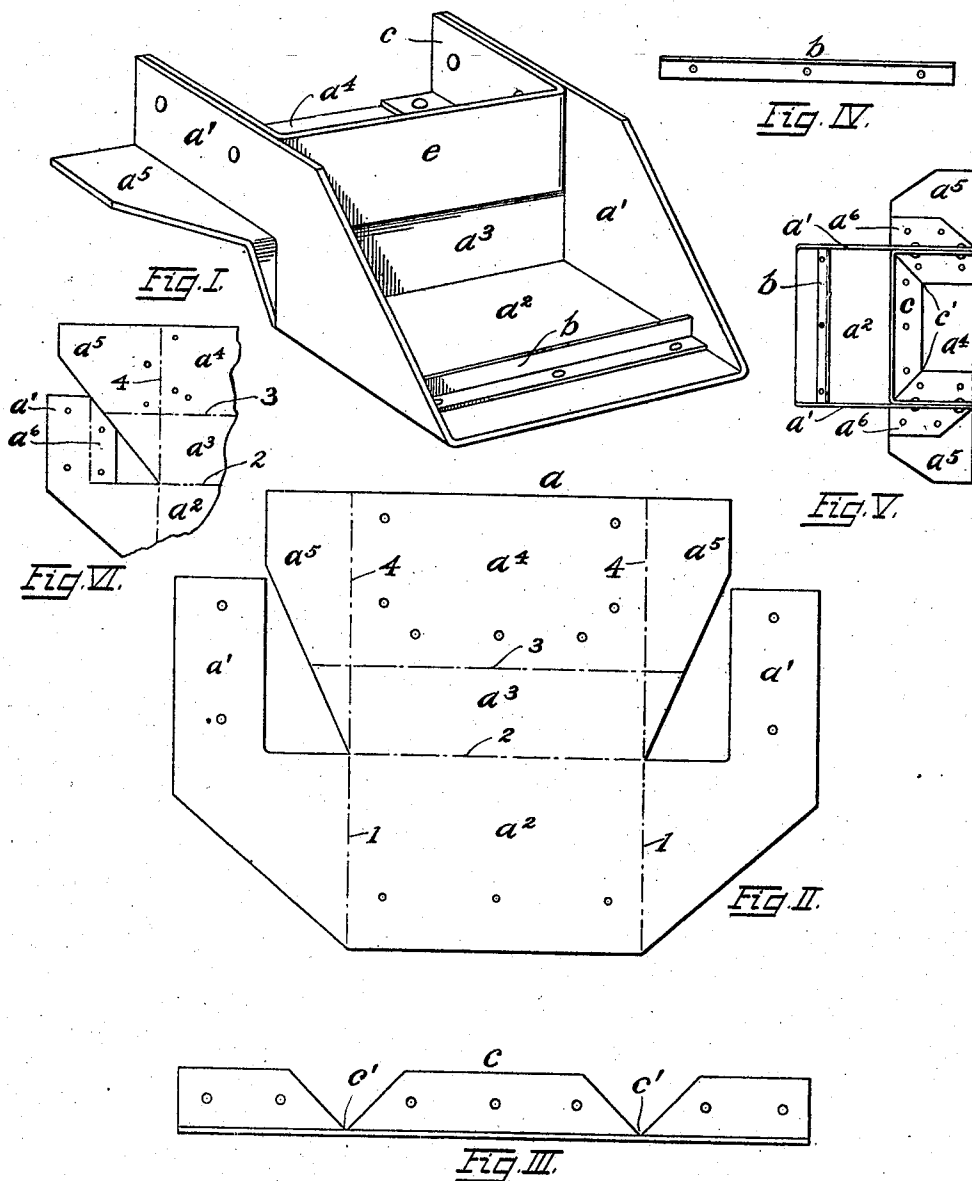


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PATENTED JULY 2, 1907.

J. TUTEUR.
JOIST HANGER.
APPLICATION FILED MAY 13, 1907.



Witnesses:
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UNITED STATES PATENT OFFICE.

JULIUS TUTEUR, OF CLEVELAND, OHIO.

JOIST-HANGER.

No. 858,838.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JULIUS TUTEUR, a citizen of the United States of America, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Joist-Hangers, of which the following is a specification.

My invention relates to improvements in stamped metal hangers for joists, and has for its object the provision of a hanger integrally formed, as far as possible, from sheet metal of sufficiently heavy gage and provided with a simple reinforcing member or members affording maximum strength for the weight of metal used.

More particularly, my invention further contemplates the provision of a wide bearing surface for the hanger without increase in expense or the loss of metal, whereby the supported weight is distributed over a greater area of the wall wherein the hanger is embedded.

Experience has shown that a broad supporting-piece is desirable for devices of this type, since instances of the collapse of buildings have been directly traceable to the fracture or crushing of the supporting wall by a heavily loaded hanger equipped with an inadequate supporting-member.

The preferred wall hanger of my invention, as will be at once observed from the accompanying drawings, preferably is blanked out from an integral sheet of mild steel, and is provided with two re-enforcing pieces or members of angle iron. These are not absolutely essential but contribute in a marked degree to the strength of my improved hanger.

It will also be observed that there is practically no loss of metal in affording broad supporting base for distributing the sustained weight, since the body portion of the hanger is blanked out in a peculiar manner, rendering it very easy to shape and secure together.

From the drawings, it is seen that the preferred wall hanger consists of an integral primary or body member suitably folded to provide a broad supporting seat and a ledge for the timber or joist carried from a lower plane, while a re-enforcing back-piece, Figure III, may be stamped out, shaped and riveted thereto to stay the same, and a cross-piece, Fig. IV, may be similarly secured to the joist receiving seat of the hanger.

The following specification will make further particular reference to said drawings, wherein:—

Fig. I is an enlarged perspective view of the preferred type of my improved hanger. Fig. II is a plan view of the blank from which the hanger is formed. Fig. III is a similar view of the blank for the re-enforcing piece uniting the side arms. Fig. IV shows the angle-iron re-enforcement for the joist seat; and Fig. V is a plan view upon a much smaller scale of a modified type of hanger, while Fig. VI is a fragment of its blank.

Throughout the several figures of the drawing, I have

employed the same character of reference to indicate similar parts.

Fig. II well illustrates the primary member *a* as formed from a single plate or sheet of metal, such as wrought iron or steel. This member is provided with lateral wings *a'* which are adapted to be folded at right angles upon the lines 1, 1 forming the side pieces for the hanger. Part *a*² thus forms the joist seat, which may be re-enforced, if required, by the rigid cross-piece *b* of angle iron suitably riveted or secured in place. The back of the hanger is formed from the rear portion *a*³ folded at right angles upon line 2, and the broad supporting-ledge *a*⁴ is again folded back at right angles with part *a*³ along line 3. The lines 4, 4 indicate the position of the side pieces, and accordingly lateral wings *a*⁵ *a*⁵ integral with the back and supporting-ledge serve to distribute the weight of the joist over a relatively large area. These wings may be of any suitable width, but ordinarily they are proportioned as herein shown, and avoid loss of any substantial amount of metal in constructing the hanger. As shown in Fig. V, these wings *a*⁵ *a*⁵ may be integral with the side pieces *a'*, and with a slight increase of expense, serve further to stay the hanger and distribute the weight. Both of these forms preferably are provided with a re-enforcing member *c* formed of angle-iron angularly notched at *c'* *c'*, and folded or bent at right angles from the apexes of the angle *c'* to form a box-like re-enforcing part; the blank therefor being shown in Fig. III. The forward portion thereof forms a back for the joist hanger, while the angular faces of the outer ends are respectively riveted to the side pieces *a'*, and the supporting-ledge *a*⁴, thereby tying the side pieces together and rigidly staying the entire structure.

The above-described type of structure has been given rigid tests, and it has been found that the integral structure not only affords economical and thoroughly practical support for joists or timbers, but that the metal thereof is most advantageously disposed to withstand the supporting strain to which an article of this type is subjected. This strain in turn is carried by a relatively broad supporting-ledge or seat bearing over a large area of the wall, and thereby avoiding the crushing action observable in other types of hanger. Particularly is this of advantage where the hanger is embedded in walls of comparatively soft brick or stone, and this deficiency in the building material is compensated for by the peculiar construction herein set forth.

The side pieces, it is seen, form an integral part of the joist seat and extend straight back to bear upon the wide supporting-ledge, whereon it is re-enforced by member *c*. The angle-iron cross-piece *b* not only serves to stiffen or stay the joist seat *a*², but serves as well to retain the timber, which preferably is cut out to

accommodate this part. As indicated, however, such re-enforcement is not essential and may be omitted, particularly in hangers of lighter construction.

From the foregoing, it will be appreciated that a hanger of approved type may be constructed in accordance with my invention from either one, two or three parts, suitably shaped and riveted together, as I have herein explained.

Having now set forth the preferred embodiment of my invention, I claim as new and desire to secure by Letters Patent, the following:--

1. An integral support for joists composed of a sheet metal member shaped to form lateral wings or side-pieces, with an intermediate support or floor for the joist and rearwardly folded to form a back-portion, and a rearwardly-extending member having a broad supporting seat laterally extending beyond the side-pieces adapted to be engaged by the wall; said side-pieces and rear member being secured together to strengthen the structure, substantially as set forth.

2. An integral wall hanger, comprising a single sheet metal part shaped to provide side-pieces bent at right angles with an intermediate ledge or floor; the said side-pieces extending to the rear thereof, a back-piece integral with and bent at right angles to said floor, and a rearwardly-extending member bent at right angles to said back-piece, laterally extending beyond the side-pieces and secured thereto, substantially as set forth.

3. In a hanger for joists, the combination with an integral primary member formed of sheet metal and having a floor or ledge, side-pieces bent at right angles thereto, a back-piece and a broad horizontal supporting member, of a re-enforcing member secured to the side-pieces and said supporting-member; the latter extending beyond the side-pieces to afford a broad seat for the hanger, substantially as set forth.

4. In a hanger for joists, the combination with an integral primary member formed of sheet metal and having a joist seat, side-pieces bent at right angles thereto and extending rearwardly, lateral wings thereon, a back-piece and a broad rearwardly-extending member to which the lateral wings are secured and adapted to stay or strengthen the hanger, substantially as set forth.

5. In a hanger for joists, the combination with the primary member formed of sheet metal and having an integral floor or ledge, side-pieces at right angles thereto, a back-piece and rearwardly-extending member, of a re-enforcing member secured to the side-pieces, and adapted to stay or strengthen the hanger, substantially as set forth.

6. In a hanger for joists, the combination with the primary member formed of sheet metal and having an integral floor or ledge, side-pieces at right angles thereto, a back-piece and rearwardly-extending member, of a re-enforcing member formed from a length of angle iron angularly cut away at two points, and bent thereat to form a box-like structure secured to the side-pieces and rearwardly-extending member for strengthening the hanger, substantially as set forth.

7. A sheet metal hanger comprising an integral member shaped to afford side-pieces or wings bent at right angles with an intermediate floor or support for the joists, a back-piece bent at right angles thereto, and a rearwardly-extending member; all in association with the re-enforcing member formed of angle iron suitably cut away and bent to form a box-like structure secured or riveted to the side-pieces and the rearwardly-extending member of the hanger, whereby said parts are rigidly united, substantially as set forth.

8. An integral hanger for joists, comprising a broad horizontal support extending beyond the vertical planes of the hanger to bear upon a large area of the wall, a ledge or seat for the joist, side-pieces bent at right angles thereto and extending over the wall seat of the hanger, and means for connecting said side-pieces thereto intermediate of its extended parts, substantially as set forth.

9. In combination with an integral hanger for joists, comprising a broad horizontal support extending beyond the vertical planes of the hanger to bear upon a large area of the wall, a ledge or seat for the joist, side-pieces bent at right angles thereto and extending over the wall seat of the hanger, of a box-like member formed of angle iron secured to the side-pieces and the wall seat, substantially as set forth.

10. In a joist hanger, the combination with an integral member, comprising a single sheet of metal formed to provide side-pieces bent vertically at right angles with an intermediate ledge or floor; the said side-pieces extending to the rear thereof, an integral back-piece bent at right angles with said floor and a rearwardly extending horizontal seat whereon the side-pieces bear, and means for uniting the said side-pieces and supporting seat, substantially as set forth.

11. The combination in a sheet metal hanger, with an integral blank formed to present vertical wings or side-pieces bent at right angles, and extending rearwardly from an intermediate ledge or support for the timber, a rearwardly extending portion folded upwardly at right angles to the ledge, and rearwardly in a plane substantially parallel thereto to form a supporting seat whereon the side-pieces bear, and means for uniting the said side-pieces and seat to stay the structure, substantially as set forth.

12. A sheet metal hanger, comprising an integral blank formed to present vertical wings or side-pieces bent at right angles, and extending rearwardly from an intermediate ledge or support for the timber, a rearwardly extending portion folded upwardly at right angles to the ledge and rearwardly to form a horizontal supporting seat extending beyond the planes of said side-pieces, and integral parts formed upon said side-pieces secured to said supporting seat, substantially as set forth.

Signed at Cleveland, this tenth day of May, A. D., 1907. in the presence of two subscribing witnesses.

JULIUS TUTTEUR.

Witnesses:

A. L. LAURENCE,
A. J. SPERRY.