

No. 656,224.

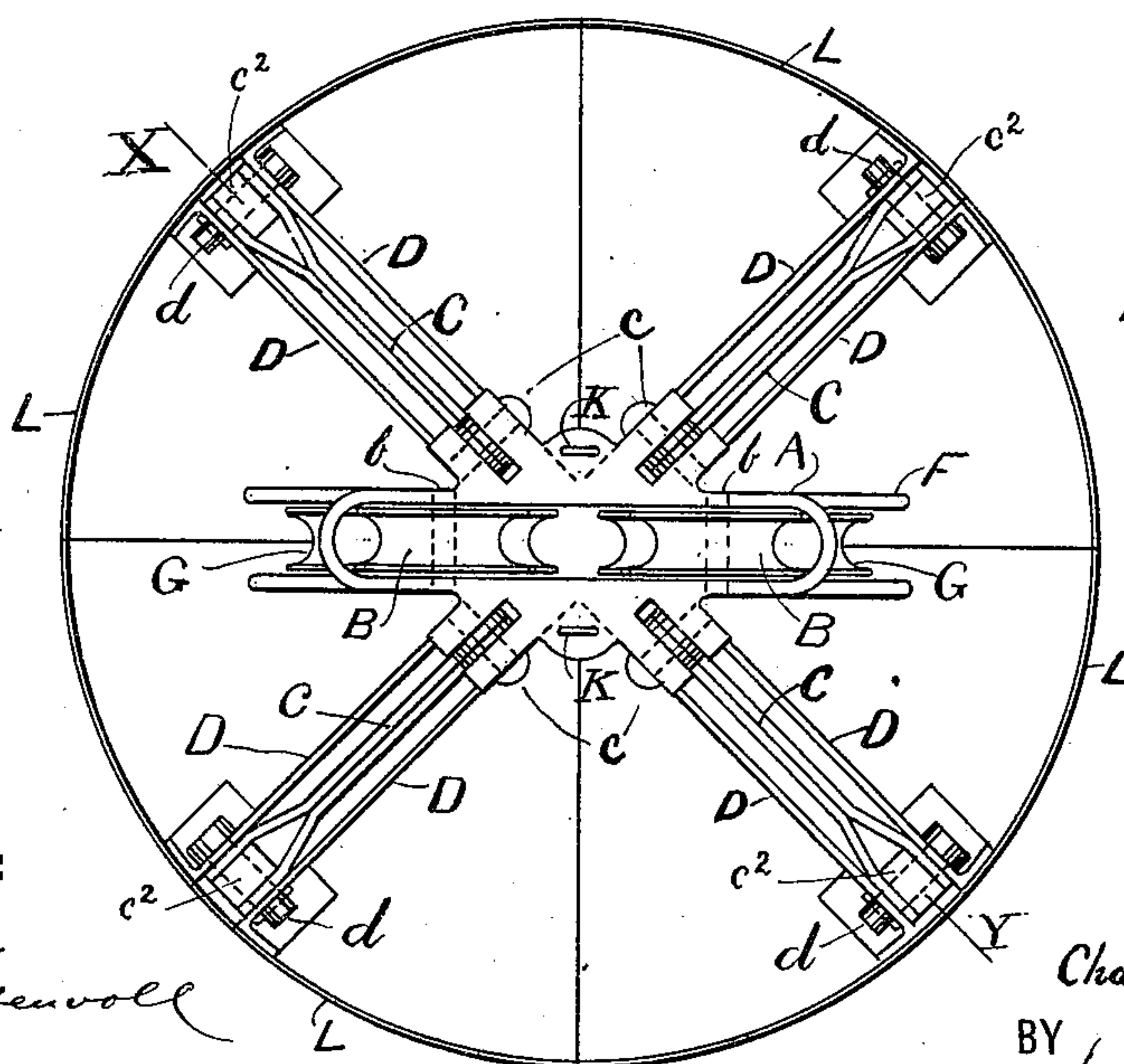
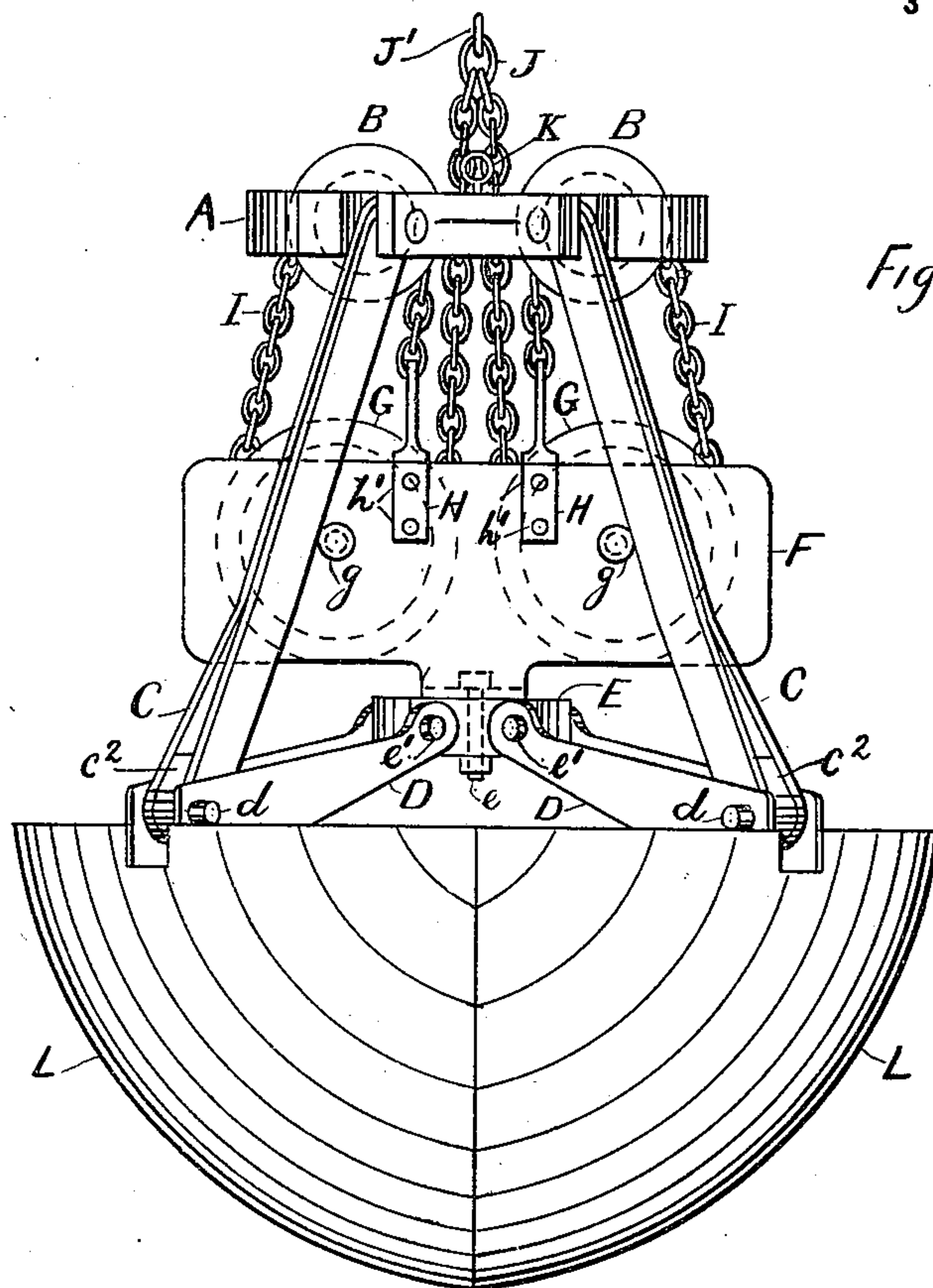
Patented Aug. 21, 1900.

C. H. SMITH.
DREDGING BUCKET.

(Application filed May 8, 1900.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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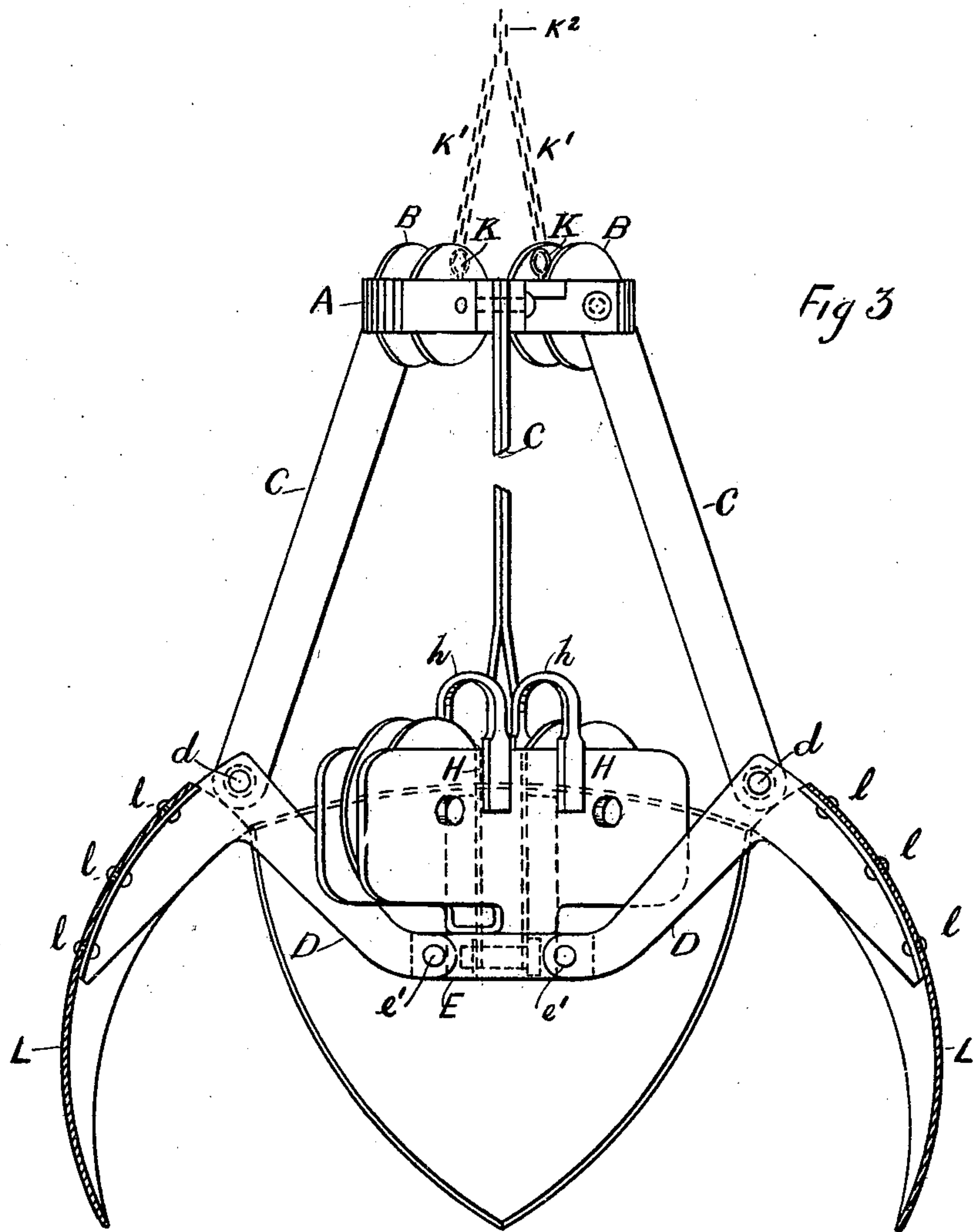
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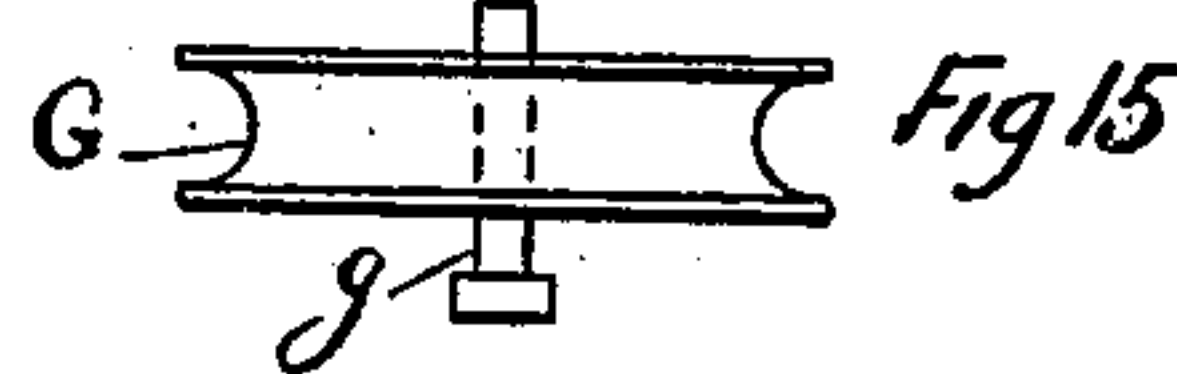
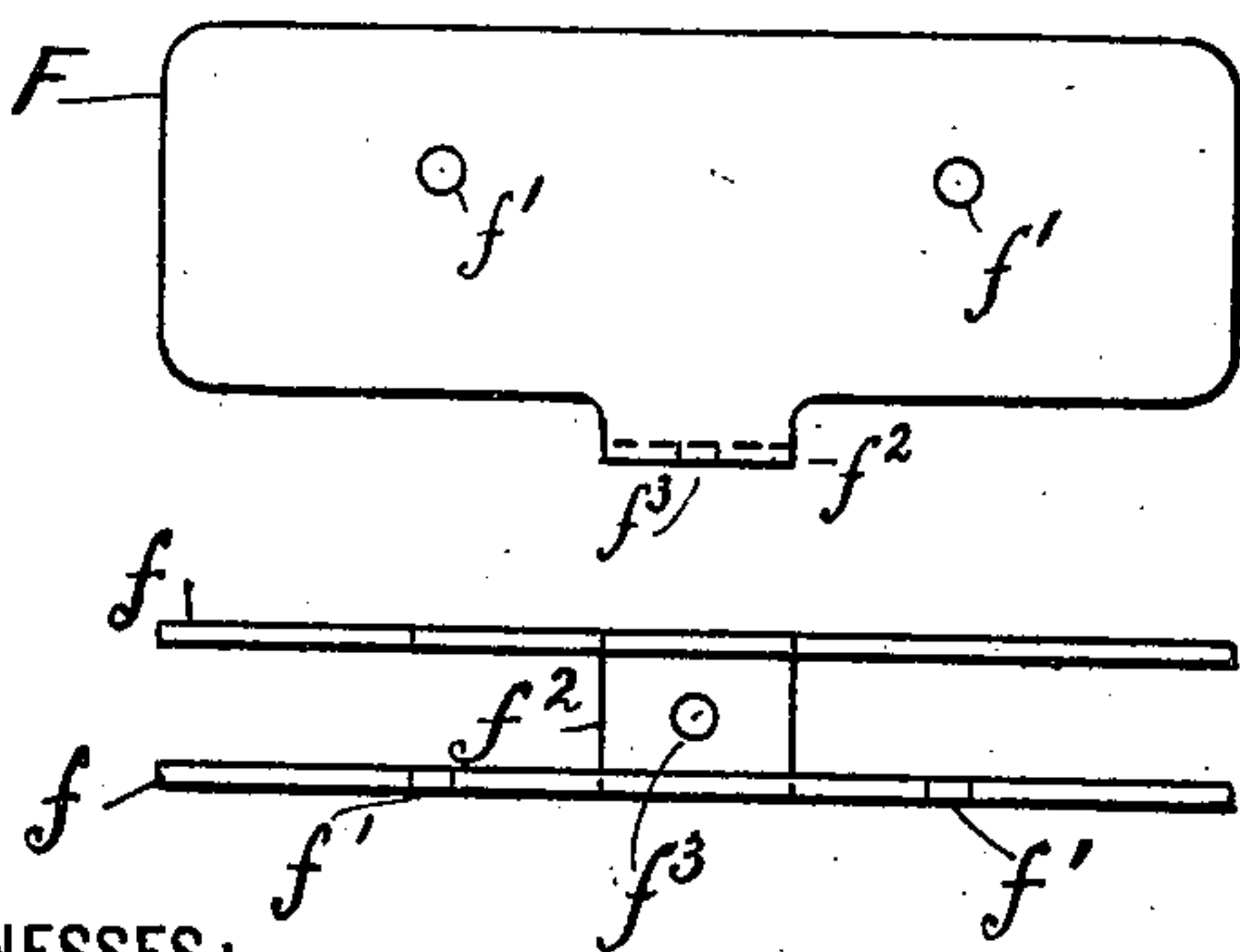
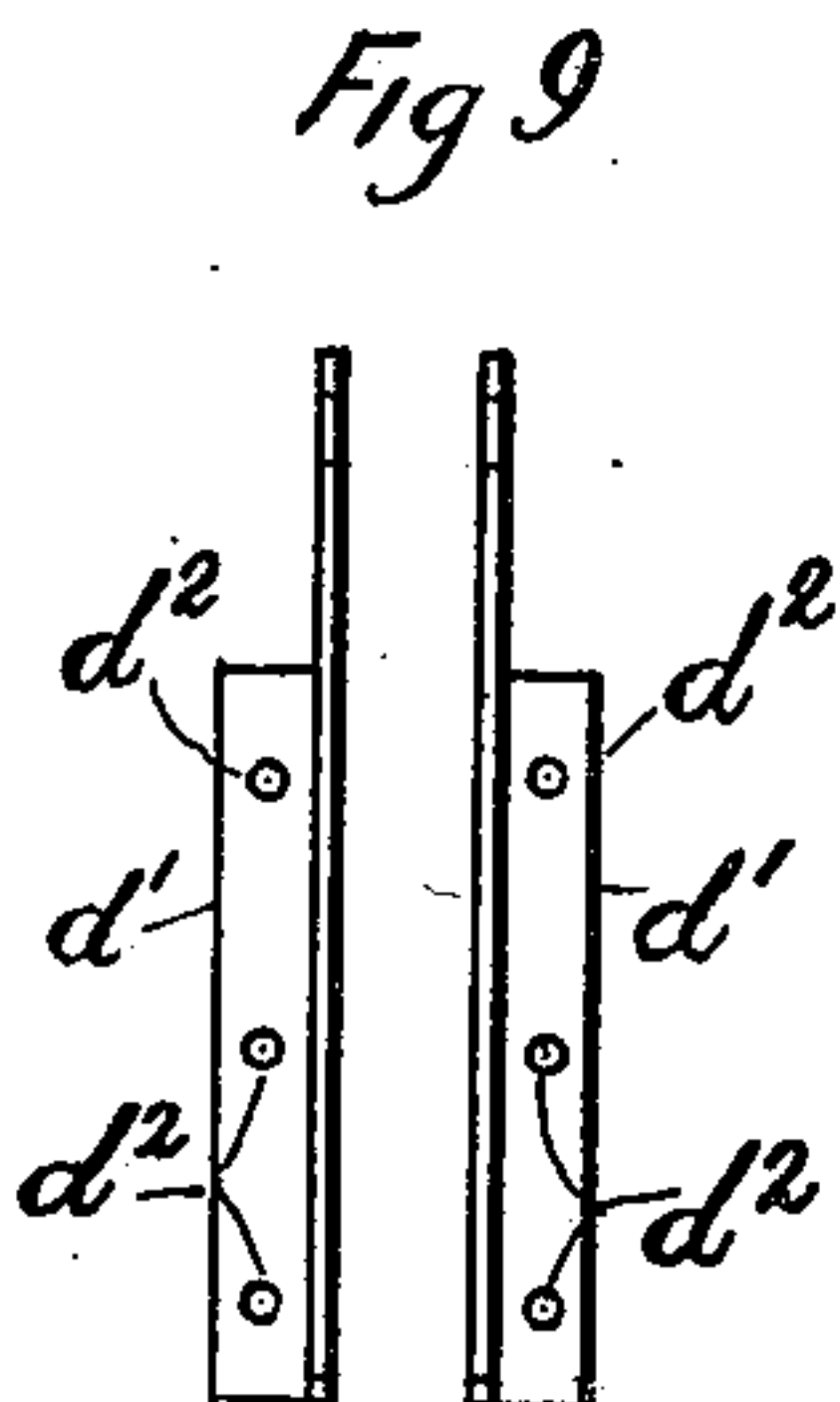
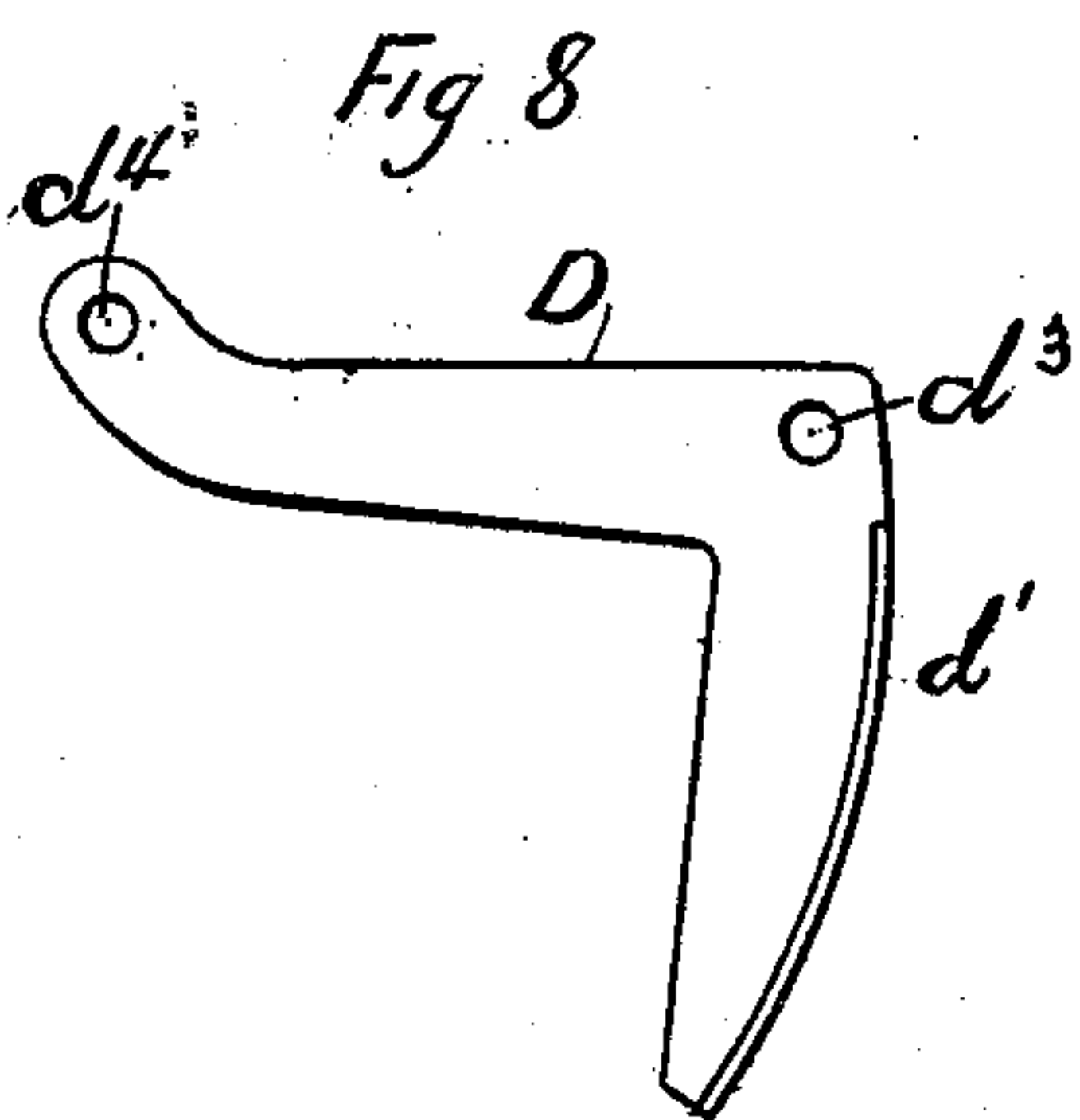
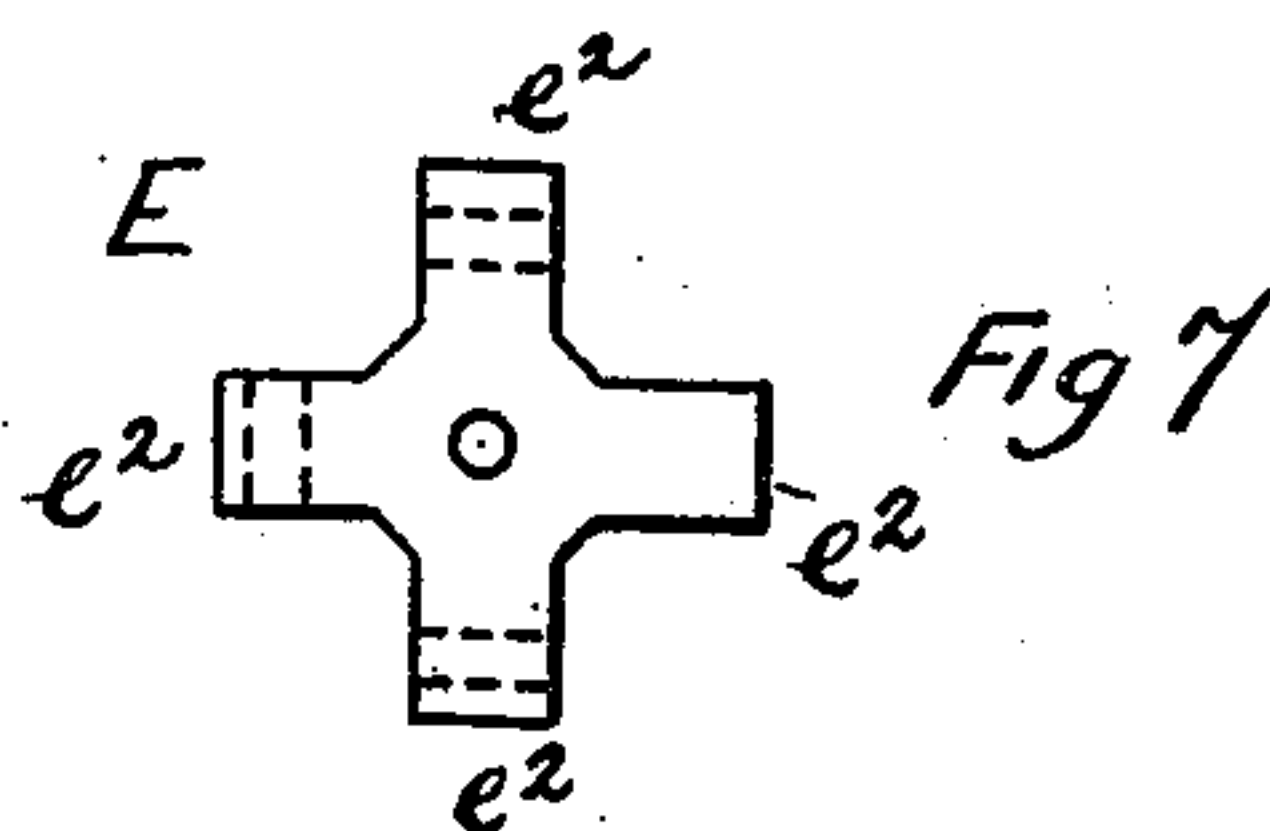
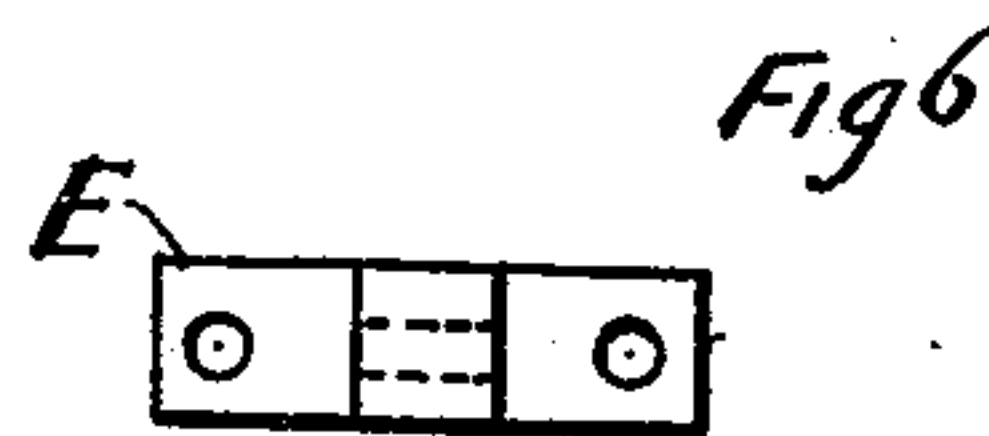
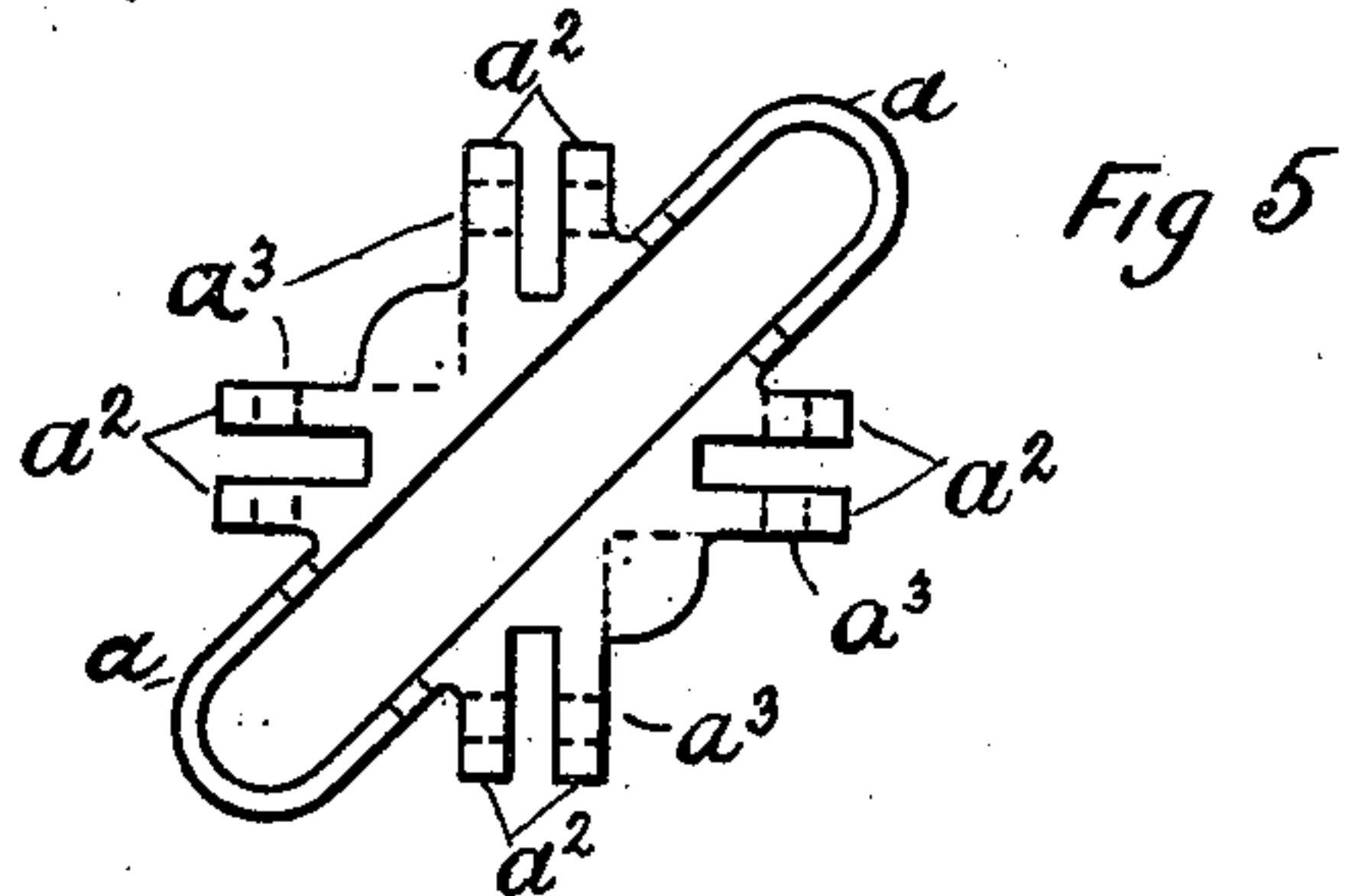
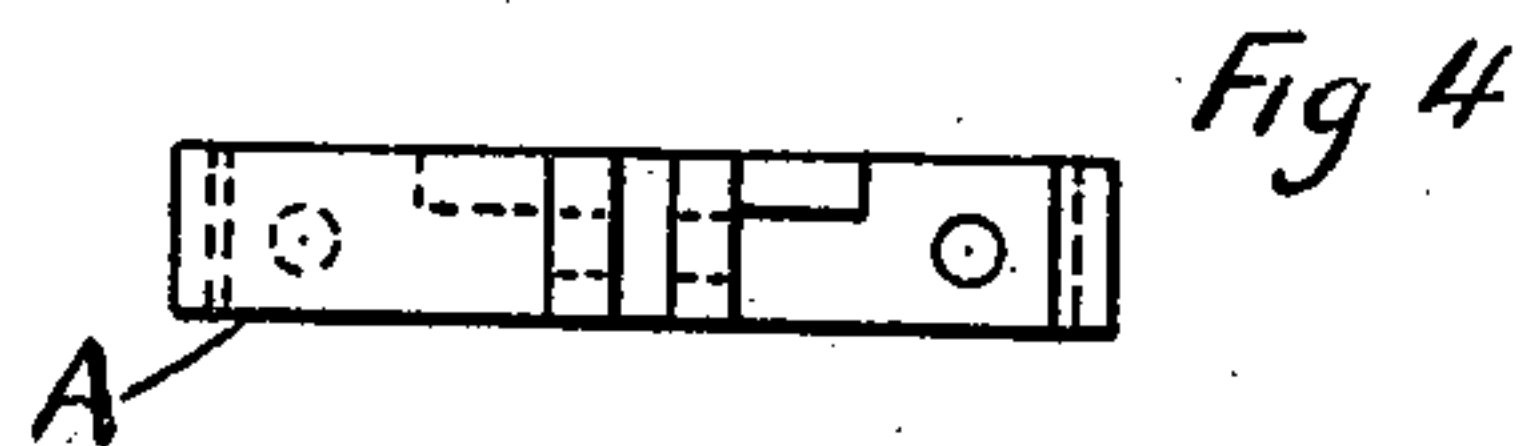
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3 Sheets—Sheet 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES HENRY SMITH, OF JERSEY CITY, NEW JERSEY.

DREDGING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 656,224, dated August 21, 1900.

Application filed May 8, 1900. Serial No. 15,926. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY SMITH, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Dredging-Buckets, of which the following is a specification.

This invention relates to certain new and useful improvements in dredging-buckets, and has for its object the production of buckets which will hang plumb while being raised or lowered and which will consist of few parts of very simple construction.

Figure 1 shows a front elevation of the bucket with its sections closed. Fig. 2 is a partial top view of Fig. 1. Fig. 3 is a fragmentary elevation of the bucket with a section on the line X Y of Fig. 2. Figs. 4 and 5 show, respectively, an elevation and plan of the head-block. Figs. 6 and 7 represent an elevation and plan of the bottom block. Figs. 8 and 9 show the braces connecting the sections to the bottom block. Figs. 10 and 11 show one of the links connecting the top block with the braces of the sections. Figs. 12 and 13 show the housing for the sheaves. Fig. 14 represents a plan of one of the pulleys in the head-block. Fig. 15 is a plan of one of the sheaves in the bottom-block housing.

In the drawings the bucket is shown to consist of four spherical sections known commonly as the "orange-peel" type; but the number of sections can be increased or diminished without departing from the spirit of my invention. The center from which each section is described is taken so that the adjacent edges of the sections will make obtuse angles with each other.

Referring to Figs. 1, 2, and 3, the bucket consists of the head-block A, supporting the pulleys B B and pinned to links C, which in turn are pinned to the braces D D. A bottom block E is pinned to the braces D D and supports a housing F, which carries the sheaves G G. A chain I I is fastened to the straps H H, and is then led over the pulleys B B, running from said pulleys downwardly under the sheaves G G, and then rising between the pulleys B B, continuing up above the same and meeting in a link J, from which a single chain J' runs to a hoisting-drum.

Eyebolts K K are fastened to the head-block A for a chain $k' k'$, from which a chain k^2 runs to a hoisting-drum.

The head-block A consists of a housing $a a$ for two pulleys B B, which turn on the horizontal and parallel axles $b b$ equally distant from the vertical center line of the bucket. Bifurcated lugs a^2 are cast with the head-block, and they are drilled with the holes a^3 for the pins c to connect the links C to the said head-block.

The links C consist of two portions $c' c'$, which run parallel at the top ends and are spread at their lower ends with a filler c^2 to obtain a wide bearing for the pins d , which connect said links with the braces D D. The braces consist of the approximately-right-angular portions D D with flanges d' . They are drilled at d^2 to secure them to the sections L of the bucket by means of the rivets l , and are connected to the links C C with the pins d and to the bottom block E by means of the pins e' .

The housing F consists of the two vertical and parallel sides $f f$, which are drilled with the holes $f' f'$ for the pins $g g$ on which the sheaves G G turn. The said pins $g g$ are parallel and equally distant from a vertical line running through the center of the bucket. The sides of the housing are connected by the horizontal portion f^2 , through which the hole f^3 is drilled for connecting the said housing to the bottom block by means of the bolt e .

The straps H H are U-shaped at the top h and are riveted to the housing F with the rivets h' .

The bottom block E is cross-shaped, consisting of the four lugs e^2 drilled for the pins e' and for the bolt e through its center.

The operation of the bucket is very simple, and referring to Figs. 1 and 2 it is shown ready to be raised, hanging either on a chain J', running from the link J, or on a chain k^2 , running from a chain K' K', Fig. 3, secured to the eyebolts K K. The tension of the chain I I keeps the sheaves G G in close proximity to the pulleys B B, and the sections L of the bucket, through the pull exerted on the braces D through the housing F and the lower block E, are kept closed. When it is desired to open the bucket, as shown in Fig. 3, a chain J', leading from link J, is slackened

and at the same time keeping the chain K² taut, when the weights of the chain I I, housing F, sheaves G G, and bottom block E lower the inward and spread the outward
5 ends of the braces D D, throwing thereby the sections L of the bucket out and open.

Having fully described my invention, I desire to secure by United States Letters Patent and claim—

- 10 In a bucket a head-block with bifurcated lugs and a housing; two pulleys journaled in said head-block; a cross-shaped bottom block, the ends of the cross constituting journal-boxes, and the said block vertically drilled
15 through its center for a bolt; a housing consisting of two vertical sides and a horizontal bottom drilled for a bolt to secure the same to the bottom block; two sheaves turning on parallel and horizontal axles secured in the
20 housing; links consisting of two parallel por-

tions open at their lower ends; a filler between the open ends of the said links; approximately right-angular braces pinned to the bottom block and riveted to the sections of the bucket; spherical-shaped bucket-sections, disposed so that the adjacent edges of
25 the same meet at obtuse angles; U-shaped straps secured to the sheave-housing; a chain linked to said straps running over the pulleys and under the sheaves; eyebolts with a chain
30 secured to head-block, all substantially as described.

Signed at Jersey City, in the county of Hudson and State of New Jersey, this 23d day of January, A. D. 1900.

CHARLES HENRY SMITH.

Witnesses:

LOUIS STUBENVOLL,
A. D. JANSEN.