

No. 824,470.

PATENTED JUNE 26, 1906.

G. H. DYER.  
BUILDING CONSTRUCTION.  
APPLICATION FILED OCT. 20, 1905.

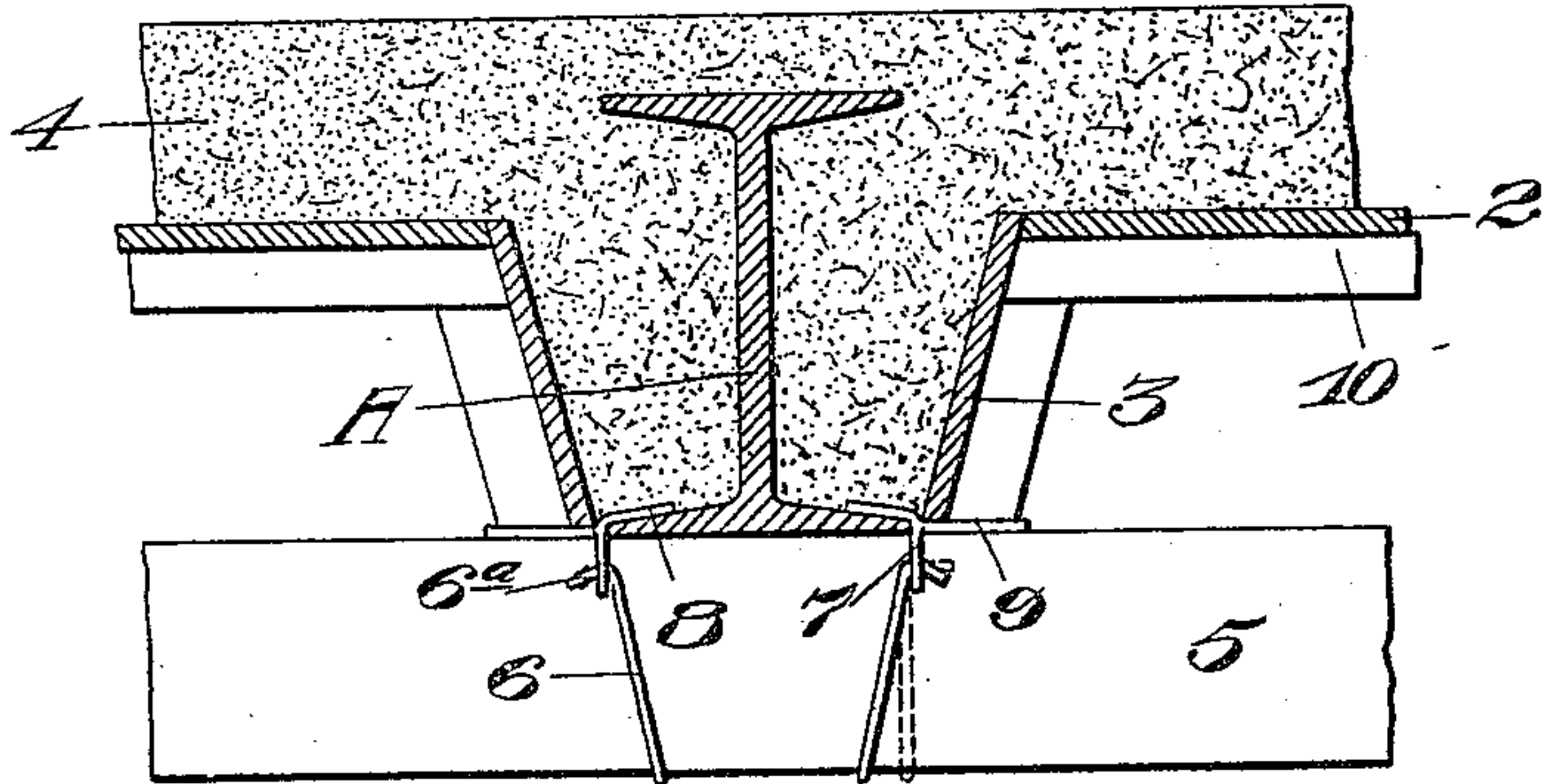


Fig. 1.

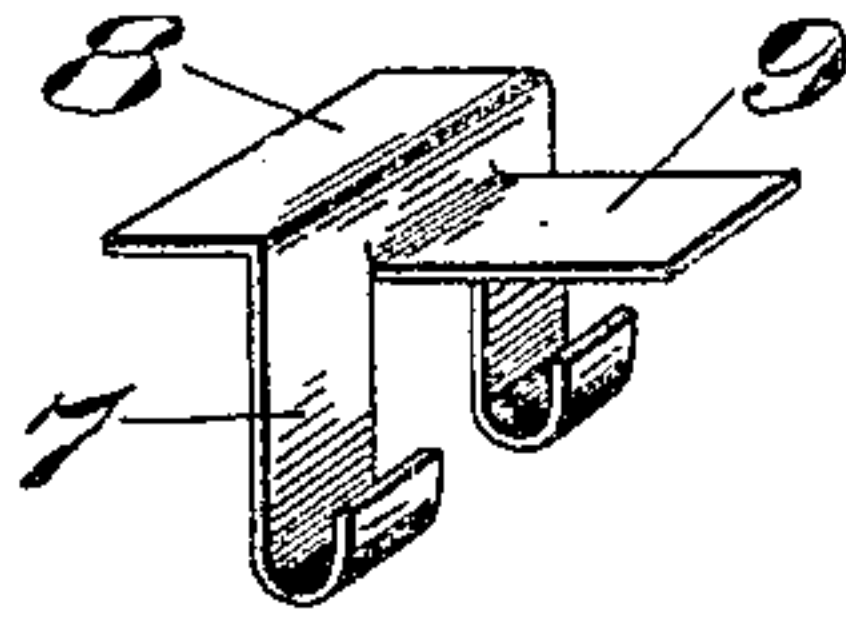


Fig. 2.



Fig. 3.

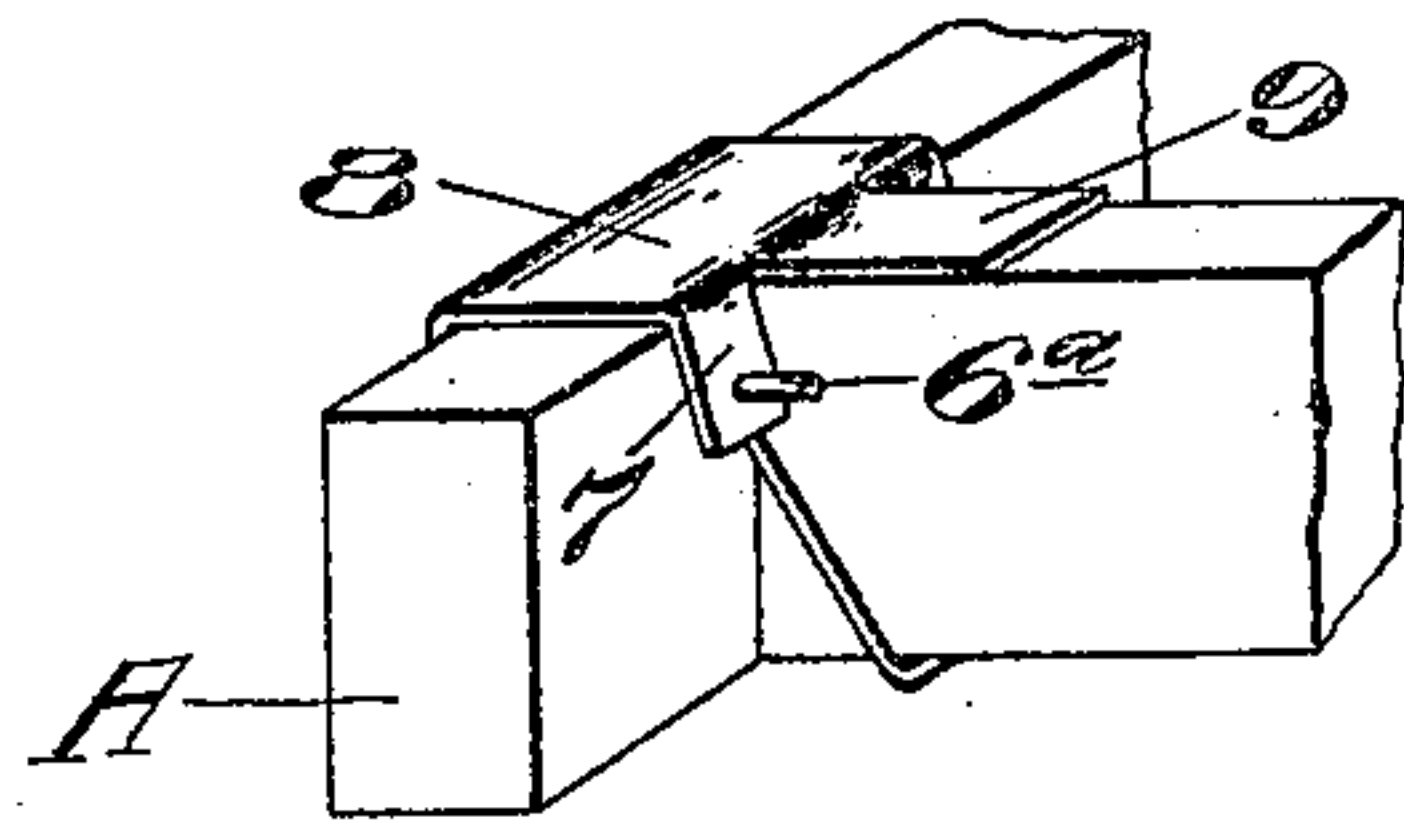


Fig. 4.

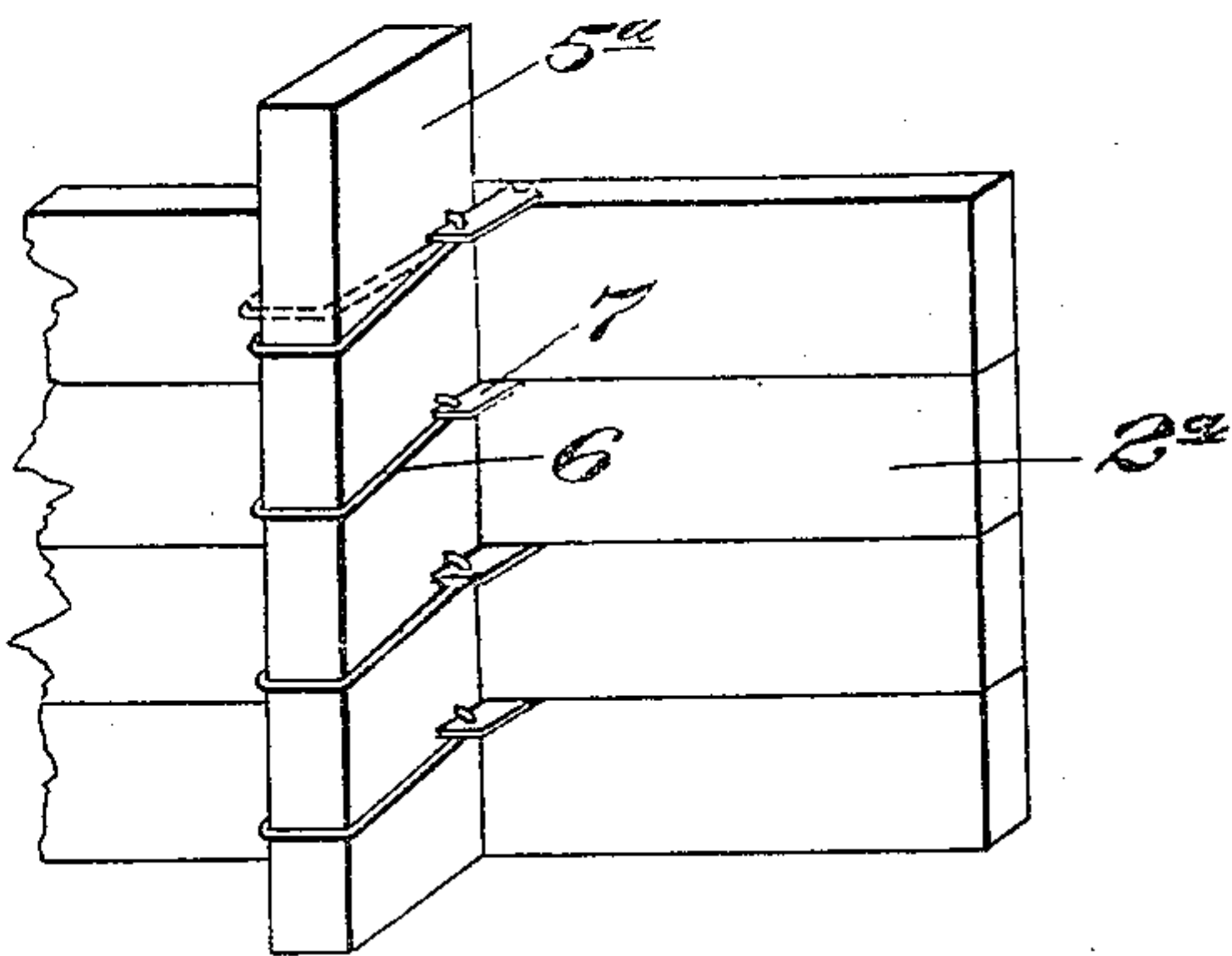


Fig. 5.

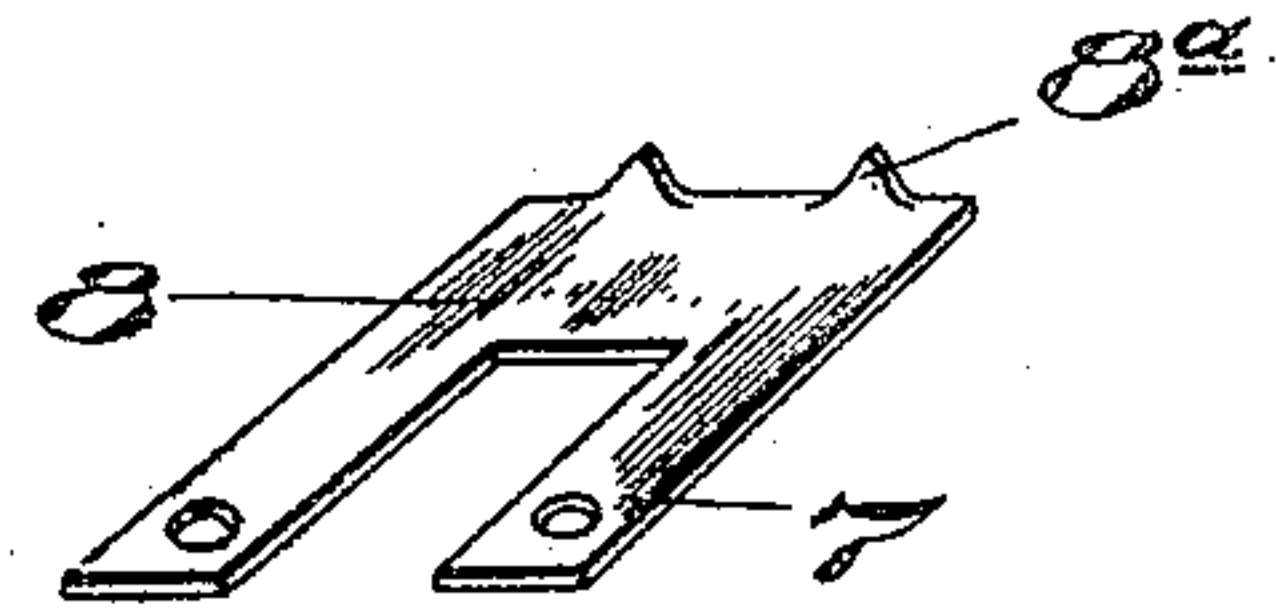


Fig. 6.

Witnesses.  
E. H. Berg.  
J. H. Moore

Inventor.  
George H. Dyer  
By Geo. H. Strong. atty



# UNITED STATES PATENT OFFICE.

GEORGE H. DYER, OF SAN FRANCISCO, CALIFORNIA.

## BUILDING CONSTRUCTION.

No. 824,470.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed October 20, 1905. Serial No. 283,561.

*To all whom it may concern:*

Be it known that I, GEORGE H. DYER, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Building Constructions, of which the following is a specification.

My invention relates to improvements in building construction, and especially in the means for supporting the molds for concrete walls, floors, and the like.

It consists in the combination of parts and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a sectional view showing my invention. Fig. 2 shows the plate with hook-shaped legs. Fig. 3 is a view of the hanger. Fig. 4 shows my attachment applied to wooden girders. Fig. 5 shows the plate adapted for wall construction. Fig. 6 shows the device applied to a vertical wall.

It is the object of my invention to provide a means for supporting forms for the filling for floors, walls, and like structures.

As shown in the drawings, A is a beam or girder which represents one of a number of parallel girders and with relation to which a flooring of concrete is to be laid. For this purpose a deck 2 and haunches 3 are supported with relation to the beam or girder to form a mold upon which the filling of concrete may be imposed, as shown at 4. In order to support these molds or forms in position, I have shown beams 5, extending beneath the girder A and secured thereto by hangers 6. These hangers may be made in any suitable form, but are here shown in the form of loops, the bights of which pass beneath the beams 5 and the upper ends are bent into a hook form, as shown at 6<sup>a</sup>. These hook-shaped ends engage with the depending ends 7 of plates 8, which are bent at such an angle with relation to said depending ends that these plates will rest upon the lower flanges of the beams or girders A. I have shown these plates 8 as having an intermediate portion 9 cut out and bent at approximately right angles with the parts 7, which thus extend down upon each side of the plate 9. These plates 9 extend upon the tops of the beams 5, while the legs 7 extend down on each side of the beams 5 and may either have holes made through them for the reception of the bent portion 6<sup>a</sup> of the extending links or they may be bent upward

to form hooks or loops from which the links may be suspended.

The structure is thus built up by first placing the beams 5 beneath the girders A, then hooking the plates 8 upon the lower flanges of the girders, with the legs 7 projecting downwardly upon each side of the beams 5, and the links or hangers 6 are then engaged with these downwardly-projecting legs, so that the bights of the hangers pass beneath the beams 5, and they may then be driven to an angle or be wedged, so as to hold the beams 5 firmly against the bottom of the girders A. The projecting portions 9 of the hanger-supporting plates extend outwardly upon the tops of the beams 5 and serve to prevent the plates 8 from swinging out of the proper position with relation to the girder-flanges. At the same time these plates serve as supports for the haunches or timbers 3, the lower ends of which rest upon the projections 9 and the upper ends serve to support the timbers 10, upon which the deck 2 is laid. This provides for a certain depth of concrete above the deck 2 to form the floor, covering the upper flanges of the girder A, and for the filling of concrete which incloses the webs of the girders down to the lower flanges. When the structure has thus been completed, it is only necessary to knock the hangers 6 back to their vertical position, which will loosen them so they can be removed from their connections with plate 8. The timbers 5 may then be removed, and after this the haunches, deck-timbers, and flooring can be removed. The plates 8 are left free to be easily knocked out from their position of rest upon the lower flanges of the beams, leaving the concrete and girder structure and the arches formed thereby complete.

If the structure is to be employed with wooden beams instead of girders, the plates 8 may rest upon the tops of these beams and the supporting-beams. The hangers will be engaged in the same manner as previously described.

When the device is designed for the construction of walls, the timbers 5<sup>a</sup> are held vertically against the mold-boards 2<sup>a</sup>, which are laid up against these timbers and are held in place by plates 8, having legs 7 and links 6, engaging the legs 7, as previously described, and passing around the vertical timbers 5<sup>a</sup>. In this structure the edges of the plate 8 may be serrated or provided with points, as at 8<sup>a</sup>, and the plate being laid upon the upper edge



of one of the planks 2<sup>a</sup> with its teeth projecting at right angles. The next plank being laid upon the teeth may be driven into one or the other edges, so as to hold the part 8 in place with sufficient strength to resist the pull of the hangers 6. The engagement and disengagement of these parts is thus very readily made after the concrete filling has been placed and has set and hardened, and the structure will be left in its desired form and clear of all obstructions.

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

1. A support for concrete in building construction, said support comprising mold-forms, beams against which said forms rest, plates having portions extending upon each side of and straddling the beam, and hangers embracing the beam and having their extremities detachably engaging the extensions of the plates whereby the beams and forms are held in place.

2. In a building construction, forms for the support of concrete, beams by which said forms are held in place, plates having members interposed between the beams and the forms, said plates having bent portions which straddle the beams, and hangers extending opposite to the bent portions of the plates and embracing the beams, and having their extremities detachably engaging the bent extensions of said plates.

3. In a concrete building construction, supporting girders or beams, forms disposed with relation thereto to receive a filling of concrete or plastic material which will set and harden, means for supporting said forms, said means consisting of beams, substantially U-shaped hangers within the bights of which the beams are held, plates having flanges resting upon the girders, said plates having downturned extensions which straddle the beam, and said hangers having their free ends detachably engaging said extensions.

4. In a concrete construction for building,

girders or beams, forms supported in relation thereto to receive a filling of concrete or plastic material which will set or harden, plates bent to rest upon the girder, flanges having downturned extensions upon each side, beam-supports for the mold-forms upon each side of which supports the extensions of the plates project, hangers, and means for engaging the hangers with said extensions, the bights of the hangers extending beneath the beams and serving to lock said beams in position against the girders.

5. In a concrete building construction, beams or girders, forms fitted with relation thereto to receive a filling of concrete or plastic material which will set and harden, means for supporting said forms, said means consisting of beams, plates bent to engage the filling-supports, having extensions upon each side of the beams, and intermediate tongues projecting upon the surface of the beams, hangers, the bights of which pass beneath the beams, and hooks by which said hangers engage with the plates.

6. In concrete and like building construction, forms and beam-supports for the concrete, hangers by which the beam-supports are held with relation to the forms, and bent plates having extensions upon each side of the beams and intermediate plates or tongues projecting along the edges of the beams, substantially as described.

7. An article of manufacture consisting of a plate bent at approximately right angles with one portion forming a support, the other portion slitted to form extensions upon the outer edges, and an intermediate tongue or plate bent outward at substantially right angles with the extensions, said extensions having means for engaging with a hanger or support.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEO. H. DYER.

Witnesses:

S. H. NOURSE,  
J. B. LEE.