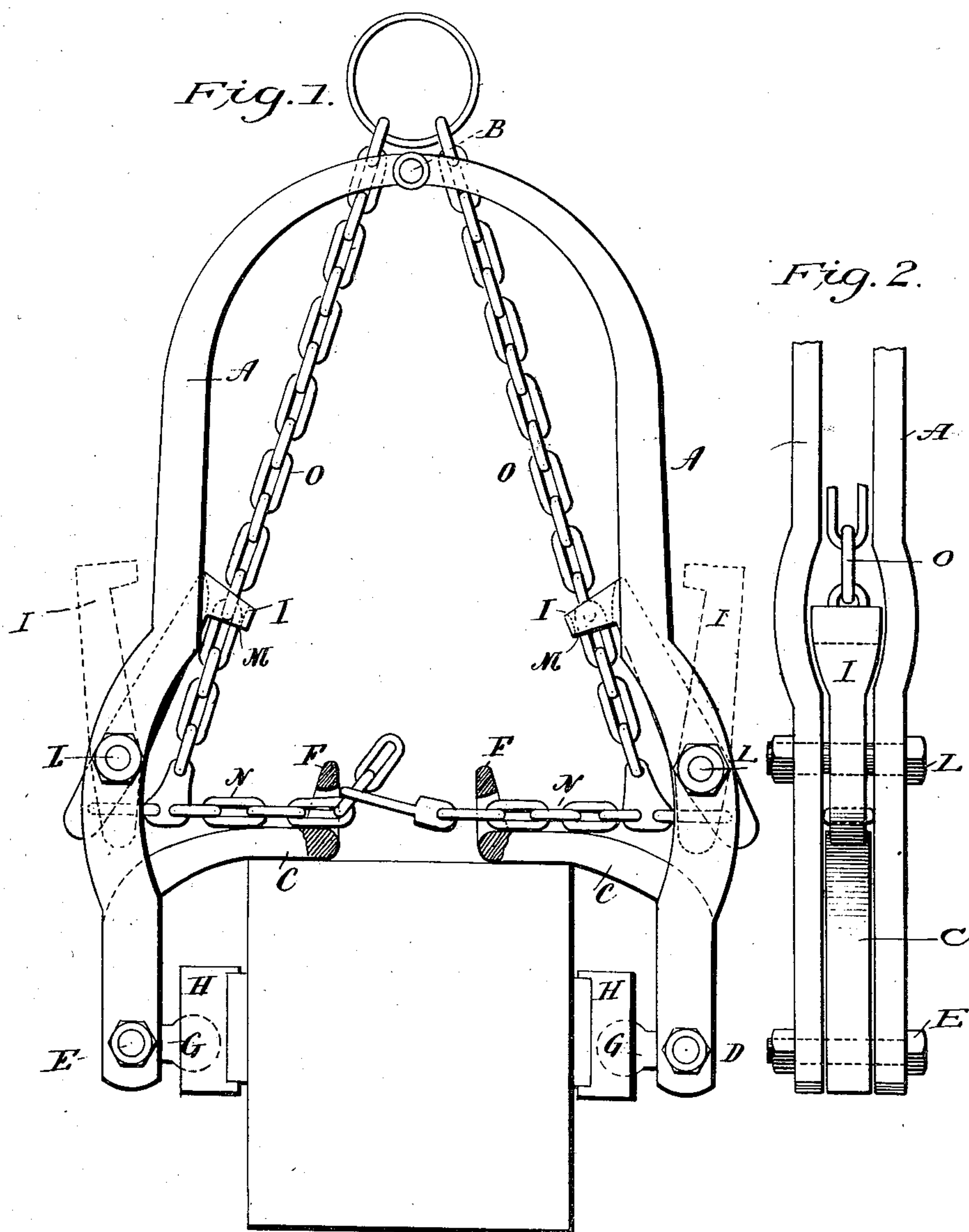


(No Model.)

F. BEATTIE.
LIFTING DOG.

No. 542,232.

Patented July 9, 1895.



Witnesses
J. H. Shumway
Lillian D. Kellogg

Frank Beattie
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UNITED STATES PATENT OFFICE.

FRANK BEATTIE, OF LEETE ISLAND, CONNECTICUT.

LIFTING-DOG.

SPECIFICATION forming part of Letters Patent No. 542,232, dated July 9, 1895.

Application filed February 4, 1895. Serial No. 537,219. (No model.)

To all whom it may concern:

Be it known that I, FRANK BEATTIE, of Leete Island, in the county of New Haven and State of Connecticut, have invented a new Improvement in Lifting-Dogs; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the apparatus as engaged with a stone; Fig. 2, a side view of the lower portion of the apparatus.

This invention relates to an improvement in lifting-dogs, and is an improvement upon the device shown and described in the application filed by me December 8, 1894, Serial No. 534,203.

In the device above referred to a slotted transverse rod was employed to support the upper ends of the jaws, and such construction is found very advantageous in using the device for raising small stones; but necessarily the length of the rod is limited, and consequently the limit of movement of the upper ends of the jaws is limited, so that the device is not conveniently used with wide stones.

One object of my present invention is to produce a pair of dogs which may be applied to stones of any width.

In employing bearing-blocks at the lower ends of the jaws of lifting-dogs it is found in practice that said blocks have a tendency to rock, as the pressure of the stone is downward, and a second object of this invention is to overcome this difficulty; and the invention consists in the constructions as hereinafter described, and particularly recited in the claims.

As in the device shown in the application above referred to, this device consists of a pair of tongs, the two legs A A of which are formed of two plates connected at their upper ends by a pivot B. Between the lower ends of the tongs jaws C C are hung upon pivots D E, which pivots also serve to connect the lower ends of the plates forming the legs of the tongs. These jaws curve upward and are formed at their upper ends with eyes F, which stand in a plane at right angles to the plane of the jaws, and at their lower ends

with projecting arms G, to which bearing-blocks H H are secured, and provided with connections to form a universal joint therewith. Between the plates of the tongs, and about midway of their length, arms I I are suspended upon pivots L L, and preferably the upper ends of said arms are formed with eyes M. The lower ends of the arms which extend below the pivots L are connected by tension-chains N N, which chains extend through the eyes F F of the jaws. Connected to the chains N N are lifting-chains O O, which extend upward through the eyes M and into connection with the raising apparatus, (not shown,) the chains N N being adapted to be engaged with each other at various points to adjust the distance between the arms I I.

The connection between the blocks H and the arms G is made near the lower ends of the blocks, so that the extension of the blocks above the arms is considerably greater than the distance below the arms, and so that the natural tendency of the upper ends of the blocks would be to rock toward each other.

In operation a stone is placed between the blocks and the chains N N drawn toward each other and engaged, in which position the upper ends of the arms are thrown outward, as indicated in broken lines. Lifting-strain then being applied to the chains O O, the upper ends of the arms will be drawn toward each other, which places the chains N N under tension and consequently draws the blocks H H into close contact with the stone to be raised, and because the connection between the blocks and the jaws is made at the lower ends of the blocks the grip of the blocks upon the stone will be very materially increased. In lifting stones of about the same dimensions the adjustment of the chain N N for each operation is not required, and this chain, passing through the eyes of the jaws, holds the upper ends of the jaws and prevents their dropping downward to seriously inconvenience the operators in adjusting the apparatus upon a stone. If desired, the pivots D E may so connect the lower ends of the jaws with the tongs as to prevent free swinging movement, so that they will be frictionally supported in any position to which they may be turned.

I claim—

1. A lifting apparatus consisting of a pair

of tongs, the legs of which are vertically divided, jaws hung in the lower ends of said legs and provided with bearing-blocks, the upper ends of said jaws formed with eyes, 5 arms hung in said legs above said jaws, tension chains passing through said eyes and connecting the lower ends of said arms, and a lifting chain connected with the tension chains and in engagement with the upper ends 10 of said arms, and whereby said arms are drawn together in the raising operation, substantially as described.

2. The combination in a lifting apparatus comprising a pair of jaws, two swinging arms

connected with said jaws and lifting chains 15 in engagement with said arms for raising them and said jaws, of bearing blocks secured to the lower ends of said jaws by universal joints, which joints are below the transverse centers of the said blocks, substantially as described. 20

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK BEATTIE.

Witnesses:

M. C. BEATTIE,
C. I. BEATTIE.