J. H. KUHNS.

TONGS.

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1,115,215. Patented Oct. 27, 1914.

Fig. 1.

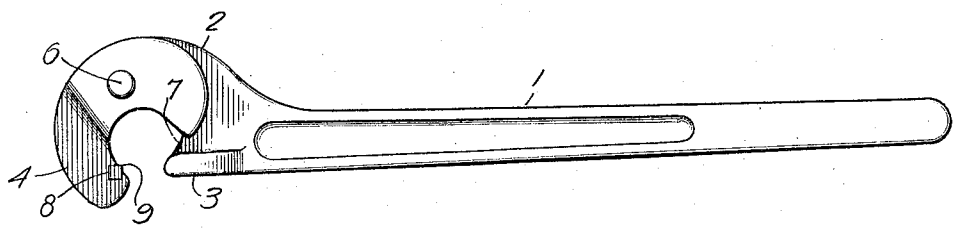


Fig. 2.

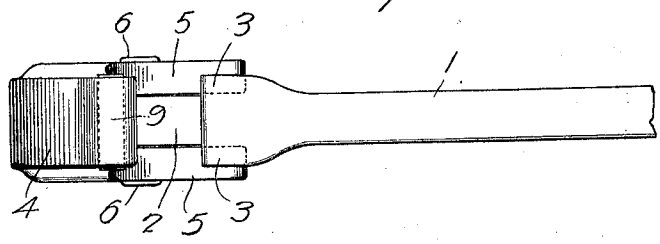


Fig. 3.

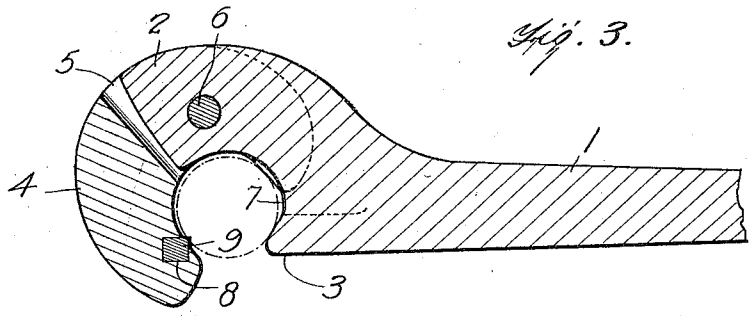
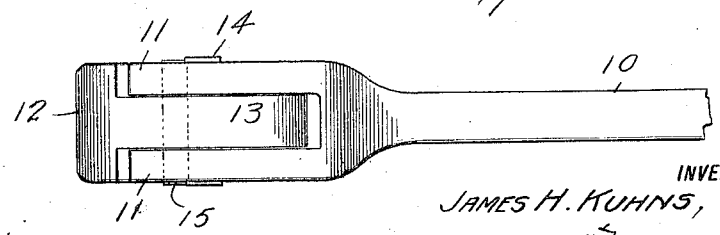


Fig. 4.



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TONGS.

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To all whom it may concern:

Be it known that I, JAMES H. KUHNS, a citizen of the United States, and a resident of Tulsa, in the county of Tulsa and State of Oklahoma, have invented a new and useful Improvement in Tongs, of which the following is a specification.

My invention is an improvement in tongs, and has for its object to provide tongs of the character specified, wherein an operating lever or handle is provided with which coöperates a curved short lever or gripping jaw, the improved tongs being especially adapted for use with pipe or other articles of circular cross section, and wherein the article may be quickly grasped or released.

In the drawings:—Figure 1 is a side view of the improved tongs, Fig. 2 is a partial bottom plan view of Fig. 1, Fig. 3 is a longitudinal section, and Fig. 4 is a partial top plan view of a modified form.

The present embodiment of the invention comprises a handle or lever 1, having one of its ends rounded to form a grip, while at its other end the lever is provided with a laterally extending lug 2. The lever is also enlarged laterally adjacent to the lug at each side as indicated at 3.

The end of the lever adjacent to the lugs 3 constitutes a fixed gripping jaw, and the movable jaw is in the form of a curved lever 4, one end of the said lever being longitudinally slotted to form oppositely arranged ears or lugs 5, which engage opposite sides of the lug 2, and are pivoted thereto by a rivet 6, or the like.

It will be noted from an inspection of Fig. 3, that the end of the lug 2 is rounded to permit a limited rocking movement of the jaw 4 with respect to the lever 1. The concave edge of the movable jaw is arranged inward, and since the outer edge of the lug 2 is also concave, as shown at 7, in Figs. 1 and 2, a space is provided for receiving the pipe or other article to be grasped.

Near the free end of the movable jaw, the said jaw is transversely recessed as shown at 8, and a block 9 of steel or the like, is arranged within the recess, the free sharp corner of the said block being extended beyond the concave edge of the movable jaw.

The improved tongs will be constructed in various sizes for grasping articles of various diameter.

In use, the movable jaw is opened or rocked away from the portion 3 of the lever 1, to permit the article to be inserted in the space between the jaws. When the pipe or other article is within this space, the free end of the lever 1 is pulled toward the operator. This clamps the jaws on the pipe, the gripping edge 3 of the lever 1 being forced toward the block 9, to firmly grip the pipe or other article between the two jaws. When the pipe has been turned, as far as may be convenient, the movement of the free end of the lever 1 is reversed, the said free end being now moved away from the operator. This movement rocks the jaws open or partially open to permit the tongs to be moved angularly with respect to the pipe to obtain a fresh grip. A repetition of this movement will complete the separation of the connection of the pipe or other article.

In the modified construction shown in Fig. 4, the lever 10 which corresponds to the lever 1 of Figs. 1 to 3, is provided with a pair of laterally spaced lateral lugs 11, the said lugs being shaped to correspond with the lug 2 of the first-described construction.

The movable jaw 12 corresponds in contour to the jaw 4 of Fig. 1, but the said jaw is provided with a single lug 13, which is received between the lugs 11, and a pivot pin 14 is passed through registering openings in the lugs 11 and 13, to pivotally connect the movable jaw to the fixed jaw. The said jaw 12 is provided with a block 15 of steel or like hard material arranged in the same manner as the block 9 of Figs. 1 to 3.

The outer ends of the lugs 11 are rounded in the same manner as the outer end of the lug 2 to permit a slight rocking movement of the movable jaw, and the operation is precisely the same as the construction shown in Figs. 1 to 3.

It will be understood that when the improved wrench is in engagement with a pipe, the pipe will be engaged at three points, namely, by the free edge of the block 9, by the end 3 of the long lever or handle, and by the ends of the lugs 5 of the short lever or movable jaw. The ends of the lugs 5 of the end of the lug 13 in the construction of Fig. 4 and the block engage at directly opposite points.

I claim:—

1. Tongs of the character specified, and

comprising a lever provided at one end with a laterally extended lug, the edge of the lug and the end of the lever adjacent thereto being concave and the junction between the said end of the lever and the face remote from the lug constituting a fixed gripping jaw, an arc-shaped movable gripping jaw longitudinally slotted at one end to form spaced lugs, said lugs being received on opposite sides of the lug of the lever, a pivot pin passing through the lugs intermediate the ends of the movable jaw for pivotally connecting the movable jaw to the lever, said movable jaw being arranged with its concave edge inwardly, the outer end of the lug of the lever rounded to permit a limited rocking movement of the movable jaw, said movable jaw having near its free end and on its inner edge a transverse recess and a block of hard material seated in the recess and having one of its edges extending beyond the edge of the jaw.

2. Tongs of the character specified, and comprising a lever provided at one end with a laterally extended lug, the edge of the lug and the end of the lever adjacent thereto being concave and the junction between the said end of the lever and the face remote from the lug constituting a fixed gripping jaw, an arc-shaped movable gripping jaw longitudinally slotted at one end to form spaced lugs, said lugs being received on opposite sides of the lug of the lever, and a pivot pin passing through the lugs intermediate the ends of the movable jaw for pivotally connecting the movable jaw to the lever, said movable jaw being arranged with its concave edge inwardly, the outer end of the lug of the lever being rounded to permit a limited rocking movement of the movable jaw.

3. Tongs of the character specified, and comprising a lever having one of its ends concave and having an extension at the said end, said extension being lateral and longitudinal with respect to the lever, a movable jaw of arc-shape arranged with its concave edge toward the concave end of the lever and pivoted to the extension intermediate the ends of the movable jaw, the outer end of the extension being rounded to permit a limited rocking movement of the movable jaw, and said movable jaw having a transverse rib of hard material on its concave edge and near the free end of the jaw.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."