Sept. 8, 1936. E. E. HALL 2,053,555

PIPE SLEEVE EXTENSION AND HOLDER THEREFOR

Original Filed June 16, 1932 2 Sheets-Sheet 1

Fig. 1.

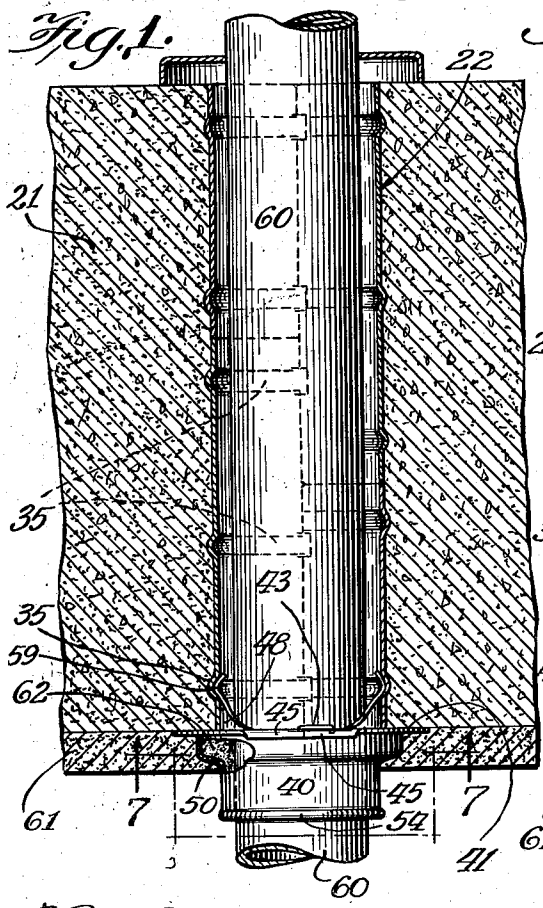


Fig. 2.

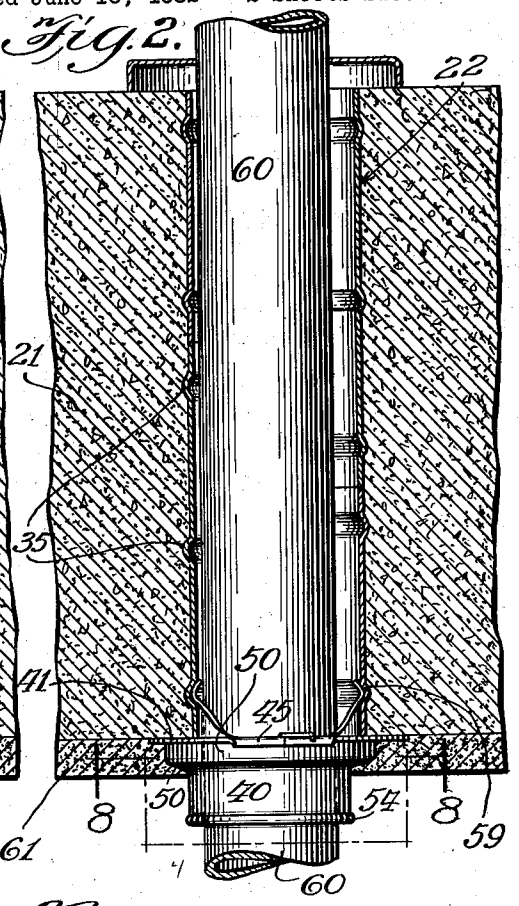


Fig. 3.

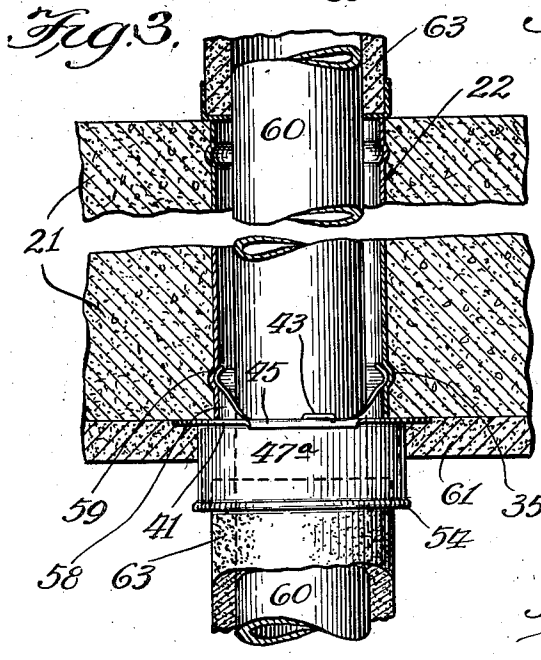
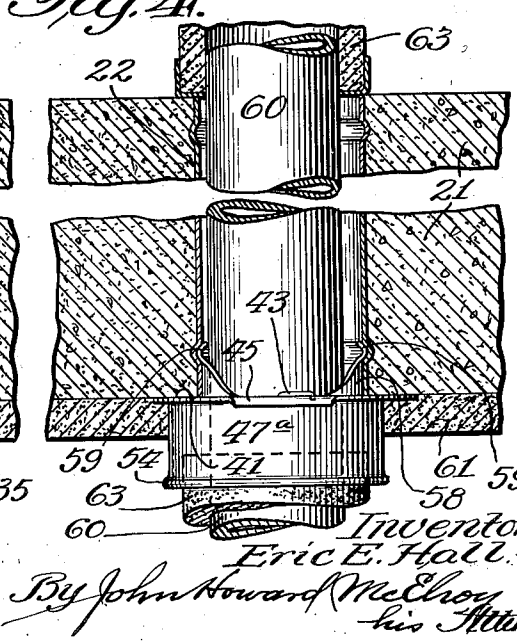


Fig. 4.



Inventor
Eric E. Hall.
By John Howard McElroy
his Atty.

Sept. 8, 1936. E. E. HALL 2,053,555

PIPE SLEEVE EXTENSION AND HOLDER THEREFOR

Original Filed June 16, 1932 2 Sheets-Sheet 2

Fig. 5.

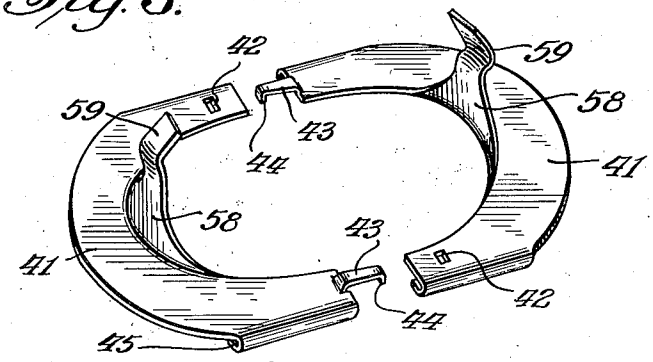


Fig. 6.

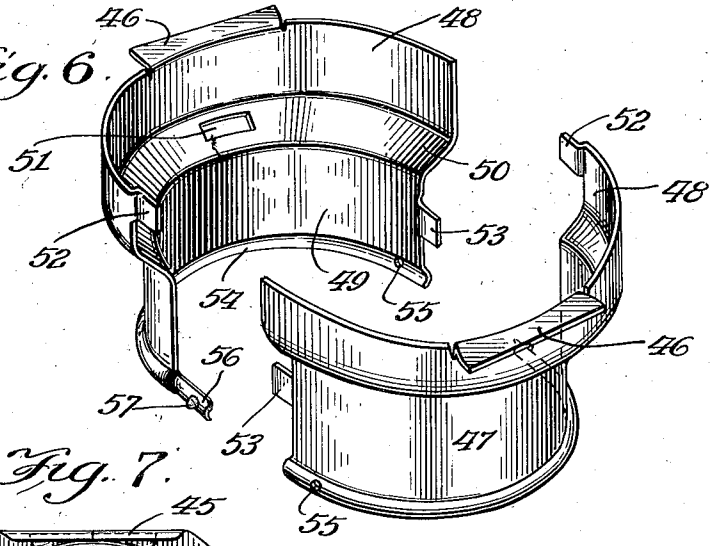


Fig. 7.

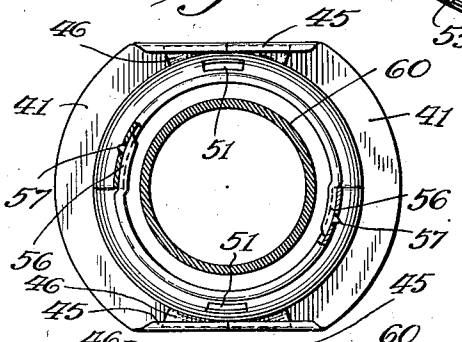
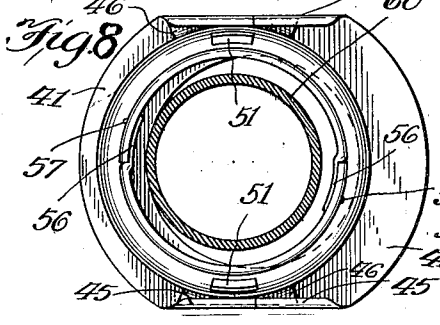


Fig. 8



Inventor
Eric E. Hall.
By John Howard McElroy
His Atty.

Patented Sept. 8, 1936 2,053,555

UNITED STATES PATENT OFFICE

2,053,555

PIPE SLEEVE EXTENSION AND HOLDER THEREFOR

Eric E. Hall, Chicago, Ill.

Application June 16, 1932, Serial No. 617,555
Renewed January 28, 1936

9 Claims. (Cl. 126—317)

My invention is concerned with pipe sleeves, such as are used in concrete or other fire-proof floors and walls, and with a novel extension for said pipe sleeves, adapted to be secured to the ends of said sleeves after the concrete is set to form a finishing ring, and which can be adjusted on said pipe sleeve to center it on the pipe, which it surrounds, even if the pipe, as is frequently the case, be not concentric with the pipe sleeve.

To illustrate my invention, I annex hereto two sheets of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—

Fig. 1 is a vertical section through the pipe sleeve after the concrete has set and with the extension in place and the ceiling plaster applied to the concrete;

Fig. 2 is a view similar to Fig. 1, but showing the pipe set eccentrically to the sleeve and with the extension adjusted accordingly.

Figs. 3 and 4 are views similar to Figs. 1 and 2, with portions of the concrete broken out and with a different form of extension applied to the sleeve, and with an insulating covering applied to the pipe;

Fig. 5 is a perspective view of the two halves, separated, constituting the supporting portion of the extension;

Fig. 6 is a similar view of the two halves constituting the extension portion of the extension member; and

Figs. 7 and 8 are inverted plan views in section on the lines 7—7 and 8—8, respectively, of Figs. 1 and 2.

In the modern practice of constructing reinforced concrete buildings, provision is made for passing the piping necessary for plumbing of all sorts through the walls and floors by securing pipe sleeves at the necessary places on the part of the false work or frames that form the walls, or more frequently the flooring so that when the concrete is poured and set, and the false work or forms finally removed, the walls or floors, as the case may be, will have usually circular apertures therethrough lined by the metallic sleeves employed. So far as my present invention is concerned, these sleeves 22 imbedded in the concrete 21, as shown in Figs. 1 to 4, may be of any desired shape and material, although in the preferred form they are of sheet metal and have near the bottom at least a transverse annular groove 35 formed on the interior, which acts as a strengthening rib in the manner that will be readily understood. In my present invention, I employ with the sleeves, extension members 40, one form of which is shown with the four parts thereof detached and in perspective in Figs. 5 and 6. The holding portion shown in Fig. 5 is made up of two identical sheet-metal sections 41, generally semicircular in outline, with one end having a rectangular aperture 42 therein, while the other end is provided with an extension 43 formed from the sheet metal and having the downwardly projecting tip 44 adapted to snap into the aperture 42 of the associated half. Toward the ends of the part 41, they are turned under at 45 to form a groove adapted to receive the flanges 46 of the extension members 47, shown detached in Fig. 6. These members 47 are, in the form shown in Fig. 6, made up of the semicircular main portions 48 having the flanges 46 extending horizontally therefrom, as shown, which are connected with the reduced lower portions 49 by the inclined portion 50, which may have the aperture 51 therein, for a purpose to be hereinafter described. The portions 48 have at one end the inwardly offset tongue 52, and the portion 49 has at the other end the inwardly offset tongue 53. The bottom of the portion 49 is preferably formed with the curved flange 54 having at one end an aperture 55 and at the other end the inwardly-offset, curved tongue 56, which has projecting outwardly therefrom the lug 57. Where the extensions are to be employed with pipe sleeves having the internal annular grooves 35, I form on the members 41 the upwardly projecting tongues 58 terminating in the humps 59 formed by shaping the ends of the tongues 58 as shown. These tongues are adapted to enter the bottom grooves 35 in the sleeve holder when the parts are assembled, and it will be understood that in assembling the parts, the two halves shown in Fig. 6 are first brought together around the pipe, and when brought together, the tongues 52 will fit inside of the members 48 of the opposing halves, and similarly the tongues 53 will fit inside of the opposing portions 49, and the tongues 56 will fit in the grooves 54 of the opposed halves, and the projections 57 will snap into the apertures 55, thereby securely holding the two halves together. With the extension half thus assembled below the sleeve, the two halves shown in Fig. 5 are then slid in place over the flanges 46, which enter the grooves 45, and the ends 44 of the tongues 43 snap into the apertures 42, so that the assembled extension can now be shoved upward so that the tongues 58 will extend between the pipe and the sleeve, and the humps 59 with their beveled upper ends will

enter the grooves **35** and securely hold the parts in place.

The purpose of the sliding connections between the upper and lower portions of the extension is indicated in Figs. 1 to 4 and 7 and 8, where it will be seen that the pipe **60** is sometimes concentric with the sleeve and sometimes not. Where it is not concentric, the lower half can be slid on the upper half until the extension is concentric with the pipe, and it will be obvious that the entire extension can be rotated when necessary to secure the desired exact concentric relation of the extension to the pipe.

In Fig. 6, I have illustrated the aperture **51** formed in each of the extension halves, and where the pipe sleeve does not have the internal annular grooves in which the humps **59** fit, I contemplate securing the extension in place by sheet-metal straps or wires, the lower ends of which would pass through the apertures **51** and be turned to hold them in place, and the upper ends of which, similarly, could be turned over and caught in any desired manner on the upper surface of the concrete.

Where this particular form of extension shown in Figs. 5 and 6 is employed, a finishing coat of plaster **61** is frequently applied, and in that case I will place in the upper portion of the extension, between the concrete and the offset portion **50**, packing **62**, which will serve to shut out the noises between the floors, and also the passage of dirt.

Where insulation tubing **63** is employed about the pipes **60**, as shown in Figs. 3 and 4, I modify the shape of the lower half to the form **47a** shown, where the offset **50** is not employed and it is approximately a true cylinder.

While I have herein shown and described my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, the combination with a pipe sleeve, of an extension therefor consisting of two halves adapted to be brought together around the pipe and secured to each other and to the end of the sleeve, each half consisting of a pipe-sleeve engaging member and an extension member proper, the two engaging members adapted to be brought together and interlocked, and the two extension members similarly adapted to be brought together and interlocked, the two pipe-sleeve engaging members having sliding connections with the two extension members so that the latter when in place can be moved transversely relative to the former without separating them.

2. A pipe-sleeve extension comprising a unit consisting of two identical supporting or engaging halves adapted to be brought together and interlocked, and a unit consisting of two identical extension halves adapted to be brought together and interlocked, the supporting unit and the extension unit having slidable connections formed by outwardly projecting flanges extending from the center of the top of each of the extension halves, and inwardly projecting hook flanges formed on the ends of each of the supporting halves.

3. A pipe-sleeve extension consisting of two identical supporting halves adapted to be brought together and interlocked, and two identical extension halves adapted to be brought together and interlocked, the supporting halves consisting of substantially semicircular flat halves of sheet metal with co-operating hooks and recesses at the ends thereof and upwardly extending tongues at the middle portions thereof, and the extension halves each consisting of semicylindrical sheet-metal halves with co-operating hooks and recesses at the ends thereof, the upper parts of the extension halves and the under edges of the supporting halves having sliding connections, substantially as and for the purpose described.

4. In a device of the class described, the combination with a pipe sleeve, of an extension therefor consisting of two halves adapted to be brought together around a pipe and secured to each other and to the end of a sleeve, each half consisting of an upper portion and a lower portion and means for adjusting the position of the lower portion of each of the halves relative to the upper portions and to the pipe sleeve so that they can be placed concentrically to the pipe although it may be eccentric to the pipe sleeve.

5. In a device of the class described, an adjustable pipe extension unit consisting of two halves of two pieces each, the upper pair of pieces combined being annular in form and provided with means to secure them together and in place to the inside of the end of a pipe sleeve with their axis concentric with that of the pipe sleeve, and the lower pair of pieces combined forming a collar member and being provided with means to secure them together and to the upper pair with their axis in any desired position relative to the axis of the upper half.

6. In a device of the class described, an adjustable pipe extension unit consisting of two halves of two pieces each, the upper pair of pieces combined being annular in form and provided with one set of means to secure them together and with another set of means to secure them in place to the inside of the end of a pipe sleeve with their axis concentric with that of the pipe sleeve and with still another set of means for attachment to the lower pair, and said lower pair of pieces combined forming a collar member and being provided with one set of means to secure them together and with another set of means to secure them to the upper pair with their axis in any desired position relative to the axis of the upper half.

7. In a device of the class described, an adjustable pipe extension unit consisting of two halves of two pieces each, the upper pair of pieces combined being annular in form and provided with one set of means to secure them together and with another set of means to secure them in place to the inside of the end of a pipe sleeve with their axis concentric with that of the pipe sleeve and with still another set of means for attachment to the lower pair, and said lower pair of pieces combined forming a collar member and being provided with one set of means to secure them together and with another set of means to secure them to the upper pair with their axis in any desired position relative to the axis of the upper half, the attaching means of the upper pair consisting of parallel inwardly-opening grooves and the attaching means of the lower pair consisting of outwardly-directed flanges adapted to enter the grooves of the upper pair.

8. In a device of the class described, an adjustable pipe extension unit consisting of two halves of two pieces each, the upper pair of pieces combined being annular in form and provided with one set of means to secure them together and with another set of means to secure them in place to the inside of the end of a pipe sleeve with their axis concentric with that of the pipe sleeve and with still another set of means for attachment to the lower pair, and said lower pair of pieces combined forming a collar member and being provided with one set of means to secure them together and with another set of means to secure them to the upper pair with their axis in any desired position relative to the axis of the upper half, the attaching means of the upper pair consisting of parallel inwardly-opening grooves and the attaching means of the lower pair consisting of outwardly-directed flanges adapted to enter the grooves of the upper pair, the co-operation of the grooves and flanges serving to prevent any possible disengagement of the attaching means of the upper pair.

9. In a device of the class described, the combination with a pipe sleeve having an internal annular groove toward the bottom thereof, of an extension therefor consisting of four pieces adapted to be brought together around the pipe to form a generally cylindrical unitary structure and secured to the end of the sleeve by projections extending into it and engaging said groove and formed by tongues extending upwardly from the upper two pieces of the sheet-metal bodies, the lower two pieces and the upper two pieces having connecting means to adjust the vertical axis of the lower half relative to the vertical axis of the upper half.

ERIC E. HALL.