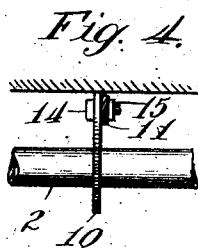
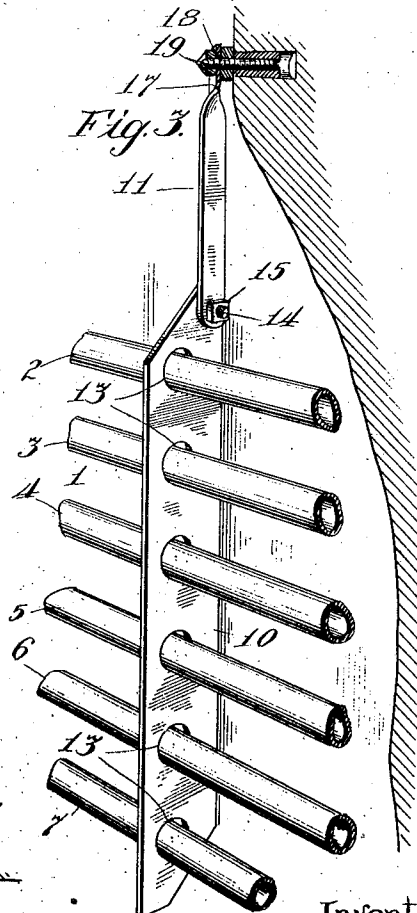
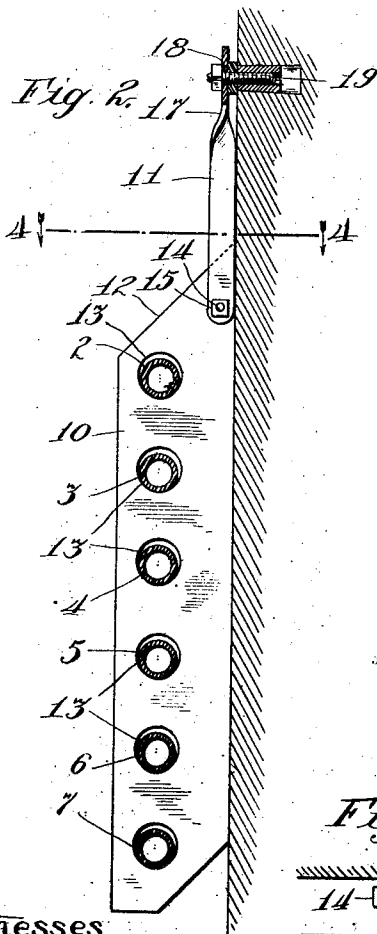
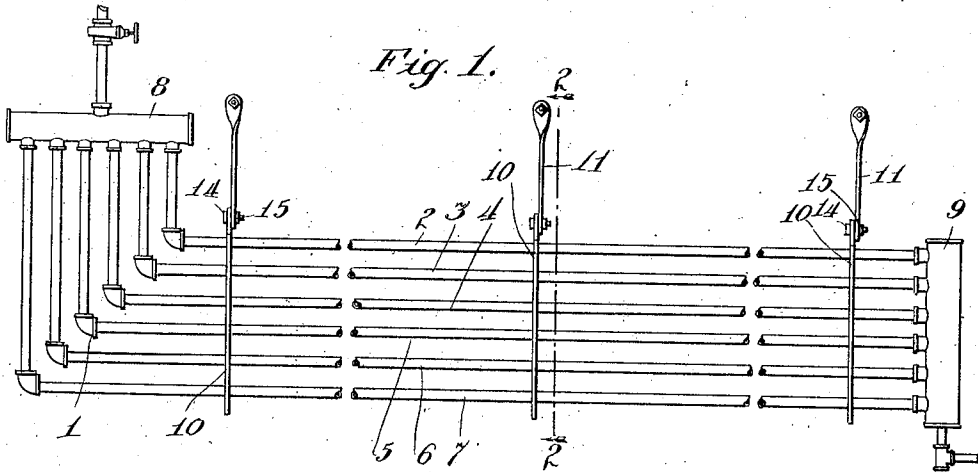


W. A. BOWERS.
PIPE HANGER.
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1,047,159.

Patented Dec. 17, 1912.



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UNITED STATES PATENT OFFICE.

WILLIAM A. BOWERS, OF MILWAUKEE, WISCONSIN.

PIPE-HANGER.

1,047,159.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed April 9, 1912. Serial No. 639,561.

To all whom it may concern:

Be it known that I, WILLIAM A. BOWERS, a citizen of the United States, and resident of the city of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Pipe-Hangers, of which the following is a specification.

This invention relates to improvements in pipe hangers and refers more particularly to a device for supporting steam or hot water coils in a factory or other building.

Among the salient objects of the invention are to provide an extremely simple and economical construction which will nevertheless securely support a pipe hanger, while at the same time allowing for limited movement of the coil due to expansion and contraction of the latter; to provide a construction in which the hangers proper are supported from flexible suspension arms pivotally connected to the wall of the building, the arrangement being such that the movement of the coil will not pull or work the hangers loose from their supports; to provide a construction which does not project out into the room so as to give an unsightly appearance and which nevertheless allows of a free air space between the pipe coil and the wall; to provide a construction in which the individual members of the coil can all have limited lateral movement or play independently of the other pipes; to provide a construction in which both the hangers and suspension arms can be economically stamped out of blank stock without any waste material and in general to provide a construction of the character referred to.

The invention consists in the matters hereinafter described and more particularly pointed out in the appended claim.

In the drawings—Figure 1 is a side elevation of a heating coil equipped with my invention, parts of the coil being broken away to reduce the size of the drawing; Fig. 2 is a vertical sectional view on an enlarged scale taken through lines 2—2 of Fig. 1 and looking in the direction of the arrows; Fig. 3 is a fragmentary perspective view of the view shown in Fig. 2; Fig. 4 is a fragmentary horizontal sectional view of the same.

I am aware that heretofore many patents have been granted on pipe hangers embodying certain advantageous features of construction, but none of them as far as I know have combined the advantages found in my

improved hanger, particularly when taken in connection with the simplicity and economy of my construction. Devices of this character while they must not only be reliable in operation, particularly to allow for movement of the coil due to contraction and expansion of the pipes, but the small margin of profit in their manufacture and sale necessitate extreme simplicity.

The essence of the present invention does not consist in any one feature but in its attaining objects heretofore set forth.

Referring now to the drawings, for a description of the invention, 1 designates as a whole a heating coil comprising pipes 2, 3, 4, 5, 6 and 7 having the usual common heads 8 and 9. The construction of the coil, however, forms no part of the present invention except that it is to be noted that the pipes are super-imposed and spaced equi-distant apart. These coils are sometimes several hundred feet in length and not only must be supported every few feet, but in such a way as to allow for expansion and contraction. Describing now my improved hangers, each comprises essentially a hanger plate 10 and a suspension arm 11. The plates 10 are preferably stamped from a strip of sheet metal angularly cut off from a strip of stock as shown at 12. Each hanger plate 10 is provided near its outer edge with a row of apertures 13, 13. These apertures are spaced apart the same distance as the pipes of the coil and are preferably located near the outer edge of the hanger plate and made of slightly greater diameter than the diameter of the pipes. It is necessary as heretofore stated that the pipe coils be spaced slightly away from the wall so as to permit free passage of air between the pipe and the wall while at the same time it is advisable to have the edge of the hanger plates abut against the wall. The manner of arranging the apertures and hanger then attains these objects and in addition the hanger plates do not project into the room any farther than is necessary. As is well known one member of a pipe coil is liable to become heated sooner than the others and have a tendency to expand independently of the remaining pipes. If the pipes are held fixedly within these apertures the pipe which is the first to become heated is liable to become distorted by its effort to expand independently of the remaining pipes. By making the apertures of a hanger

plate slightly larger in diameter than the pipes I permit sufficient lateral play in the pipes to accommodate for the expansion just referred to. Each of these hanger plates 10 is connected at its upper end by means of a bolt 14 and nut 15 to a flexible suspension arm 11, preferably formed from a narrow strip of metal as shown. The upper ends of these arms 11 are bent angularly as shown at 17 and are pivotally connected as shown at 18 to an expansion bolt 19 secured within the adjacent wall. The pipe coil is supported by a plurality of these hangers, the hangers being spaced from eight to twelve feet 15 apart, depending upon the length of the pipe coil, and the number of pipes of which it is composed. The length of the suspension arms 16 is also regulated by the length of the coil, as the longer the coil the more 20 will be its expansion and contraction and accordingly longer suspension arms are needed to allow for greater play in the hangers. The suspension arms being flexible allow of limited lateral movement of the 25 hanger plates and this is further provided for by a pivotal connection at the upper end of the arms. The length of the hanger plates as well as the length of the arms depend upon, as stated, the length of the pipe 30 coil and the number of pipes of which it is

composed. The present invention permits the hangers of various lengths being readily constructed or cut out of common stock of metal. This is obviously a material economy in manufacture. While the hanger 35 plates are flexible and pivotally supported they are nevertheless sufficiently rigid when carrying the pipe coil to prevent undue movement of the latter.

The invention is not limited to the details 40 of construction shown except as set forth.

I claim as my invention:

A pipe hanger for supporting a pipe coil and comprising a hanger plate formed from a single narrow strip of flat sheet metal hav- 45 ing a plurality of vertically superimposed and equi-spaced apertures of slightly greater diameter than the external diameter of the pipes to be supported, which permit limited lateral play and a flexible suspension arm 50 having its lower end secured to the hanger plate and its upper end twisted into a plane substantially at right angles to the plane of the hanger and pivotally connected to a suitable support.

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