

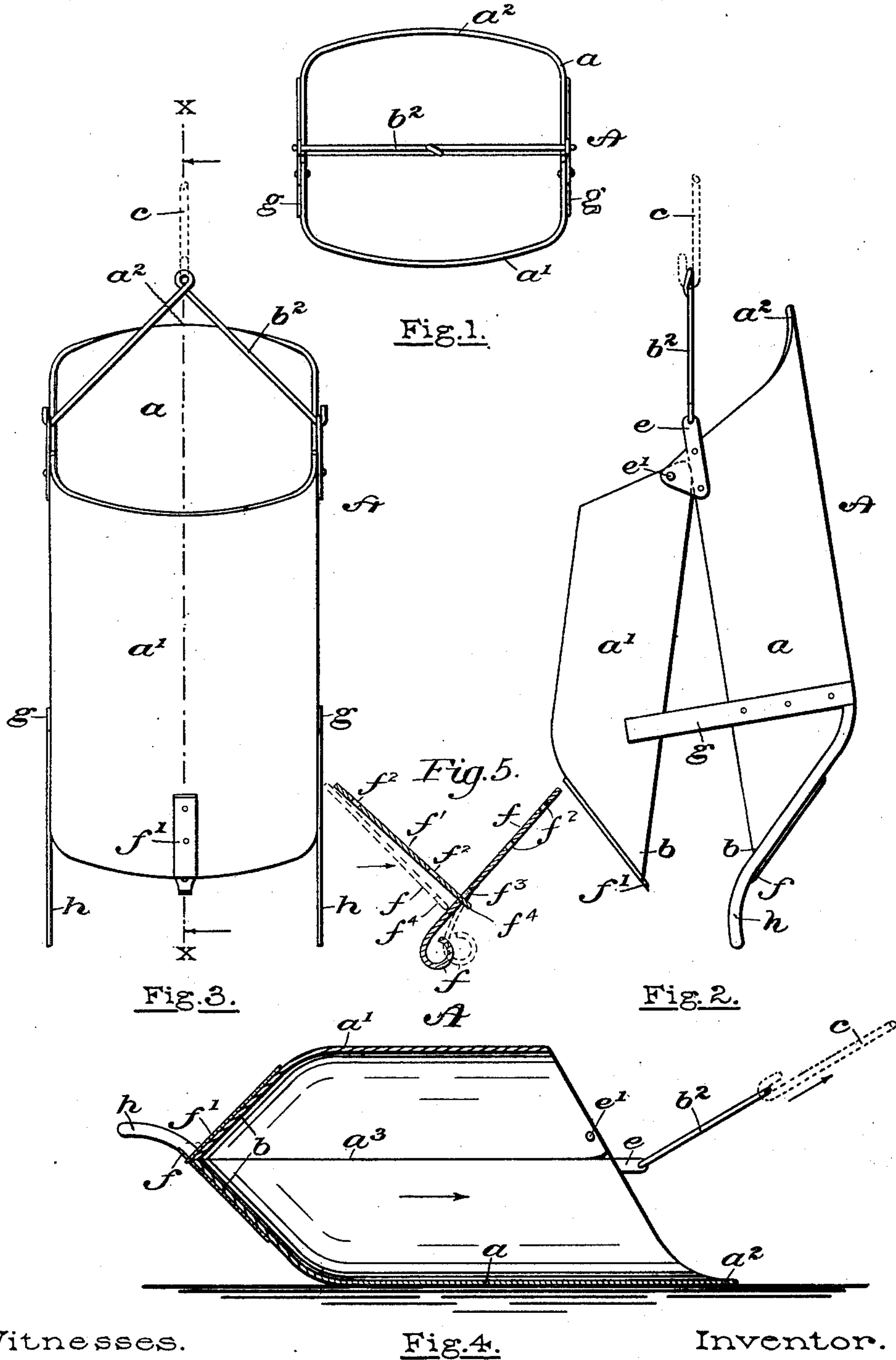
No. 656,987.

Patented Aug. 28, 1900.

G. C. LUTHER.
SCOOP BUCKET.

(Application filed May 14, 1900.)

(No Model.)



Witnesses.

Frederic Arnold,
Charles W. Boeschman

Fig. 4.

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UNITED STATES PATENT OFFICE.

GARDNER C. LUTHER, OF SWANSEA, MASSACHUSETTS.

SCOOP-BUCKET.

SPECIFICATION forming part of Letters Patent No. 656,987, dated August 28, 1900.

Application filed May 14, 1900. Serial No. 16,614. (No model.)

To all whom it may concern:

Be it known that I, GARDNER C. LUTHER, a citizen of the United States of America, and a resident of Swansea, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Scoop-Buckets, of which the following is a specification.

My invention relates to improvements in "scoop-buckets," so called—that is, buckets adapted to be filled with loose earth or material—such as sand, gravel, stone, &c.—and then transported, say, by a cable conveyer.

My invention consists of a two-part bucket hinged together at the top or front end, its opposite end being V-shaped, whereby upon releasing a spring catch or latch adapted to keep the bucket normally closed the contents are readily discharged therefrom, and having the main or stationary side of the bucket extended at its front end to serve as a scoop or shovel. As thus constructed the device forms a simple, inexpensive, and efficient scoop-bucket, one well adapted to be attached, say, to a suitable power-actuated endless-cable conveyer arranged not only to mechanically fill the bucket with the material being worked, but also to convey the thus-filled holder to any desired point contiguous to the cable-line, at which point the contents of the bucket may be easily and quickly discharged, the same being effected without detaching it from the cable. The traveling cable in its continuous movement carries the empty buckets back to the filling-station or pile of material, where they are again filled, the operation being repeated as long as desired.

In the accompanying sheet of drawings, Figure 1 is a plan or top view of my improved scoop-bucket. Fig. 2 is a side view of the same, the bucket being open, as in discharging. Fig. 3 is a corresponding front elevation. Fig. 4 is a longitudinal sectional view taken on line *xx* of Fig. 3, showing the bucket resting on its side preparatory to being filled mechanically; and Fig. 5 is a longitudinal sectional view enlarged, corresponding to Fig. 4, showing the relative arrangement of the members of the fastening device detached from the bucket-walls.

In the drawings, A designates my improved scoop-bucket complete. I prefer to make the

same of suitable sheet metal, as steel, the body portion being composed of two substantially U-shaped sections *a* and *a'*. These two members or sections are hinged together at the front or top end and form a chamber within having a practically-rectangular cross-section. The section *a* may be termed the "stationary" or "scoop" member. The forward end of the same is extended upwardly or outwardly to form the cutter or scoop portion *a*², having a curved edge. To the member *a* is secured two hinge-eyes *e*, oppositely located at the front end and contiguous to the joint *a*³. The other or swinging member *a'* of the bucket is hinged at *e'* to extensions or wings integral with said eyes *e*. (See Fig. 2.) The lower ends of the sections are beveled, so as to form a V-shaped bottom *b*. As thus made the contents of the bucket will readily fall out when the latch of the fastening device is released. This latter, as drawn, consists, simply, of a flat spring or catch *f*, secured to the bottom of the side member *a* and having an opening *f*³ (see Fig. 5) therein near its free end to receive the corresponding end or tongue *f*⁴ of the member *f'*, fastened to the other or swinging side member *a'*. Rivets passing through the holes *f*² may be used to secure the parts *f f'* to the bucket. By simply depressing the lower end of the part *f* (see dotted lines, Fig. 5,) the member *f'* is thereby released, thus permitting the bucket to open. (See Fig. 2.) In closing the bucket the end of said member *f'* engages the spring *f*, thereby pressing the latter downwardly until it enters the opening *f*³, at which instant the spring returns to its normal position, the two sections of the bucket then being practically locked together.

In order to stiffen the bucket, the same may be provided with side arms or guides *g*, rigidly secured to opposite sides of the main member *a*. The free ends of these arms extend beyond the joint-face, thereby forming lateral guides for the swinging member *A'*. (See Fig. 2.) The said part *a* of the bucket is also provided with a pair of handles *h*. These are oppositely arranged and secured to the bottom edge of the bucket and form handles, as shown.

In order that the bucket may be readily connected to a cable conveyer or other suitable

power-actuated means, the bucket is provided with a swinging bail b^2 , mounted in the said hinge-eyes e , the center portion of the bail having a loop or eye therein adapted to be
 5 hooked into a connection c , (shown by dotted lines,) which in turn may be attached to a traveling cable or other hauling mechanism.

My improved bucket A is well adapted to be employed in excavating trenches, &c.,
 10 where the material taken out is to be transported to another place; or, in other words, suppose that a power-driven endless-cable conveyer be used, the same being suitably mounted and provided at intervals through-
 15 out its length with depending connections or hooks. Now upon attaching the bail b^2 to one of the said hooks the bucket will be drawn along the ground or excavation substantially as indicated in Fig. 4. At the same time the
 20 attendant seizes the handles h and elevates the rear end of the bucket slightly, thereby causing the edge a^2 of the scoop to enter the earth or material being worked, and thus filling the bucket mechanically while being car-
 25 ried along by the cable. The cable itself may be further elevated, if desired, so that when the filled bucket arrives at the discharging-station it (the bucket) will then be in a vertical position, at which instant another at-
 30 tendant releases the catch f , thereby permitting the side a' to swing open, as indicated in Fig. 2. The contents of the bucket then drop out by gravity or automatically. The bucket is next closed and carried by the cable to the
 35 charging-station, where it is again filled, as before described, the operation being repeated

successively and as fast as the attending workmen can manipulate the buckets.

I claim as my invention—

1. The scoop-bucket herein described, nor- 40
 mally closed at the bottom and open at the top end, the same consisting of the side or body members, a , a' , hinged together at the top, a scoop or cutting extension a^2 formed on the forward or top end of the member a , 45
 and a catch or locking device arranged to keep the bucket normally closed, substantially as set forth.

2. The scoop-bucket A hereinbefore described, the same consisting of the stationary 50
 body member a having a scoop extension a^2 at its forward or filling end, the swinging member a' hinged to the member a , a spring-catch or locking device adapted to keep the bucket normally closed, and means whereby 55
 the bucket may be detachably secured to a conveyer-cable or other analogous hauling mechanism.

3. A scoop-bucket comprising stationary and swinging members a a' hinged together 60
 at the forward or filling end, a scoop or extension a^2 integral with said member a , means for keeping the bucket normally closed, and guides g secured to the member a for main-
 65 taining the other member a' in position later-ally, substantially as hereinbefore described.

Signed by me at Providence, Rhode Island, this 9th day of May, A. D. 1900.

GARDNER C. LUTHER.

Witnesses:

GEO. H. REMINGTON,
 CHARLES W. BOARDMAN.