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F. L. YORK

3,334,461

FIRE BAFFLE FOR WALLS

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Fig. 1.

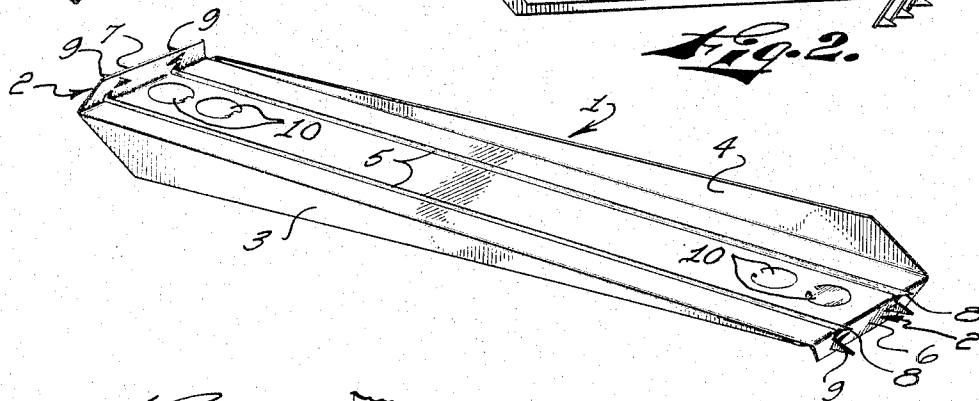


Fig. 2.

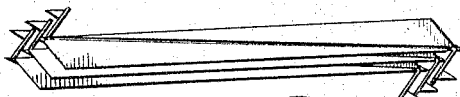


Fig. 3.

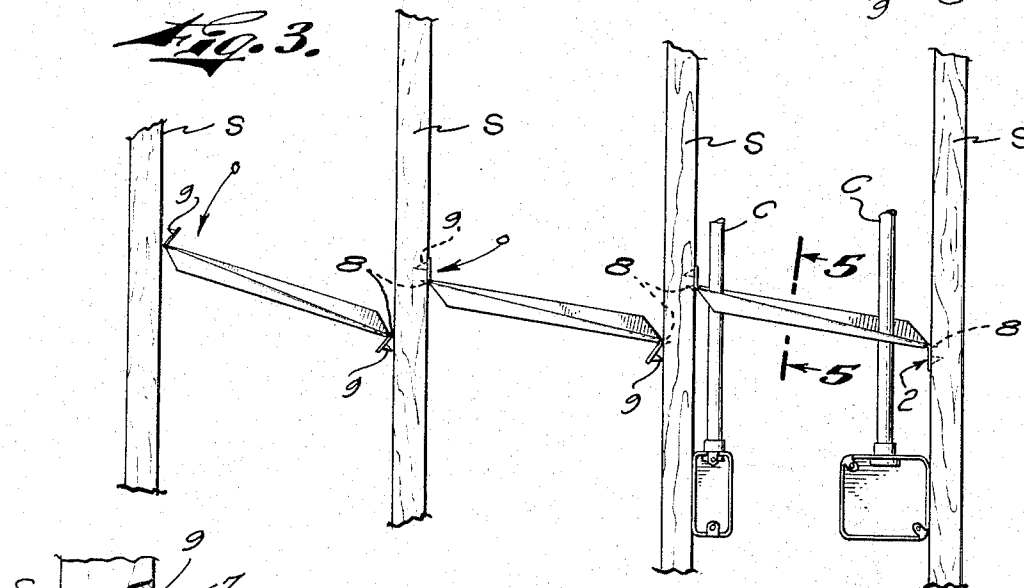


Fig. 4.

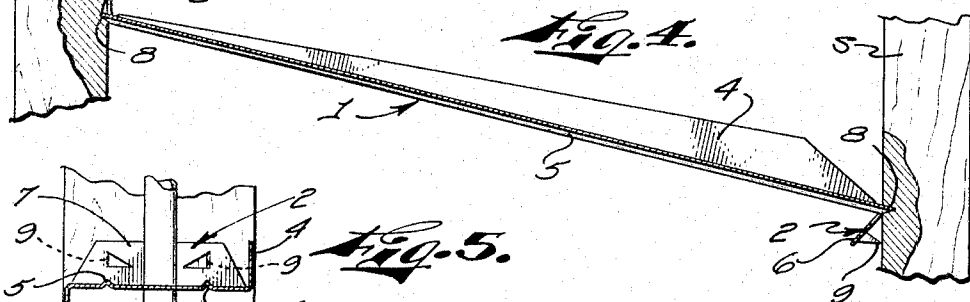
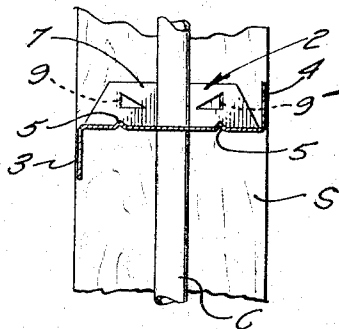


Fig. 5.



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FIRE BAFFLE FOR WALLS

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5 Claims. (Cl. 52—317)

This invention relates in general to the formation of the walls in conventional house construction and more particularly to an improved fire baffle unit for application between the studs of such a wall to close the vertical space therein and thereby prevent upward spread of fire in such space.

It has been the practice to cut lengths of wooden members of proper dimensions to form fire baffles between opposed studs and to nail these baffles between the studs. If the studs are not rather precisely spaced, the precut baffles do not fit well so that their installation is difficult and in some instances the full benefit will not be realized.

It is an object of this invention to provide a prefabricated metal baffle unit which will eliminate the above noted objections in that it is formed and dimensioned so that it may be readily and easily installed between opposed studs and as readily fastened thereto to form a complete and fireproof baffle or closure in the wall space between the studs, regardless of the studs being on prescribed centers or somewhat off center.

Further, it is an object of this invention to provide a prefabricated fire baffle unit which is somewhat greater in length than the usual space between studs, the length of the unit being such that the unit may be installed to form an effective baffle in the space between studs that are on as well as off center. In case the studs are set on centers less than normal, the unit may be quickly and easily installed in a position inclined from the horizontal, yet will provide a reliable fire baffle. Should the studs be set so that the space therebetween is substantially as great as the length of the unit, the unit may be installed readily in a horizontal or substantially horizontal position. In other words, it is possible to wedge the unit in place when necessary and to quickly and easily secure it in place in view of the inherent latitude thereof so as to effectively fit between accurately and inaccurately spaced studs.

It is another object of this invention to provide a metal fire baffle unit such as above described which readily, easily and inexpensively may be made of suitable sheet metal and may have fastening means therefor carried by the unit so that the use of extraneous fastenings such as nails will be eliminated and a quicker and easier installation thereof may be effected.

Another object is the provision of a baffle unit such as next above described which readily and easily may be provided with knock-out portions to form openings therein for water and electrical lines that are to be installed in the wall.

An additional object is to provide a metal fire baffle unit such as described in which the fastening means therefor are integral with the ends of the unit and include end flanges which extend across the ends of the unit with one flange extended upwardly and the other downwardly, there being fastening prongs struck out from the unit so to extend outwardly therefrom substantially at the joint of the flanges, with the body of the unit. In addition, longer and larger spurs are struck out from the flange nearer to the outer transverse edges of the flanges. These end flanges also reinforce the metal unit and are preferably bent inwardly from the ends of the unit so as to facilitate the angular placement or

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wedging of the unit between studs without having the larger spurs and the flanges interfere with such placement. However, the small prongs nearer to the joint of the flanges than the larger spurs, will bite into the studs in positioning the unit therebetween and thereafter, with suitable hammering, the end flanges will be bent outwardly to engage the studs and to cause the spurs to be driven into the studs. In this connection, it should be noted that the end flanges in being bendable make it possible for the unit to be installed between studs spaced apart a distance somewhat greater than the length of the body proper of the unit, since the end flanges when bent outwardly to fasten the unit to the studs will increase the effective length of the unit as a baffle.

An additional object is to provide a metal baffle unit such as described which is also effectively reinforced by side flanges along longitudinal edges of the unit with such flanges extending therefrom in opposite directions so as to project above and below the unit. Each side flange is tapered from a wide end at one end of the unit to a comparatively narrow end at the opposite end of the unit whereby the unit may be installed with either side uppermost or downmost by an operator standing on either side of the studs, the narrow ends of the side flanges affording ready visibility of the end flanges as well as ready access thereto so that they may be appropriately hammered to drive the spurs thereon into the studs.

It is another object of this invention to provide a metal fire baffle unit which is constructed so that a plurality thereof may be nested together in small compass to facilitate shipping and storage of the units.

Other objects and advantages of the invention will be hereinafter described or will become apparent to those skilled in the art, and the novel features of the invention will be defined in the appended claims.

Referring to the drawing:

FIG. 1 is a perspective view of a prefabricated fire baffle unit embodying the present invention;

FIG. 2 is a perspective view of a plurality of the units, showing how such units may be nested in small compass;

FIG. 3 is a front elevational schematic view showing a plurality of studs and three fire baffle units embodying this invention, as they would appear in different stages of installation between studs; this figure also illustrating at the right end of the figure how pipes or conduits may be extended through one of the baffle units;

FIG. 4 is an enlarged sectional view of a baffle unit positioned between studs in the stage of installation shown in the center of FIG. 3; and

FIG. 5 is a cross-sectional view taken on the line 5—5 of FIG. 3.

Referring more specifically to the drawing, it will be seen that a prefabricated fire baffle embodying this invention may be made of suitable sheet metal as a rectangular plate-like body 1 of appropriate width and length to serve as a reliable fire baffle between wall studs S. The body 1 has fastening means at opposite ends whereby the body was be rigidly and fixedly mounted between adjacent studs. Such fastening means, as will hereinafter appear, includes end flanges 6 and 7 which also reinforce the plate transversely, and the plate is also provided with reinforcing side flanges 3 and 4 along opposite longitudinal edges. The body 1 may also be reinforced by means of ribs 5 extending longitudinally thereof. Hence, adequate strength of the unit may be provided with the use of comparatively light gauge sheet metal. As here shown, the fastening means 2 comprises the end flanges 6 and 7 on the body 1, with the flange 6 preferably, for a purpose hereinafter more fully described, extending downwardly from the body and the flange 7 extending upwardly therefrom when the unit is in the position shown in FIG. 1.

Near the joint of the end flanges 6 and 7 with the body are pointed prongs 8 including the fastening means and struck out from the flanges and adapted to bite into studs as shown in FIGS. 3 and 4. Additional fastening means or elements are struck out from the flanges 6 and 7 near the outer ends of the flanges and are in the form of pointed spurs 9 that are larger and longer than the prongs 8. In addition, it is preferred that the flanges 6 and 7 be bent to extend angularly inwardly from the ends of the body 1 to facilitate installation of the unit as hereinafter described.

In order that the baffle unit as here provided will have appreciable latitude as to fitting between studs not on prescribed centers, it is preferred to make the unit of greater length than the usual net space between studs erected on standard centers; for example, the unit may have a length of approximately one-half to one inch in excess of the distance between studs.

The side flange 3, as shown in FIG. 1, is of greater width at the end of the unit on which the end flange 7 is located, and from this end this side flange is gradually reduced in width so that at the opposite ends of the unit the side flange does not obstruct ready visibility of and access to the flange 6 and fastening elements 8 and 9 thereon. The other side flange 4 is widest at the end of the unit at which the end flange 6 is located and tapers to a narrow width at the opposite end of the unit so that the end flange 7 and fastening elements 8 and 9 are clearly visible and readily accessible for being struck with a hammer for fastening the end flange 7 to a stud.

The body 1 may be provided with weakened knockout portions 10 near the ends thereof or as otherwise desired, such portions upon being knocked out providing openings through which pipes or conduits C, as shown in FIGS. 3 and 5, may be extended.

In installing the baffle unit, it is preferred to place it between a pair of studs S, as shown in the left side of FIG. 3, with the unit inclined from the horizontal and, for example, with the end flange 6 downmost and the end flange 7 uppermost at the upper end of the unit. However, this position of the unit may be reversed, since the unit may be applied with either side flange up or down as well as with either end flange up or down. This angular positioning of the baffle unit would be effected if the studs are set on normal centers, for example, or are somewhat off such centers either way, since the length of the baffle unit is preferably somewhat greater than the standard spacing between properly set studs.

Accordingly, upon forcing the unit downwardly in the inclined position shown at the left of FIG. 3 between opposed studs S, the unit will become wedged between the studs and the prongs 8 on the flanges 6 and 7 will bite into the studs as indicated in the center portion of FIG. 3 to stop the unit in position to form an effective baffle. Next, as shown for example in the center portion of FIG. 3 also in FIG. 4, the upper flange 7 has been struck with a hammer and forced against the adjacent stud to drive the spurs 9 into the stud, after which the lower flange 6 is appropriately hammered to force it against the adjacent stud and drive the spurs 9 into the stud. This completes the installation of the baffle unit which then appears as shown in the right side of FIG. 3.

It is obvious that if the space between the studs is equal to the length of the baffle unit, the latter may be installed in a horizontal position and that whether the unit is installed in a horizontal or an inclined position it will effectively serve as a reliable fire baffle with the advantage that in one dimension it may be installed between studs that are on or off standard centers, in a much quicker and easier manner than wooden baffles which must be cut to fit between the studs, toenailed in place if of proper fit, or recut or discarded for a new baffle of proper length if the spaces of the studs are significantly greater or less than the standard length of the conventional wood fire baffles.

Another advantage of the baffle unit as here provided

is that a plurality thereof may be neatly stacked or nested in small compass as shown in FIG. 2 to facilitate shipping and storing thereof.

While specific structural details have been shown and described, it should be understood that changes and alterations may be resorted to without departing from the spirit of the invention as defined in the appended claims.

I claim:

1. A fire baffle unit for installation between the studs in a wall, comprising: an elongate plate-like metal body dimensioned to fit between the studs of a wall to provide a fire-blocking partition across the upright space between said studs; fastening means carried by said body affording the fastening thereof to said studs, including end flanges projecting from the ends of said body for contact with said studs, said end flanges being arranged so that one extends upwardly from said body and the other extends downwardly from said body; a side flange disposed along one side edge of said body and projecting upwardly therefrom; and another side flange disposed along the other side edge of said body and projecting downwardly therefrom; each side flange diminishing in width toward the end flange that is disposed on the same side of said body of each side flange to afford free access to said end of the flanges above and below said body.

2. A fire baffle unit for installation between the studs of a wall, comprising: an elongate metal body having a length and width to provide a fire-blocking partition across the upright space between the studs; flanges joined to and extending in opposite directions from the ends of said body; pointed fastening elements carried by said flanges in position to be driven into said studs in response to hammering of said flanges toward said studs; and side flanges projecting from longitudinal edges of said body in opposite directions, said side flanges diminishing in width toward said end flanges to afford ready access to the latter for said hammering thereof.

3. A fire baffle unit for installation between the studs in a wall, comprising: an elongate plate-like metal body dimensioned to fit between the studs of a wall with the ends of the body engaged with the adjacent stud surface to provide a fire-blocking partition across the upright space between said studs; oppositely directed angularly extending bendable flanges respectively on the ends of said body for face engagement with said adjacent stud surfaces; and pointed fastening elements struck out from said flanges so as to project from the outer surface thereof for entering the adjacent stud surfaces upon hammering the flanges against the studs.

4. A fire baffle unit according to claim 3, wherein the body has a length greater than the stud spacing, the body being capable of wedging between the studs in a position inclined from the horizontal, and said fastening elements including prongs adjacent the juncture of the flanges with the body and projecting beyond the associated body end.

5. A fire baffle unit according to claim 3 including side flanges projecting from longitudinal edges of said body in opposite directions, said side flanges each having a diminished width at the end thereof adjacent the end flange which extends in a similar direction to its direction from said body.

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