F. W. TICKNER.

EXTRACTOR FOR CORE BARRELS.

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1,122,046.

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Fig. 2.

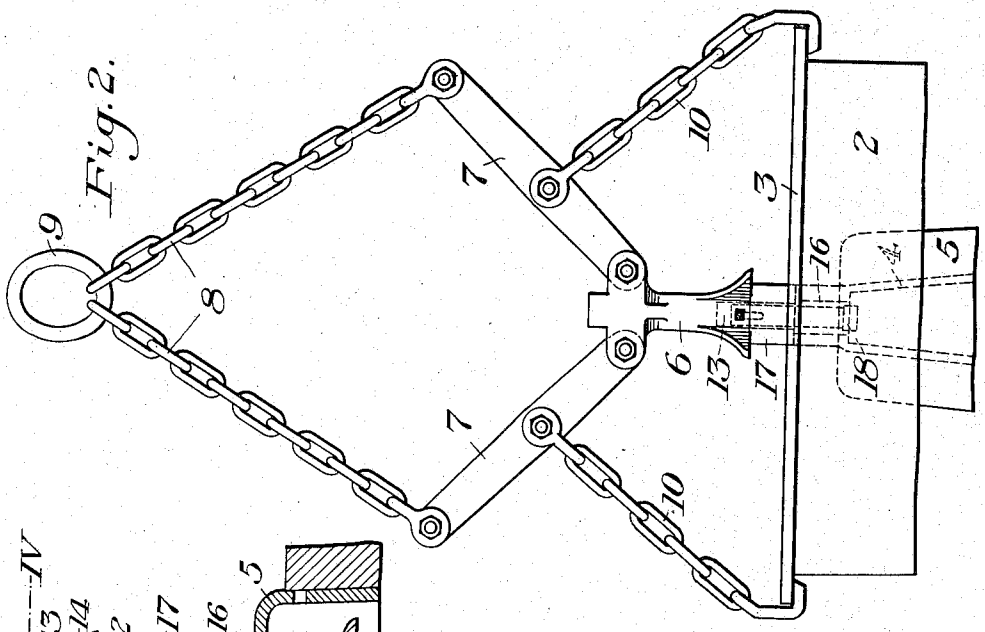


Fig. 3.

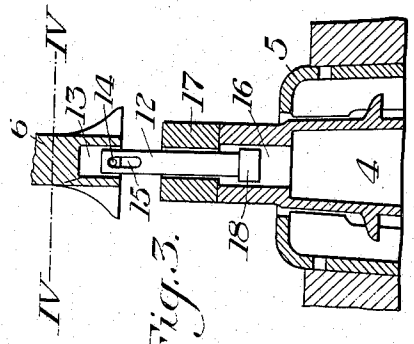


Fig. 4.

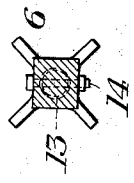
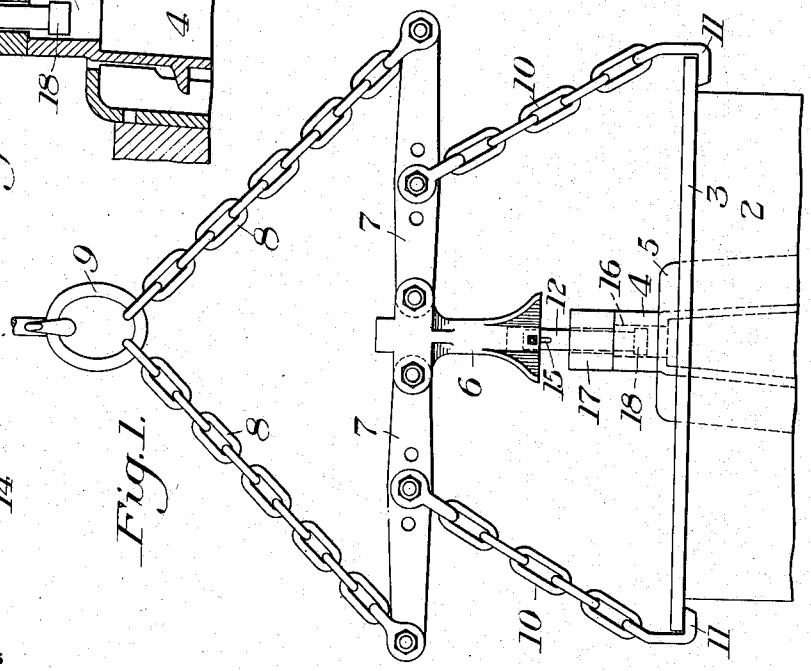


Fig. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

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EXTRACTOR FOR CORE-BARRELS.

1,122,046. Specification of Letters Patent. Patented Dec. 22, 1914.

Application filed August 5, 1914. Serial No. 855,138.

To all whom it may concern:

Be it known that I, FRANK W. TICKNER, a citizen of the United States, residing at Sharpsville, in the county of Mercer and State of Pennsylvania, have invented a new and useful Improvement in Extractors for Core-Barrels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are side views showing the extractor in different positions; Fig. 3 is a detail sectional view; and Fig. 4 is a section on the line IV—IV of Fig. 3.

This invention has relation to extractors for core barrels.

The object of the invention is primarily to prevent the head of the extractor slipping from the neck or head of the center cone of the core barrel in the act of extracting the core from the mold.

The flasks containing the molds vary in dimensions across the top according to the size and shape of the mold, and therefore, when the head of the extractor rests on the neck or head of the cone, it is frequently out of alinement, and therefore, not in the center line of the push. Consequently, the extractor head has a tendency to fall to one side and slip off when leverage is exerted. This is prevented by my invention.

The invention is also useful in retaining the extractor head in position on the neck or head of the cone, while the extractor is being lowered, for the purpose of engaging its hooks with the top flange of the mold flask.

In the accompanying drawing, the numeral 2 designates a portion of a mold flask having the usual flange 3, at its upper end.

4 designates the center cone member of a collapsible core, and 5 designates portions of the collapsing members of the core placed around said cone in a well known manner.

The extractor shown consists of the head 6 to which are pivoted the oppositely extending link arms 7, connected at their outer extremities by chains 8 with a lifting ring 9. Loosely connected to each link arm 7 is a chain 10, having a hook 11, at its free end for engagement with the flange 3 of the flask.

In accordance with my invention, I provide the head 6 of the extractor with a depending centering pin 12, whose upper end preferably extends loosely into a bottom opening 13, in the head and is secured thereto by a pin 14, extending through an oblong slot 15 in the centering pin. The lower end of the centering pin is adapted to fit within the hollow neck portion 16 of the cone 4. When the extractor is lowered on to the head of the cone, the centering pin passes downwardly within the neck of the cone, thus properly centering the extractor head with reference to the cone and preventing the extractor from slipping off. The bottom opening 13, combined with the slot 15, allows the pin sufficient play, so that if it should not be lowered exactly into the central hole and neck of the cone, it can be adjusted without the necessity of hoisting the extractor away from the flask. In other words, these features give free play to the pin to move in all directions a sufficient distance to be brought into position to enter the neck of the cone. I also preferably provide the centering pin with a loose collar 17. This collar is prevented from dropping off the pin by means of a head 18 at the lower end of the latter. The purpose of this collar is to lengthen the head of the extractor and thus give the link arms 7 a greater range of effective movement. This is sometimes necessary, especially in case of small or narrow flasks, in which said link arms are nearly perpendicular before any leverage is obtained. In such case, the length of push is not sufficient before the effective leverage on the arms is exhausted.

The collar may be of any size or length which may be required and different forms of collars may be employed, according to the character of the flask with which the extractor is being used at any particular time. To apply or remove these collars, it is only necessary to remove the pin or bolt 14. The slot in the pin should be long enough and the bottom opening 13 in the extractor head should be deep enough to permit the centering pin to move up into the extractor head until its head 17 engages the collar.

The use of this device makes one extractor suitable for either large or small molds and avoids the necessity of using hook chains of shorter lengths when the narrow flask is being handled.

I claim:

1. A core barrel extractor, having its head provided with a depending centering pin adapted to have a centering engagement with the core to be extracted, substantially as described.

2. A core extractor having a head provided with a depending centering pin loosely connected thereto to permit lateral movement, said pin being adapted to have a centering engagement with the core to be extracted, substantially as described.

3. A core extractor having its head provided with a bottom opening, and a centering pin extending loosely into said opening and pivotally connected to the head, substantially as described.

4. A core extractor having a head, a centering pin depending therefrom, and a collar loosely mounted on said pin, said collar forming an extension of the head in operation, substantially as described.

5. A core extractor having a head, a centering pin pivotally and detachably connected to the head, and a collar loosely carried by said pin, substantially as described.

In testimony whereof, I have hereunto set my hand.

FRANK W. TICKNER.

Witnesses:
M. J. McDOWELL,
HUGH J. GARVEY.