

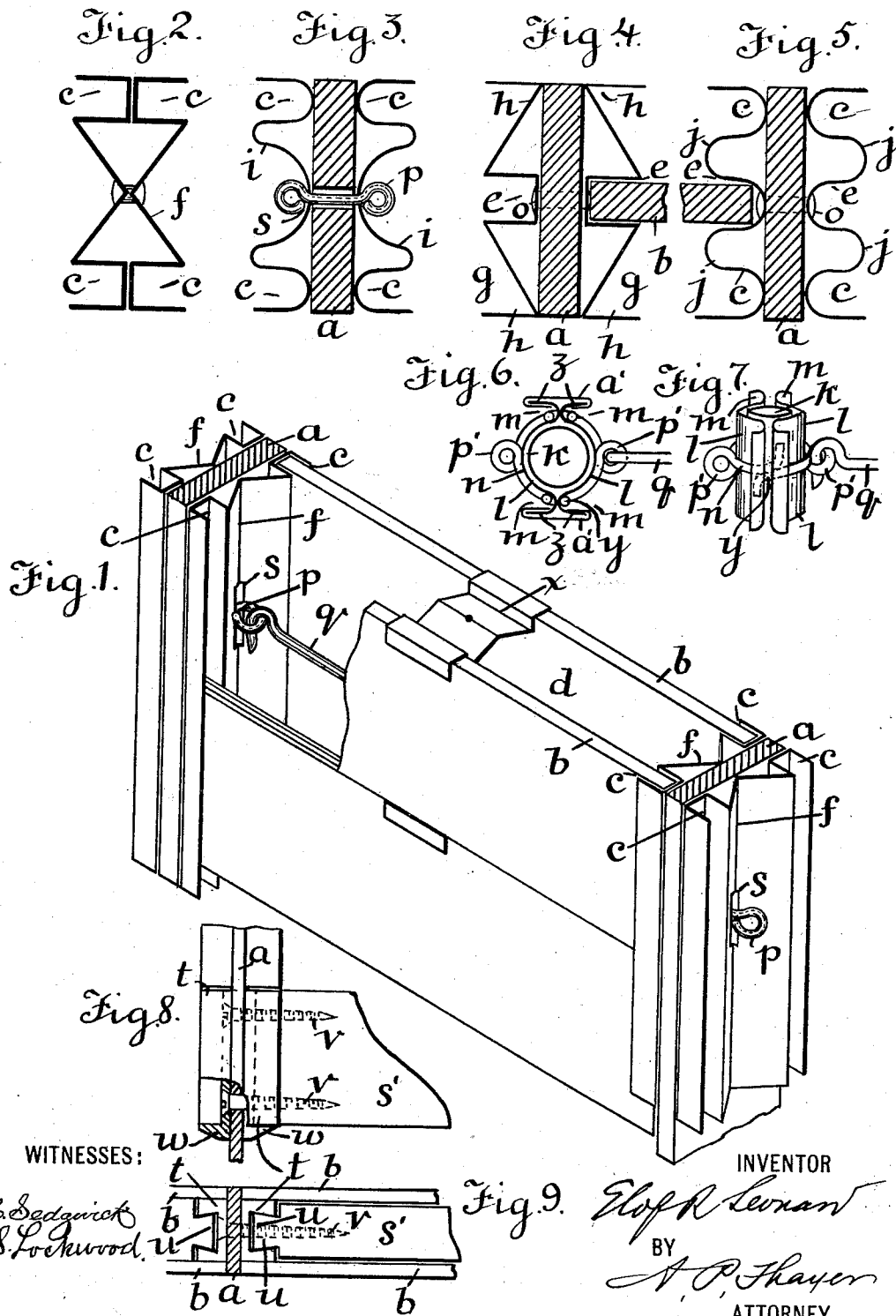
No. 609,685.

Patented Aug. 23, 1898.

E. R. LEONARD.
FIREPROOF PARTITION.

(Application filed Mar. 11, 1898.)

(No Model.)



UNITED STATES PATENT OFFICE.

ELOF R. LEONARD, OF NEW YORK, N. Y.

FIREPROOF PARTITION.

SPECIFICATION forming part of Letters Patent No. 609,685, dated August 23, 1898.

Application filed March 11, 1898. Serial No. 673,440. (No model.)

To all whom it may concern:

Be it known that I, ELOF R. LEONARD, a citizen of the United States of America, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Fireproof Partitions, of which the following is a specification.

My invention consists of improvements in metallic studs for supporting the ends of fireproof plaster sheets on which the plaster finish is to be applied, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of parts of a partition in which my improvements are represented. Figs. 2, 3, 4, and 5 are details in horizontal section, showing modifications of form in the studding-strips. Fig. 6 is a horizontal section; and Fig. 7 a detail, of other modifications in studding-strips. Fig. 8 is a detail in elevation, and Fig. 9 a detail in horizontal section, showing the application of wood-filling to facilitate nailing on chair-rails, wainscoting, and the like.

The invention consists, essentially, of molded studding-strips of sheet metal having grooves or channels adapted for receiving and confining the ends of fireproof plaster-holding sheets or plates in a way to afford simple construction and avoiding the use of wood in the partitions, the said strips being used in connection with flat bar metallic studs, to the sides of which they are applied, so as to adapt the bars more simply and cheaply for the connection of the plaster-holding plates than such bars can be otherwise adapted for such use; but for partitions not requiring very great strength the flat metallic bars may be dispensed with by securing two of the sheet-metal strips together back to back, particularly if thicker and stronger material be used for the strips.

In Figs. 1, 3, 4, and 5, *a* represents a flat metallic bar stud, to the sides of which channeled or grooved sheet metallic studding-strips are applied for receiving the ends of fireproof sheets or plates *b*, of any approved kind, on which the plaster finish is to be applied.

In Fig. 2 the studding-strips are placed together back to back and suitably fastened to each other, the flat bar being omitted. These

strips may be of various forms in cross-section with two grooves or channels, as *c*, when double-walled partitions with an intermediate space, as *d*, is required, or with a single groove or channel, as *e*, when a single-walled partition is to be built, consisting of one thickness of plates or sheets *b*, placed in the middle of the studs to be plastered on both sides, as indicated in Figs. 4 and 5.

The studding-strips are produced by suitably corrugating them lengthwise to form the channels. The corrugations may be angular or curved in cross-section. The strips *f*, Figs. 1 and 2, have angular corrugations, the two channel corrugations being rectangular at the bottom and the middle corrugation being in *V* form.

The strips *g* of Fig. 4 are also angular in the corrugations, with a single rectangular channel in the middle for reception of the plaster-supporting plates in a single partition. There are also other channels *h* of *V* form at the outer edges, in which plates *b*, having the ends beveled correspondingly, may be placed, so as to utilize these strips for double partitions also, if desired.

Strips *i*, Fig. 3, and *j*, Fig. 5, are curved in the corrugations, and strips *j* have three channels of uniform size and shape, in either of which plaster-holding plates *b* may be secured.

In Figs. 6 and 7 a tube *k* is represented instead of the flat bar *a*, with studding-strips of half-round form in the middle corrugation applied, said strips having the marginal channels *m* for plates *b*. They are tied onto the tube *k* with wire ties *n*, hooked through the two strips, as at *y*, and having eyes *p'* for the tie-rods *q*, while the other strips are riveted to the flat bars, as at *o*, or secured by eye-links *p*, to which tie-rods *q* may be engaged, as shown in Fig. 1, for tying the studs together when it may be desired. These eye-links are inserted through vertical slots *s*, wide enough to admit them when their wide dimension is presented in the lengthwise plane of the slot; but said links will be locked therein when turned the other way, and thus will hold against the pull of the tie-rods.

In Fig 6 the marginal flanges *z* of the channel-strips are represented as confined by a sheath-strip *a'*, slipped over them lengthwise

to reinforce them for greater rigidity. Such sheaths may be employed in all cases, if desired.

In Figs. 8 and 9 I represent wood nailing-strips *s'* applied to the stud-bar *a* between the plates *b* for nailing on wood chair-rails or wainscoting and the like, the application being by means of dovetail grooved metallic chair-plates *t*, applied to the sides of the bars *a* at a suitable height from the floor, for which sections of the studding-strips will be displaced, to which chairs dovetail heads *u* of the wood strips will be connected, the chairs being secured to the stud-bars by wood-screws *v*, inserted through the chairs and the studs and screwed into the end of one wood strip before the other is inserted in the other chair, as indicated in Figs. 8 and 9. The chairs have seats *w* at the lower ends of the grooves, on which the wood strips rest.

At *x* a stay-piece is represented for coupling the two plates *b* of a double partition intermediately of the studs for greater lateral rigidity, which consists of a short strip of sheet metal corrugated in about the same form as the studding-strips *f* and having like grooves for the edges of the plates *b*. Such stays may be employed between the edges of the plates with or without notches in their edges, being so thin that the slight parting between the edges not notched will not be objectionable.

I claim—

1. The combination in fireproof partitions of plaster-holding plates, and corrugated metallic studding-strips having one or more grooves for reception of the ends of the plates set up edgewise one upon another substantially as described.

2. The combination in fireproof partitions of plaster-holding plates and two corrugated metallic studding-strips having one or more grooves for reception of the ends of the plates set up edgewise one upon another, said strips placed and secured together back to back substantially as described.

3. The combination in fireproof partitions of plaster-holding plates, metallic bar-studs,

and corrugated metallic studding-strips attached to the sides of the bar-studs and having one or more grooves for reception of the ends of plaster-holding plates set up edgewise one on another substantially as described.

4. The combination in fireproof partitions of plaster-holding plates, corrugated metallic studding-strips having one or more grooves for reception of the ends of the plates set up edgewise one on another, and corrugated stays, having grooves, connecting the edges of two partition-plates substantially as described.

5. The combination in fireproof partitions of plaster-holding plates, corrugated metallic studding-strips having one or more grooves for reception of the ends of the plates set up edgewise one upon another, metallic bar-studs, having said strips attached to the sides, eye-links inserted through slots of the strips and bars, and hook tie-rods connecting the studs by said links substantially as described.

6. The combination in fireproof partitions, of the bar-studs, nailing-strip chairs, and nailing-strips seated in said chairs between the partition-plates, said chairs attached to the sides of the studs substantially as described.

7. The combination in fireproof partitions, of the bar-studs, nailing-strip chairs, and nailing-strips seated in said chairs between the partition-plates, said chairs attached to the studs by screws inserted through them and the studs and screwed into the end of a nailing-strip substantially as described.

8. The combination in fireproof partitions of plaster-holding plates, corrugated metallic studding-strips having one or more grooves for reception of the ends of the plates set up edgewise one upon another, and sheath-strips confining the marginal flanges of the studding-strips substantially as described.

Signed by me, at New York, this 5th day of March, 1898.

ELOF R. LEONARD.

Witnesses:

A. P. THAYER,
J. HOWARD.