

(No Model.)

F. IMHORST.
Grappling Bucket.

No. 243,449.

Patented June 28, 1881.

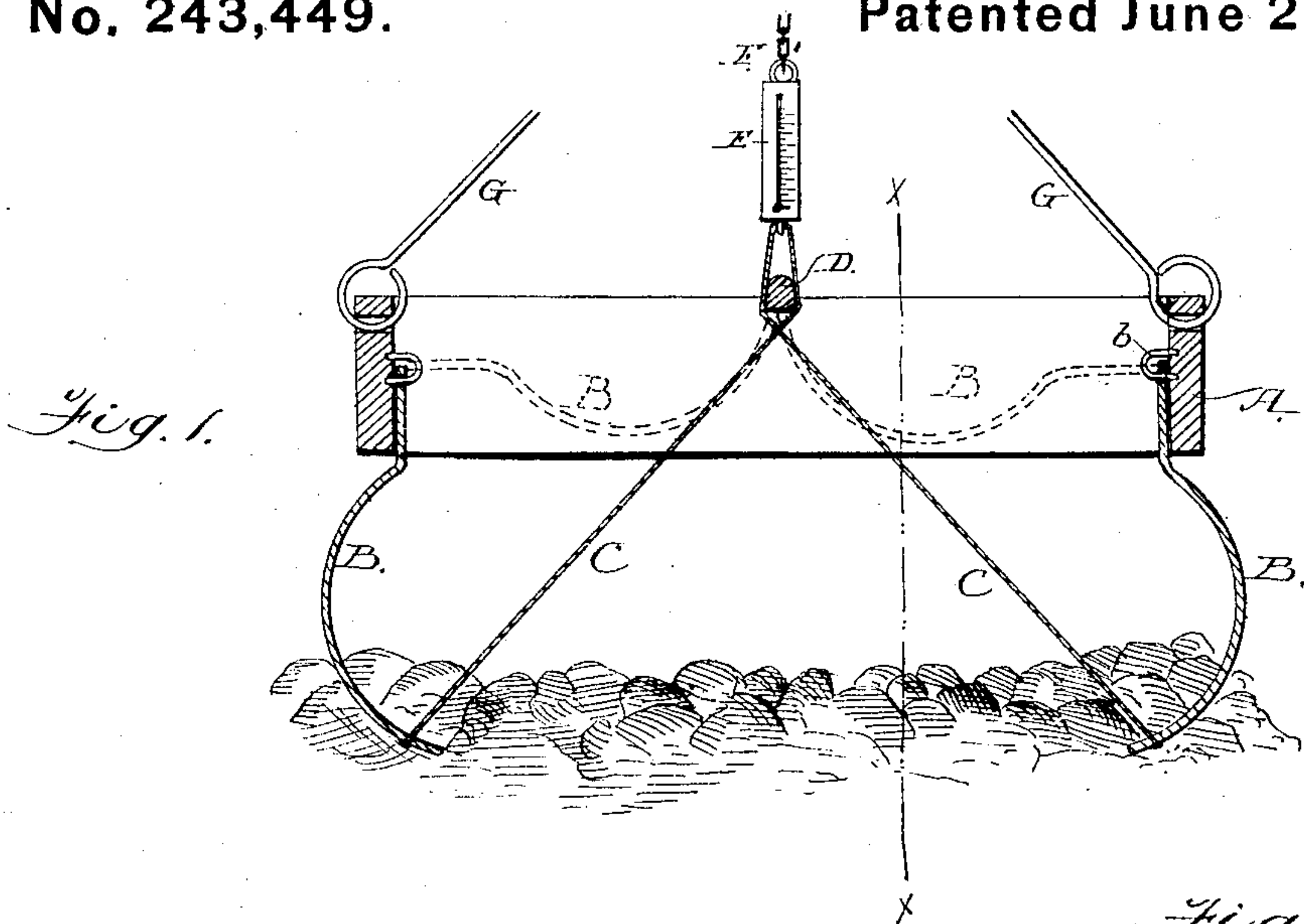


Fig. 3.

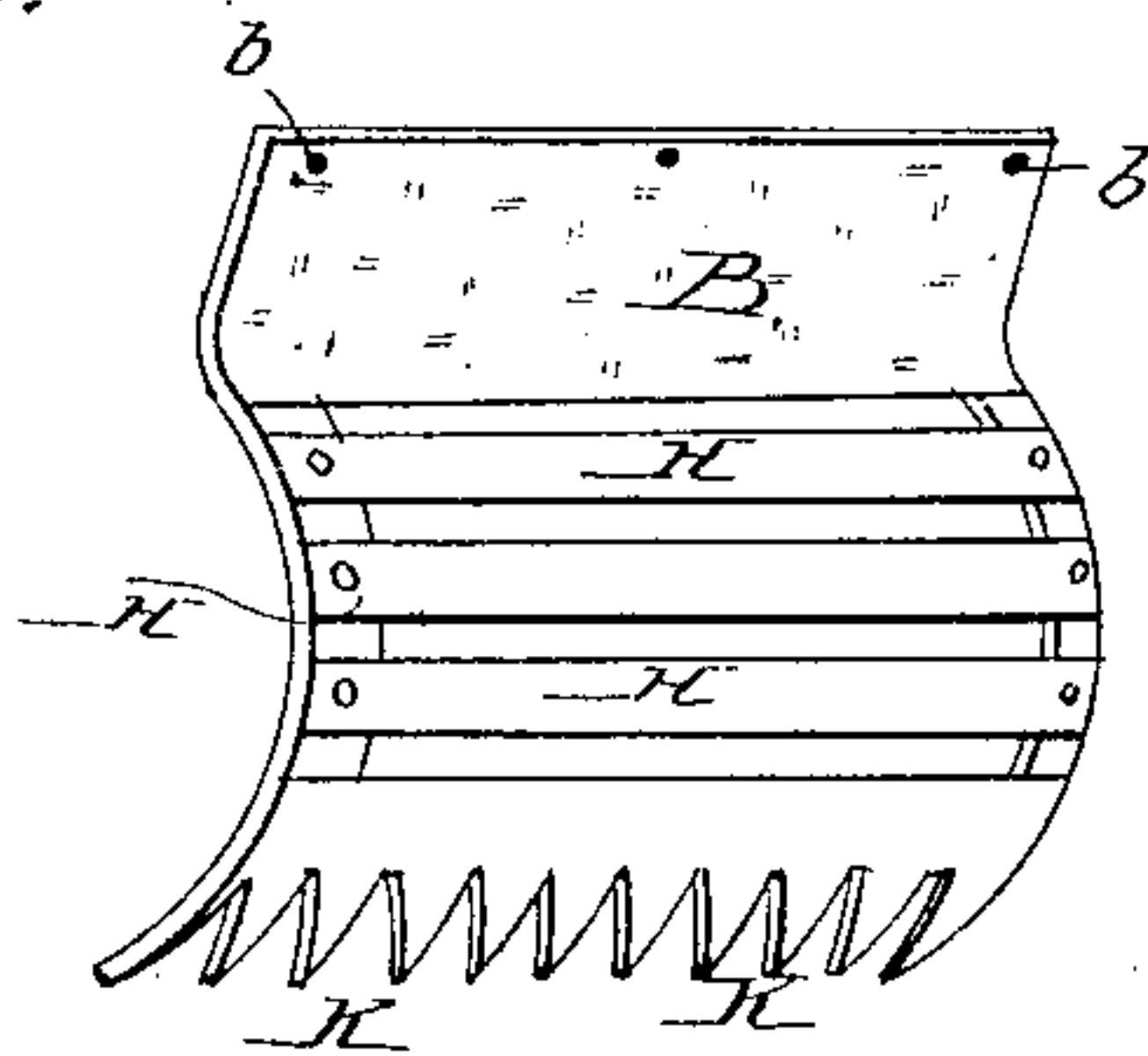


Fig. 4.

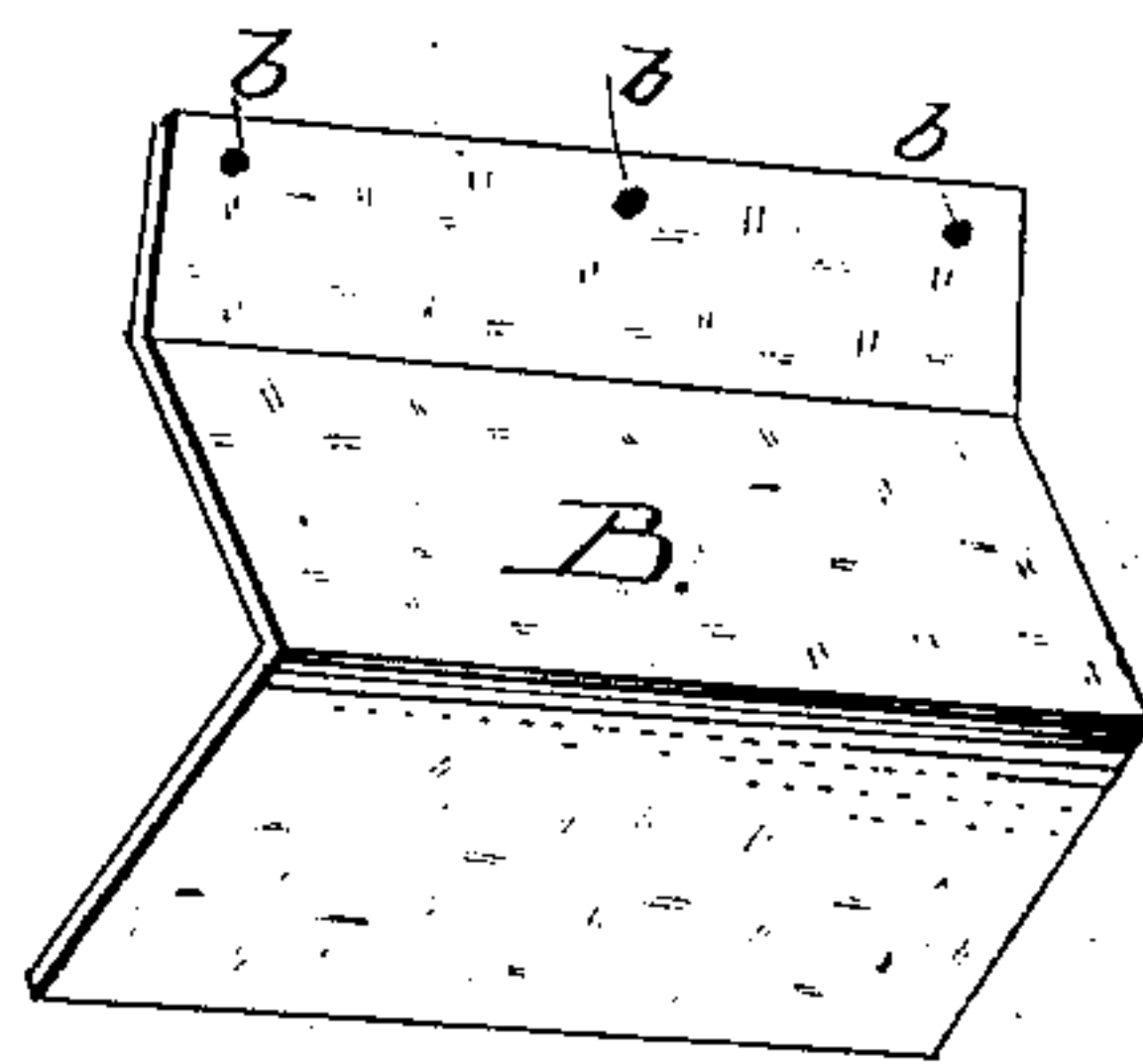


Fig. 5.

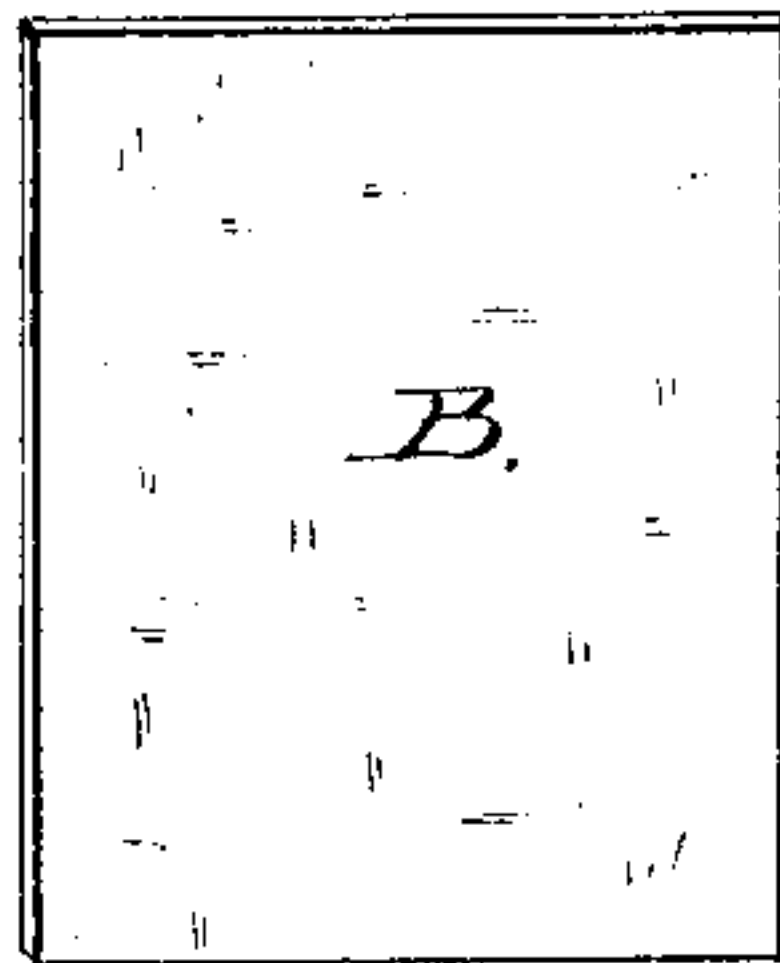
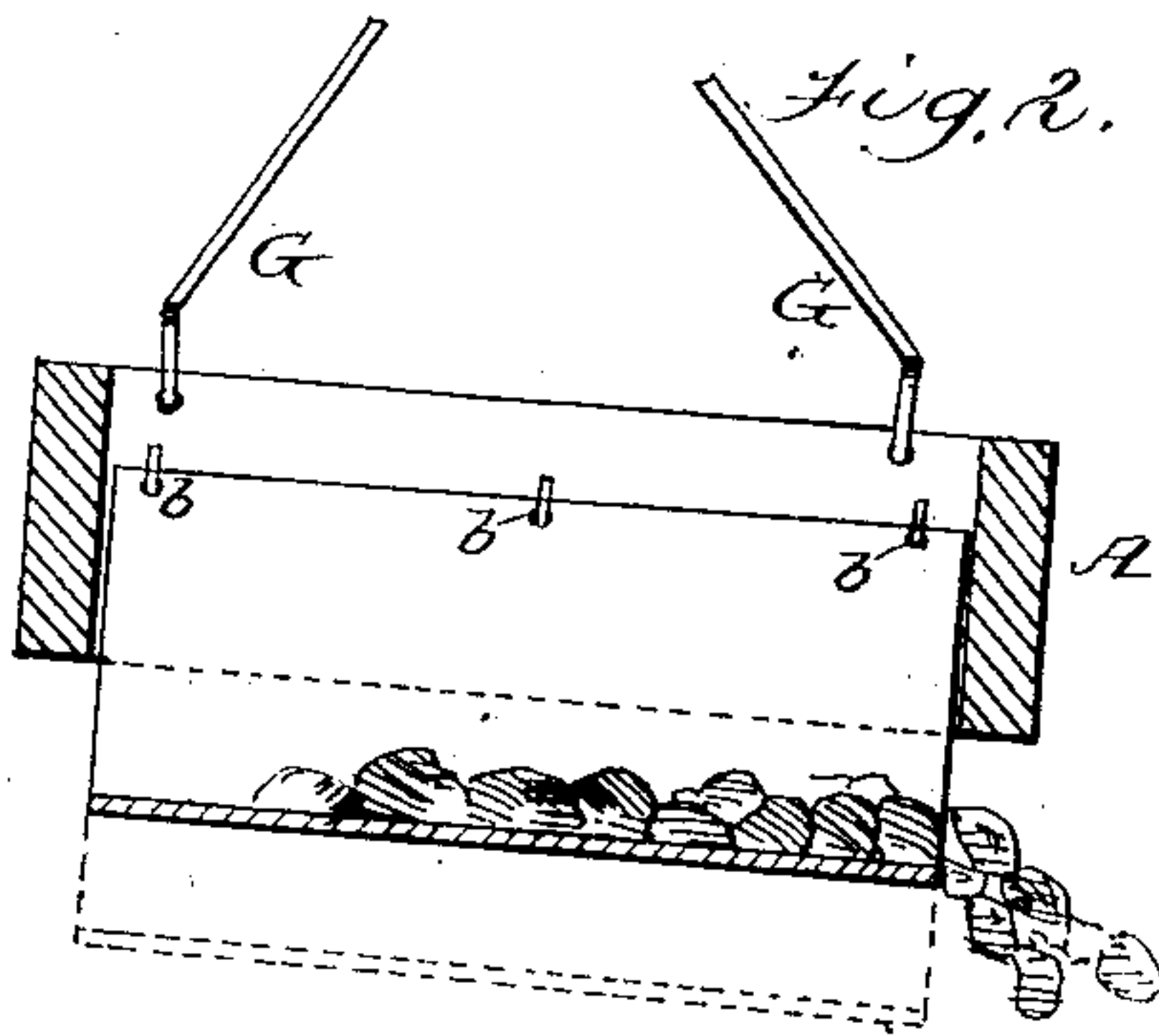


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

FERDINAND IMHORST, OF BALTIMORE, MARYLAND.

GRAPPLING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 243,449, dated June 28, 1881.

Application filed June 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND IMHORST, of the city of Baltimore, State of Maryland, have invented new and useful Improvements in Combined Grappling and Dumping Buckets, for grappling and holding articles in bulk, such as grain, ores, oysters, shells, gravel, earth, coal, &c, said bucket being provided with a scale that the articles contained by the bucket or box may be weighed by the same motion that will close the grappling apparatus.

My improvements are directed toward the grappling, dumping, and weighing construction of a bucket or box constructed in a very simply form, so that the bucket and the contents thereof may be weighed at the same time that they are hoisted. There is no difference in the shape of sides or rim of the bucket or box from those in common use, but the improvements consist in the combination thereof with a movable bottom hinged or otherwise secured to the sides of the bucket, and shaped into such forms or curvatures as may be considered most convenient or advantageous for grappling and retaining articles in bulk. The sides of the bucket or box may be made of solid or perforated material, such as may be found to be most advantageous for doing the work required. The bottom of the bucket forming the grappling apparatus is to be made either of solid or perforated material. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the grappling-bucket, also showing the scale as used in combination therewith. Fig. 2 is a vertical section of bucket, and showing face view of curved bottom. Fig. 3 shows a perforated toothed or pronged grappling-bottom of a curved shape. Fig. 4 shows the grappling-bottom made into an angular shape. Fig. 5 shows a grappling-bottom made with a straight surface.

Similar letters refer to similar parts throughout the several views.

A shows the frame or sides of the bucket or box, to which are secured by means of hinges or staples *b* the grappling-sections B B forming the bottom of the bucket, placed in a pendant position, entered into the mass to be secured, and then drawn partially or wholly together by fastenings, chains, or ropes C C.

The movable points of the bottom are prevented from passing beyond the horizontal line by the cross-bar or projection D. The grappling-bucket can now be suspended entirely and safely by chains or ropes C C, to which is secured the scale E, which, being secured and suspended by the hoisting chains or ropes above, will show the weight of the bucket with inclosed contents exactly. When the bucket is to be emptied it is held suspended by chains or ropes G, and the required slack given to chains C C, which will cause the bottom to drop, and its contents will fall below. If it be desirable to slide the contents of the bucket sidewise from the bucket, then a limited slack is given to the chain C only sufficient to effect an opening sidewise between the bottom and the sides or rim of the bucket or box.

In Fig. 3 B shows the grappling-bottom; *b*, the hinges or slots for hinging it to the frame; H, the slots or perforations for allowing water or dirt to run through in case of oyster or other shell grappling. K shows prongs or teeth facilitating the uprooting of refractory articles.

In Fig. 4 B shows the grappling-bottom as made into an angular shape.

In Fig. 5 B shows the shape of the grappling-bottom to be made with a straight surface.

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

1. A bucket or box having its bottom formed so as to act as a grappling apparatus, consisting in the rim or frame to which is hinged or secured a bottom made in sections and to be either curved, angular, or with a straight surface of solid or perforated material, the edges of the bottom to be either smooth, ragged, or toothed, in combination with mechanism for elevating and lowering the bucket, as and for the purposes set forth.

2. The combination of the grappling bucket or box with the scale and mechanism for operating the combined devices, as and for the purposes set forth.

3. The combination of the hoisting box or bucket with a scale for indicating its contents, substantially as and for the purpose set forth.

FERDINAND IMHORST.

Witnesses:

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