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PATENTED AUG. 11, 1903.

G. B. WAITE.  
HANGER FOR TEMPORARY CENTERING.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.

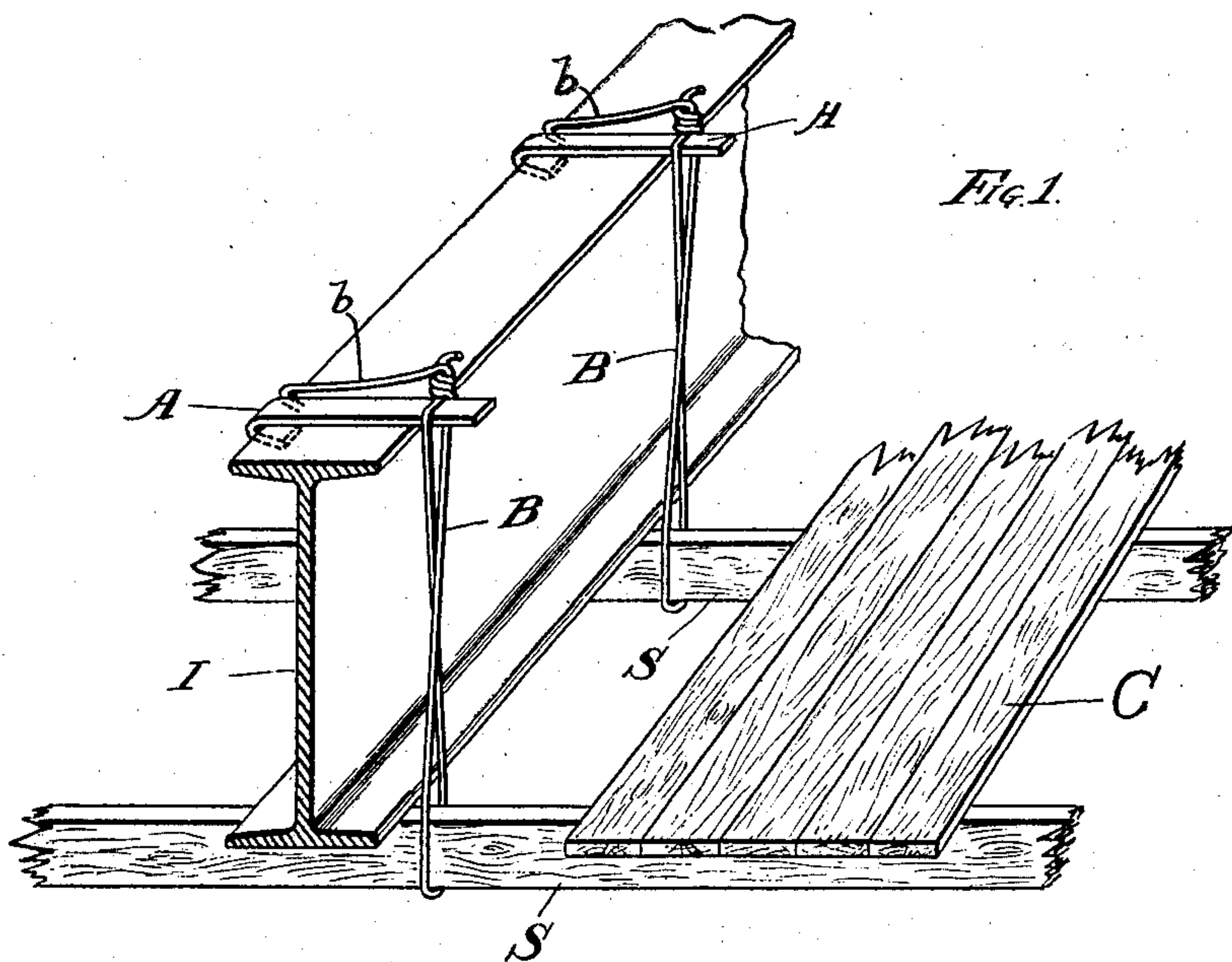


Fig. 1.

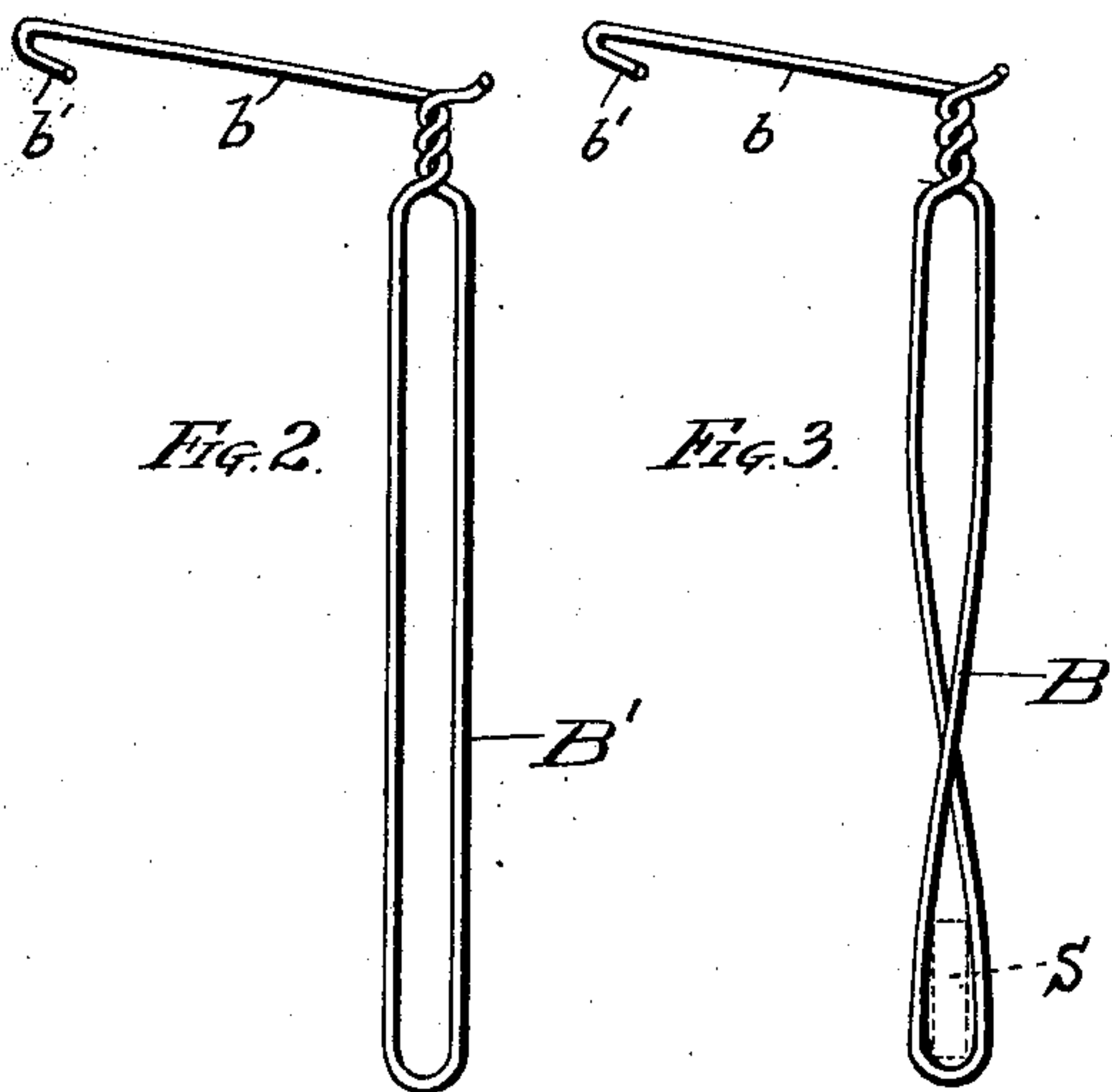


Fig. 2.

Fig. 3.

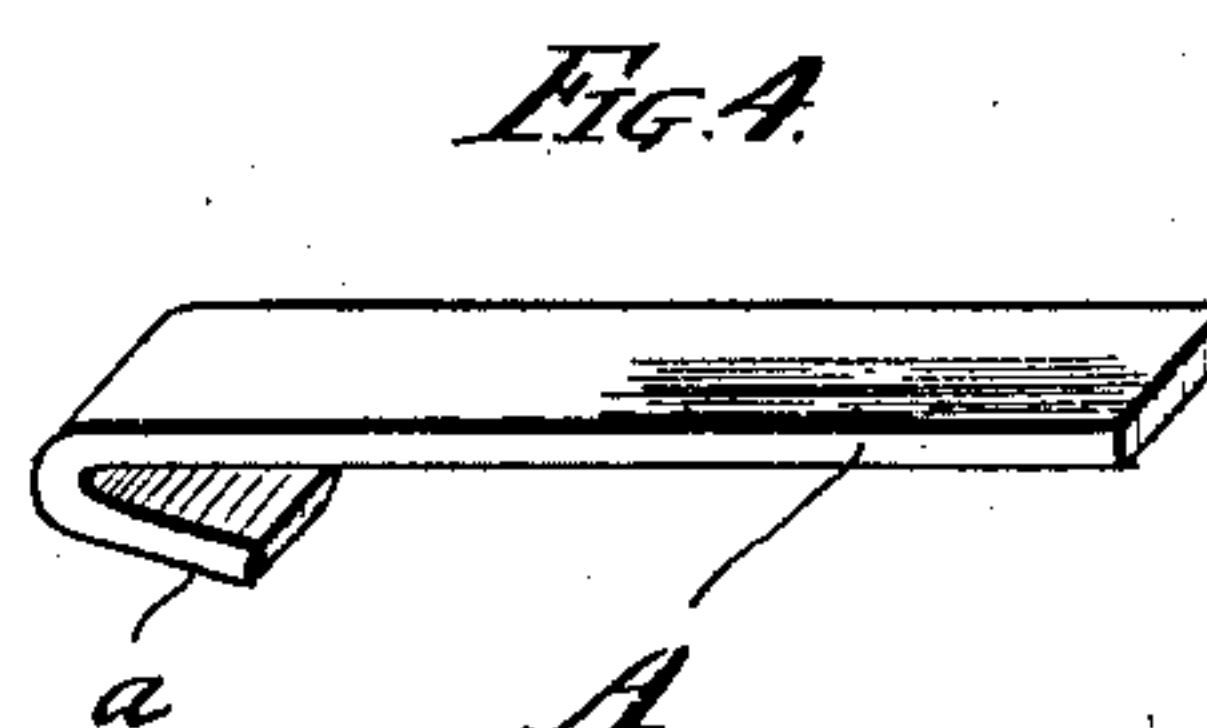


Fig. 4.

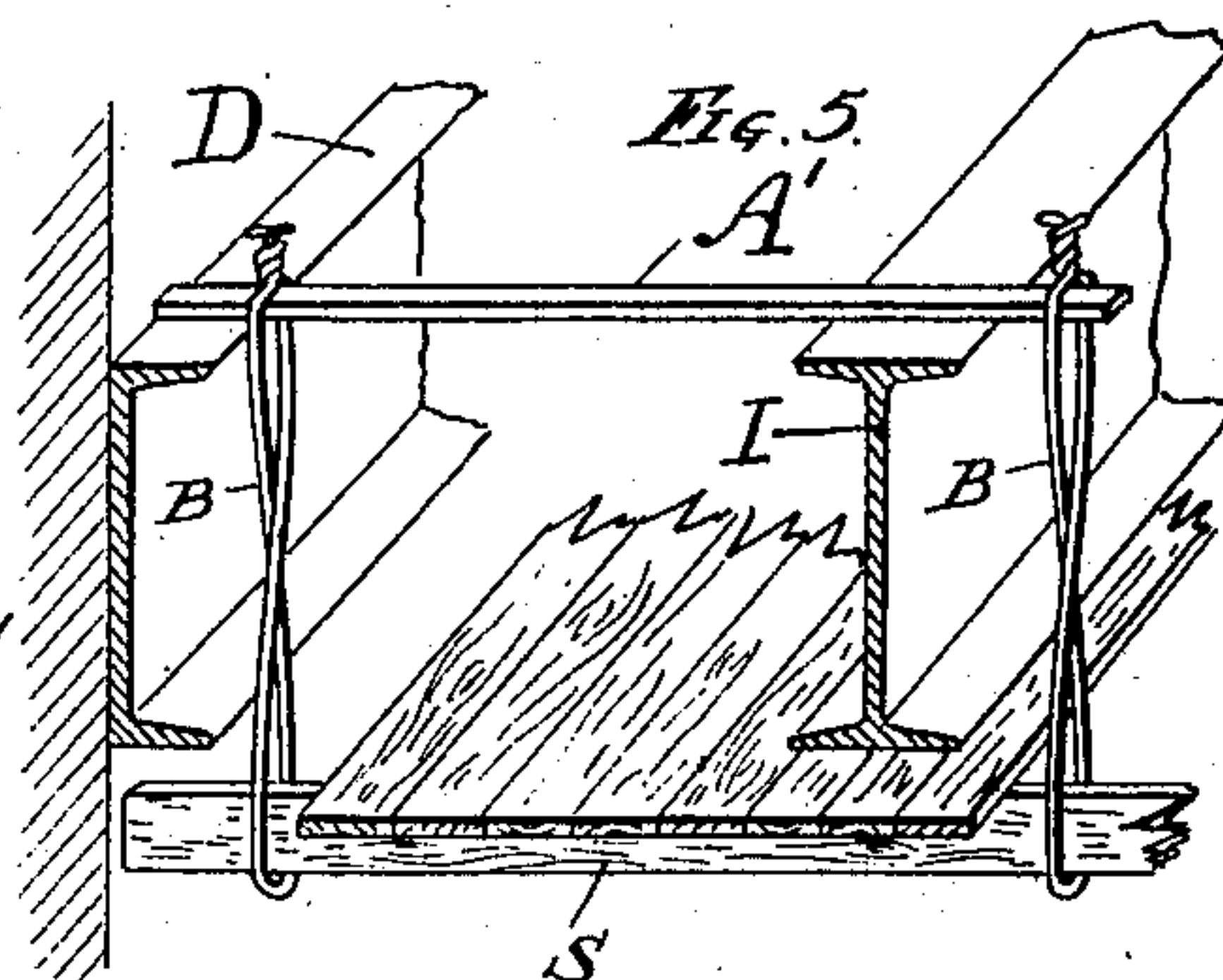
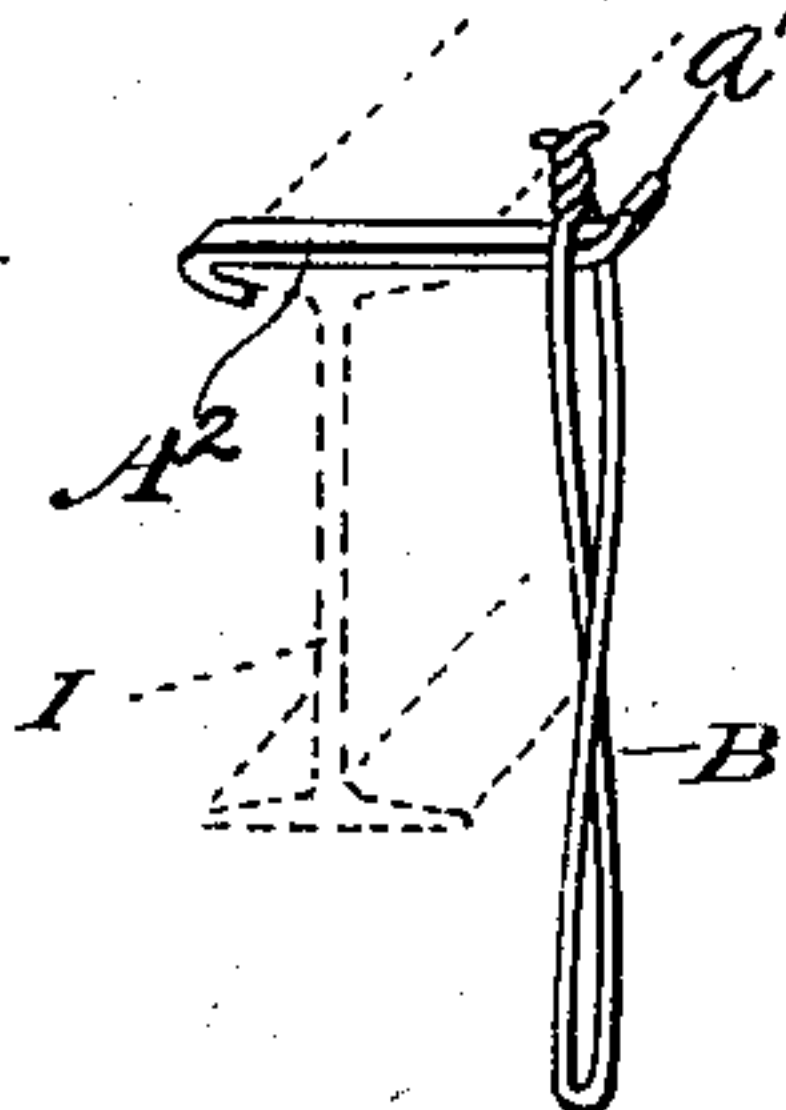


Fig. 5.

Fig. 6.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## HANGER FOR TEMPORARY CENTERING.

SPECIFICATION forming part of Letters Patent No. 736,040, dated August 11, 1903.

Application filed June 4, 1903. Serial No. 160,103. (No model.)

*To all whom it may concern:*

Be it known that I, GUY B. WAITE, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hangers for Temporary Centering, of which the following is a specification.

My invention relates to devices in the nature of hangers for supporting joists or carriers for temporary centering, on which are supported the materials employed in forming arches for fireproof floors. In the formation of such temporary centering it is quite essential to securing perfect results in the permanent structure that the entire centering support be maintained uniform and level throughout, inasmuch as a drooping or sagging of any portion thereof produces defects in the ceiling-work.

The satisfactory character of the temporary centering is dependent very largely upon the means employed for temporarily supporting the same from the main floor beams or girders. My invention has for its object to provide a supporting device which shall maintain the temporary centering in true and accurate position throughout and at the same time represent in its own structure a maximum simplicity of operation and economy of manufacture.

To these ends my invention resides principally in an improved form of wire-hanger and in its special means of engaging the floor-girder and the centering-joist, which it supports.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a portion of a floor-beam and a section of temporary centering, illustrating also my improved hanger, whereby the latter is supported from the former. Fig. 2 is a detail view of the wire member of the hanger having the form of a single loop. Fig. 3 is a similar view of the preferred form of wire member wherein its sides are crossed, thus forming a double loop. Fig. 4 is a perspective detail of the clip or clamp constituting an element of the complete hanger device and forming the

means whereby the wire loop is supported from the upper flange of the floor-beams. Fig. 5 shows a modification in the form of the wire-loop-supporting device adapted for use in connection with channel-beams supported against a wall, and Fig. 6 shows another modification of the supporting clip or clamp having an upturned end taking the place of the locking extensions of the wire loops shown in Figs. 1, 2, and 3.

Referring to Figs. 1 to 4 of the drawings, I designates a section of an ordinary floor-girder formed from an I-beam, and S S represent a pair of joists or beams constituting the transverse underlying supporting elements of the temporary centering, over which are laid the planks C.

B designates the suspension member of the hanger, which is made from a single length of wire bent into the form of a narrow loop, with the ends thereof twisted together at the upper end of the loop and having one end continued or extended a distance equal to the width of the upper flange of the floor-girder, as shown at *b*, and terminating when in place in a hook *b'*. In the preferred form of this hanger the sides of the loop are caused to cross each other by giving the loop a half-twist, thereby forming, in effect, a double loop, the lower part of which receives and supports the joist S. My invention, however, also comprehends a construction having a single elongated loop B' or without the crossing of the sides of the loop, as shown in Fig. 2, although the partially-twisted loop is preferable as better facilitating the work of placing the centering in position.

A designates a clip or clamp consisting of a plain strip, one end of which is inwardly bent, as shown at *a*, to thereby constitute a hook for engaging one margin of the top flange of the floor-beam.

The device is manipulated substantially as follows: Prior to raising the joists S to position beneath and engaging the under flanges of the girders I a series of hangers are slipped over the ends of the joists and spaced at about the required intervals apart thereon. The joist is then passed up to workmen on top of the girders I, beneath which the ends of the



joist lie, who draw the upper loops of the hangers over the free ends of the clips A, at the same time bending the end of the extension *b* over the edge of the flange alongside of the hook *a* of the clip, forming the hook *b'*, to thereby lock the hanger snugly against the girder. This having been done, the intermediate hangers are then similarly connected by the clips and their end extensions to their respective girders. Where the double-loop hanger B is employed, when the joist is raised the upper end of the hanger is obviously carried to a position where it can be readily engaged with the overhanging end of clip A, while when the form B' is employed it hangs from the joist S when the latter is raised, and consequently has to be reached for by the operator and raised into operative connection with the clip A; hence the advantage of the crossed-wire form.

I am aware that wire hangers tied around the floor-beams have been employed and also that other more or less elaborate and expensive forms of hangers have been suspended through apertures in clips or clamps supported on the upper flange of the floor-beam; but I have found in practical experience that these devices where tied around the beams are apt to produce an uneven character of ceiling by reason of the sagging of one hanger more than another, while in the case of stiff hangers supported from clips it has not always been possible to prevent the clips from turning and allowing the hangers suspended therefrom to drop slightly, thus injuriously affecting the character of the ceiling.

My present invention resulted from the discovery that by taking wire about the size of hay-wire and bending it over forms of correct size to fit uniform joists the centers were held securely to the spot desired, whatever settlement occurred was uniform, and the ceiling formed was far more satisfactory than resulted from the use of heavy wire tied around the beams, as formerly, or by the use of heavy wire hangers such as shown in my former patent, No. 703,025, June 24, 1902. The hanger of my present invention, lying straight across one side of the beam, has the advantage of not being liable to stretch out, and a further practical advantage over going around the beam resides in the fact that the boards forming the centers may be extended under the beams with my present hanger, and thus allow a concrete covering to the soffit of the beams. The fact that they can be simply slipped over the ends of the joists and passed up into position with the latter and subsequently slipped over the free end of the clip and locked in place by merely turning the end of the hanger extension under the top flange of the floor-beam renders their use advantageous in respect to the time and work required to put them in operative relation to the parts connected thereby.

Where one end of the centering-joist S has

to be supported from a channel-beam secured flat against a wall, I employ the arrangement shown in Fig. 5, wherein A' designates an iron or wooden bar thrust through the loop of the hanger B, lying against the channel-beam D and extended across and overhanging the top of the next floor-beam I.

Fig. 6 shows a clip or clamp A<sup>2</sup>, the overhanging end of which is upwardly turned or bent, as at *a'*, this form of clip being capable of substituting the clip A and the locking extension *b b'* of the loop, since the upturned end *a'* performs the same function as the extension *b b'* in keeping the loop in place on the clip.

I claim—

1. A hanger for the purpose described, consisting of a wire loop adapted to lie across one side of a floor-beam, and a clip engaged with and overhanging the top of the floor-beam and having said wire loop slipped over and supported from its overhanging end, substantially as described.

2. A hanger for the purpose described, consisting of a wire loop adapted to lie across one side of a floor-beam, a clip engaged with and overhanging the top of the floor-beam and having said wire loop slipped over and supported from its overhanging end, and means preventing accidental separation of said loop and clip, substantially as described.

3. A hanger for the purpose described, consisting of a wire loop adapted to lie across one side of a floor-beam and having an upper end extension adapted to lie over the top of the floor-beam and hook under its opposite flange, and a clip engaged with and overhanging the top of the floor-beam and having said wire loop slipped over and supported from its overhanging end, substantially as described.

4. A hanger for the purpose described, consisting of a double wire loop, the lower loop of which is adapted to receive a centering joist or beam, and a supporting-clip engaging the upper loop and itself supported on the floor-beam, substantially as described.

5. A hanger for the purpose described, consisting of a double wire loop formed by twisting a single elongated loop to produce an intersection of its side members, and a supporting-clip on the floor-beam over which said loop is hung, substantially as described.

6. A hanger for the purpose described, consisting of a suspension member formed from a single length of wire bent and twisted to form upper and lower loops and an integral locking extension to engage the floor-beam, and a supporting-clip on the floor-beam from which said suspension member is hung, substantially as described.

7. A hanger for the purpose described, consisting of a clip clamped to and overhanging the top flange of a floor-beam and a wire-loop suspension member hung therefrom and at its lower end embracing an element of the



temporary centering, substantially as described.

5 8. A hanger for the purpose described, consisting of a double-wire-loop suspension member lying wholly across one side of a floor-beam, and a clip removably clamped to and across the top of said floor-beam and having

an overhanging end over which said suspension member is hung by its upper loop, substantially as described.

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