

No. 860,883.

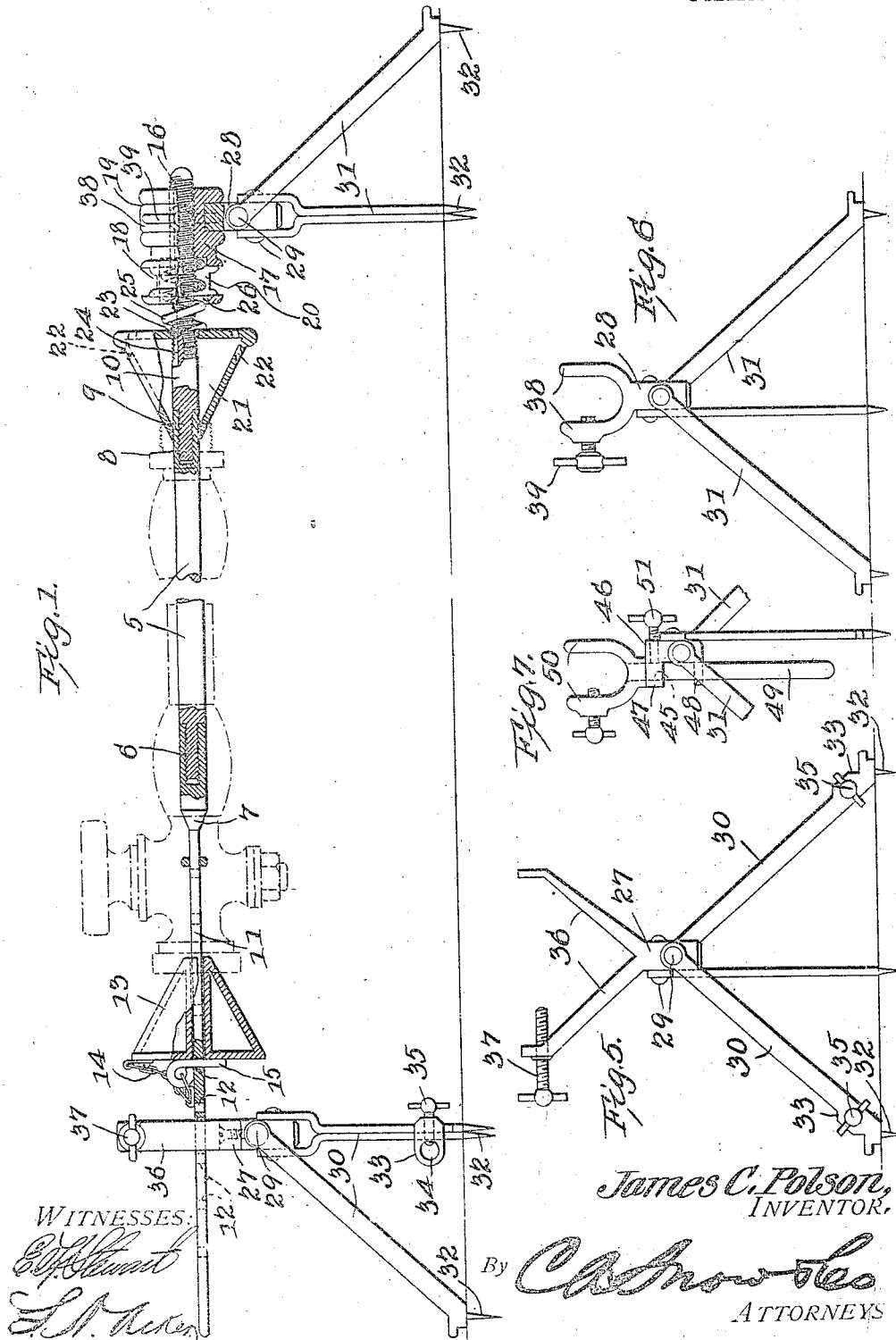
PATENTED JULY 23, 1907.

J. C. POLSON.

SOLDER NIPPLE HOLDER AND WIPING BRACKET.

APPLICATION FILED JUNE 26, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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APPLICATION FILED JUNE 20, 1906.

2 SHEETS—SHEET 2.

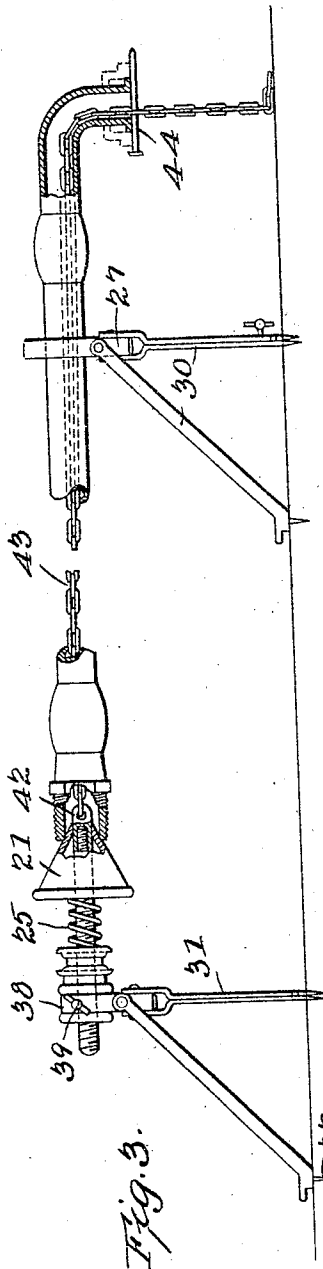


Fig. 3.

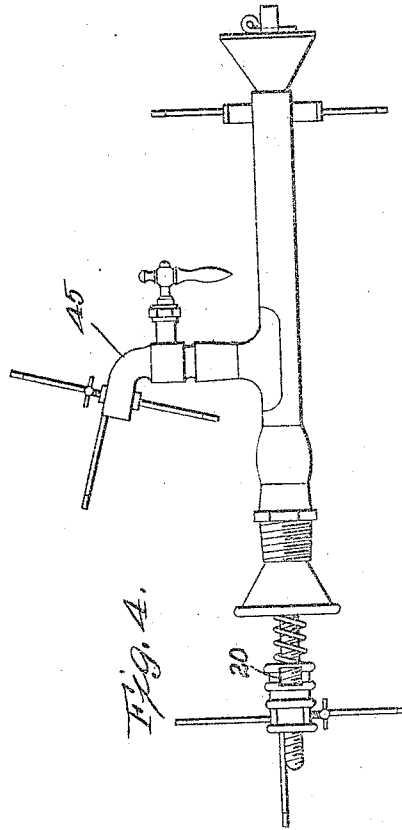


Fig. 4.

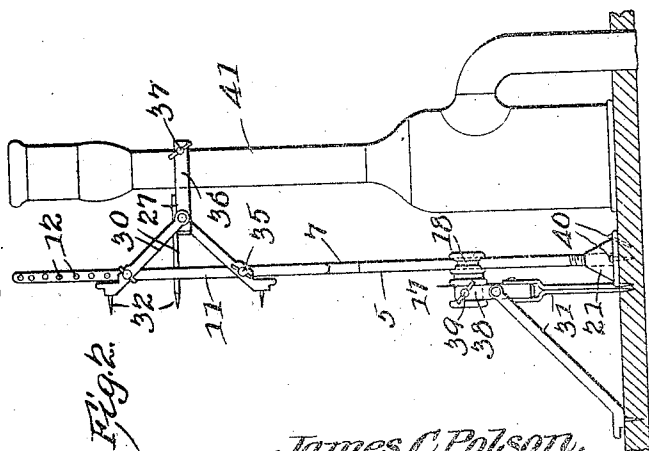


Fig. 2.

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JAMES C. POLSON, OF CENTRALIA, ILLINOIS.

SOLDER NIPPLE-HOLDER AND WIPING-BRACKET.

No. 860,883.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed June 26, 1906. Serial No. 323,509.

To all whom it may concern:

Be it known that I, JAMES C. POLSON, a citizen of the United States, residing at Centralia, in the county of Marion and State of Illinois, have invented a new and useful Solder Nipple-Holder and Wiping-Bracket, of which the following is a specification.

This invention relates to combined plumber's clamps and brackets used in making wipe-joints.

The object of the invention is to provide a simple and novel form of clamp which shall be adapted for use in connecting straight sections of pipe, or a section of pipe to a nipple, or a straight section of pipe to a curved nipple, the parts of the implement being so constructed and assembled as practically to preclude danger of accidental displacement in use and to secure the highest efficiency in operation.

A still further object is to provide an improved bracket for supporting the pipe-receiving shank in elevated position during the wiping or soldering operation.

A further object is to provide a pipe-receiving shank capable of being supported in either a vertical or horizontal position so as to adapt the device for coupling either horizontal or upright sections of pipe or tubing.

A further object is to form one of the supporting brackets with spaced eyes or sockets adapted to receive the shank when the latter is supported in an upright position thereby to assist in preventing accidental displacement of the adjacent pipe section.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation partly in section of a combined plumber's clamp and bracket constructed in accordance with my invention. Fig. 2 is a side elevation showing the device used for holding an upright section of pipe. Fig. 3 is a side elevation partly in section showing a flexible connection in the form of a chain for supporting a pipe. Fig. 4 is a top plan view showing one of the brackets supporting a faucet in position to be soldered. Fig. 5 is a side elevation of one of the supporting brackets. Fig. 6 is a similar view of the adjacent supporting bracket. Fig. 7 is a side elevation of a portion of a bracket illustrating a modified form of the invention.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The purpose of the implement shown in Fig. 1 is to hold the nipple and pipe end assembled while the joint is being formed, and in such manner as positively to preclude the possibility of either the pipe or nipple having movement relatively to each other while the formation of the joint is being effected.

With this end in view the device consists of a sectional pipe-receiving shank an intermediate section 5 of which is provided at one end with a threaded extension 6 for detachable engagement with an adjacent section 7 and its opposite end formed with a socket 8 engaging the threaded end 9 of the opposite end section 10. The end section 7 is provided with a flat extension 11 the opposite faces of which are arranged parallel with each other and provided with a series of spaced openings or perforations 12, said extension being relatively flat to permit the insertion of the same in the water-ways of cocks, faucets and similar valves when the latter are to be coupled or united to a section of pipe.

Slidably mounted on the extension 11 is a hollow cone or clamping member 13 and secured to said cone by a chain or other flexible medium 14 is a key 15 adapted to enter the openings or perforations 12 for locking the cone in engagement with the adjacent pipe section or other object to be operated upon.

The free end of the section 10 of the shank is threaded as indicated at 16 and engaging said threads is a collar 17 provided with spaced annular grooves 18 and 19 one of which is formed with a vertically disposed opening or perforation 20 for the purpose hereinafter referred to. Slidably mounted on the sections 5 and 10 of the shank is a cone or clamping member 21 similar in construction to the cone 13 and adapted to bear against the adjacent section of pipe to be united. The base of the cone 21 is formed with one or more openings or perforations 22 and is provided with a lip or feather 23 which engages a longitudinal groove or spline 24 formed in the shank section 10 thereby to prevent rotation of the cone or clamping member. Interposed between the base of the cone 21 and the collar is a coil-spring 25 one end of which bears against the perforated base of the cone while the opposite end thereof is seated in an annular recess 26 formed in the collar and serves to yieldably support the clamping member or cone in engagement with the pipe-section as best shown in Fig. 1 of the drawing.

As a means for supporting the clamping member in elevated position during the wiping or soldering operation suitable brackets 27 and 28 are employed. The brackets 27 and 28 are each provided with a squared portion on which are pivotally mounted as indicated at

29 a plurality of folding legs 30 and 31 provided with terminal spurs 32 adapted to engage a bench or other suitable support for preventing accidental displacement of said brackets. Two of the folding legs of the bracket 27 are provided with lateral extensions 33 having eyes or sockets 34 formed therein and each provided with a clamping screw 35, the head of the bracket 27 being provided with diverging arms 36 for the reception of the extension of the shank, there being a screw 37 threaded in one of the arms 36 as shown. The head of the bracket 28 is formed with a pair of vertically disposed parallel arms 38 adapted to engage the annular groove 19 in the collar 17. One of the arms 38 of the bracket 28 is provided with a clamping member preferably in the form of a screw 39 which engages the walls of the recess 19 and serves to support the collar 17 in position on said bracket.

In using the implement described, the locking pin 15 is detached from the shank 11 thus leaving the cone or clamping member 13 free to be removed. The shank 11 is then inserted through the pipe and through the water-way of the cock or faucet, which parts have previously and temporarily been combined in the usual manner, after which the cone 13 is positioned on the shank and the pin 15 inserted in the adjacent opening or perforation.

It will thus be seen that the brackets 27 and 28 serve to support the shank of the clamp in spaced relation to the bench so as to permit free manipulation of the parts to be operated upon. When it is desired to couple two upright sections of pipe the threaded end of the shank is withdrawn from the collar 17 and inserted through the vertical opening or recess 20 after which the cone or clamping member 21 is secured to the bench or floor by means of screws, nails, or similar fastening devices 40 which pass through the openings 22 in the cone and the threaded end of the shank inserted in said cone, as best shown in Fig. 2 of the drawing. The extension 11 of the shank is then threaded through the eyes of sockets 34 of the bracket 27, and the clamping screws 35 rotated to clamp the parts together after which the upper section of the pipe indicated at 41 is inserted between the arms 36 of the bracket and secured in position by adjusting the screw 37 thus preventing accidental displacement of the pipe sections.

In some cases where it is merely necessary to effect the union of two or more pipe sections without the interposition of a faucet or valve the cone 13 and extension 11 may be dispensed with. In this event the sections 5 and 7 of the shank are detached and a coupling member 42 threaded on the extension 9 of the shank section 10, said coupling member being provided with a chain or other flexible medium 43 which passes through the pipe and is retained in position by a nail or similar device 44 threaded through one of the links of the chain and bearing against the adjacent end of the pipe, as best shown in Fig. 3 of the drawing.

By means of the flexible connection or chain 43 any curve or angular section of the pipe may be united to a straight section of pipe by threading the chain through said sections and fastening the end thereof in any suitable manner as will be readily understood.

In Fig. 4 of the drawing three supporting brackets are employed one of said brackets being used to support

the discharge end of a valve or faucet 45 so as to prevent the weight of the same from rotating the pipe sections during the wiping or soldering operation.

In Fig. 7 of the drawing there is illustrated a modified form of supporting bracket in which the squared shank 46 is provided with laterally extending lugs 47 having aligned openings 45 formed therein for the reception of a vertically adjustable rod 49 the upper end of which is bifurcated as indicated at 50 for the reception of the shank of the clamping member, there being a screw 51 passing through the squared portion 46 for engagement with the rod 49 thereby to lock the rod in adjusted position.

Having thus described the invention what is claimed is:

1. A device of the class described comprising a pipe-receiving shank formed of a plurality of detachable sections, one of which is provided with a flat extension, clamping members slidably mounted on the shank and adapted to engage the object to be operated upon, and means for supporting the shank in elevated position.
2. A device of the class described comprising a shank formed of a plurality of detachable sections one of which is reduced and provided with spaced perforations, clamping members slidably mounted on the shank and adapted to engage the object to be operated upon, and a locking key carried by one of said clamping members and adapted to enter the perforations in the adjacent shank section.
3. A device of the class described comprising a pipe receiving shank having one end thereof threaded, clamping members slidably mounted on the shank and adapted to engage the object to be operated upon, a perforated collar engaging the threaded end of the shank, yieldable means interposed between the collar and the adjacent clamping member, and means engaging the collar and one end of the shank for supporting the latter in elevated position.
4. A device of the class described comprising a sectional shank having one end thereof threaded, clamping members slidably mounted on the shank and adapted to engage the object to be operated upon, a collar engaging the threaded end of the shank and having a recess formed in one end thereof, and a spring seated in the recess and bearing against the adjacent clamping member.
5. A device of the class described comprising a shank, a collar mounted on one end of the shank and provided with an annular groove, a bracket engaging the groove in the collar for supporting one end of the shank, a bracket for supporting the opposite end of the shank, a plurality of clamping members slidably mounted on the shank and adapted to engage the object to be operated upon, and a spring interposed between the collar and adjacent clamping member.
6. A device of the class described comprising a shank formed of a plurality of detachable sections one of which is formed with a flat perforated extension, clamping members slidably mounted on the shank, and a locking key carried by one of the clamping members and adapted to enter the perforations in the extension.
7. A device of the class described comprising a shank, a plurality of clamping cones slidably mounted on the shank one of which is provided with a series of openings, a collar mounted on one end of the shank, a spring interposed between the collar and the adjacent cone and means for supporting the shank in elevated position.
8. A device of the class described consisting of a shank comprising an intermediate section having one end thereof provided with a threaded extension and its opposite end formed with a socket, end sections engaging the socket and threaded extension, respectively, and clamping members slidably mounted on the shank and adapted to engage the object to be operated upon.
9. A device of the class described comprising a shank consisting of an intermediate section having one end thereof provided with a threaded portion, and its opposite

end formed with a threaded socket, an end section engaging the threaded portion of the intermediate section and provided with a flat perforated extension, a threaded end section engaging the socket, clamping cones slidably mounted on the shank and adapted to engage the object to be operated upon, a key carried by one of the cones for engagement with the perforations in the extension, a collar engaging the threads of the end section and a spring interposed between the collar and adjacent cone.

10 10. A device of the class described comprising a shank provided with spaced cones adapted to clamp the object to be operated upon, a bracket for supporting the shank in elevated position, said bracket being provided with lateral extensions having aligned sockets formed therein, and clamping screws engaging the walls of said sockets.

15 11. A device of the class described comprising a sectional shank, spaced cones slidably mounted on the shank and adapted to engage the object to be operated upon, brackets for supporting the shank in elevated position, and sockets formed in one of the brackets and adapted to receive the shank when the latter is supported in an upright position.

20 12. A device of the class described comprising a sectional shank one end of which is threaded, clamping cones mounted on the shank and adapted to engage the object to be operated upon, a collar threaded on the shank and pro-

vided with a vertical opening adapted to receive the shank when the latter is supported in an upright position, a bracket engaging the collar at one end of the shank, a bracket for supporting the opposite end of the shank, and lateral extensions secured to said brackets and provided with sockets for the reception of the shank when the latter is supported in an upright position. 30

13. A device of the class described comprising a horizontally disposed shank provided with a threaded terminal, clamping cones slidably mounted on the shank and adapted to engage the object to be operated upon, a collar engaging the threaded terminal of the shank and provided with a vertical opening adapted to receive the shank when the latter is supported in a vertical position, and brackets supporting the collar and the opposite end of the shank, respectively, and provided with pivoted legs, the legs of one of said brackets being provided with aligned sockets adapted to receive the shank when the latter is supported in an upright position. 35 40 45

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES C. POLSON.

Witnesses:

H. A. FOWLER,
FRANK V. ANDERSEN.