

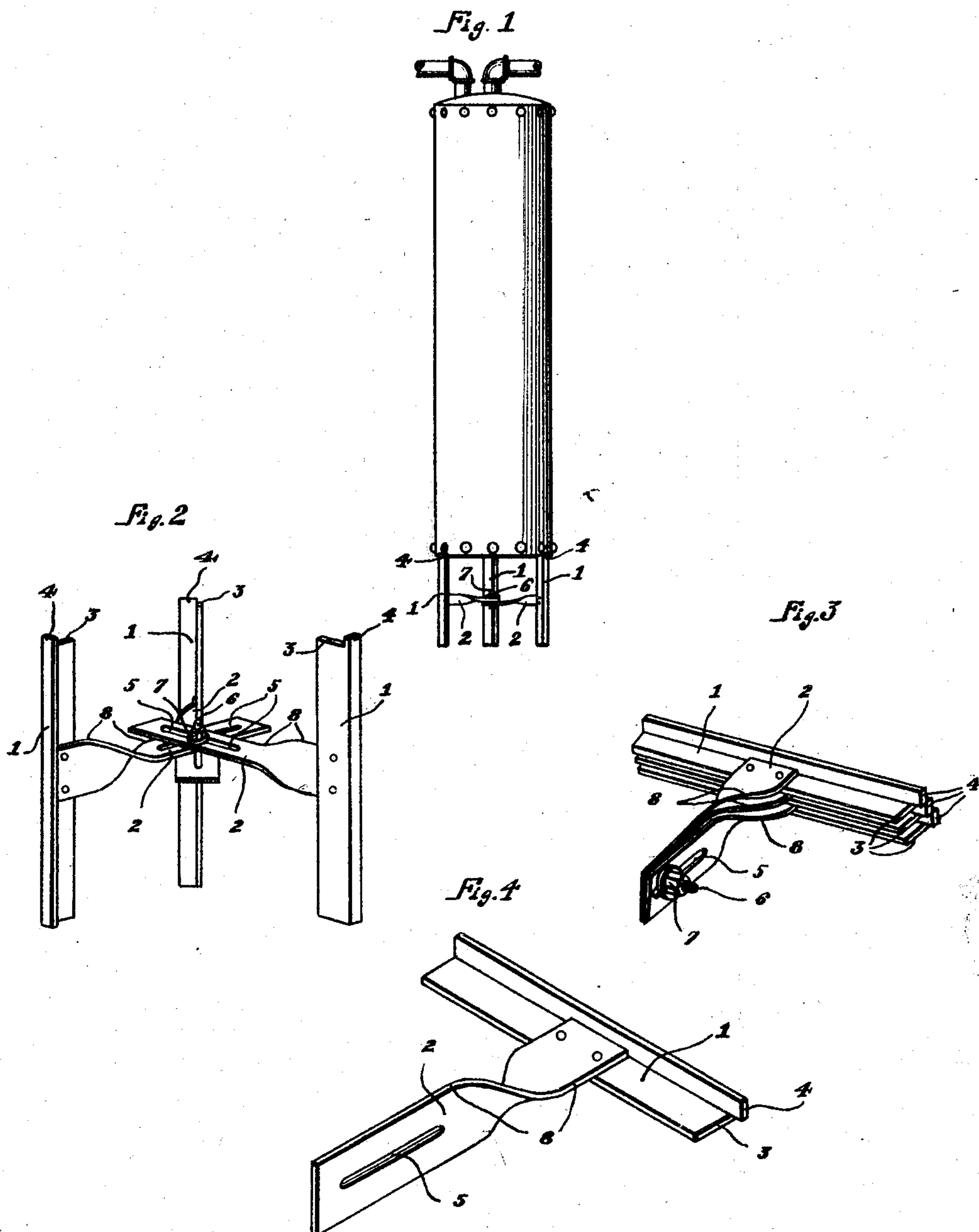
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BOILER STAND

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Witness:

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UNITED STATES PATENT OFFICE

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BOILER STAND

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This invention relates to an adjustable stand for supporting upright range boilers or objects of that form, and it is the object of the invention primarily to provide an improved stand of this character which is simple and sturdy of construction, which is adapted to be adjusted and applied to boilers of different diameters with a minimum amount of labor, which is capable of being folded into a compact package for shipping and storage purposes when not in use without requiring the dismembering of any of its parts, and which may be manufactured at a low cost.

The novel features which characterize the invention and their advantages will be better understood when the following detailed description is read in conjunction with the accompanying drawings of which Fig. 1 is a view illustrating a stand embodying the invention as it may be used; Fig. 2 a perspective view of the stand to enlarged scale; Fig. 3 a view showing the stand folded for storage or shipment; and Fig. 4 a view of one of the combined leg and cross arm sections detached.

In accordance with the invention and as is illustrated in the drawings, a boiler stand is provided which comprises a plurality of similarly constructed combined leg and cross arm sections all of which are adjustably connected together by a single bolt. These sections, which in the preferred form of the stand are three in number, each consist of an uprightly disposed leg member 1 and a cross arm member 2 which is rigidly connected to the central portion of the leg member by rivets or other suitable means and at right angles therewith. While the leg members may be made from suitable sturdy pieces of strip metal, angle iron is preferably used for their construction since it presents a flat surface on the outside of the stand, is more rigid and also otherwise better adapted to such use. A small portion 3 of the radially disposed flange at the top of each leg member is cut away to form a lug 4 which is employed to engage the edge of a boiler and hold it in place on the stand.

The cross arm member 2 is made from a relatively wide piece of strip metal, such as

strip steel, and is rigidly connected in a vertical manner to the radially disposed flange portion of the leg member. To give rigidity to the stand and to facilitate the joining of the different sections together, the cross arm is twisted beyond the point where it is connected to the leg member through an angle of 90°, and in such a way that a substantial portion of the free end of the arm lies in a horizontal plane. An elongate slot 5 is formed in this horizontally disposed portion of the arm to provide for adjustably joining the various sections of the stand together. When the stand is assembled the horizontally disposed portions of the different cross arms are laid one on top of the other with their elongate slots 5 in register, and a bolt 6 is passed through them to hold them in place, a nut 7 being turned on the bolt to rigidly clamp the sections together. After the nut is screwed on the bolt the threaded end of the bolt is jammed sufficiently to prevent the nut coming off, but not sufficiently to interfere with the movement of the nut enough to prevent adjustment of the stand. In this way the nut is prevented from getting lost and the parts of the stand from coming apart.

As will be appreciated, the width of the cross arm and twisted portion 8 thereof function to increase the rigidity of the stand, since both strengthen the cross arm against deflection from both horizontal and vertical forces, which when encountered tend to twist the stand out of shape. The rigidity of the stand is also further increased by the mounting of the cross arms in the midportion of the leg members, since, by connecting them to the leg members at that point, the stand is less liable to be twisted out of shape if it is slid along the floor when loaded or when a boiler mounted on it is rotated without the stand itself being rotated.

To obtain the greatest possible rigidity in the cross arm, the twisted portion 8 is started at the point where it joins the leg and extended inwardly along the leg as far as is possible without its interfering with the adjustability of the stand, the limit being determined by the flat portion required at the free ends of

the arm to permit of the necessary radial movement of the sections for adjustment.

By providing elongate slots 5 in the cross arms and using only a single bolt 6 to hold all the sections together, it is possible to adjust the stand to the proper size to fit a boiler by merely loosening nut 7 and radially sliding the section together or apart as may be necessary and then retightening the nut. If one of the legs should be slightly out of true after the boiler is placed on the stand, nut 7 may be loosened and the leg tapped to place without disturbing the other sections of the stand, and due to the rigid connection between the cross arms and the legs, if the stand is found to be too high for certain uses, the portion of the legs below the cross arms may be cut off without weakening the stand.

As is illustrated in Fig. 3, when the stand is not in use, or when it is being shipped, it may be folded into a very compact form by merely loosening nut 7 and rotating the sections into a nested position. This feature is made possible by the twist 8 and slots 5 in the cross arms which permit the arms to be shifted with respect to each other and snugly nested together.

As will be readily appreciated by plumbers, and others skilled in the art, there is a real advantage in being able to fit a stand of this character to a boiler or fold it for shipment by merely adjusting a single bolt, and especially so when such a small amount of time and labor are required to do it. In addition to this it is unnecessary to dismember any of the parts of the stand for shipping purposes or any other reason. Hence, the possibility of losing any of its parts either when it is being fitted to a boiler or when it is in storage or shipment is greatly reduced. Another feature is that due to the limited space taken up by the cross arms the legs of the stand may be made comparatively short and still allow sufficient room below the boiler for attaching fittings thereto. Furthermore, each of the sections of the stand are identically alike and interchangeable, and because of their simple construction are capable of being fabricated or manufactured at a very low cost.

According to the provisions of the patent statutes, I have explained the principle and operation of my invention, and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. A boiler stand comprising a plurality of combined cross arm and leg sections each of which consists of an uprightly disposed leg member and a radially disposed cross arm, said leg members consisting of a straight

angle member notched on its upper end to engage the lower edge of a boiler, said cross arm being formed from a flat piece of strip metal rigidly attached in a vertical plane to said leg member and extending at right angles thereto, said arm being twisted through an angle producing a bend portion therein adjacent said leg member and placing its free end in a horizontal plane, said horizontally disposed portion being provided with an elongate radially disposed adjustment slot, and a bolt extending through said slots and adjustably holding the sections of the stand together.

2. A boiler stand comprising a plurality of combined cross arm and leg sections each of which consists of a vertical leg member and a radially disposed cross arm member having a bolt-receiving opening in its free end, said cross arm member being formed of a flat sturdy piece of strip metal rigidly secured in a vertical plane at right angles to the leg member and twisted laterally through an angle placing a portion of its free end in a horizontal plane to adapt it for attachment to the same portion of the cross arms of the other sections of the stand, and a bolt passing through the bolt-receiving holes of the different cross arms to hold the sections of the stand together.

In testimony whereof, I sign my name.

GALBRAITH S. MELVIN.