

(No Model.)

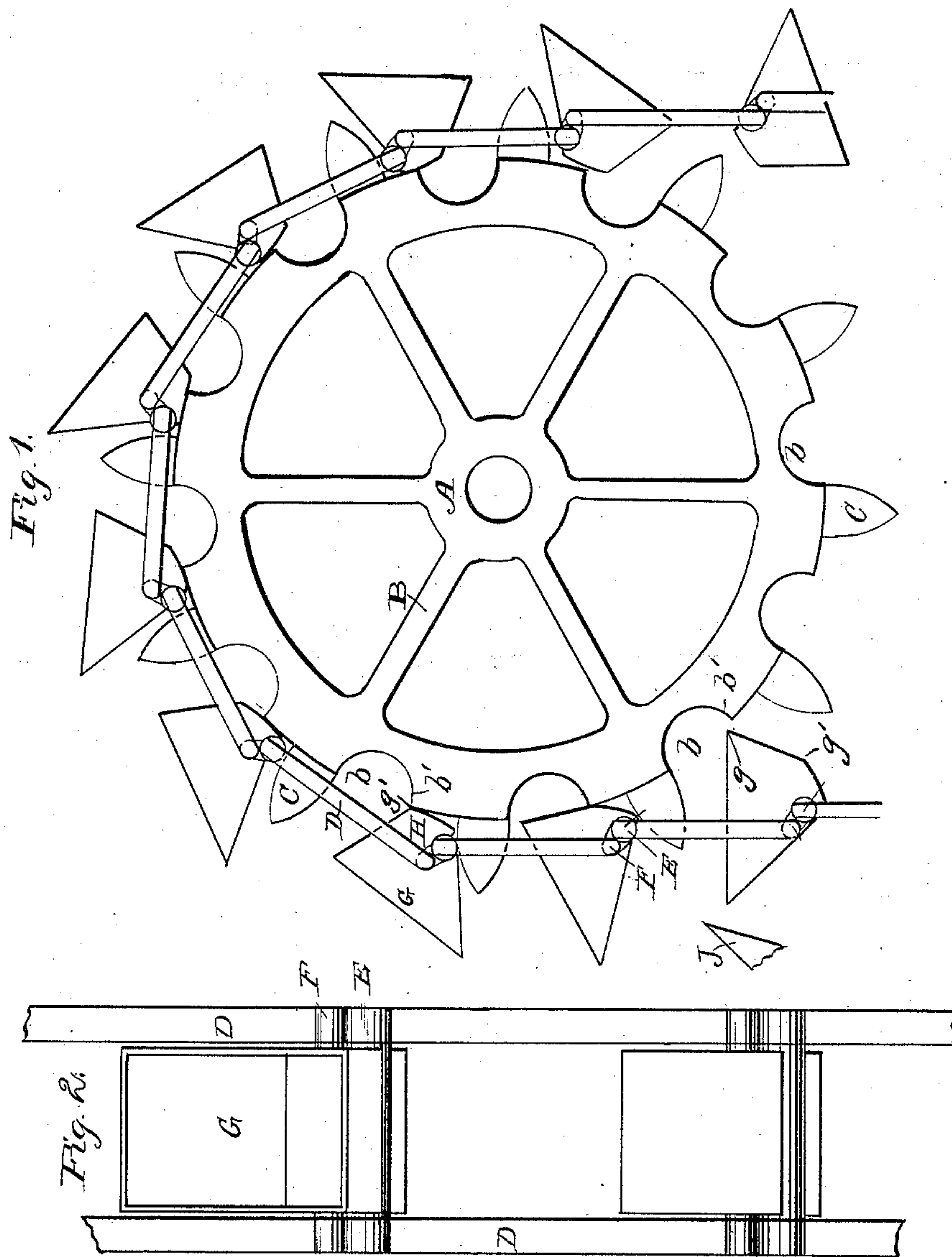
2 Sheets—Sheet 1.

C. W. LEVALLEY.

ELEVATOR.

No. 311,337.

Patented Jan. 27, 1885.



Witnesses:
H. E. Bliss
J. S. Barker

Inventor:
Christopher W. Levalley
by Embledon & Bliss attys.

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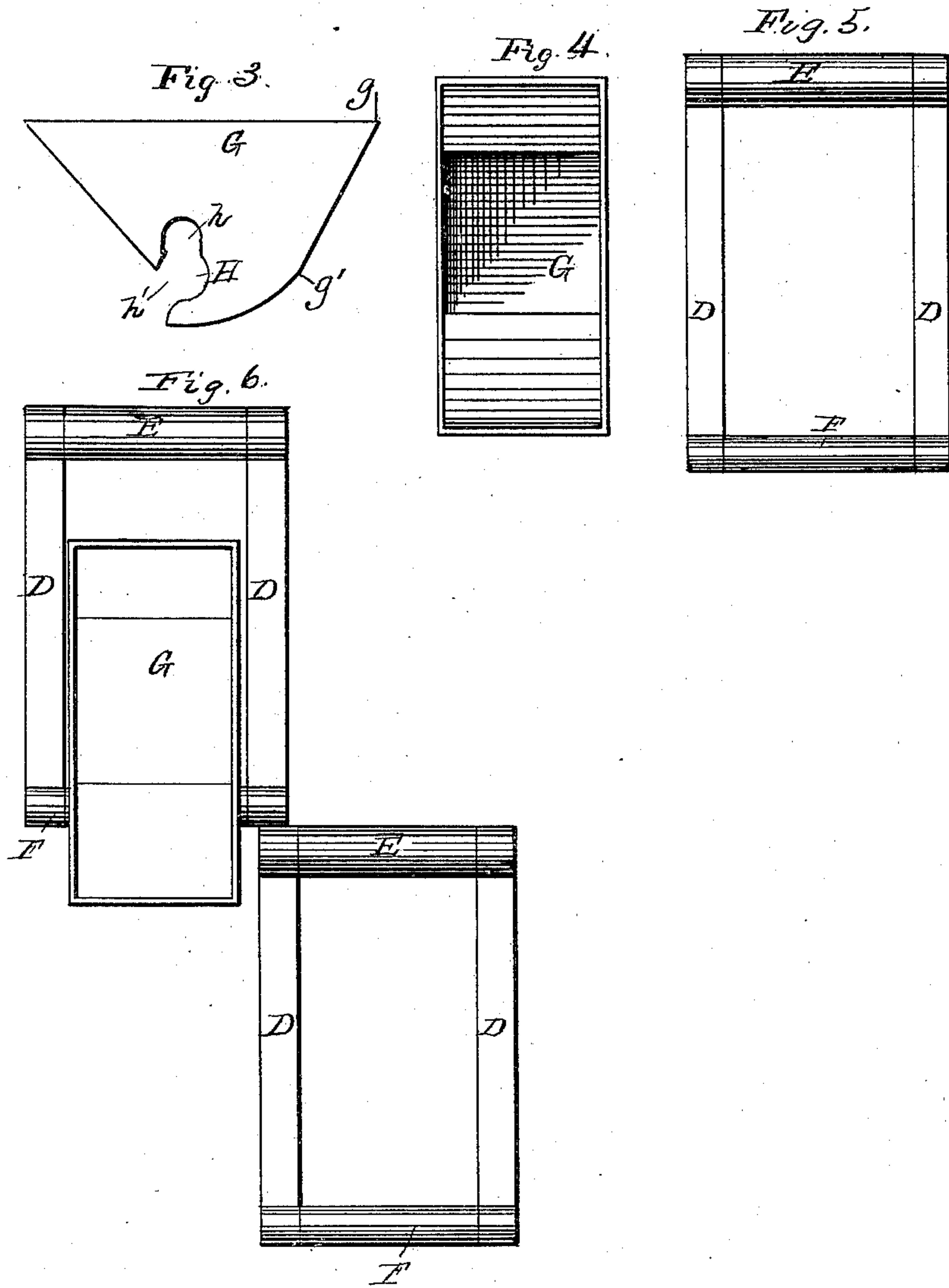
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UNITED STATES PATENT OFFICE,

CHRISTOPHER W. LEVALLEY, OF ST. PAUL, MINNESOTA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 311,337, dated January 27, 1885.

Application filed July 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER W. LEVALLEY, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Elevators, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation of a wheel and a chain containing my invention. Fig. 2 is an edge view. Fig. 3 is a side view of one of the buckets. Fig. 4 is a plan or top view of one of the buckets. Fig. 5 is a plan view of one of the links. Fig. 6 is a view illustrating the method of connecting the links and buckets together.

A is the hub, B the spokes, and C the teeth, of a sprocket-wheel, which may be of any usual or approved construction, except that its periphery is formed with a series of semicircular recesses or grooves, *b b*. These recesses are of sufficient depth and size to permit the entrance of one end of an elevator-bucket, as will be hereinafter described, and are of a width less than the distance between two adjacent sprocket-teeth, thus forming shoulders *b'*, which serve a purpose to be set forth.

Each of the chain-links consists of two side bars, D D, and two end bars, E F, the end bars being circular in cross-section, but of different sizes.

The bucket G H in this instance is constructed with four sides, two of which are parallel, as shown in Fig. 2, while the others are converging, as shown in Fig. 1. At the lower part, H, of the bucket there is a double seat to receive the large and small end bars of two adjacent links, and thus connect said links so as to form a chain. The seat H is circular in cross-section, except where it is broken away, the circle being of about the same diameter as is the end bar, E, and between the seat H and the upper edge of the bucket there is a smaller seat, *h*, adapted to receive and fit closely the end bar, F. There is also a throat, *h'*, of a width a little greater than the thickness of the side bars.

In putting the links and buckets together, the end bars, F, may be thrust through the

throat and into their respective seats *h*, after which the end bars, B, may be inserted in the seats H by thrusting them in endwise, one of the side bars passing through the throat *h'* when the parts are in the position shown in Fig. 6.

When the chain and buckets are in any position which they will assume in ordinary working, it will be impossible to disengage or detach them from each other, and when the buckets are moving in an upward direction, as indicated by arrow 1, the buckets will be maintained with their upper edges in substantially horizontal planes, their points or corners *g* entering the recesses *b* of the wheel as they (the buckets) pass the chute K; but shortly after each bucket passes this chute the shoulders *b'* will engage with the corners *g'* of the outer walls of the buckets and tilt them, so that they will discharge their contents upon the upper surface of the chute, as will be readily understood by an examination of Fig. 1 without further explanation.

What I claim is—

1. An elevator-bucket provided with seats of different sizes communicating with each other, adapted to receive chain-link end bars of different sizes, substantially as set forth.

2. The combination of the buckets provided with seats, and the chain-links having their end bars supported in the seats formed in the buckets, substantially as set forth.

3. An elevator-bucket having end-bar seats which communicate with each other, and having a throat of less diameter than one of the end bars, in combination with the chain-links, whereby one of the end bars locks the end bar of the adjacent link in position, substantially as set forth.

4. An elevator-bucket provided with two end-bar seats, one arranged above the other, in combination with the chain-links, whereby the bucket is maintained in a horizontal position by the weight of the chain below it, substantially as set forth.

5. The combination, with the sprocket-wheel, of the links and the buckets uniting the links, substantially as set forth.

6. The herein-described sprocket-wheel, provided with recesses *b*, adapted to receive corners of the buckets, substantially as set forth.

7. The combination, with the chain and the buckets, of the wheel provided with recesses *b* and shoulders *b'*, substantially as set forth.

8. The combination, with the chain and the
5 buckets pivoted thereon, they being provided with the corners *g'*, of the sprocket-wheel provided with recesses *b* and shoulders *b'*, said shoulders being adapted to engage with the corners *g'* of the bucket to tilt the bucket and

discharge its contents, substantially as set forth.

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

CHRISTOPHER W. LEVALLEY.

Witnesses:

A. S. FAULKS,

GEO. S. BENNETT.