Dec. 11, 1928. 1,694,525

B. J. BLOEMSMA

TONGS

Filed Dec. 27, 1927

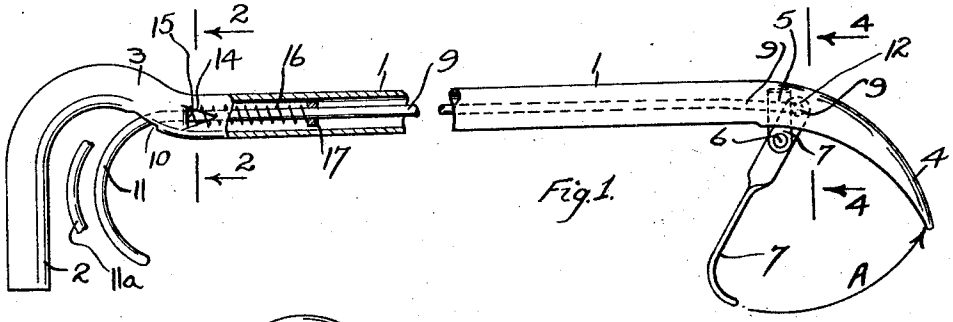



Fig. 1.

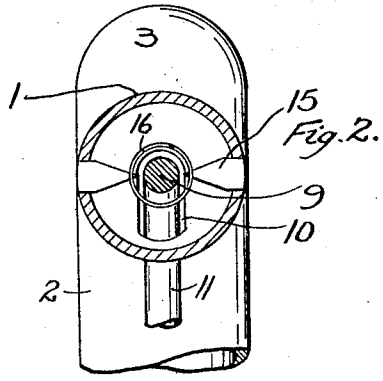



Fig. 2.

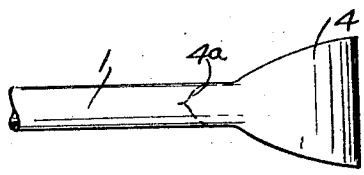



Fig. 3.

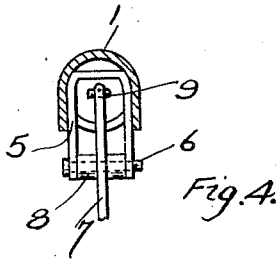



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## TONGS.

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This invention aims, among other things, to provide a pair of tongs wherein the main member, which is tubular for the greater part of its length, has a fixed jaw at one end and terminates in a handle at the other; and wherein an operating rod connected to a movable jaw passes through the tubular member for the greater part of its length and also terminates in a handle adjacent to said first named handle, so that when the tongs are employed for picking up, say, a clinker in a furnace, and the outer end of the tongs are outside the furnace, there are no intermediately exposed moving parts to catch against the furnace doorway or on any other obstruction. Another object of the invention is to provide spring means wholly within the tubular member for tending to hold the movable jaw in open position.

With these and other objects in view which will be mentioned as the specification proceeds, the invention is hereinafter more fully described with the aid of the accompanying drawings, in which:

Figure 1 illustrates a side elevation of the invention partly in section.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a plan view of one end of the tubular member, and

Figure 4 is a section on the line 4—4 of Figure 1.

Referring to the drawings, 1 designates a tubular member, usually made of pipe, one end of which is bent to form a handle 2, and adjacent to the latter the member is preferably curved slightly upwardly at 3, the the latter portion thereby also forming portion of the handle. 4 indicates a jaw integral with the opposite end of the member 1, and usually formed out of portion of the said member which has been split longitudinally from its end for a portion of its length as indicated at $4^a$ in Figure 3. To the inner sides of the member 1 adjacent to the inner end of the split portion $4^a$ a bracket 5 is welded or otherwise secured in position. This bracket extends below the split sides of the said member and supports a pin 6 on which a movable jaw 7 is pivotally mounted. 8 indicates washers which are generally employed for holding the movable jaw against lateral movement when the bracket 5 is channel-shaped as shown in Figure 4.

9 indicates an operating rod which passes through the intermediate portion of the member 1 and projects through an opening 10 in the handle portion 3. That end of the rod terminates in a handle 11 of any desired shape. The opposite end of the rod is in engagement with an eye 12 through the upper portion of the movable jaw 7. The sides of the tubular member are cut as indicated at 14 thereby forming strips 15 which are inwardly flexed to form opposed stops against which one end of a spring 16 rests. This spring is located around the rod 9 and its opposite end bears against a collar, or other enlargement, 17 on the said rod, so that the spring tends to move the rod towards the fixed jaw thereby holding the movable jaw in open position.

When the handle 11 is moved into the position indicated at $11^a$ the jaw 7 swings through the path indicated by the line A. and brings the movable jaw against the fixed one. Meanwhile the spring 16 has been compressed so that when the handle 11 is released the former moves the rod 9 and movable jaw back into their normal positions shown in Figure 1.

While in the foregoing the preferred embodiment of the invention has been described and shown, it is understood that the construction is susceptible to such modifications as fall within the scope of the appended claim.

What I claim is:

Tongs comprising a tubular member having a fixed jaw at one end and a handle at the other and having an opening therethrough, a movable jaw pivotally mounted at the inner end of said jaw and having its outer end adapted to close against the outer end of said fixed jaw, an operating rod having one end attached to said movable jaw, extending intermediately through said tubular member, passing through said opening and terminating in a handle adjacent said first named handle, the sides of said tubular member being cut to form opposed stops which are flexed inwardly, a spring around the rod one end of which rests against said opposed stops and an enlargement around said rod against which the opposite end of said spring bears, said spring being adapted to force said rod forward and hold said movable jaw in open position.

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