(No Model.)

J. MENGE.

DREDGING BUCKET.

No. 294,250. Patented Feb. 26, 1884.

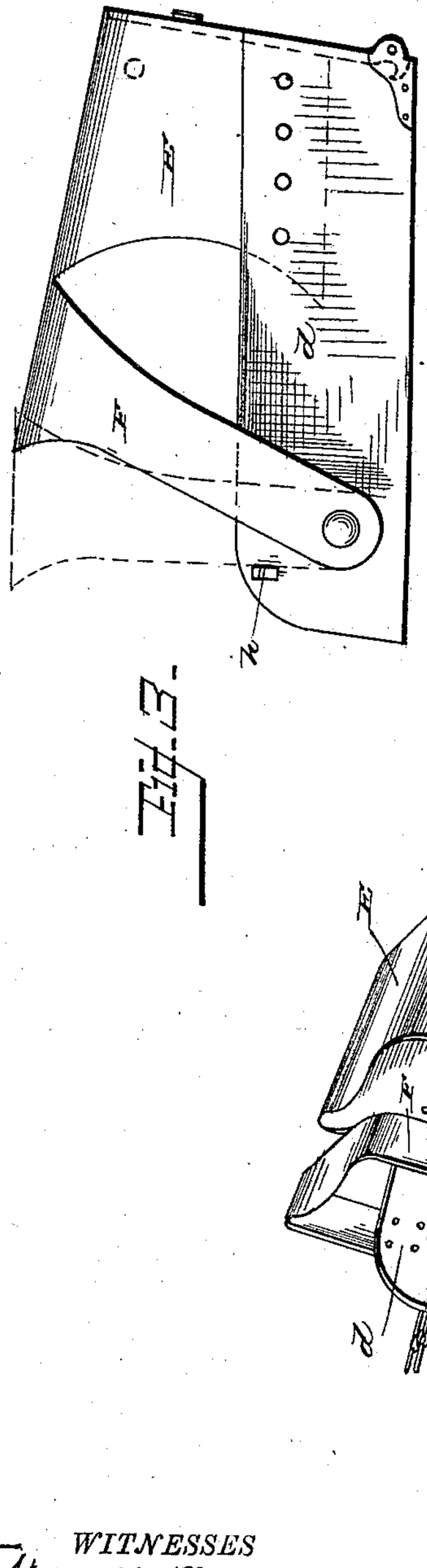

FIG. 3.

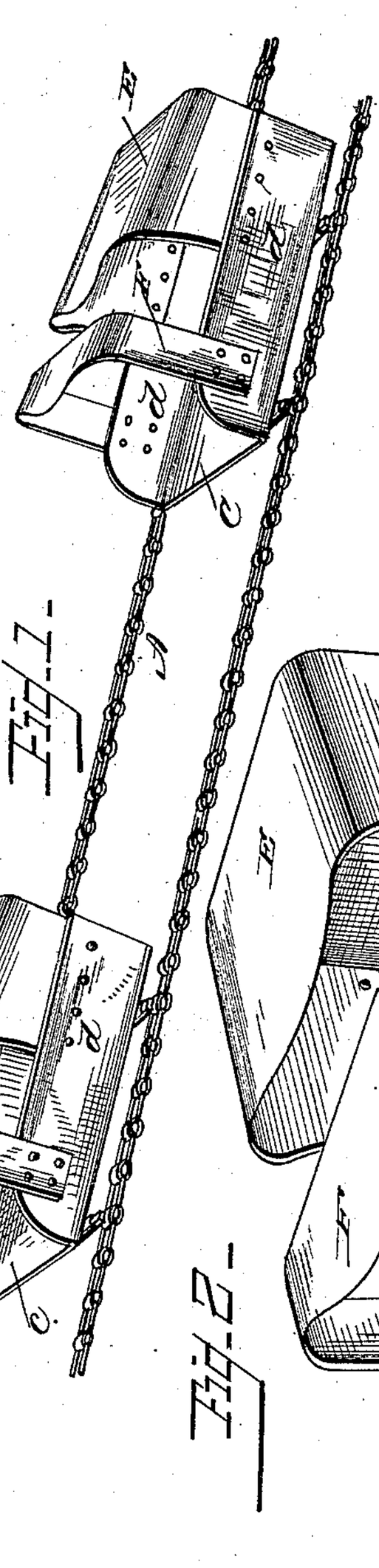

FIG. 1.

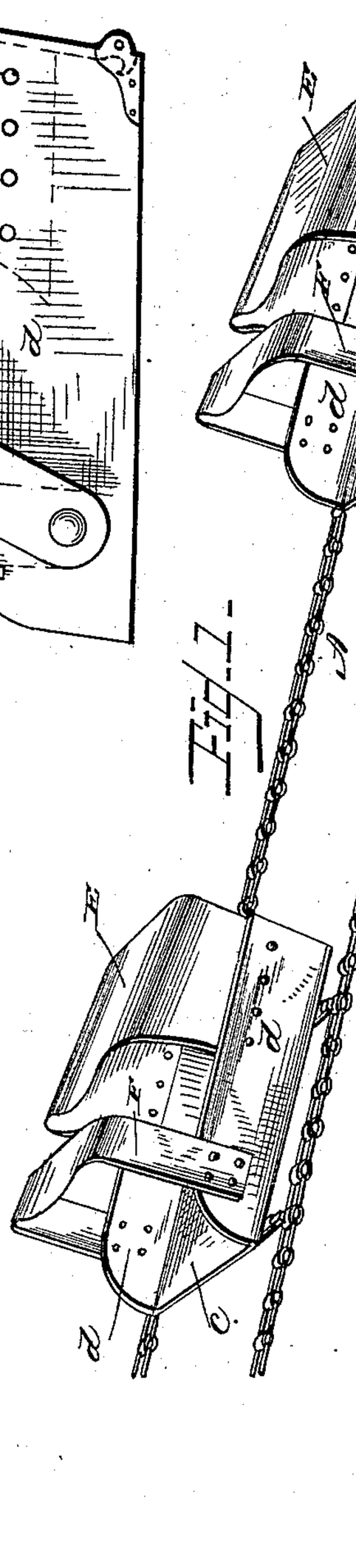

FIG. 2.

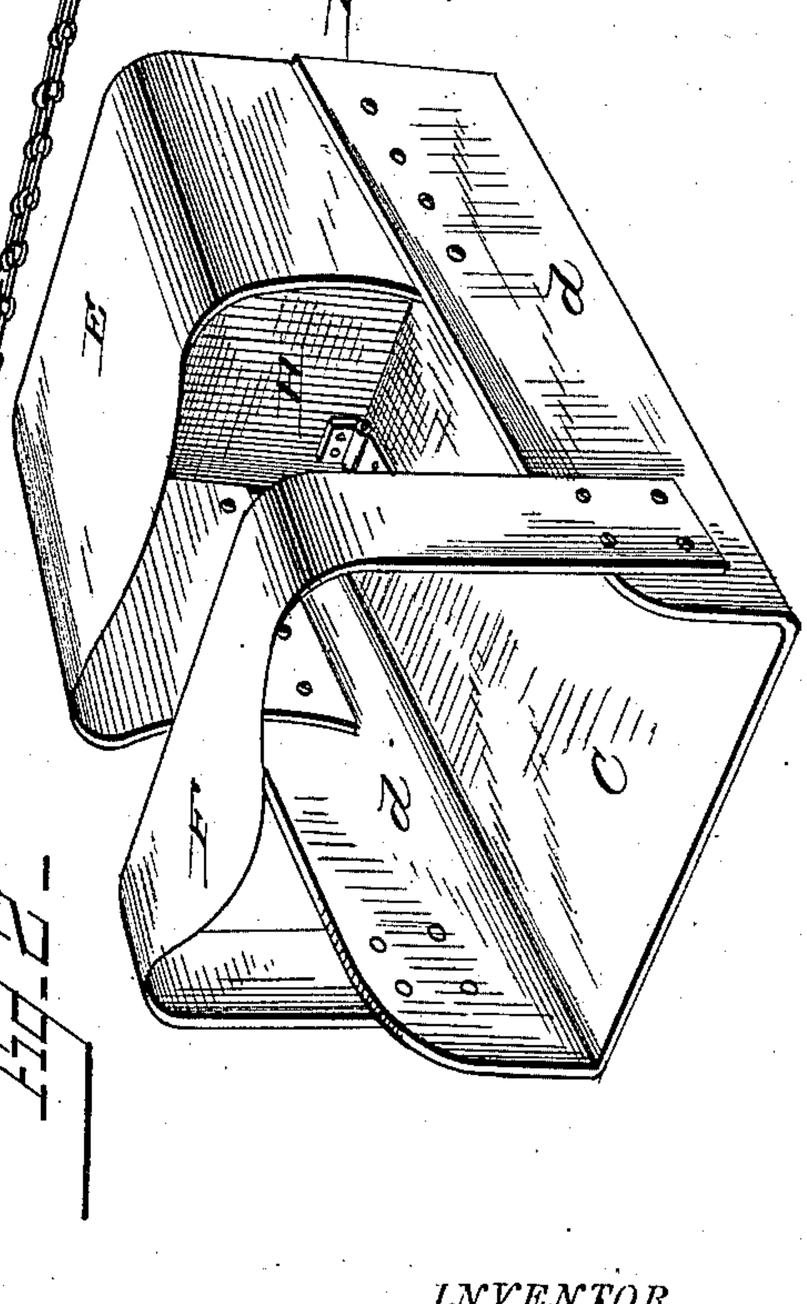

FIG. 4.

WITNESSES

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which are hinged at the base, substantially as indicated in Fig. 2 of the drawings. The movement forward of the hinged bottom also gives an impetus to the soil in the bucket, which assists the delivery of the same.

I reserve the right to apply these improvements to the scoop-buckets of the well-known constructions, and especially to those shown and described in my several patents.

I also reserve the right to apply these improvements to dredging-buckets of the dipper class—such as are used on the Osgood and other dredges; and I also reserve the right to vary the construction and arrangement of the parts without departing from the spirit of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A dredging-bucket having at the upper front end, in advance of the top section, an attached cutter having a similar peripheral outline and an intermediate space between the top section and cutter-bar, substantially as described.

2. A dredging-bucket having the cutter pivotally connected to the sides of the bucket and arranged in advance of the top section of the bucket, and stop means, substantially as and for the purpose set forth.

3. The improved dredging-bucket consisting of the lower section, upper section, bottom, and cutter having peripheral outlines to correspond with the upper section, with the intermediate space, substantially as described.

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

JOSEPH MENGE.

Witnesses:

ZENO T. GRIFFEN,

H. C. ALBERDA.

UNITED STATES PATENT OFFICE.

JOSEPH MENGE, OF NEW ORLEANS, LOUISIANA.

DREDGING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 294,250, dated February 26, 1884.

Application filed October 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MENGE, a citizen of the United States of America, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Dredging-Buckets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a perspective view of a portion of an endless chain with two dredging-buckets attached, showing my improvements. Fig. 2 is a perspective view of a dredging-bucket with my improvements applied thereto; and Fig. 3 is a side view of a bucket, showing the cutter pivotally attached to the sides thereof.

In the practical working of dredging-machines employing ordinary scoop-buckets or endless train buckets in sticky soil, it has been found that the soil adheres to the buckets, and the discharge from the buckets is not free on account of the adhesion, and whenever this occurs the buckets become clogged, and do not freely discharge in passing the highest point of elevation. The main object of this invention is to remove this serious difficulty by constructing a scoop-bucket that will discharge its contents readily and freely.

The invention consists in providing each bucket at or near its forward outer end with a steel bar with a cutting-edge attached to the opposite sides of the bucket, to serve as a cutter for loosening the soil or cutting through obstructions for the bucket, the construction and arrangement being substantially as will be hereinafter more fully set forth.

The invention further consists in a dredging-bucket provided with a cutter at or near its forward outer end and an intermediate space between said cutter and the upper section of the bucket, as will be hereinafter more fully set forth.

The invention further consists in the construction of the dredging-bucket, as will hereinafter be more fully set forth.

In the annexed drawings, A represents a portion of an endless chain for a dredging-machine of the Menge class, provided with a plurality of scoop-buckets, B, properly secured thereto by suitable means. The bucket B consists of the lower or bottom section, C, formed or provided with the side walls, *d*, the top or upper section, E, flush at the base with the lower side walls of the section C, and extended forward the distance of about one-half (more or less) the length of the bottom section, the front steel bar, F, curved to correspond with the peripheral outline of the upper section, E, and a hinged bottom, H. The parts E and F are firmly connected to the side walls, *d*, of the bottom section, C, by rivets or other fastening means. The front portion of the curved steel bar F is sharpened to form a cutting-edge. The cutter, which is arranged upon the upper front end of each bucket, is a little greater in diameter than the diameter of the forward portion of the upper section, E, so as to act upon the material or obstructions below the path of the circle traversed by the front end of the bucket. The bar is also arranged at a suitable distance from the forward edge of the top section, E, of the bucket, so as to form an intermediate space between the edge thereof and the rear edge of the curved bar F, substantially as shown in Figs. 1 and 2 of the drawings. This intermediate space between the upper edge of the top section of the bucket and the curved bar allows the excavations to pass wet and loosely into the part E, or body of the bucket, and for the emission of water in the excavated soil, and also lessens the frictional surface of adhesion in the bucket.

In Fig. 3 of the drawings the curved steel bar F is shown as pivoted to the side walls of the section C, so that the bar can fall back and rest upon the front edge of the section E of the bucket during the process of excavating, and when the bucket is about to unload its contents at the point of discharge the curved arm is automatically thrown forward, as indicated by the dotted lines, on account of its weight and the downward passage of the bucket, in which position the cutter is sustained from further movement by means of the stops *h*, arranged on opposite sides of the bucket. This slight forward movement of the curved arm loosens itself from the soil and enlarges the opening for the discharge, thus permitting the soil to escape easily from the bucket.

These buckets may be provided with either the fixed or movable bottoms, preference being given to the movable ones of that class