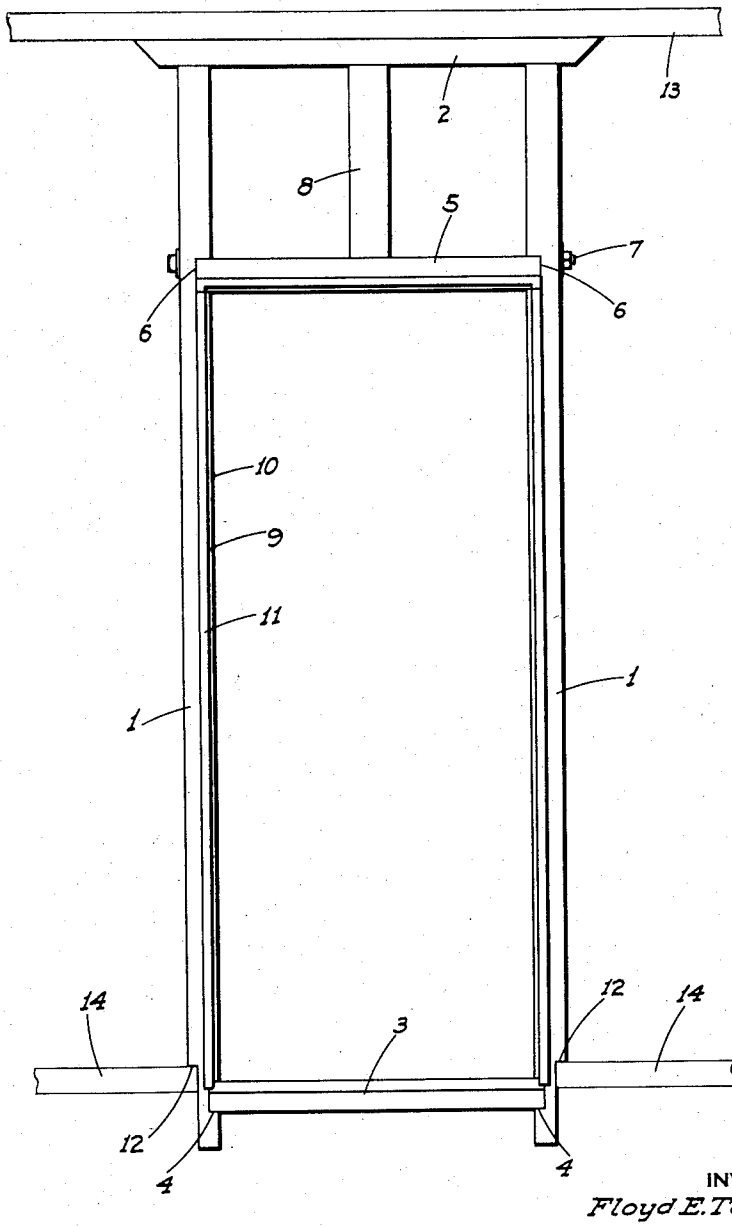
May 5, 1942. F. E. TOOTHACRE 2,281,864

VERTICAL FRAMING CONSTRUCTION

Filed May 13, 1940 2 Sheets-Sheet 1

Fig. 1



INVENTOR
Floyd E. Toothacre
BY Webster & Webster
ATTYS

May 5, 1942. F. E. TOOTHACRE 2,281,864

VERTICAL FRAMING CONSTRUCTION

Filed May 13, 1940 2 Sheets-Sheet 2

Fig. 2

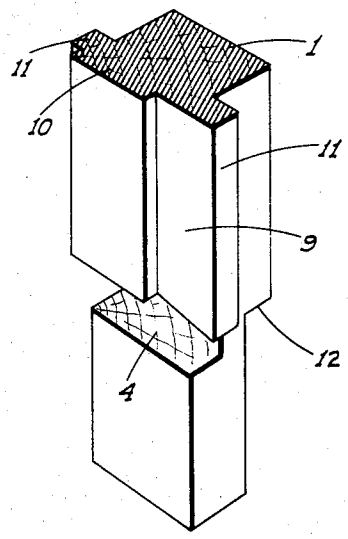


Fig. 3

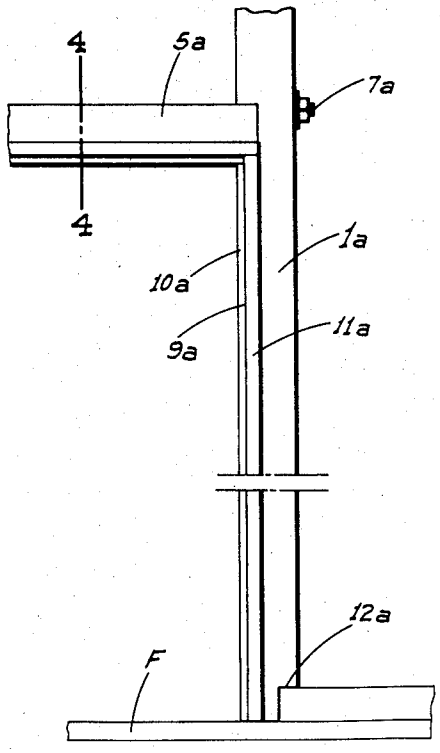
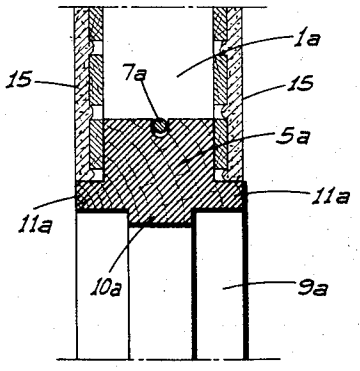


Fig. 4



INVENTOR
Floyd E. Toothacre
BY
Worth & Worth
ATTYS

Patented May 5, 1942 2,281,864

UNITED STATES PATENT OFFICE

2,281,864

VERTICAL FRAMING CONSTRUCTION

Floyd E. Toothacre, Stockton, Calif.

Application May 13, 1940, Serial No. 334,869

4 Claims. (Cl. 20—11)

This invention relates in general to frame construction for exterior and interior walls, and in particular the invention is directed to a combination door frame and building frame unit; the structure being a modification of the Window frame construction shown in my copending application for United States patent, Serial No. 298,440, filed October 7, 1939.

In conventional wall construction, the door frames are separate and each is set between independent studs which extend vertically between the top and bottom plates of the building structure; a horizontal header extending between said studs immediately above the top of the separate frame, and short lengths of vertical studding are fixed between the header and top plate. The plaster grounds or stops, door stops, and sill are initially separate and must be assembled with the door frame as the building is constructed. It will thus be seen that considerable time is expended in cutting, fitting and truing up the several parts which comprise the finished door frame and the building support therefor.

It is therefore the principal object of this invention to provide a prefabricated combination door frame and building frame unit designed to provide—in "ready to set" assembly—a complete door frame which without any independent framing or studding forms a unitary part of the wall structure; the invention being adapted for use in both exterior or interior walls, as will hereinafter appear.

Another object of the invention is to provide a unit as above which provides greater wall strength in the area of the door than does conventional construction.

A further object of the invention is to provide for the use of spaced vertical wall studs as the sides or jambs of the door frame; such studs being milled to provide integral door stops, plaster stops, and sill engaging and supporting ledges.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Figure 1 is an elevation of the prefabricated unit as constructed and used in exterior walls.

Figure 2 is a fragmentary perspective view of the lower end portion of the combination wall studs and door jambs.

Figure 3 is a fragmentary elevation of the prefabricated unit as constructed and used in interior walls.

Figure 4 is a cross section on line 4—4 of Fig. 3.

Referring now more particularly to the characters of reference on the drawings, and at present to the embodiment shown in Figs. 1 and 2, the prefabricated door frame and exterior wall frame unit shown therein comprises spaced vertical studs 1 connected together at the top by a supplementary horizontal plate 2, and connected together adjacent but slightly above their lower ends by means of a sill 3 whose ends rest on ledges 4 formed by mortising in adjacent faces of said studs.

A horizontal header 5 is disposed some distance below supplementary plate 2, and at opposite ends is mortised into the studs as at 6. A tie bolt 7 extends between the studs adjacent the top of the header and may rest in a longitudinal groove therein (see Fig. 4). A short intermediate stud 8 is secured between the supplementary plate 2 and header 5.

The studs 1, between sill 3 and header 5, are milled to provide finished door jambs 9 which include integral door stops 10, as well as integral, outwardly and oppositely projecting stops or grounds 11 for the wall finish and to which stops 11 suitable trim material may be affixed, the grounds 11 being flush with the jambs. The header 5 is likewise milled so as to correspond with jambs 9, door stops 10 and finish grounds 11. The doorway is thus defined by jambs 9, sill 3, and header 5; and a door, together with a screen door if desired, may be mounted therein in conventional manner.

Opposite faces of studs 1 are cut away upwardly a certain distance from the lower ends thereof to form downwardly facing shoulders 12 disposed a short distance above the plane of sill 3; the distance between shoulders 12 and the top of supplementary plate 2 being equal to the distance between adjacent surfaces of the upper and lower horizontal wall plates 13 and 14 respectively, of the wall in which the unit is intended to be mounted.

In use, the unit is disposed vertically with the shoulders 12 resting atop plates 14 at adjacent ends of the latter; the plates terminating at the doorway as shown. The studs 1 are secured by nailing or the like to, and some distance below, the plates 14 and support the sill 3 in proper

position. The supplementary top plate 2 snugly engages top plate 13 and is secured thereto by nailing or other suitable means.

The above described prefabricated unit can be manufactured at reasonable cost, erected in a building with ease and without necessity of sundry cutting, fitting and truing up of the various parts on the job, and when in place forms a strong, rigid and unitary part of the wall structure including properly disposed finish grounds to which any desired trim may be applied.

The unit shown in Figs. 3 and 4 is adapted for use in interior walls and in assembly is substantially the same as described above, including studs 1*a*, header 5*a*, tie bolt 7*a*, miller jamb 9*a*, door stop 10*a*, and finish grounds 11*a*; the jamb, stop, and finish grounds being integral. In this embodiment, the header is likewise milled to correspond. This interior type unit is mounted in place much the same as the exterior unit, except that the sill is omitted and the studs terminate at the floor F and rest thereon as shown; the shoulders 12*a* riding the plates 14 as heretofore described.

If plaster and lath is the inside finish, it is worked up to the grounds 11 as shown at 15 in Fig. 4, and other finishes are similarly applied.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such details may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:

1. A prefabricated combination door frame and building frame unit to fit between the top and bottom plates of a wall framing, the bottom plate being cut away for the width of the door frame, said unit comprising a pair of spaced studs, means on the studs adjacent their lower end to engage and rest on the bottom plate at the ends of the cutaway portion, a sill secured on the studs adjacent their lower end, means at the upper end of the studs to connect them with the top plate and a header forming the top of the door frame, secured on the studs below said connecting means.

2. A prefabricated combination wall and door framing unit for installation after fabrication and assembly between the top and bottom plates of the wall framing of a building and in supporting relation to the adjacent portion of the top plate; said unit comprising a pair of spaced wall-framing studs, a header connecting the studs below the supplementary plate at a level to form the top of the door frame, a sill connecting and mortised into adjacent faces of the studs adjacent their lower end and a supplementary horizontal plate connecting the studs at their upper end and adapted to engage closely under and be secured to the wall top plate.

3. A prefabricated combination wall and door framing unit for installation after fabrication between the top and bottom plates of the wall framing of a building and in supporting relation to the adjacent portion of the top plate, the bottom plate being cut away for the width of the door frame; said unit comprising a pair of spaced wall-framing studs, means at the upper end of the studs to connect them with the top plate so that said studs carry the load from the top plate and a sill secured on and extending between the studs adjacent their lower end; the studs on their opposite sides being reduced in width from the bottom up to adjacent the sill to there form right-angled downwardly facing shoulders to rest on the adjacent separated ends of the lower wall plates.

4. A prefabricated combination wall and door framing unit for installation after fabrication and assembly between the top and bottom plates of the wall framing of a building and in supporting relation to the adjacent portion of the top plate; said unit comprising a pair of spaced wall-framing studs, a header connecting the studs at a level to form the top of the door frame and a sill connecting the studs adjacent their lower end; and means forming downwardly facing shoulders on the opposite sides of the studs to rest on the adjacent separated ends of the lower wall plates when the upper end of the unit is disposed in supporting relation to the top wall plate.

FLOYD E. TOOTHACRE.