Dec. 22, 1936. R. E. MARSH 2,064,984

WALL BRACKET

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Fig. 1.

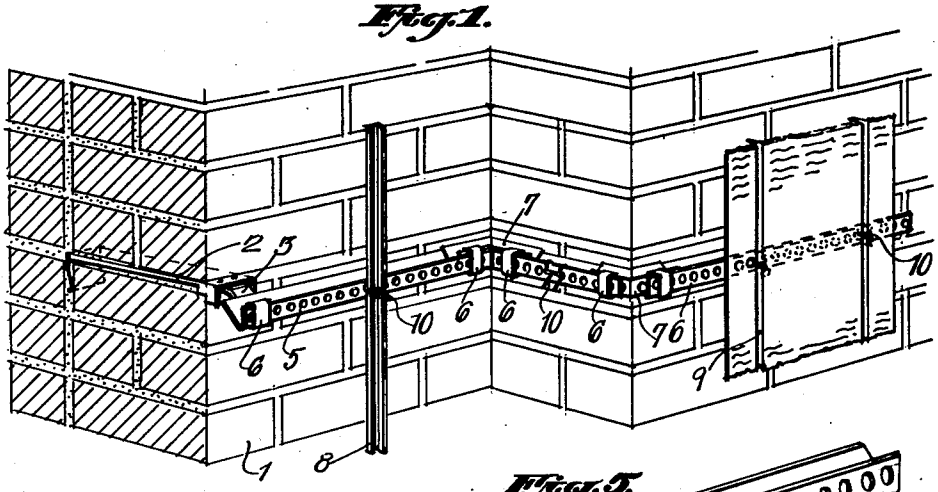


Fig. 5.

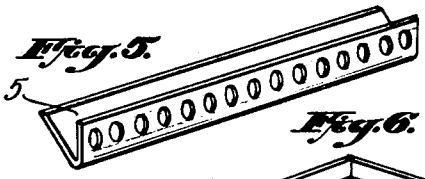


Fig. 2.

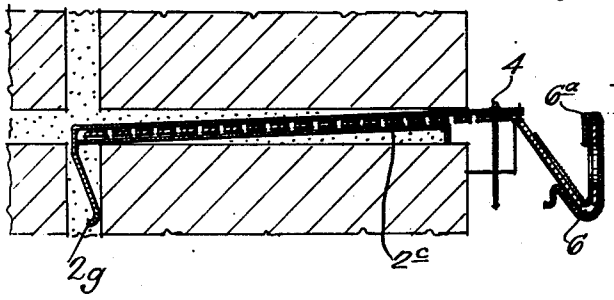


Fig. 6.

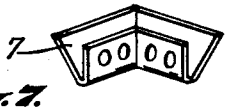


Fig. 7.

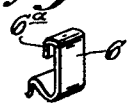


Fig. 8.

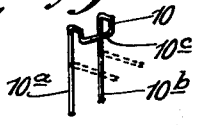


Fig. 3.

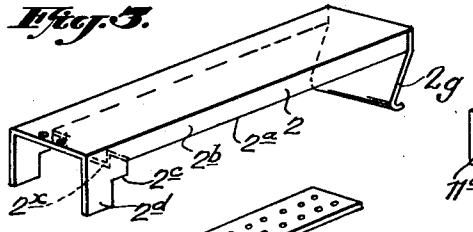


Fig. 10.

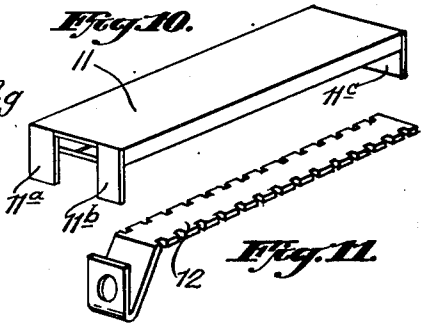
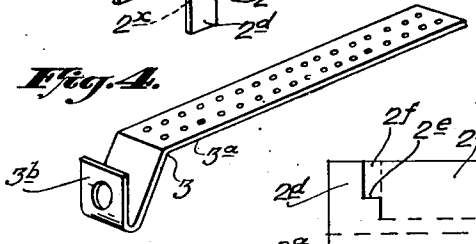


Fig. 11.

Fig. 4.



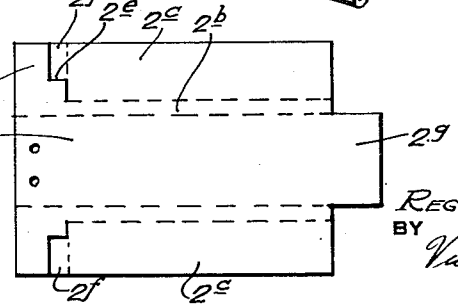


Fig. 9.

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Fig. 12.

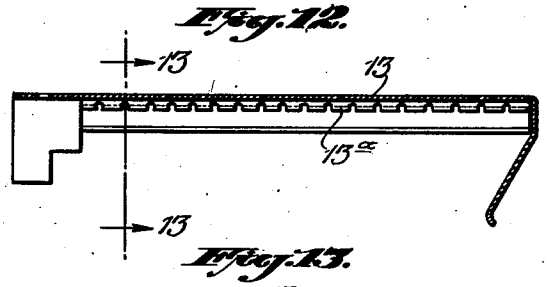


Fig. 13.

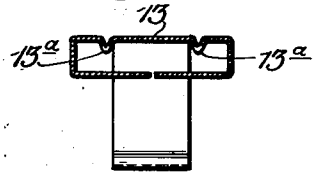
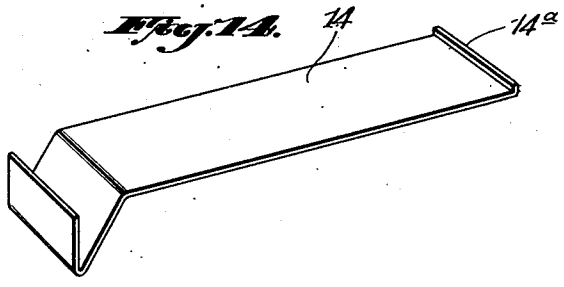


Fig. 14.



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UNITED STATES PATENT OFFICE

2,064,984

WALL BRACKET

Reginald E. Marsh, Bronxville, N. Y., assignor to Simplon Products Corporation, a corporation of New York

Application April 13, 1933, Serial No. 665,910

17 Claims. (Cl. 72—101)

My invention relates to wall brackets which are secured to a wall and adapted to support an object adjacent the wall. In particular, my invention relates to a wall bracket which is adapted to be built into the wall.

In the construction of buildings, various objects are secured to the walls, for example, pipes and furring for laths. Such objects are secured to the walls in various ways but particular difficulty is encountered in securing these objects to masonry walls such as brick, stone, tile, block or concrete walls. In some instances expansion bolts are used and in other instances, for example, in securing furring strips, it is common to build wires into the wall by which the furring strip is secured to the wall after the wall is completed. These methods of securing objects to masonry walls have been found unsatisfactory. The expansion bolt, because of the time necessarily consumed in drilling the wall, is impractical where large numbers are needed, for example for supporting furring strips, and the wires inserted by the mason in constructing the walls are often found to be so far out of alignment that the furring strip is only secured to the wall at a few points. In addition, with these wire fastenings, the furring is not rigidly secured to the wall; it is contiguous with the wall and very little air space is left between the masonry wall and the plaster in the finished wall.

By my invention, I am enabled to provide a satisfactory wall bracket for supporting objects adjacent a masonry wall, which is readily and easily secured to the wall. In accordance with my invention, I provide a bracket which consists of an anchoring section adapted to be built in the wall and anchor or secure the bracket therein, and a holder section which engages the object to be supported adjacent the wall. The anchoring section of the bracket is adapted to extend transversely of the wall and includes elements for embracing a portion of the wall to position the bracket with respect to the wall and maintain the bracket in place during the construction of the wall.

An advantage of the bracket of my invention is the fact that the anchoring section is adapted to fit varying wall sections and frictionally engage such sections to hold the anchoring section in place during the construction of the wall.

Another advantage of my invention is the fact that the bracket is normally inclined downwardly toward the outer side of the wall, thus preventing moisture from following the bracket to the inner plaster wall.

A clearer understanding of my invention will be had from the following particular description of the embodiments thereof disclosed in the accompanying drawings in which:

Fig. 1 is a perspective of a section of a wall to which brackets formed in accordance with my invention are applied;

Fig. 2 is a sectional end elevation of the wall taken through a wall bracket;

Fig. 3 is a perspective of the anchoring or socket section of the bracket;

Fig. 4 is a perspective of the holder section of the bracket;

Fig. 5 is a perspective of a portion of a furring strip;

Fig. 6 is a perspective of an angle of the furring strip;

Fig. 7 is a perspective of a clip for clipping the furring strip to the bracket;

Fig. 8 is a perspective of a wire for wiring lathing or channel strips to the furring strip;

Fig. 9 is a development of the casing shown in Fig. 3;

Fig. 10 is a perspective of a modified form of socket or anchoring section;

Fig. 11 is a modified form of holder section adapted to be used in conjunction with the anchoring section shown in Fig. 10;

Fig. 12 is a longitudinal, sectional, side elevation of the anchoring section of a modified form of the wall bracket;

Fig. 13 is a transverse, sectional, end elevation taken on the line 13—13 of Fig. 12; and

Fig. 14 is a perspective of the holder.

In the drawings I have illustrated my wall bracket as it may be used in supporting furring strips. While the wall bracket has particular advantages for use in supporting furring strips, it is of course obvious that it is equally useful in supporting any other object which it is desired to run adjacent a wall and to be supported from the wall, such as pipes, cables, etc. As shown in the drawings, the bracket when in supporting position is built into a wall 1. The bracket is constructed in two sections, an anchoring or socket section 2 which which is built into the wall, and a holder 3 which is slidable in and out of the socket section and which can be secured to the socket section against longitudinal movement with respect thereto in various positions and thus adjusted with respect to the surface of the wall. The socket section is a thin, oblong case of rectangular cross section. This case is formed from a single sheet of sheet metal, the blank for which is illustrated by the devel-

opment designated Fig. 9, the solid lines indicating the lines along which the blank is cut and the broken lines indicating the lines along which the blank is bent. The case is open at one end and closed at the other end. At the opened end of the case, which when the case is built into a wall is at the surface of the wall, the top 2*a*, as the case is mounted, and the sides 2*b* extend beyond the bottom 2*c*. The sides of the casing, at the opened end thereof and for that portion extending beyond the bottom of the casing, have flanges 2*d* which extend from the sides of the casing and depend below the bottom of the casing. These flanges have shoulders 2*e* formed thereon which act as props. The shoulders are assisted in their supporting action by a prop 2*f* formed by bending downwardly an extended portion of the bottom of the casing. The blank from which the casing is formed has a central extended portion 2*g*. This extended portion is bent downwardly, closing the end of the casing and forming a resilient flange which depends from the casing. As shown in the drawings, when the bracket is built into a brick wall, the brick is embraced between the resilient flange 2*g* and the edges of the flanges 2*d* formed by the extension of the sides of the casing. When these flanges embrace the brick, the resiliency of the flange 2*g* pressing against the side of the brick draws the flanges 2*d* into frictional engagement with the brick. The shoulders 2*e* of the flanges 2*d* and the prop 2*f* rest upon the top of the brick and thus causes the case to be inclined downwardly towards the outer side of the wall. The extended portion of the top of the casing extends beyond the inner surface of the brick wall and this section has a pair of openings extending therethrough. The frictional engagement of the flanges of the casing with the sides of the brick, due to the resiliency of the flange 2*g*, positions the casing with respect to the brick and also maintains the casing in position during the construction of the wall. The resiliency of the flange 2*g* also adapts the casing to varying sized bricks, and in the case of concrete walls, for example, to variations in a section of a wall. When used for supporting furring strips a series of these brackets are built into the wall at various elevations, probably five or more feet apart.

In conjunction with the casing 2 forming the socket or anchoring section of the bracket, a holder 3 of the general shape shown in the drawings, is used in conjunction with the particular furring strips disclosed. This holding section is constructed from a single strip of sheet metal and includes a porton 3*a* which is adapted to extend into the casing 2. This strip 2*a* is substantially equal in length to the length of the casing 2. At one end, this strip is bent in a shape of a trough of substantially V-shape in cross section. This trough-shaped portion 3*b* is adapted to receive and support the furring strip. The portion 3*a* which extends into the socket section of the bracket has a series of pairs of holes bored therethrough, each pair of which holes corresponds to the holes through the extended portion of the top of the casing. Any pair of the holes in the strip 3*a* of the holder may be aligned with the holes in the top of the casing, and when so aligned a U-shaped pin 4 extending through the aligned holes secures the holding section and anchoring section of the bracket from relative longitudinal movement. By virtue of the several pairs of holes in the strip, the holder of the bracket may be adjustably positioned with respect to the casing and the inner surface of the wall. This adjustable feature is of particular importance in connection with supporting furring strips. While an outer brick or masonry wall may be out of plumb, the inner plaster wall must be in plumb. This can readily be accomplished where the supports for the furring strip are so adjustable, as this bracket is, that the furring strip may be adjusted at various points with respect to the masonry wall.

The furring strip 5 shown in the drawings corresponds in shape to the trough-shaped portion 3*b* of the holder 3 of the bracket. One side, the inner side, of this furring strip has a series of holes bored therethrough for the purpose of securing metal ribbed lathing to the furring strip, or vertical channel lath. The particular shape disclosed is of especial advantage because it can be secured in the bracket by a clip 6. The clip 6 is merely made of resilient metal and is shaped similar to the furring strip and the trough-shaped portion of the bracket and has an overhanging section 6*a* which overhangs the edge of the holder of the bracket and the furring strip which is laid therein. When pushed over the bottom of the furring strip, it locks the furring strip to the bracket. The shape is also of advantage because the clip may be used in securing angle sections, such as that shown in Fig. 6 and indicated in the several figures of the drawings by the numeral 7, to the furring strip. This arrangement of securing the furring to the bracket also has the advantage of being sufficiently stable so that only one bracket is necessary for securing the furring strips used for piers.

When the furring strip is mounted horizontally, it may be used to secure and support either vertical channel furring strips 8 or ribbed metal lath 9. For the purpose of securing either of these to the horizontal furring, I have provided a simple, convenient form of wire. This form of wire is shown in perspective in Fig. 8 and is indicated in the drawings by the numeral 10. The wire is bent so that it has two legs 10*a* and 10*b* which are reversely bent at their upper end and a cross-bar 10*c* joins the reversed ends of the legs 10*a* and 10*b*. The reversal of the legs of the wire forms an overhanging portion which overhangs the edge of the furring strip. In use, as shown in Fig. 1, the legs of the wire are pushed through two adjacent holes in the furring strip and the upper reversed ends of the legs overhang the upper edge of the furring strip. The legs are then bent perpendicularly to the furring strip, as indicated by the broken lines in Fig. 8, and embrace either the vertical channel furring strip 8 or the ribs of the ribbed metal lath 9. The ends of the two legs are twisted together thus securing the lath or the vertical furring to the horizontal furring 5.

In Figs. 10 and 11 I have disclosed a modified form of my bracket. In this form, the casing 11 does not have any overhanging section. At the front end of the casing, two strips 11*a* and 11*b* constituting elongations of the top are bent downwardly, transverse to the plane of the casing, and extend transversely over the opened end of the casing. These strips form the front flanges which engage the inner side of the wall or a brick. A flange 11*c* at the rear of the casing engages the opposite side of the wall or

brick. The holder 12 used in conjunction with this form of socket or anchoring section 11 is also made from a strip of metal. This strip of metal is, however, of less width than the casing by the width of the two strips 11a and 11b. The portion of the holder which extends into the casing extends between these two strips 11a and 11b. The sides of the holder are serrated or notched and any one of these notches is adapted to engage a strip 11a or 11b to secure the holder against longitudinal movement with respect to the casing. Due to the difference in width between the holder and the casing, there is, however, some play in the plane of and transverse to the casing. This bracket therefore permits adjustment longitudinally and transversely in the plane of the casing.

The form of the bracket disclosed in Figs. 12 to 14 inclusive differs from the two forms above described in the manner in which the holding section is secured against longitudinal movement with respect to the casing when the bracket is in supporting position. In forming the socket section 13 of this bracket which is similar in its general shape to the socket shown in Fig. 3, the blank is perforated or crimped to form a series of projections 13a which extend inwardly from the top of the casing. As shown, the portion of the blank from which the case is made which, in the finished case, forms the top, has two series of perforations each adjacent one side of the casing. These perforations, in the finished case, form a series of pairs of projections spaced longitudinally of the casing. The holder 14 has an upturned flange 14a formed on the end thereof which extends into the casing. The depth of the casing 13 is slightly greater than the length of the projections 13 plus the length of the upturned flange 14a of the holder so that when the holder is parallel to the axis of the casing it can be slipped in and out of the casing. When the holder is released in the casing, or when some object to be supported engages and rests upon the outer end of the holder, the holder pivots about the edge of the bottom of the casing which causes the flange 14a to extend between successive pairs of projections 13a. In such condition, the holder can not be moved longitudinally of the casing. However, for the purpose of adjustment, the holder can, while secured to the object to be supported, be relieved of the weight of the object to be supported and shifted longitudinally of the casing. Thus this form of my invention permits the adjustment of the bracket without the necessity of unfastening and fastening securing means.

In the forms of the wall bracket illustrated in Figs. 1 to 4 and 12 to 14, the portion of the socket which protrudes from the surface of the wall into which it is built forms a hood which protects the holder from water running down the face of the wall. The sides of the protruding portion of the socket section act as drips and carry such water past the sides of the bracket.

The advantages which flow from the use of a wall bracket, such as those disclosed herein and described above, will be readily apparent to those skilled in the art. When used in supporting furring as described herein, they assure a proper air space between the masonry wall and the plaster wall, and the tilt to the anchoring section of the bracket prevents the seepage of moisture along the bracket to the plaster wall. The use of these brackets and the furring which I have devised and which is disclosed in the drawings, together with the means for securing the furring strips to the brackets, and for securing lathing to the furring strips, all result in a great saving of time and labor in the erection of buildings.

It is obvious that various changes may be made by those skilled in the art in the details of the embodiments disclosed in the drawings and described above within the spirit and scope of my invention as expressed in the appended claims.

I claim:

1. A wall bracket comprising a case forming a socket and adapted to be embedded in a wall transversely thereof, a holder for supporting an object comprising a section adapted to extend into the socket formed by the case and to be supported therein, and a section adapted to extend from the surface of the wall and substantially lateral thereto for engaging an object to be supported by the bracket, and means for securing the holder in the case against relative longitudinal movement with respect to the case.

2. A wall bracket comprising a case forming a socket and adapted to be embedded in a wall and form an anchor for the bracket, a holder including a section adapted to extend into the socket formed by the case and to be supported therein and a section adapted to extend from the surface of the wall for engaging an object to be supported by the bracket, and means for adjustably positioning the holder in the case and securing the holder in the adjusted position against relative, longitudinal movement with respect to the case.

3. A wall bracket comprising a metal case forming a socket and adapted to be embedded in a wall and form an anchor for the bracket, a holder for supporting an object including a section adapted to extend into the socket formed by the case and to be supported therein, and a trough-shaped section adapted to receive an object to be supported by the bracket, and means for securing the holder against relative longitudinal movement with respect to the case.

4. A wall bracket comprising a metal case forming a socket and adapted to be embedded in a wall, a holder for supporting an object including a section adapted to extend into the socket formed by the case and to be supported therein, and a substantially V-shaped section adapted to receive an object to be supported by the bracket and means for securing the holder against relative longitudinal movement with respect to the case.

5. A wall bracket comprising a metal case forming a socket and adapted to be built into a wall, the case having one side thereof extending beyond the end thereof and an opening through the extended portion, and a metal holder including a straight section adapted to extend into the case and having a series of openings therethrough adapted to be aligned with the opening through the extended side of the case, and a section adapted to extend from the socket for supporting an object.

6. A wall bracket comprising a metal case forming a socket and adapted to be built into a wall, a strip extending across the opening to the case adjacent one side thereof, and a metal strip forming a holder and including a section adapted to extend into the case and having the edge thereof serrated to engage the strip extending across the opening of the case, and a furring receiving section.

7. A wall bracket comprising a metal case forming a socket and adapted to be embedded in a wall and form an anchor for the bracket, a series of spaced limiting projections within the casing, a metal strip forming a holder and including a section for engaging an object to be supported by the bracket, a section adapted to extend into the case, and a projection extending from said latter section and adapted to engage the projections within the case.

8. A metal case adapted to be built into a wall and form an anchoring section for a bracket comprising a hollow body portion open at one end and means on said case for gripping the wall to maintain the anchoring section in position on the wall during construction of the wall.

9. A metal case adapted to be built into a wall and form an anchoring section for a bracket comprising a hollow body portion open at one end and means on said case for engaging the wall to maintain the anchoring section in position on the wall during construction of the wall including flanges extending from each end of the case and adapted to embrace the wall.

10. A metal case adapted to be built into a wall and form an anchoring section for a bracket comprising a hollow body portion open at one end and means on said case for engaging the wall to maintain the anchoring section in position on the wall during construction of the wall including flanges extending from each end of the case and adapted to embrace the wall, one of said flanges being resilient to effect a frictional engagement between the flanges and the wall.

11. A metal case adapted to be built into a wall and form an anchoring section for a bracket comprising a hollow body portion open at one end, and means for tilting the case with respect to the plane of the wall.

12. A metal case adapted to be built into a wall and form an anchoring section for a bracket comprising a hollow body portion open at one end and means on said case for engaging the wall to maintain the anchoring section in position on the wall during construction of the wall including a prop adjacent one end of the body portion for inclining the case to the plane of the wall.

13. A metal case adapted to be built into a wall transversely thereof and form an anchoring section for a bracket comprising a rectangular body portion open at one end and having the upper wall thereof extending beyond the open end to form a shield extending beyond the surface of a wall.

14. A metal case adapted to be built into a wall transversely thereof and form an anchoring section for a bracket comprising a rectangular body portion open at one end and having the upper and side edges thereof extending beyond the bottom edge to form shields extending beyond the surface of a wall in which the case is embedded.

15. A holder for a wall bracket having an anchoring section forming a socket in a wall which holder comprises a strip of heavy metal having a greater length than width and including a straight section adapted to extend into a socket and having a series of openings therethrough spaced longitudinally thereof and a trough-shaped section for receiving an object to be supported.

16. A holder for a wall bracket having an anchoring section forming a socket in a wall which holder comprises a strip of heavy metal having a greater length than width and including a straight section adapted to extend into a socket and having the side edges thereof serrated and a trough-shaped section for receiving an object to be supported.

17. A holder for a wall bracket having an anchoring section forming a socket in a wall which holder comprises a strip of heavy metal having a greater length than width and including a straight section adapted to extend into a socket, a lateral flange on one end thereof and a trough-shaped section at the other end thereof for receiving an object to be supported.

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