June 19, 1923.

1,459,471

J. KOHN

HANGER

Filed March 13, 1922

Fig. 1.

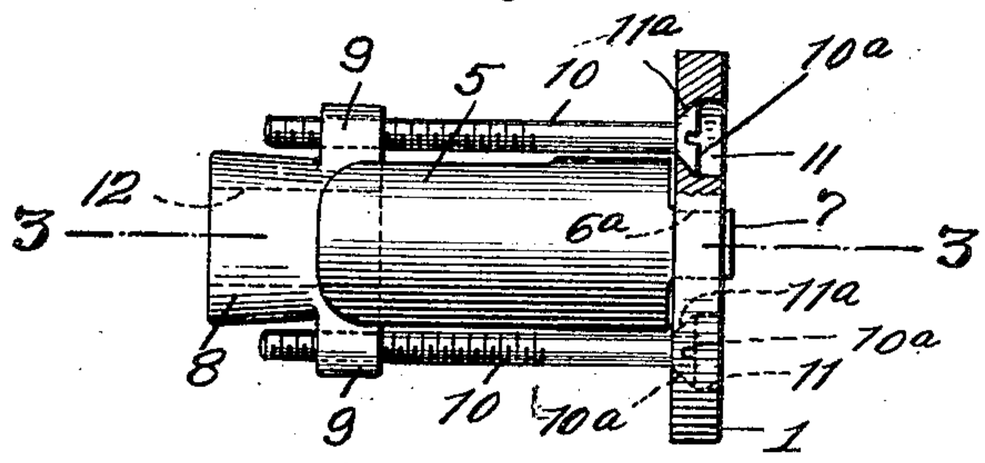



Fig. 2.

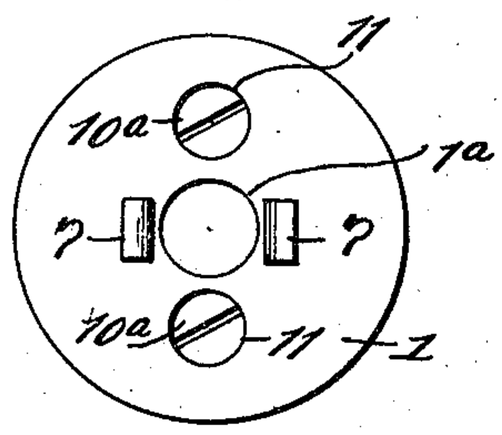



Fig. 3.

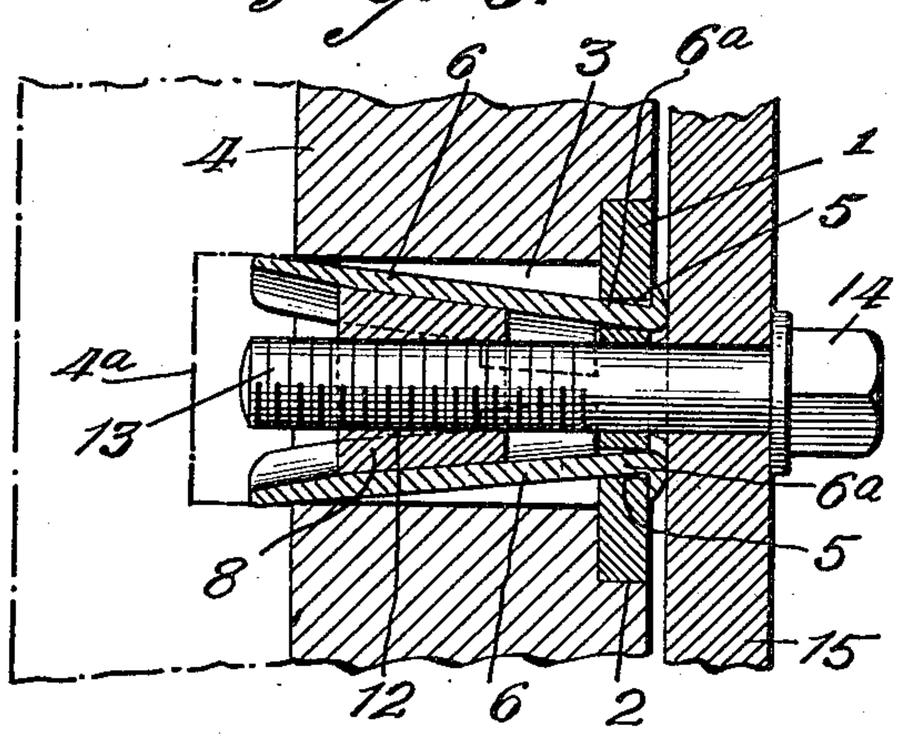



Fig. 4.

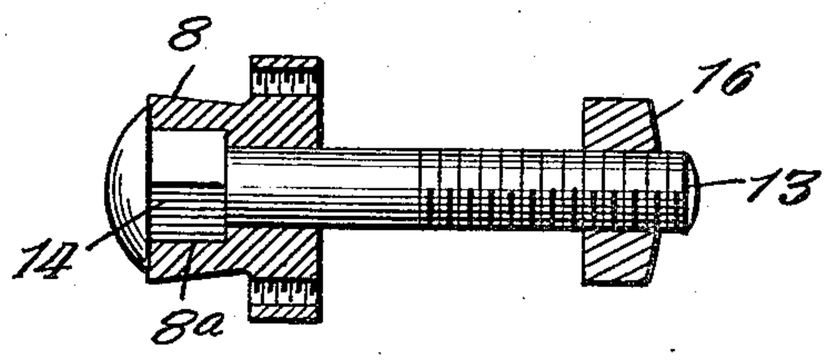



Fig. 5.

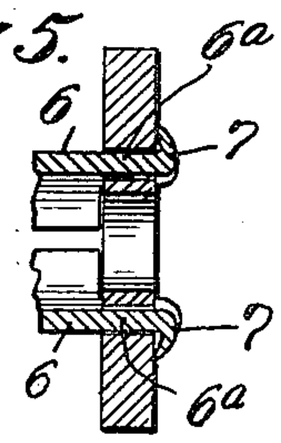
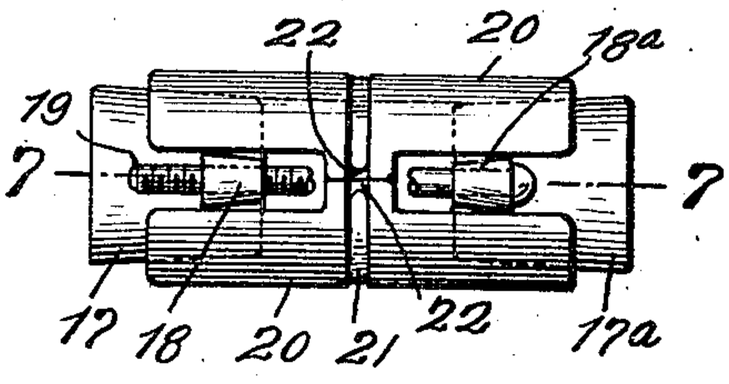



Fig. 6.



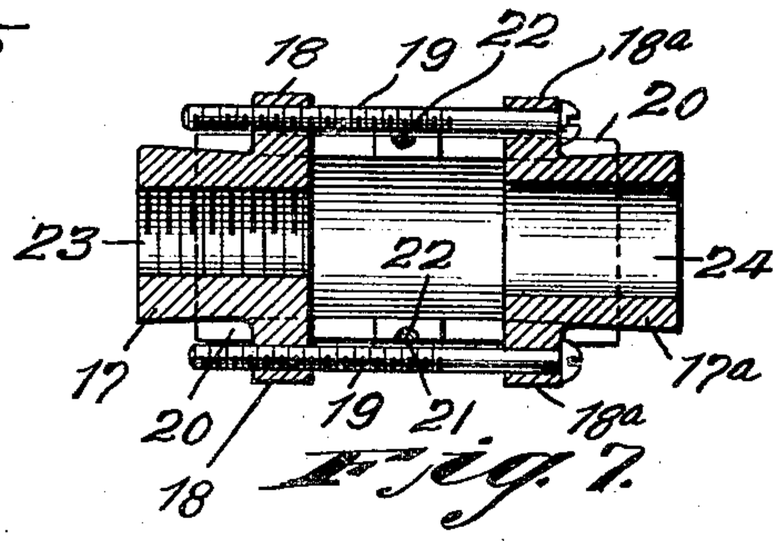




Fig. 7.

INVENTOR

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Patented June 19, 1923. 1,459,471

# UNITED STATES PATENT OFFICE.

JACOB KOHN, OF NEW YORK, N. Y.

## HANGER.

Application filed March 13, 1922. Serial No. 543,248.

*To all whom it may concern:*

Be it known that I, JACOB KOHN, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hangers, of which the following is a specification.

This invention relates to hangers adapted particularly for fastening structural iron work to the sides of a building wall, such as fire escape brackets etc.

The invention has for its objects the provision of a device of this character which is simple in construction, durable and inexpensive; which is adaptable for attachment to a building wall without necessity of employing rivets or riveting machines; which, when fixed in place, maintains secure connection with the structure to which it is attached; and which is readily attachable and detachable by means of ordinary tools, as a screw driver and wrench and which is adapted to be expanded within a wall recess before the bolt for hanging an auxiliary structure is inserted.

In carrying out my invention I employ elongated segmental elements, conical expanders for spreading said segmental elements against a cylindrical aperture formed in a building wall, screw means for actuating the expanders and other novel features hereinafter fully described and specifically set forth in the appended claims.

In the accompanying drawings forming part of this specification, Figure 1 is a side view illustrating one example of my improved hanger;

Fig. 2 is a front end view thereof;

Fig. 3 is a longitudinal sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a side view illustrating one example of a bolt and spreader element employed in the assemblage of my improved device;

Fig. 5 is a fragmentary sectional view of a part of the device;

Fig. 6 is a side view showing a slightly modified form of the device; and

Fig. 7 is a longitudinal sectional view taken on the line 7—7 of Fig. 6.

In the drawings, referring particularly to Figures 1 to 3, 1 indicates a disc or head adapted to be countersunk in a shallow recess 2 formed around the inlet of a cylindrical recess 3 of a building wall 4, said recess may constitute a hole extended entirely through a shallow wall, as shown by full lines Fig. 3 of the drawings, or the recess may extend only partly through the wall, as shown by dotted lines 4ª.

The head 1 has a central bore 1ª, and formed through said head 1, on a diametrical line and located at equal distances from the center of said head are two openings 5, through which the contracted ends 6ª of the elongated segments, or clamping elements 6 are extended, these contracted ends of the segments are respectively provided with a laterally turned flange 7 which extends obliquely towards the head 1, when the segments are extended parallel with each other, as shown in Fig. 5 of the drawings, whereby when said clamping elements are spread or fully expanded, as shown in Fig. 3 of the drawings, the inner surfaces of the flanges are in alignment with the face of the head 1, whereby a closed joint is maintained to prevent rain or snow from entering through the opening 5.

The spreading element comprises a conical plug 8 having oppositely located lugs 9 through which screws 10 are threaded, said screws respectively provided with a conical head 10ª, which bears against a conical part 11ª of a cylindrical recess 11. The spreading element is further provided with an interiorly screw-threaded bore 12 for engaging a screw-bolt 13 having a squared head 14, whereby the bolt 13 may be turned to coincidentally actuate the spreader 8 and clamp a bracket member or other device 15 to the outer face of the wall 4. Instead of screwing the bolt 13 into the spreader 8, said spreader may be provided with a squared recess 8ª for engaging the bolt head 14, and said bolt may be fastened by means of a nut 16, as shown by Fig. 4 of the drawings.

In the modification illustrated by Figures 6 and 7 of the drawings, I provide two conical spreaders 17, 17ª having respectively lugs 18, 18ª, said spreaders being connected by adjusting screws 19 which rotate through the lugs 18ª and are threaded through interior screw threaded openings of the lugs 18, the segments, or clamping members being held on the spreaders by means of a resilient split ring 21 which engages grooves 22 of the clamping members, the spreader 17 having a screw threaded bore 23 for engaging a bolt 13, and the spreader 17ª having a smooth bore 24 through which said bolt may rotate.

In the operation and use of the invention the device is placed within a recess of a wall and then expanded by turning the adjusting screws in the threaded lugs of the conical spreaders until the segmental clamping elements are in sufficient frictional contact with the walls of the recess to hold the device in place said recess having peripheral grooves for accommodating the lugs of the spreaders, then a bolt 13 is passed through an element to be attached to the building wall, as a fire escape bracket, indicated by 15, (see Fig. 3 of the drawings) and turned in the threaded spreader until the segments are further expanded and the element 15 is tightly clamped into fixed relation with the building wall, the recesses 11 of the plate 1, when such plate is used, admitting of slight forward movement of the heads of the adjusting screws.

While I have illustrated and described fair examples of my improved hanger, I do not confine myself to the specific details of mere mechanical constructions shown, as under the spirit of my invention I believe that I am entitled to employ such variations of minor detail as may fall within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a hanger for fixing auxiliary structural work to the face of a building wall, a slidably adjustable conical spreader having a radial lug, and a clamping element for engaging a recess in the wall, means engaging said lug for adjusting said spreader whereby the clamping element is actuated, and a bolt for expanding the clamping element.

2. In a device for fixing auxiliary structural work to the face of a structure, a slidably adjustable conical spreader, segments constituting clamping elements which are in peripheral engagement with said spreader, screws for adjusting said spreader, and means for holding the clamping elements in laterally adjustable relation with each other.

3. In a hanger for fixing auxiliary structural work to the face of a structure, a slidably adjustable conical spreader, segments constituting clamping elements which are in peripheral engagement with said spreader, screws for adjusting said spreader to move the clamping elements for fastening the device within a recess of the structure, and means for further moving the clamping elements and coincidentally secure the auxiliary structural work to the structure.

4. In a device for fixing auxiliary work to a structure, a slidably adjustable conical spreader, segments constituting clamping elements, and a plate for holding said segments in swinging relation around the spreader, said plate having recesses and screws having heads for engaging said recesses, said screws adapted for moving said spreader to primarily fix the device within a recess of the structure, and means for further moving the spreader and coincidentally fixing the auxiliary structural work to the structure.

5. In a device for fixing auxiliary structural work to a structure, a slidably adjustable conical spreader having lugs for preventing rotation of said spreader in a wall recess, segments constituting clamping elements which are in peripheral engagement with said spreader, and a screw for adjusting said spreader to expand the clamping elements with the wall recess, and a bolt for further expanding the clamping elements.

6. In a hanger for fixing auxiliary structural work to the face of a building wall, a pair of slidably adjustable conical spreaders having, respectively, radially extending lugs, segments constituting clamping elements which are in peripheral engagement with said spreaders, screws engaging said lugs for primarily adjusting said spreaders to expand the clamping elements within a building wall recess, and a bolt for further expanding said clamping elements.

Signed at New York, in the county of New York and State of New York this 25th day of January A. D. 1922.

JACOB KOHN.