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C. BLOHM, JR

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CLINKER EXTRACTOR

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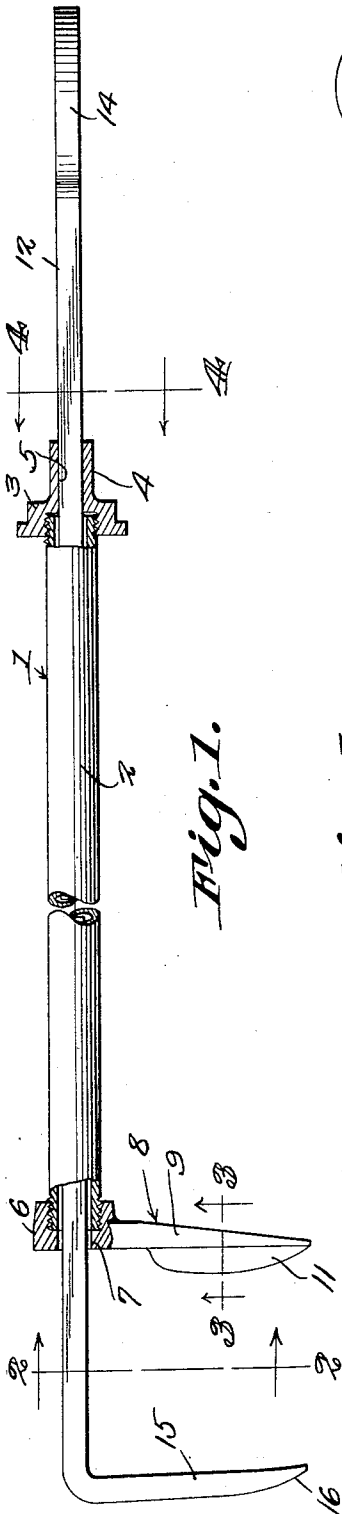


Fig. 1.

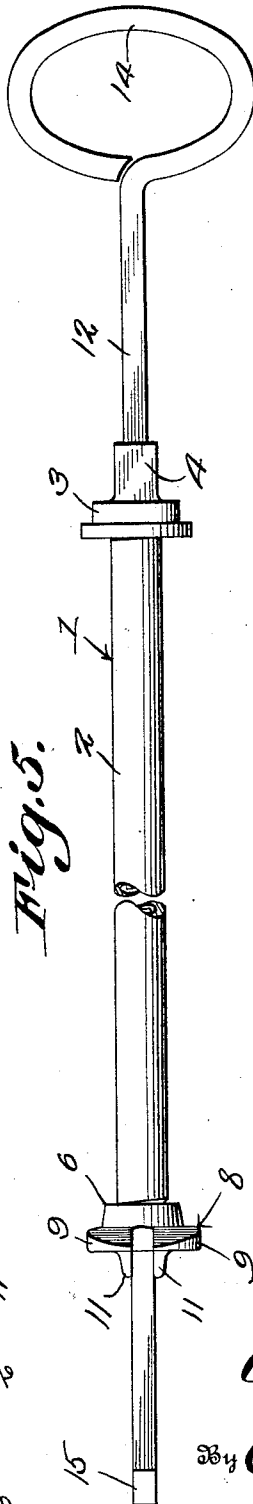


Fig. 5.

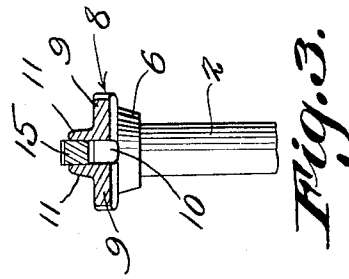


Fig. 3.

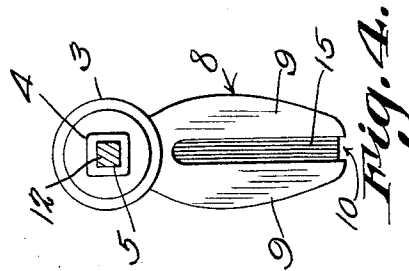


Fig. 4.

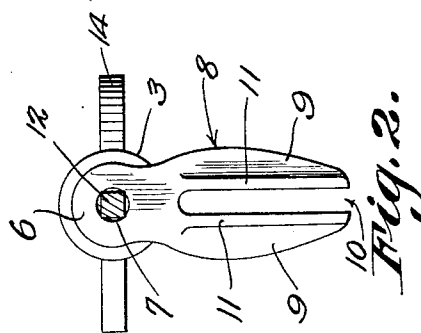


Fig. 2.

Inventor

Carl Blohm Jr

By *Chas. H. Snow & Co.*

Attorneys.

UNITED STATES PATENT OFFICE

CARL BLOHM, JR., OF SILVIS, ILLINOIS

CLINKER EXTRACTOR

Application filed October 15, 1931. Serial No. 569,078.

This invention aims to provide a simple but effective means for extracting clinkers from a furnace, cook stove, or from any other place where there are clinkers to be extracted. The invention aims, moreover, to improve devices of the kind specified, by providing structural details, hereinafter described, which facilitate both the operation of the tool and the assembly thereof.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:—

Figure 1 shows, in side elevation, a device constructed in accordance with the invention, parts being broken away, and parts being in section;

Figure 2 is a cross section on the line 2—2 of Figure 1;

Figure 3 is a cross section on the line 3—3 of Figure 1;

Figure 4 is a cross section on the line 4—4 of Figure 1;

Figure 5 is a bottom plan, parts being broken away.

The device forming the subject matter of this application is made of metal throughout, care being taken to select a metal which will be well adapted to withstand the heat and hard use. The article comprises a body, which, as a whole, is marked by the numeral 1. The body 1 includes a tube 2, which may be a piece of commercial pipe. A cap 3 is threaded on the rear end of the tube 2 and is held against rotation thereon. The cap 3 has a rearwardly prolonged tubular extension 4, provided with a polygonal bore 5, arranged coaxially with respect to the bore of

the tube 2, the bore 5 preferably being square in cross section.

On the forward end of the tube 2, a cap 6 is threaded and secured. The cap 6 has a circular opening 7, arranged coaxially with respect to the bore of the tube 2. The cap 6 carries a jaw 8, arranged substantially at right angles to the body 1. In width, the jaw 8, as shown in Figure 2, broadens as it extends downwardly, and then contracts in width toward its lower end. In thickness, the jaw 8 tapers from its upper end to its lower end, as Figure 1 will show. The jaw 8 comprises two fingers 9, with a space 10 between them. Ribs 11 extend forwardly from the jaw 8, and are located on opposite sides of the space 10 and immediately adjacent to said space. The ribs 11 taper as they extend downwardly, so as not to detract from the general pointed construction of the fixed jaw 8.

A slide 12 is provided, and is in the form of a rod, of square cross section, and polygonal in cross section, in any event. The slide 12 passes through the bore 5 of the extension 4 of the cap 3, through the circular opening 7 of the cap 6. On the rear end of the slide 12 there is a handle 14, of any desired construction, and on the forward end of the slide 12 there is a jaw 15, disposed approximately at right angles to the body 1. The jaw 15 preferably is bluntly pointed at its lower end, as shown at 16 in Figure 1.

The general operation of the implement will be understood readily, without an extended explanation. The slide 12 is drawn backwardly, the clinker is engaged between the jaw 15 and the ribs 11, and the clinker, in this way, of course can be lifted out of the fire.

It would not be possible, commercially, to form the tube 2 with a square bore, because that would make the article too expensive, and, therefore, the tube 2 is simply a piece of pipe. Since the tube 2 does not have a square bore, there is nothing about the tube 2, itself, which will prevent the slide 12 from rotating on its axis. The slide 12, however, should not rotate on an axis, because the jaw 15 always should be in line with the jaw 8, in

order to engage and hold the clinker properly. It is in order to prevent the slide 12 from rotating, that the cap 3 is provided, the slide 12 being held against rotation in the polygonal bore 5. The cap 3, including the polygonal bore 5, can be made cheaply, and it is unnecessary to go to the expense of making the tube 2 with a square bore. Although the opening 7 on the cap 6 is circular, as shown in Figure 2, it is of such diameter that the slide 12 will be guided therein, as the slide is reciprocated, the diameter of the opening 7 being equal to the diagonal of the slide 12. The slide 12 is guided for right line reciprocation in the opening 7 of the cap 6, and in the bore 5 of the extension 4 on the cap 3, and, as has been explained hereinbefore, the bore 5 has an additional purpose, in that it prevents the slide 12 from rotating.

In assembling the tool, the handle 14 is formed on the slide 12, the cap 3 is placed on the slide, the slide is introduced through the tube 2, the cap 6 is placed on the slide, and the jaw 15 is formed on the slide. Up to this point, the caps 6 and 3 have not been threaded on the ends of the tube 2. The cap 3 can be threaded readily on the rear end of the tube, by rotating the cap, along with the slide 12.

If the cap 6 had a polygonal bore, like the bore 5 of the cap 3, it would be difficult to thread the cap 6 on the end of the tube 2, because the slide 12, the cap 3, and the cap 6 would have to be rotated together, and there is not one chance in a thousand that the threads on both ends of the tube 2 would be so located that the caps 3 and 6 could be rotated together, to thread them on the ends of the tube. Therefore, the opening 7 in the cap 6 is made circular, so that, after the cap 3 has been threaded on one end of the tube 2, the cap 6 can be rotated, independently of the cap 3, to thread the cap 6 on the end of the tube.

There are at least two reasons for having the outstanding ribs 11 on the jaw 8. One of these reasons is that when the clinker is engaged by the inner edge of the jaw 15, and by the ribs 11, the parts specified have a three-point hold on the clinker. Another reason for having the ribs 11 is that when the slide 12 is retracted, the jaw 15 fits between the ribs 11, and the fingers 9 and the jaw 15 then cooperate to form a pointed lateral part, enabling the device to be used conveniently and with safety to the article, as an ordinary poker. By having the space 10 between the fingers 9, the jaw 8 will always clear itself readily of dirt, and there will be no clogging between the ribs 11, the outer edges of the ribs always being left clear, and the ribs, therefore, being at all times in condition to cooperate with the jaw 15 in affording the three-point hold on the clinker, which has been mentioned hereinbefore.

Having thus described the invention, what is claimed is:—

A clinker extractor comprising a tube having a circular bore, forward and rear caps threaded on the tube, the forward cap having a circular opening, and carrying a lateral jaw, the rear cap having a polygonal opening, a slide of polygonal cross section extended through the body and the caps and held against rotation in the opening of the rear cap, the slide having a lateral jaw cooperating with the jaw of the forward cap, the slide being guided for longitudinal movement in the circular opening of the forward cap, as well as in the polygonal opening of the rear cap, the circular opening permitting the forward cap to be rotated on the slide and threaded on the body, independently of the slide and the rear cap.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CARL BLOHM, JR.