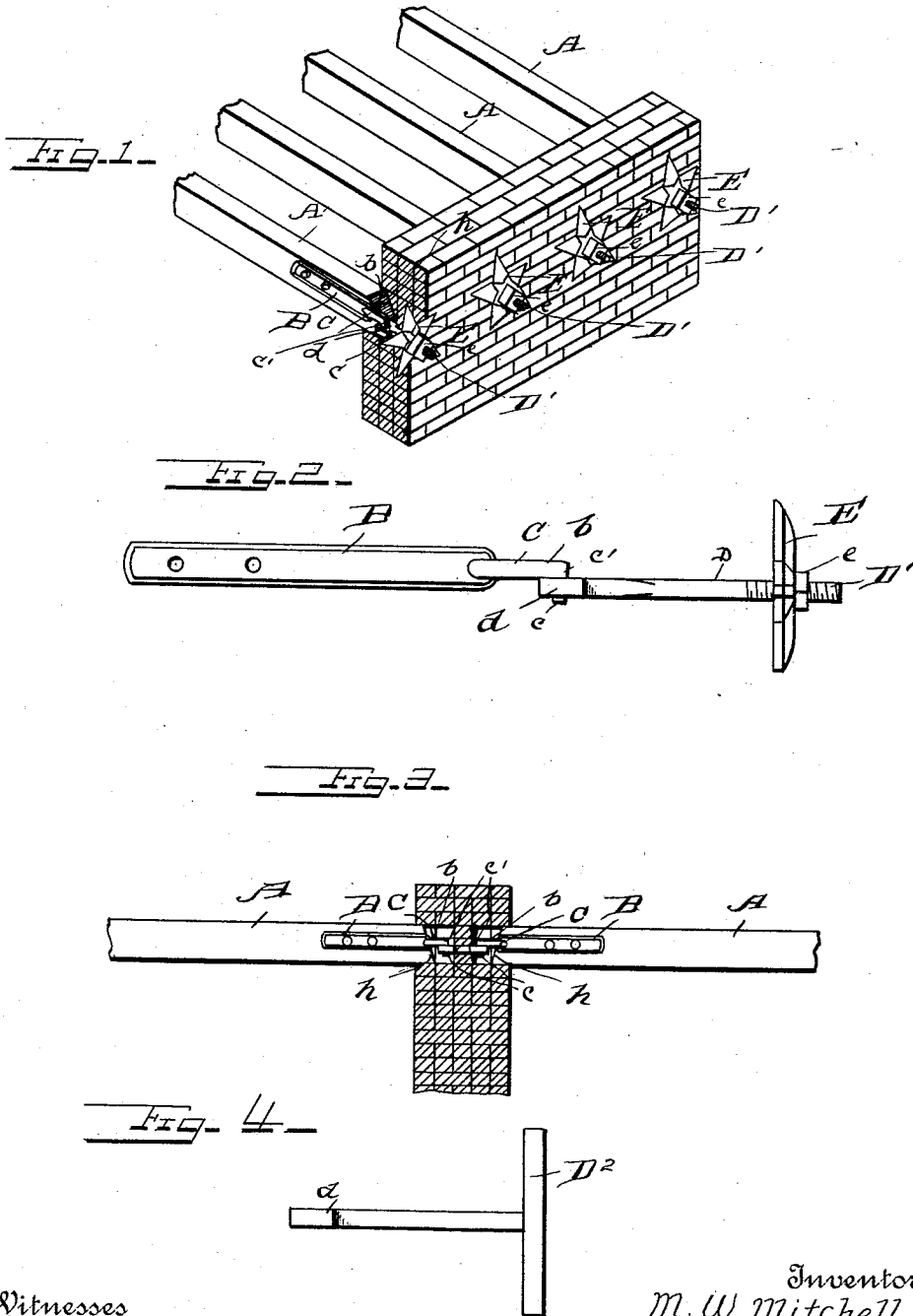


(No Model.)

M. W. MITCHELL.
ANCHOR FOR JOISTS.

No. 484,666.

Patented Oct. 18, 1892.



Witnesses
Jesse Heller,
Phillipmasi.

Inventor
M. W. Mitchell,
by E. W. Anderson,
his Attorney

UNITED STATES PATENT OFFICE.

MANCELL W. MITCHELL, OF NEW ALBANY, INDIANA.

ANCHOR FOR JOISTS.

SPECIFICATION forming part of Letters Patent No. 484,666, dated October 18, 1892.

Application filed April 14, 1892. Serial No. 429,208. (No model.)

To all whom it may concern:

Be it known that I, MANCELL W. MITCHELL, a citizen of the United States, and a resident of New Albany, in the county of Floyd and State of Indiana, have invented certain new and useful Improvements in Anchor-Bars for Joists; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view of anchor-bars applied to a section of wall. Fig. 2 is a side view of anchor-bar. Fig. 3 is a side view of anchor-bars, partly broken away and applied to partition-wall. Fig. 4 is a detail view of cross-head D''.

This invention has relation to certain new and useful improvements in anchor-bars for flooring, joist-beams, &c., the object being to provide a device of this character so constructed that, while forming a secure anchor for the joist-beams, &c., while in their normal position or when subject to great strain, it will upon the falling of the joist or beam from fire or other cause free itself and relieve the wall from its tendency to buckle and fall out or in, as in cases where the joists or beams have a rigidly-fixed support therein.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter specified.

In the accompanying drawings the letter A designates a section of a floor joist or beam provided with my improved anchor. Said anchor, as shown, consists of a plate or strap B, of brass or other suitable metal, securely bolted to one side of the joist or beam at its end portion. Said plate or strap at its free end terminates in a projecting shank C, which at its end is formed with a depending hook c, the outer edge c' of which preferably forms a slightly-acute angle with the upper edge b of the shank.

D designates the anchor-rod, formed at one end with an eye d, designed to be somewhat loosely engaged by the hook c when the joist or beam is placed in position. Said rod is designed to extend solidly through the wall and

is secured at the outside by a star or other suitably shaped plate or washer E and nut e, engaging the outer threaded end D' of said rod, or by building said rod in the wall with a cross-head D'' on the end, as shown in Fig. 4, instead of a star. The ends of the joists are usually built or set into the wall, and into which the inner ends of the anchor-rods project. In the case of partition-walls the said rod is provided with an eye at each end, the rod being in the center of the wall and projecting at each end into the joist-seats. The ends of the joists or beams are also usually cut on a splay, as indicated at h, in order that they may the more readily clear themselves of the wall in falling.

It will be apparent that, while the connection between the hook c and the anchor-rod is such as normally forms a secure anchorage for the joist or beam, the greater the weight sustained by the joist or beam the greater being the bondage, yet in case of fire or accident arising, the joist or beam burning through or breaking, said hook will by the falling of the joist free itself from the anchor-rod and leave the walls uninjured.

I am aware of the patent to Paradise, No. 318,648, granted May 26, 1885, and disclaim the construction therein set forth. In the said patent the hook forming the connection is formed upon the anchor-rod and not upon the joist-iron, as in the present invention, and the connection between the hook and eye is formed outside the wall, while in the present case the connection is within the wall. By forming the hook upon the joist-iron I enable the anchor-iron to receive partially the weight of the joist. This is an important feature, owing to the liability of the bricks forming the seat for the joist to crumble and settle, leaving the joint without support, and also from the well-established fact that joist ends are particularly liable to decay or rot off. In either of the above cases the anchor-rod will receive the weight of the joist and form a support therefor. This is not the case when the connection is reversed, as if the joist settles the eye will disengage from the hook. By forming the connection within the wall in the vertical line or slightly to the rear and above the center of movement of the joist in falling (which is the point where the joist

rests on its seat) the hook will readily disengage itself and permit the joist to fall. When, however, the connection is outside the wall and forward and above this center, as soon as
5 the joist commences to fall the eye binds on the hook and the parts are not free to disengage.

Having described this invention, what I claim, and desire to secure by Letters Patent,
10 is—

In an anchorage for joists and beams, the combination, with the joist or beam and the wall forming the support therefor, of the strap or plate secured to said joist or beam and
15 having a shank projecting within the wall, a

depending acute-edged hook terminating said shank, and the anchor-rod D, secured in the wall and terminating in an eye *d* at its inner end, which receives said hook, the connection between said hook and eye being within the
20 socket or seat in which said beam or joist is held, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

MANCELL W. MITCHELL.

Witnesses:

JACOB HERTER,
JOHN LOIS MEURICH.