

Dec. 9, 1930.

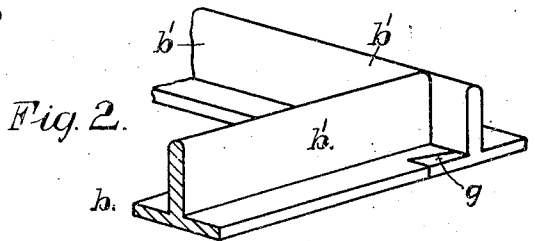
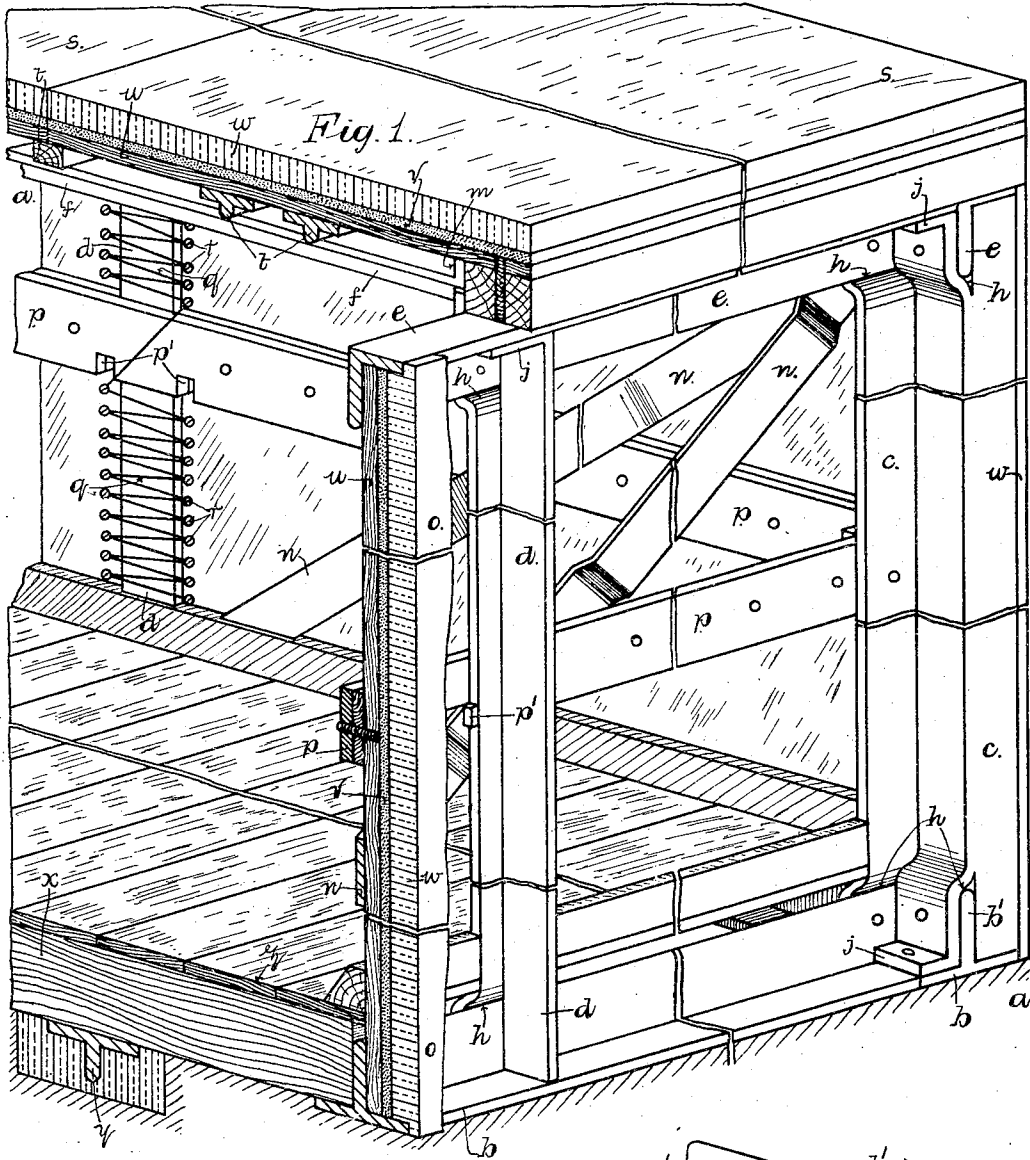
A. LEYLAND

1,784,808

BUILDING STRUCTURE

Filed May 26, 1927

2 Sheets-Sheet 1



Witnesses.

Herbert White.
Geo. N. Forster.

Inventor.

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Dec. 9, 1930.

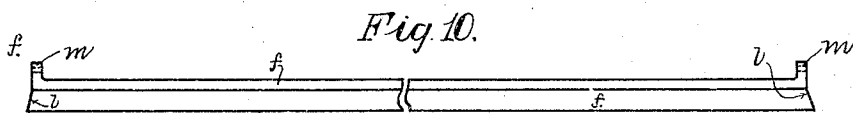
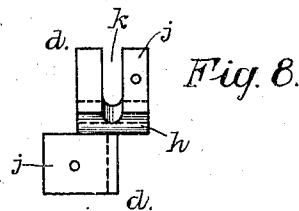
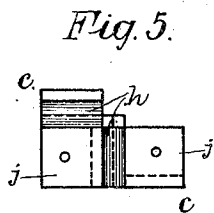
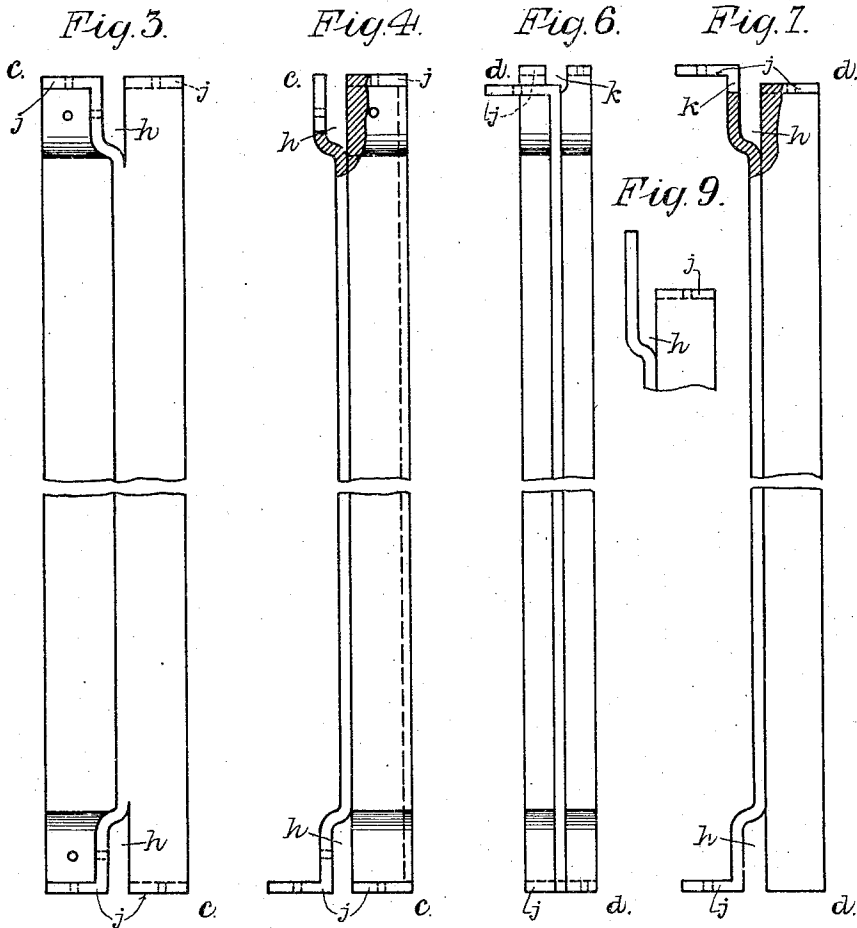
A. LEYLAND

1,784,808

BUILDING STRUCTURE

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2 Sheets-Sheet 2



Witnesses.

Herbert White.
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UNITED STATES PATENT OFFICE

ALFRED LEYLAND, OF TADDINGTON, NEAR BUXTON, ENGLAND

BUILDING STRUCTURE

Application filed May 26, 1927. Serial No. 194,335.

This invention relates to building structures, and has for its object to provide a simple, strong and durable structure which may be quickly and cheaply erected.

A building structure, according to my invention, includes a metal framework, and, preferably, composition roofing and walling sheets or slabs; and is characterized in that certain members of the framework are, in-part, split and bent to create channels or cavities, wherein other members of the framework are entered; and said first mentioned members being provided with flanges whereby both the first and second mentioned members may be secured together.

Further and additional features are hereinafter described and pointed out in the claiming clauses concluding this specification.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings which illustrate, by way of example only, one mode of carrying my invention into effect.

In said drawings:—

Fig. 1 is a perspective view, partly in section, of a fragmentary portion of a building structure embodying my improvements.

Fig. 2 illustrates a portion of base members detached.

Figs. 3 and 4 are elevations, taken at right angles to each other, and Fig. 5 a plan, of a corner stanchion.

Figs. 6 to 8, inclusive, are views similar to Figs. 3 to 5, of a side stanchion, and Fig. 9 is a fragment of a side stanchion of modified construction.

Fig. 10 illustrates a roof joist stiffener and binder.

a generally designates the building structure, the metal framework whereof includes T section base members *b*, Z section corner stanchions *c*, T section side stanchions *d*, angle roof supports *e*, and T section joist stiffeners and binders *f*.

Said base members, which are attached to each other prior to the fitment of stanchions *c*, are shaped so that they dovetail into one another as shown at *g*.

Each corner stanchion *c* is firmly and rigidly attached to the base members by splitting in-part its lower end and bending in such manner that there are created two U shaped channels or cavities *h* at right angles to each other, and outwardly projecting flanges *j*. When fitting a stanchion in position, the upstanding portion *b*¹ of each base member *b* is entered into its corresponding channel *h*, and the flanges *j* are bolted to the base horizontal portions. As the curved or shouldered portions of channel *h* rest on said upstanding portions *b*¹ of the base members, and take substantially all the weight of the stanchions, few bolts only are required, and the shearing stress on these is negligible.

The lower end of each side stanchion *d* is formed in similar manner with a single channel *h* for its attachment to a base member.

The angle roof supports *e* are secured to the upper ends of said corner and side stanchions in substantially the same manner as the base members are attached to the lower ends of the stanchions.

To provide means whereby the joint stiffeners and binders *f* may be fixed to stanchions *d*, there are formed in certain of the upper channel portions of stanchions *d*, slots *k* whereinto the protruding edges *l* of the joist stiffeners are entered, the joists resting on the flanges *j* of the stanchions and being secured by its flanges *m* to the stanchions: in this construction also, the shearing stress on the bolts is negligible.

In the modification illustrated in Fig. 9, the joist flanges *m* are adapted to be secured to upstanding portions of the stanchions.

Struts *n* extending from the upper ends of the corner stanchions *c* to the lower ends of side stanchions *d* suitably bind and strengthen the framework.

The walling composition sheets or slabs *o* are fixed to the metal framework by means of strips *p* (having projections *p*¹ adapted to clip against the side stanchions *d* whilst the slabs are being attached) and lacing *q* which is wound around screws *r* provided on the slabs; whilst the roof slabs *s* are fixed to the supports *e* and joist stiffeners *f* by means of wood and metal rafters *t*.

Said sheets or slabs may be of any suitable type but are preferably of the kind described in my British Patent No. 252,784, being constructed of wood boards *u* and layers of tar mass *v* and concrete *w*.

The floor is formed of joists *x* which are strengthened by means of angle members *y* embedded in concrete blocks and boards *z*.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a metal framework for buildings, frame members adapted to be erected at an angle to each other, one of said members having an upstanding portion, the other member being partly split and bent at its end to receive said portion, and a flange on said bent end secured to said first named member.

2. An article of manufacture for a framework for buildings comprising an elongated member of Z cross section including an intermediate web and lateral webs at the edges thereof, said intermediate web having its end portion severed from the adjacent webs and bent outwardly to form a slot, one of said adjacent webs having its end portion likewise bent outwardly.

3. An article of manufacture for framework for buildings comprising an elongated member of angular cross section and including a plurality of webs, one of said webs having its end portion severed from the adjacent web and bent outwardly to form a slot with said adjacent web.

In witness whereof I have signed this specification.

ALFRED LEYLAND.

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