

(No Model.)

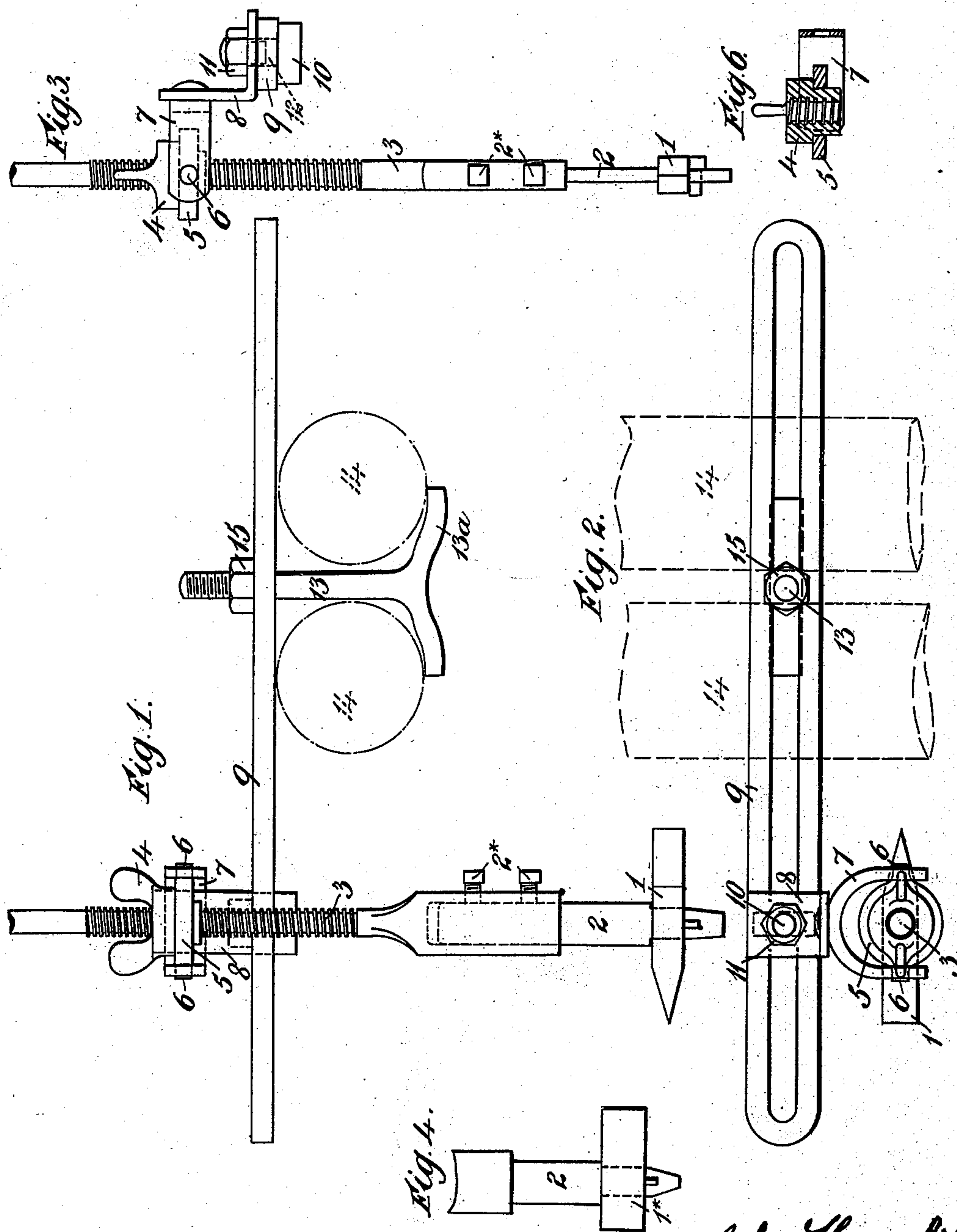
2 Sheets—Sheet 1.

J. T. BILLSON.

DEVICE FOR CARRYING CHIPPING HAMMERS OR OTHER TOOLS.

No. 377,664.

Patented Feb. 7, 1888.



Witnesses.

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(No Model.)

2 Sheets—Sheet 2

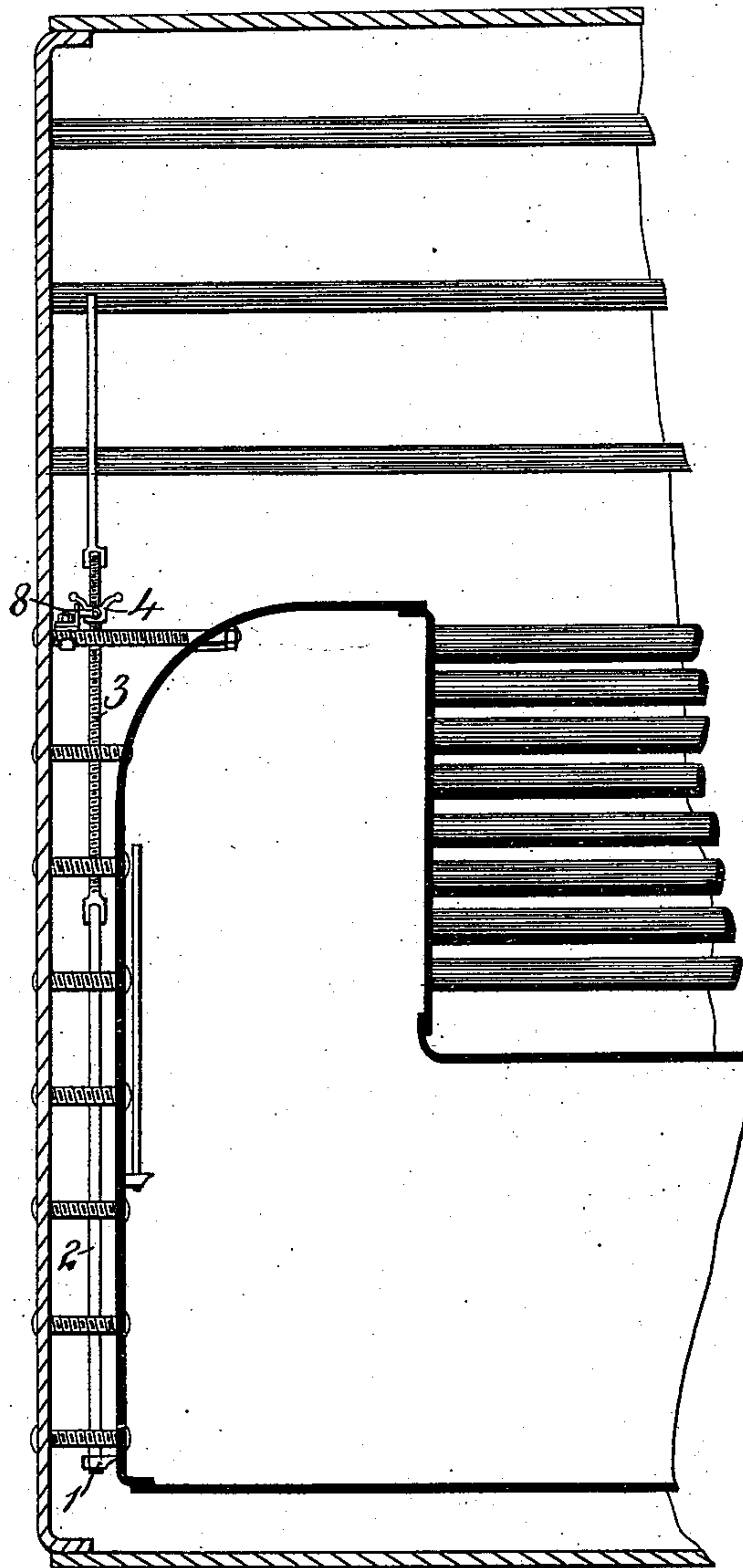
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Fig. 5.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR CARRYING CHIPPING-HAMMERS OR OTHER TOOLS.

SPECIFICATION forming part of Letters Patent No. 377,664, dated February 7, 1888.

Application filed November 25, 1887. Serial No. 256,160. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS BILLSON, a subject of the Queen of Great Britain and Ireland, residing at North Shields, in the county of Northumberland, Kingdom of Great Britain and Ireland, marine engineer, have invented new and useful Apparatus for Carrying Chipping-Hammers or other Tools in Positions to be Operated, of which the following is a specification.

My apparatus is for carrying chipping-hammers or other tools—such as holding up tools for riveting purposes in position to be operated—and is designed more particularly for use in steam-boilers or outside ships. As applied to steam-boilers it has for its object to obviate or mitigate the difficulties hitherto experienced in removing the scale or incrustation from the interiors of the boilers and in holding up the heads of rivets while riveting. The parts to be cleaned or riveted are in boilers of the tubular type often difficult of access.

According to this invention the tool is carried by a rod or lever that is supported by a universal joint carried by a bracket stand or frame, that can be readily adjusted and fixed in position within a boiler or elsewhere, so as to leave the tool perfectly free to be manipulated or operated as required.

In the accompanying two sheets of illustrative drawings, Figures 1 and 2 are elevations at right angles to each other, and Fig. 3 is a plan or top view of a device according to this invention. It is shown provided with a chipping hammer or tool suitable for removing the incrustation from the interior of a steam-boiler; but it will serve to hold any other required tool. Fig. 4 shows in elevation part of the rod or lever fitted with a holding-up tool for riveting purposes. Fig. 5 illustrates the application of the apparatus in a steam-boiler, which is shown in longitudinal vertical section. Fig. 6 is a detail of nut in section.

Referring to Figs. 1 to 3, 1 is a chipping-hammer head or tool for removing scale or incrustation. It is formed with a chisel-edge at each end, the two chisel-edges being arranged at right angles to each other. The handle or

shank 2 of the tool is secured by screws 2* to my apparatus, which I will now explain.

3 is a lever or rod with a socket at one end; or it may have any other equivalent or suitable device for securing a hammer-head or other tool. The said rod or lever is also formed with a male screw around it, provided with a nut, 4.

5 is a ring swiveled at two opposite parts, 6, of its circumference to a fork, 7, which is swiveled to a bracket, 8. The ring 5 and fork 7 together form a gimbal or universal joint, adapted to suspend the rod or lever 3 by means of the nut 4, which partly enters and partly rests upon the ring 5. (See Fig. 6.)

9 is a slotted bar, to which the bracket 8 is, when required, connected by a bolt, 10, and nut 11. The bolt 10 is formed with a squared part, 12, or equivalent, that is able to be slid in the slot of said bar 9 when the nut 11 is loosened, in order that the position of the bracket 8 may be adjusted.

In order to use the apparatus in a boiler, the slotted bar 9 is fixed in the boiler in any suitable manner. A convenient method of fixing is that illustrated, in which 13 is a bolt formed with a kind of T-head, 13^a, that can be let down between the stays or tubes 14 (shown in dotted lines in Fig. 1) of a boiler and then partially rotated, (through about ninety degrees,) so as to bring each branch of said T-head under two of the tubes or stays. The bar 9 can then be placed over the stem of the bolt 13 and the two be secured to the stays or tubes by a nut, 15, being screwed onto the screwed part of the bolt. The bar 9 will then be ready to receive the bracket at any required part of its length.

After my apparatus has been fixed in place, the chipping hammer or tool can be operated by hand through the rod or lever 3, which by reason of its being suspended from a universal joint can be moved in any desired vertical plane according to the locality of the part of the boiler to be operated upon. By providing the rod or lever 3 with screw-thread and a nut, as in the example shown, (or the equivalent thereof,) the distance of the tool from the uni-

versal joint can be readily adjusted according to requirement.

In Fig. 4, 1* is a holding-up tool for riveting purposes. It is held up to its work by pressure applied to the upper part of its rod or lever 3.

In Fig. 5 the slotted bar 9 is secured to one of the screw-stays of the boiler, with the tool 1 between the inner and outer shells of the combustion-chamber and in position for cleaning the inner one.

My apparatus, as described, can be used with advantage for cleaning parts of the exteriors of vessels and for other purposes of a similar nature.

What I claim is—

1. The combination of the ring 5 and fork 7, pivoted together, and bracket 8, or equivalent, to which said fork 7 is pivoted, substantially as described, for the purpose of supporting a rod or lever carrying a tool, substantially as described.

2. Apparatus comprising a ring, 5, and fork 7, pivoted together, bracket 8, to which said fork is pivoted, and a screw-threaded rod or lever, 3, with nut 4, supported by said ring 5,

substantially as herein described, for carrying a chipping-hammer or other tool.

3. Apparatus comprising a ring, 5, and fork 7, pivoted together, bracket 8, to which said fork is pivoted, a screw-threaded rod or lever, 3, with nut 4, supported by said ring 5, slotted bar 9, bolt 10, and nut 12, substantially as herein described, for carrying a chipping-hammer or other tool.

4. Apparatus comprising a ring, 5, and fork 7, pivoted together, bracket 8, to which said fork is pivoted, a screw-threaded rod or lever, 3, with nut 4, supported by said ring, a slotted bar, 9, whereon said bracket can be adjusted and fixed, and means for fixing said slotted bar in position, substantially as herein described.

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

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