

(No Model.)

T. J. WALDEN.
ELEVATOR BUCKET.

No. 414,829.

Patented Nov. 12, 1889.

Fig. 1.

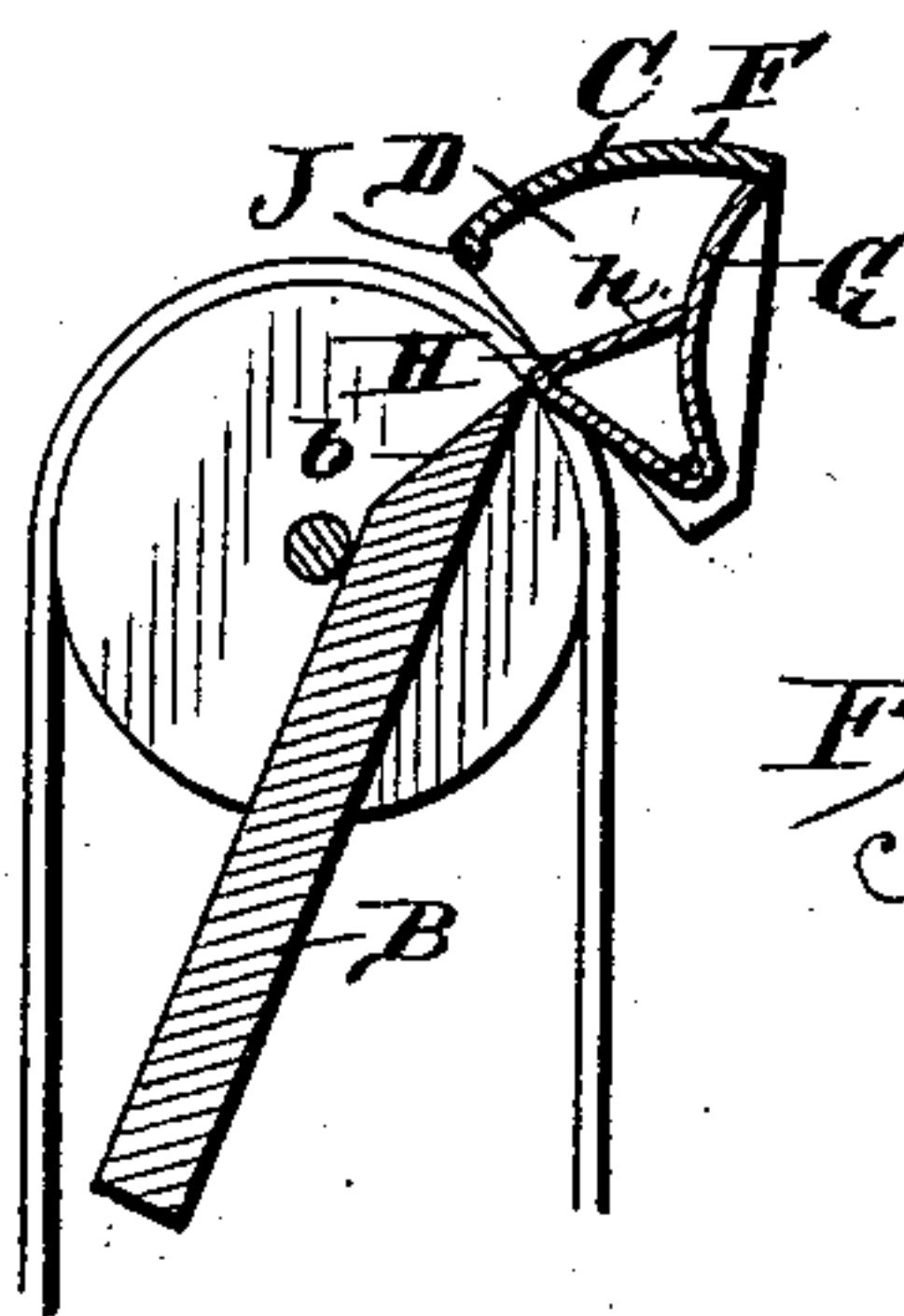
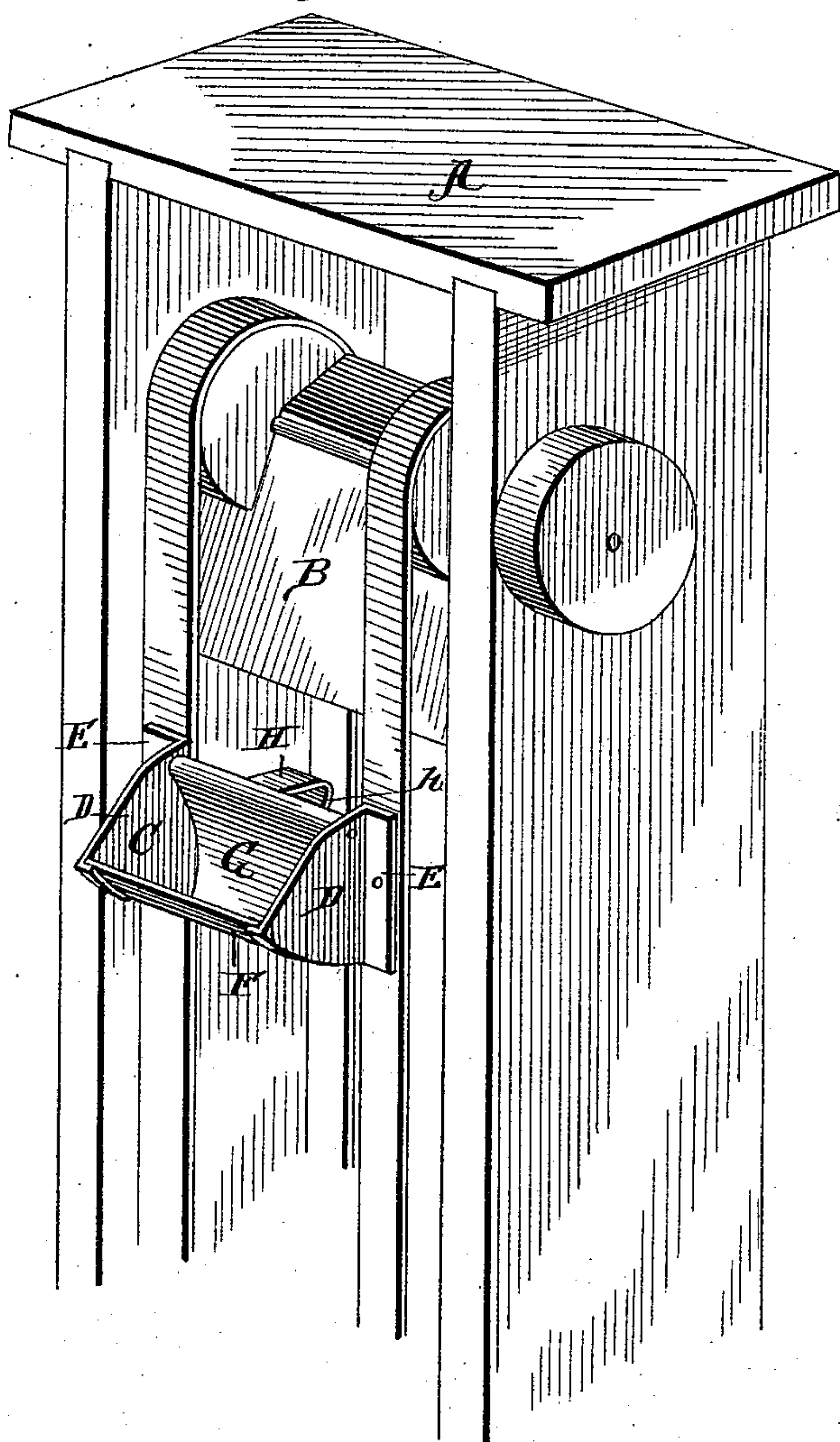


Fig. 2.

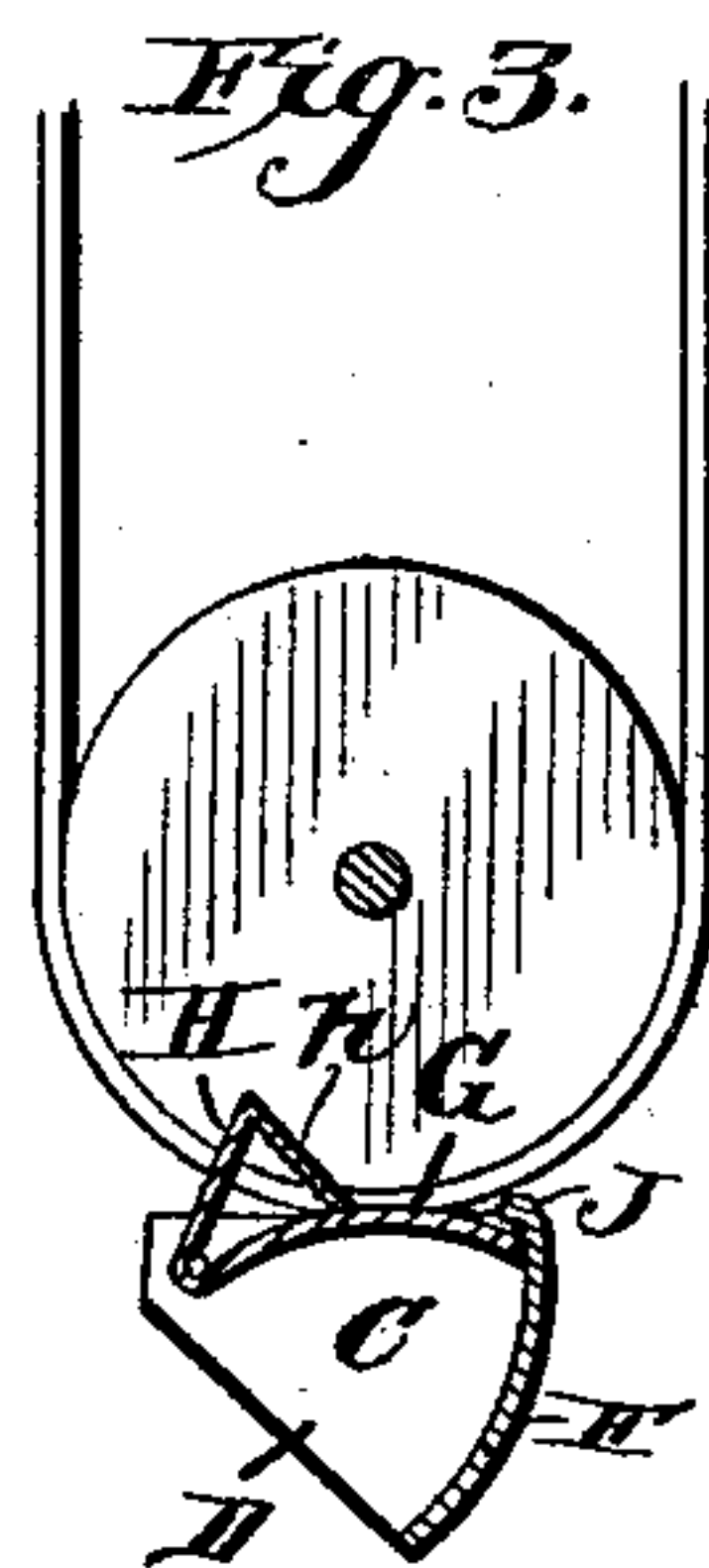


Fig. 3.

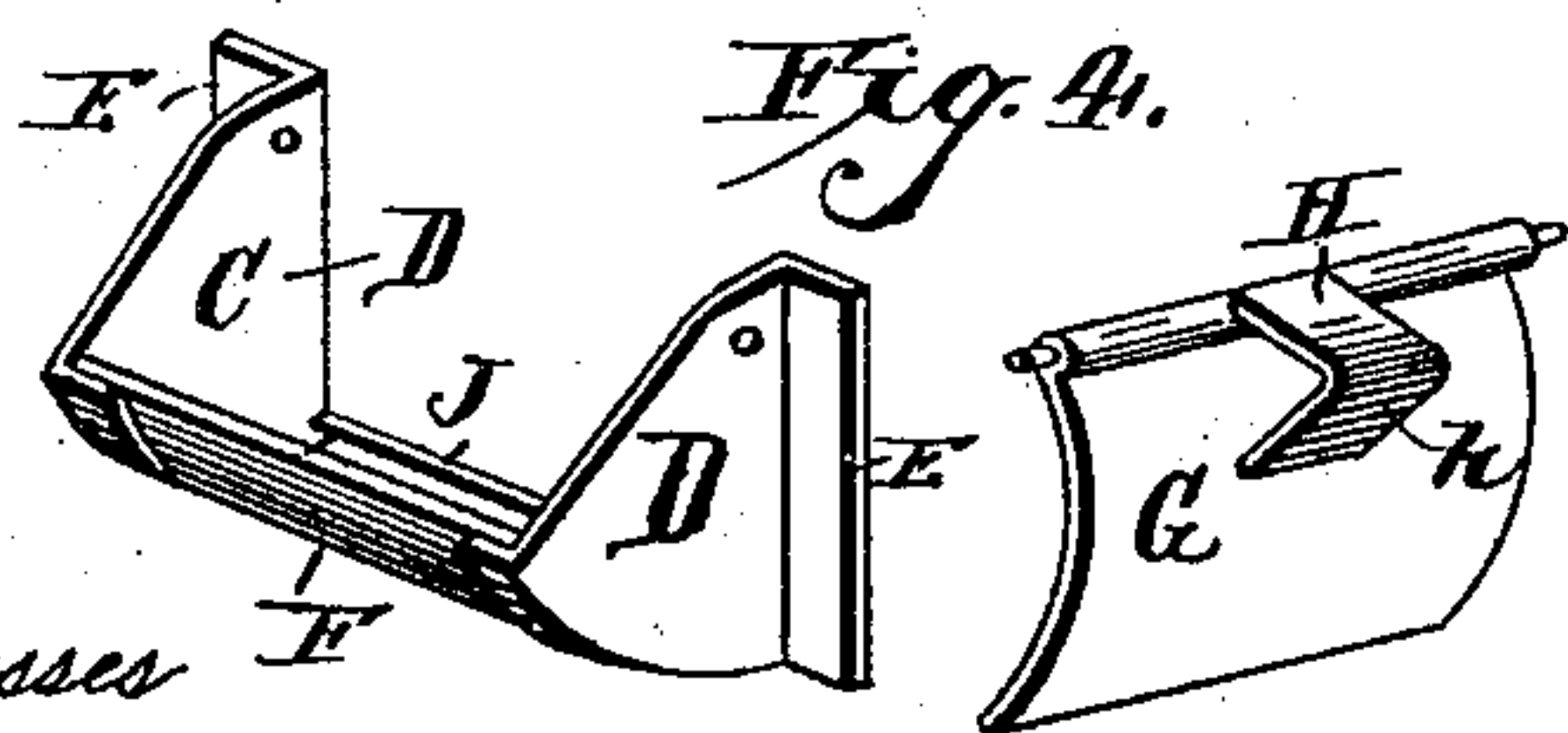


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS J. WALDEN, OF LEBANON, INDIANA.

ELEVATOR-BUCKET.

SPECIFICATION forming part of Letters Patent No. 414,829, dated November 12, 1889.

Application filed March 25, 1889. Serial No. 304,656. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. WALDEN, a citizen of the United States, residing at Lebanon, in the county of Boone and State of Indiana, have invented a new and useful Elevator-Bucket, of which the following is a specification.

This invention relates to that class of elevator-buckets which are used especially in dredges and excavators, and which are provided with hinged or pivoted side or bottom pieces that serve, in conjunction with suitable operating mechanism, to expel or discharge the contents of the bucket at the proper time—an important consideration in cases where the material which is being excavated is at all slimy or sticky, as is frequently the case.

The invention consists, essentially, in certain improvements in the construction of the bucket, and incidentally in the trip mechanism for operating the hinged bottom of the bucket, as will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view showing my improved elevator-bucket in operative position. Figs. 2 and 3 are vertical sections illustrating the bucket in different operative positions. Fig. 4 is a detail view of the bucket with the parts separated.

Like letters of reference denote like parts in the several figures.

In carrying out my invention I provide upon the frame A, near its upper end, a trip or stop B, having a beveled upper edge *b*, and located between the upper pulleys over which the elevator-belts run, in the usual manner.

The buckets C consist of the end plates D, which have flanges E at their inner edges, by means of which they are secured to the elevator-belts, and between these plates I secure the curved plate F, forming one side of the buckets. The upper side of each bucket is open, and its inner side is formed by a swinging plate G, which is secured upon a pivot-pin having its ends journaled in the end plates D, at the upper corners of the same, as shown. The swinging plate G is provided at its hinged edge with a projecting integral lip or strip of metal, which is bent so as to form a V-shaped lug H, the outer end of which forms a brace

h, that rests or bears against the outer side of the plate G, thus bracing the said lug. The inner edge of the side F of the bucket is provided with a longitudinal shoulder or flange J, to limit the rearward movement of the swinging plate G.

In practice the elevator is operated to carry the bucket upward, so as to hoist the material contained therein and discharge the same at the proper point. When the bucket is filled, the weight of the material therein will press the swinging plate or side G rearward, so that the bucket can be filled to its entire capacity. The rearward movement of the swinging plate G is limited by the shoulder or flange J, as described, so that the swinging-plate cannot pass beyond the side F and allow the contents of the bucket to drop. When the bucket is raised, and as it is carried over the upper end of the elevator, the contents of the bucket will be discharged, owing to the fact that the bucket will be inverted. As the bucket is inverted, the V-shaped lug H on the near side of the swinging plate will contact with the beveled edge *b* of the trip or stop B on the elevator-frame, and will thus be retarded in its movement, so that the swinging plate will be forced toward the open side of the bucket and consequently expel the contents, as will be understood by reference to Figs. 2 and 3. The flanges of the inner edges of the ends of the bucket may be turned either inward or outward, as desired, and the V-shaped projection H may be of any desired width; or, instead of a single projection, two may be employed—one at each end of the bucket.

I claim as my invention—

In an elevator-bucket, the combination of the ends D, having flanges E, the side F, permanently connecting said ends and having flange or shoulder J, and the hinged side G, having the single integral V-shaped lug H, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS J. WALDEN.

Witnesses:

JOHN M. CONYERS,
WILLIAM R. GROVE.