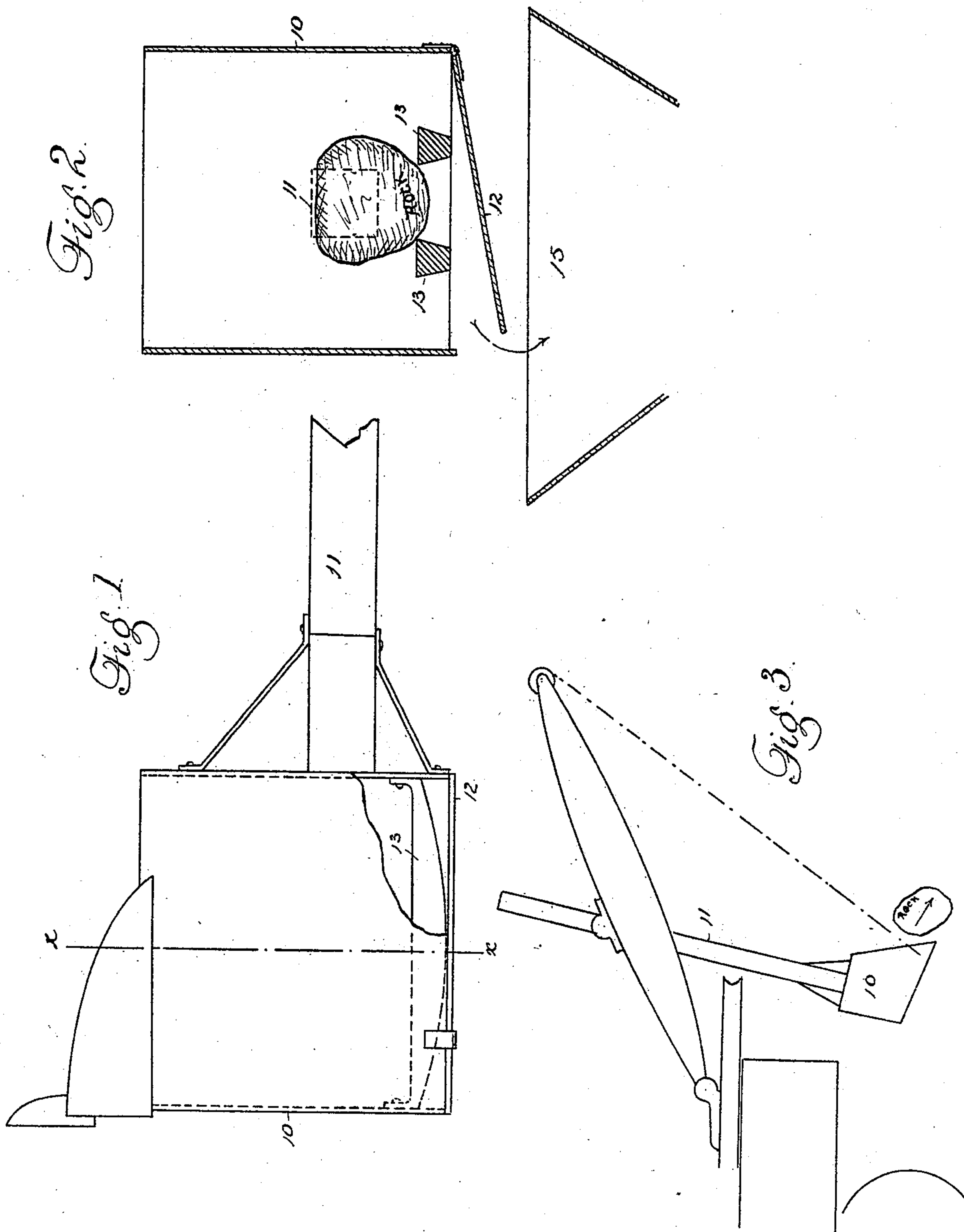


(No Model.)

E. S. BENNETT.
DREDGE BUCKET.

No. 516,697.

Patented Mar. 20, 1894.



WITNESSES:

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ERASTUS S. BENNETT, OF DENVER, COLORADO.

DREDGE-BUCKET.

SPECIFICATION forming part of Letters Patent No. 516,697, dated March 20, 1894.

Application filed February 24, 1891. Renewed March 22, 1892. Again renewed August 14, 1893. -Serial No. 483,152.
(No model.)

To all whom it may concern:

Be it known that I, ERASTUS S. BENNETT, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Dredge-Buckets; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention comprises certain improvements in dredge buckets or dippers, my object being to provide a bucket specially adapted for use in connection with my improved cylindrical rotating separator for which I have received Letters Patent of the United States, No. 448,189, dated March 10, 1891. This separator is used in connection with my improved dredge for which I have also made application for Letters Patent of the United States, said application being numbered 338,408, filed January 27, 1890, and allowed March 9, 1891. The material to be treated is discharged from the dredge bucket or dipper into a suitable hopper, whence it is discharged through a central end opening to the separator, which consists of two concentric screens provided with screw conveyers.

It frequently happens, in placer mining, that the bucket takes up large rocks or bowlders which would clog the inlet opening of the separator; and which, if allowed to pass thereinto, would subject the same to so much wear and tear that it becomes very desirable and almost necessary to prevent their leaving the bucket when its contents are discharged into the hopper; for, the outlet of the separator being smaller than the inlet, large stones that would pass in at the inlet, would, if allowed to enter, clog the outlet, thus choking the discharge of the separator. Hence, the object of the invention is to prevent these rocks from leaving the bucket through the bottom opening; or, in other words, to so construct a bucket as to prevent

them from leaving the same except through the top where they enter; whereby it results that they are returned to the bank and discharged thereon preparatory to filling. This I accomplish by providing the bucket with grate bars, which permit the rest of the material to pass freely therethrough and retain the rocks and bowlders which would clog the outlet opening of the separator or which are so large that it is not desirable to have them enter the same.

To this end, my invention consists in the features shown in the accompanying drawings, wherein is illustrated an embodiment of the invention.

In the drawings:—Figure 1 is a side elevation of a dipper or bucket, provided with my improvement. Fig. 2 is a vertical section taken on the line $x-x$, Fig. 1. In this view a rock is shown which is too large to pass between the grate bars or between them and the sides of the bucket, hence it is retained. Fig. 3 is an outline view illustrating the manner of discharging a rock from the bucket preparatory to filling.

In the views, wherein similar reference characters designate corresponding parts of the mechanism, the numeral 10 designates the body of the bucket, 11 the handle, 12 the door, and 15 the hopper leading to the inlet of the separator.

Secured transversely across the bucket, between the top and bottom, and preferably just inside the door when closed, are the grate bars 13. The number of the bars and the distance between them may be regulated as desired; the object being, as before stated, to prevent large rocks or bowlders from passing out of the bucket and clogging the outlet opening of the separator, and also to hold rocks of such size as to injure the separator screen or subject it to needless wear and tear. The grate bars may be of any desired size and strength; and may be secured to the sides or ends of the bucket in any suitable manner, as by riveting. (See Fig. 1.) By this construction, it will be observed, the large rocks are retained in the bucket until it is returned to the bank and assumes the posi-

tion shown in Fig. 3, which it does immediately before filling. The rock or rocks then roll out through the opening in the top, where they entered; when the bucket is again ready
5 for filling.

Having thus described my invention, what I claim is—

A dredge bucket provided with a dumping door, and having a grating adjacent to the

door and across the discharge opening, substantially as described.

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

ERASTUS S. BENNETT.

Witnesses:

JULIUS BROWN,
WM. MCCONNELL.