June 29, 1965 O. C. KINDORF 3,191,899

PIPE HANGER

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Fig. 1.

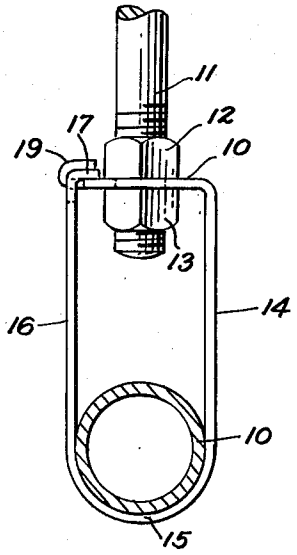


Fig. 2.

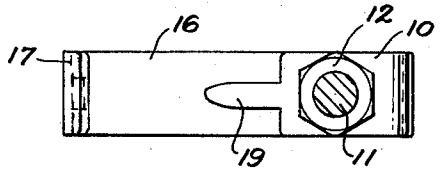
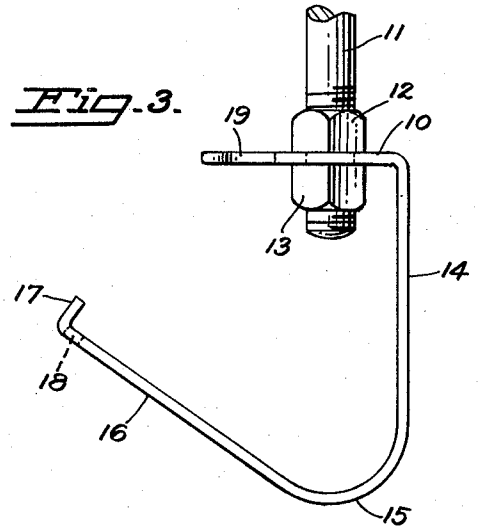


Fig. 3.



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Fig. 4

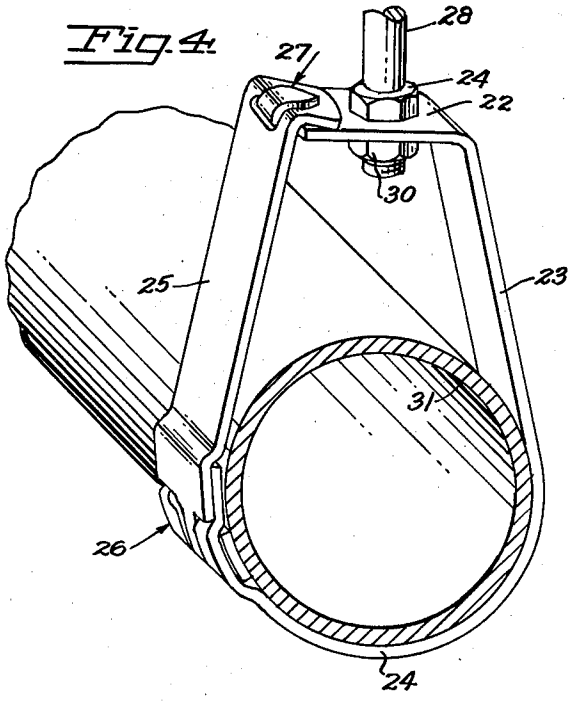
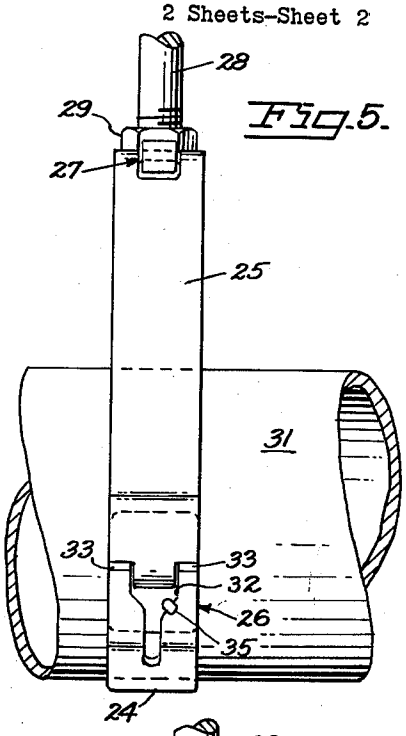


Fig. 5.



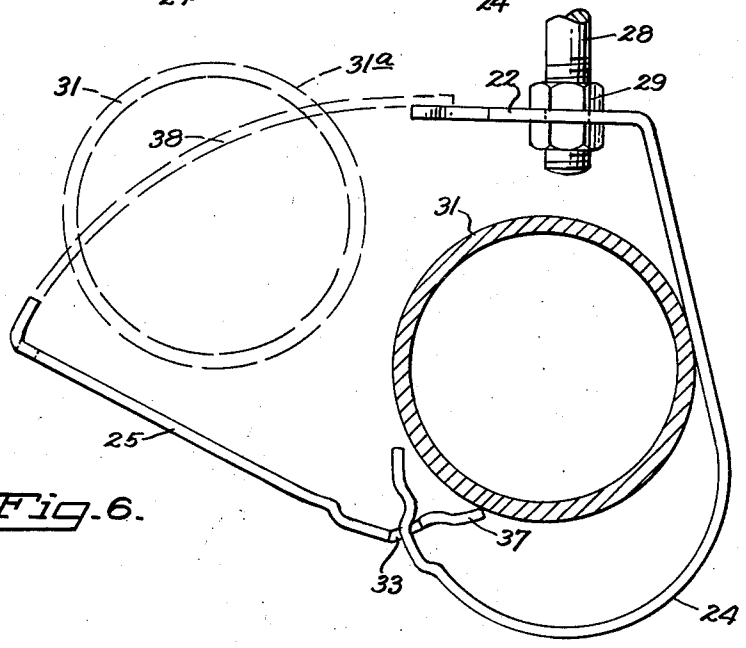


Fig. 6.

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PIPE HANGER

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2 Claims. (Cl. 248—62)

This invention relates to pipe hangers of the kind employed for embracing pipe or conduits and supporting it at the lower end of vertical supporting rods.

Presently available pipe hangers used to support pipe in an overhead position are numerous. Some types are formed or forging or casting and are cumbersome and costly while other less costly types are difficult to install. Of the simpler type of hangers usually made of strap steel, it is necessary to install the hanger and pipe at the same time which is a difficult task particularly where it is necessary to work from a ladder or scaffolding. A desirable method of the installation is to attach hangers to supporting rods and align them before the pipe to be supported is brought into position. With hangers designed with this method in mind, the pipe may then be installed in separate lengths and coupled in place and the hangers then secured or closed. This presents a decided advantage because it is not necessary for a workman to handle both the pipe and hanger at the same time.

It is an object of the present invention to provide a strong, low-cost hanger capable of being installed in an open position to receive and support pipe and thereafter be closed and secured.

A further object of the invention is to provide a hanger of ductile metal which is shaped as by stamping or bending and which has a very simple and inexpensive securing means capable of sustaining heavy loads.

A still further object of the invention is to provide a hanger to be installed in an open pipe receiving position and automatically closed upon the placing of a pipe therein.

Further and more specific objects and advantages of the invention and the manner in which it is carried into practice are made apparent in the following specification wherein reference is made to the accompanying drawings.

In the drawings:

FIG. 1 is a view in front elevation of a simple form of pipe hanger embodying the present invention showing it with a pipe in place and supported by a vertical support rod;

FIG. 2 is a plan view of the hanger shown in FIG. 1 showing the same in an open position;

FIG. 3 is a front elevation of the same hanger in its open position before a pipe has been installed;

FIG. 4 is a perspective view of a self-closing pipe hanger intended to support pipe which is larger and heavier than the hanger shown in FIGS. 1 to 3;

FIG. 5 is a view in side elevation of the hanger shown in FIG. 4; and

FIG. 6 is a view in front elevation of the hanger shown in FIG. 4 illustrating the manner in which it is closed automatically upon the placing of a pipe therein.

The pipe hanger of FIG. 1 is made of a single piece of strap steel or other ductile metal bent to form a top bar 10 suitably perforated to embrace the lower threaded end of a hanger rod 11 to which it is secured as by nuts 12 and 13 enabling it to be adjusted vertically for perfect alignment with other similar hangers arranged in a row for the reception of a long length of pipe. At one side of the top bar 10 the hanger material is bent downwardly as at 14 then curved as at 15 to form a cradle for pipe of any desired size and then upwardly as at 16. The upper end of the cradle supporting member 16 is bent inwardly as at 17 to overlie one end of the top bar 10. The member 16 is perforated as at 18 immediately below the end

17 for reception of a tongue 19 formed as an extension of the top bar 10.

As shown in FIGS. 2 and 3, the hanger is manufactured with the supporting member 16 extending outwardly to provide an opening of sufficient size for the insertion of the piece of pipe to the position shown at 20 in FIG. 1. After the hangers have been installed and aligned and the pipe supported in the manner shown, the supporting member 16 is bent upwardly to the position of FIG. 1 with the tongue 19 extending through the perforation 18. The tongue is then easily bent by one or two hammer blows toward the position shown in FIG. 1 where it prevents outward swinging movement of the support member 16. This simple connecting means or lock is unusually strong because of the fact that the inwardly bent upper end 17 of the support member 16 overlies the widest part of the top plate 10 and vertical loads are not sustained by the narrow and weaker tongue 19.

Referring to FIGS. 4 to 6 inclusive, a modified form of hangers intended for larger and heavier pipe is shown as comprising a top plate 22 with a side support 23 bent downwardly therefrom and terminating in a supporting cradle 24. An opposite side support 25 is hingedly connected as at 26 and has its upper end connected as by lock means generally indicated at 27 identical in construction to the lock means shown in FIGS. 1 to 3, inclusive. This hanger is also supported at the lower threaded end of a rod 28 by means of nuts 29 and 30 and cradles a pipe in the position shown at 31.

The hinge generally indicated at 26 is of a conventional type known for hingedly connecting two straps and comprises a long T-shaped slot 32 in one strap for admission of the end of the other strap. The other strap has a pair of notches 33 in its opposite edges adjacent its end. The end of the member 25 is first inserted through the elongated slot 32 and then turned at right angles to assume the position shown in the drawings. It may be secured against accidental removal if desired by staking or deforming an edge of the long slot 32, as at 35, to prevent the member 25 from being turned back to the position in which it may be inserted and withdrawn. With this type of hinge, the member 25 will normally assume a position somewhat as shown in FIG. 6 permitting the pipe as shown in broken lines at 31*a* to move to the position where it is shown at 31 and finally to be cradled in the hanger.

During the insertion of the pipe, it engages the projecting inner end 37 of the member 25 swinging it downwardly and swinging the outer end thereof upwardly through the arcuate path indicated at 38 and into position where the notch adjacent its end embraces the tongue on the top bar 22 which may thereafter be bent into the locking position shown in FIG. 4. This automatic closing of the hanger upon its reception of a piece of pipe is particularly desirable with heavy pipe where the weight of the pipe may spring or bend a hanger out of shape making its closing difficult or impossible. The instantaneous action of the closer member 25 swinging upwardly upon insertion of the pipe into the cradle of the hanger insures that the hanger will be in condition to provide full support for the pipe before its entire weight is imposed upon the hanger because the vertical load is sustained in the same manner as in the hanger of FIGS. 1 to 3 by the inwardly bent upper end of one of the cradle supporting sides of the hanger.

I claim:

1. A pipe hanger formed of a strap shaped to provide a top bar, a part bent downwardly from one end of the top bar then curved to form a pipe cradle and extending upwardly for connection to the opposite end of the top bar and connecting means comprising a bendable tongue

narrower than the strap extending outwardly from said opposite end of the top bar and adapted to extend through a perforation in said upwardly extending portion of the strap, and said upwardly extending portion of the strap having its end bent to overlie and bear upon the top bar.

2. A pipe hanger comprising a strap shaped to form a top bar, a portion extending downwardly from one end thereof and curved to form a pipe cradle, a second strap hinged at one end to said cradle for closing the space between the cradle and the top bar, said second strap having its other end bent to overlie the top bar in a position to sustain weight in the cradle and having a perforation, and said top bar having a tongue positioned to extend through said perforation and bendable to secure the second strap in closed position.

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