

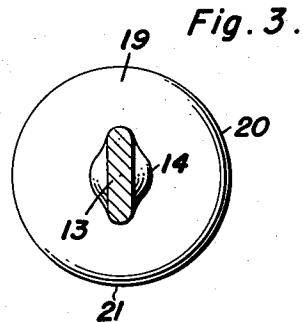
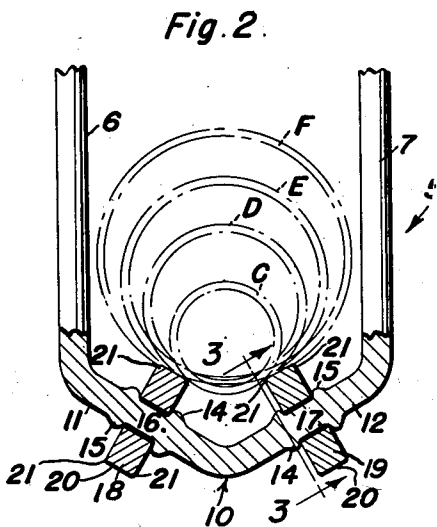
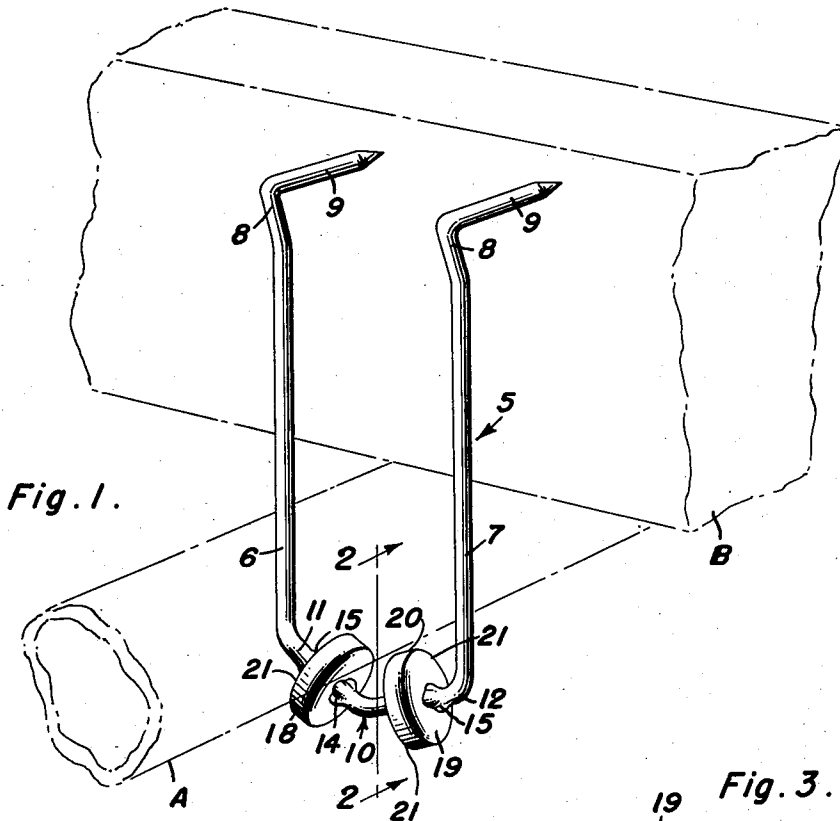
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PIPE HANGER WITH GLIDE ROLLERS

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PIPE HANGER WITH GLIDE ROLLERS

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2 Claims. (Cl. 248—55)

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The present invention relates to pipe hangers which are equipped with anti-friction rollers for suspending hot water and steam pipes, in cellars and elsewhere, and which have been adapted and used to cope with the inherent expansion and contraction properties of piping.

It is a matter of common knowledge, to those familiar with this line of endeavor, that the ordinary pipe hanger takes the form of a staple of wire or strap metal and serves to straddle the coating pipe tightly against the suspending joist or other support. However, and to take care of the aforesaid suspension and contraction properties pipe hangers are now available with anti-friction and gliding rollers.

The object of our invention is to structurally, functionally and otherwise improve upon roller-equipped hangers. Therefore, we have evolved and produced a simple, practical and economical roller-equipped hanger in which users will find their needs fully met, contained and conveniently available.

More specifically, we achieve wanted ends through the medium of a U-shaped wire hanger whose central or bight portion is especially made to provide journals and we mount a pair of companion idlers or rollers on the journals and cant same in relation to each other to thus provide what we believe to be a more efficient and aptly suitable suspension arrangement for shiftable piping.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the accompanying sheet of drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view of a pipe hanger constructed in accordance with the principles of our invention illustrating the manner in which the same is installed and used.

Figure 2 is a fragmentary view in section and elevation which may be said to be taken approximately on the plane of the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is an enlarged cross-section on the line 3—3 of Figure 2, looking in the direction of the arrows.

In Figure 1 a pipe section is denoted by the reference character A and a supporting joist or the like by the reference character B.

The improved wire hanger per se is denoted by the numeral 5 and is of general U-shape form and is preferably made from copper clad or cadmium coated wire of about 24 gage. The opposed

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limbs or arms are denoted by the numerals 6 and 7 and are substantially straight and the free or terminal ends are laterally bent at the points 8 and 9 to provide suitable prongs which are hammered or driven into the joist in a well known manner. The principal improvement in our hanger has to do with the substantially V-shaped connective or bight portion 10. The converging members thereof are denoted by the numerals 11 and 12 and the wire thereof is stamped "out-of-round" as at 13 to define pairs of shoulders 14 and 15. There are two sets of shoulders and the portions between the respective shoulders constitute journals 16 and 17 and these journals constitute adapters for the idling anti-friction and pipe supporting rollers 18 and 19. The rollers are preferably solid copper, solid aluminum or Micarta wheels and the peripheral edges 20 are very slightly convexed or suitably cambered as at 21—21. By having the portions 11 and 12 in converging relationship the journals or axles are properly slanted in respect to each other and this, in turn, serves to cant the rollers 18 and 19 in proper angular relationship. The arrangement as brought out in Figure 2 is such that the rollers may support a variety of sizes of pipes denoted for example by the reference characters C, D, E and F. Using the dimensions and angles as shown in the drawings will permit the larger pipe to seat perfectly on the rollers. The smaller pipe with lesser weight rides on the innermost edges, it being that the larger pipe with more weight requires a more perfect seating for freedom of movement, thus preventing the binding of the canted pair of idling rollers. The limbs or arms 6 and 7 are sufficiently far apart to accommodate the various sizes of pipes illustrated. Thus, the one hanger will accommodate many sizes of hot water and steam pipes.

This hanger will be made in various sizes, hanging legs may vary from 4" to 12" spaced from 1" between to 2" more or less to accommodate various sized pipes and made from various wire or rod gages. Various methods of hanging will be used. While the wire part is not new we do, however, believe that the idea of making a rolling pipe hanger of wire is new. On the job that we have it in use it is functioning perfectly eliminating an annoying disturbance; it is, therefore, practical and salable.

Our rolling pipe hanger permits a long run of hot water pipe to expand and contract as it is heated and cools. For instance, a hot water or steam heating job installed in the basement of a residence has the piping run in the basement

hung closely to the floor joists, perhaps one or two lines are run at a total of 80' to 200' for each line; this run of pipe hung on ordinary straps or wire pipe hangers would not move freely but would vibrate or chatter and make a cracking noise as it moved on its bearing in the seat of this hanger, thus causing disturbing noises because the noise from the piping transmitted to the hangers causes the whole floor system to become a sounding board, which greatly amplifies the racket throughout the building.

It is thought that person skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in the shape, size and arrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having described the invention, what is claimed as new is:

1. A pipe hanger of the class described comprising a substantially U-shaped wire hanger embodying complementary opposed limbs having attaching means at their free end portions and including a V-shaped bight portion, said bight portion having downwardly converging complements provided with surface deformations orderly arranged and providing longitudinally spaced sets of diametrically opposite nodules, said nodules defining shoulders and said shoulders

defining intervening journals between themselves, and anti-friction rollers mounted for free rotation on the respective journals, said anti-friction rollers being of uniform cross-sectional thicknesses and thus providing substantially flat peripheral edge portions and having their upper half-portions canted and converging toward each other within the limits of the hanger and having their lower half-portions spread and diverging away from each other.

2. The structure defined in claim 1 wherein said limbs are distances apart sufficient to accommodate a plurality of differently diametered pipes, the flat peripheral portions of the converging portions of said rollers being distances apart relative to each other and to said limbs that said rollers likewise properly support a wide range of differently diametered pipes.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
501,439	Reznor	July 11, 1893
1,301,428	Gitterman	Apr. 22, 1919
1,476,473	Skinner	Dec. 4, 1923
1,541,129	Farley	June 9, 1925
2,319,832	Trochim	May 25, 1943
2,423,455	Larson	July 8, 1947
2,530,791	Smith	Nov. 21, 1950