly be seen in Figs. 1, 3, and 4. The purpose of this shoulder or extension *h* is to give a purchase or point on the bucket where it may be taken hold of, so as to tilt the front end of the bucket downwardly. This may be done either by the hand of the operator or in any other convenient way.

The bail or handle C is secured to the sides

of the bucket by a bolt *i*, to which bolts are also secured the reinforcing-straps *k*, these straps *k* being riveted to the sides of the bucket and preferably extending in a diagonal manner toward the bottom of the bucket, at which point it is thought the bucket has the most strength. By thus securing the bail or handle C the pulling strain is more or less distributed, as can readily be understood. The handle or bail C is also preferably provided with a brace or reinforcing-piece *l*, so that the handle or bail when the bucket is drawn or lifted will not bend and compress the forward ends of the bucket. The handle or bail C has also secured to it in any suitable manner a ring or rings *m*, through which a yoke at the end of a rope or chain may take.

The middle reinforcing-strap on the bottom of the bucket may extend slightly beyond the rear end of the bucket and have secured to it the clevis *n*, to which a rope or chain may be secured for the purpose of drawing or pulling the bucket back to the point at which it is desired to use the same after the bucket has been carried forward to a point where its contents have been dumped. It will be readily understood that this clevis *n* may be secured in a different manner; but it is preferably secured at the point indicated, because the strain or pull is better applied at this point.

Of course it will readily be understood that a number of slight modifications may be made in the construction of the bucket and also in the method of fastening the flap or lid without departing from the spirit of my invention, and

What I claim, and wish to secure by Letters Patent, is—

1. An excavating-bucket comprising top, bottom, sides and end, the end provided with reinforcing-strips and being hinged at its lower side, a hasp secured to the end, a latch secured to the bucket top and adapted to take through said hasp and lock the end in place, a bail secured to the bucket sides and provided with rings or hooks, and reinforcing-strips secured to the bucket sides to prevent the collapsing

of the bail and the bucket sides, substantially as shown and for the purpose described.

2. An excavating-bucket having a top, bottom, sides and end, the sides sloping away from the bottom toward the top, the end hinged at its bottom to the bucket bottom, the straps of said hinges extending along the outside of said bottom to form runners, a latch secured to the top of the bucket and engaging with top of the end whereby the same is normally held in place, a bail having the width of the bucket secured to the sides thereof, substantially as shown and described.

3. An excavating-bucket having its sides sloping away from the bottom toward the top at the forward open end thereof, the rear end being provided with a flap hinged at its bottom, said flap provided with a hasp extending beyond its top, a latch secured to the bucket top and taking through said hasp, means secured to said flap whereby the bucket may be tilted, runners secured along the bucket bottom, and means whereby the bucket may be drawn and lifted, substantially as shown and described.

4. An excavating-bucket having its sides sloping away from the bottom toward the top at the forward open end, the rear end being provided with a flap hinged at its bottom to the bottom of the bucket, a reinforcing-strap secured to said flap and forming a part of the hinge, a latch secured to the bucket top and engaging with the free end of the flap, straps or runners secured along the bucket bottom and forming parts of the hinge, one of said runners or straps extending beyond the rear end of the bucket and provided with a clevis or ring, means secured to the flap whereby the bucket may be tilted, a bail secured to the sides of the bucket and diagonal straps secured to the bucket sides and providing pivotal points for the bail, substantially as shown and for the purpose described.

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Witnesses:

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