

June 15, 1965

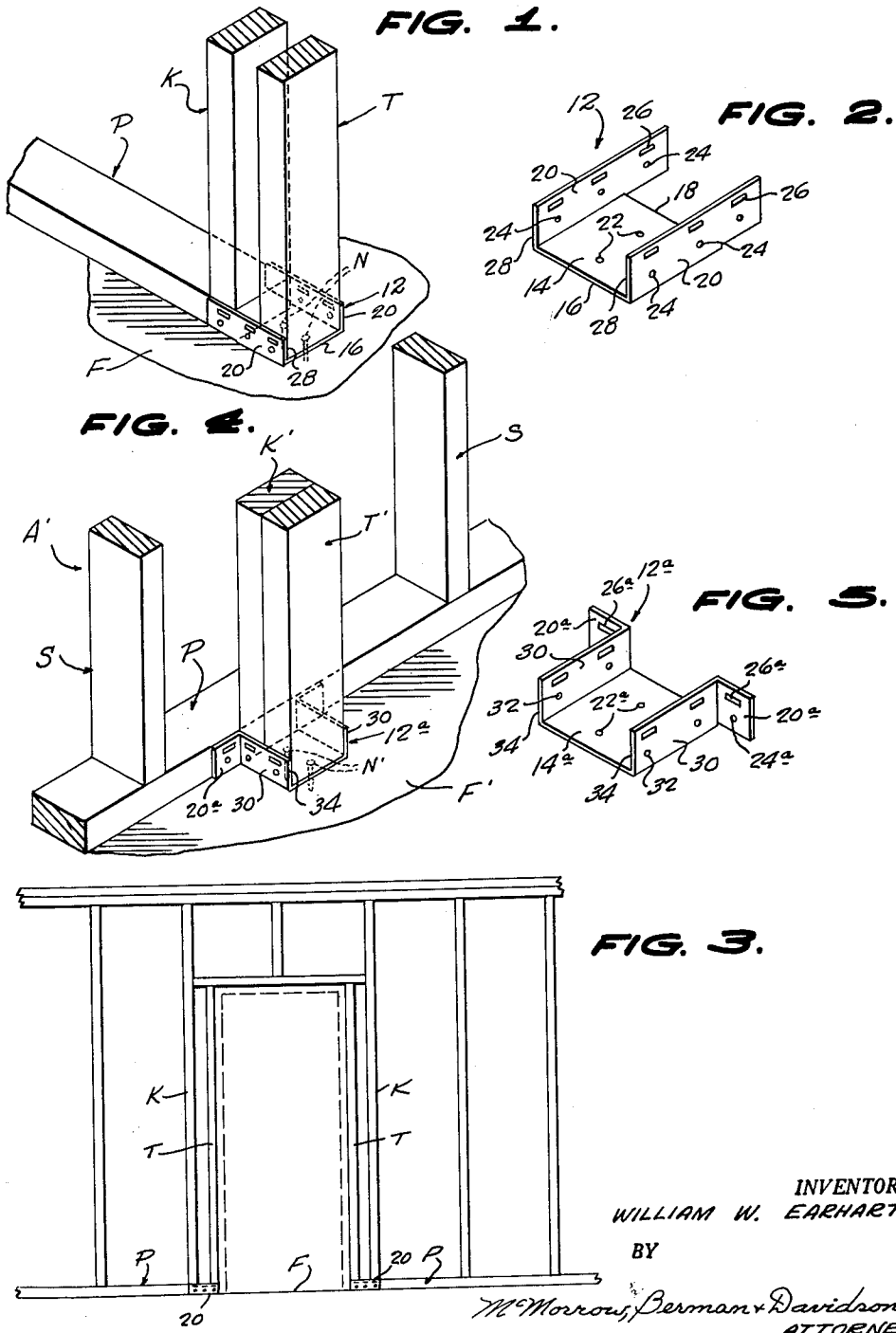
W. W. EARHART

3,188,696

COMBINATION ANCHORS AND BRACES

Filed Aug. 24, 1962

2 Sheets-Sheet 1



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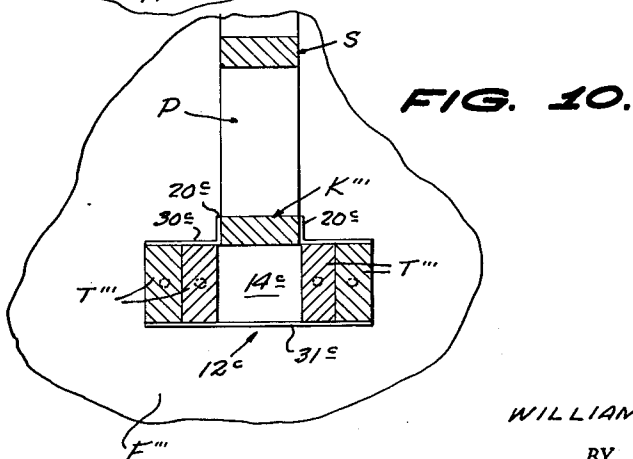
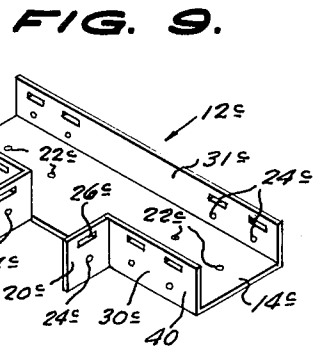
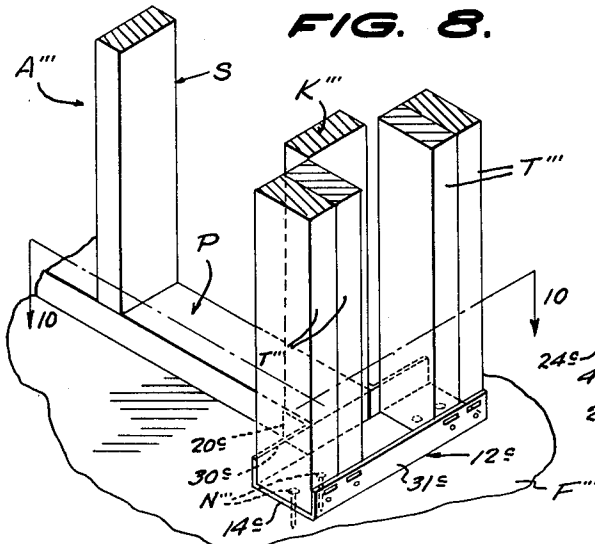
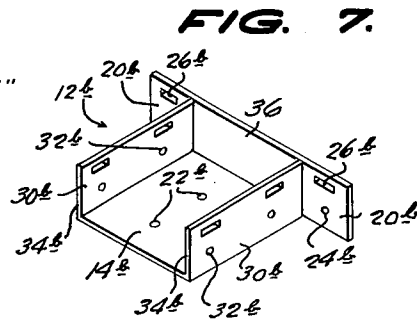
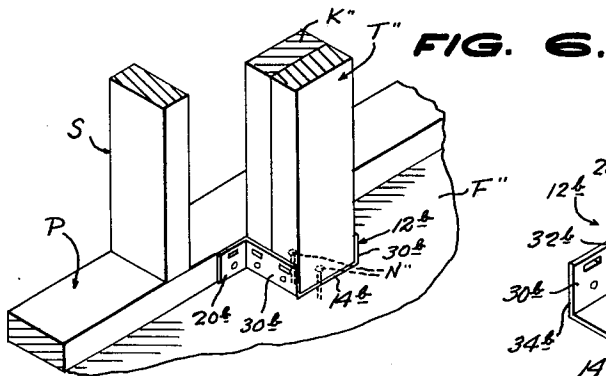
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COMBINATION ANCHORS AND BRACES

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2 Sheets-Sheet 2



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COMBINATION ANCHORS AND BRACES

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2 Claims. (Cl. 20—4)

This invention relates to novel combination anchors and braces for such as building wall studs and floor plates and the like.

The primary object of the invention is the provision of efficient, practical, and easily installed devices of the kind indicated, which facilitate the accurate erection and installation of components of wood framing, and render the same stronger and more permanently durable, with the components in original accurate alignment.

Another object of the invention is the provision of devices of the character indicated above, which are simple in construction and are adapted to be made of single sheets of metal by simple and inexpensive stamping and/or forming operations.

A further object of the invention is the provision of devices of the character indicated above, which are adapted to be nailed to the floor, adjacent floor plates and to the floor plates, and nailed to studs, including king studs forming the side members of door openings, and to the vertical trimmers, so as to eliminate the use of wooden blocks, ordinarily used, and the tendency of such blocks to become loosened and out of line.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, specific forms of the invention are set forth in detail.

In the drawings:

FIGURE 1 is a fragmentary perspective view, showing one form of device of the present invention nailed to a floor and to a king stud and a floor plate, and to a trimmer spaced from and aligned with the king stud;

FIGURE 2 is an enlarged perspective view of said device;

FIGURE 3 is a side elevation of a wall framing embodying devices of FIGURES 1 and 2;

FIGURE 4 is a fragmentary perspective view of another form of device of the invention nailed to a floor at one side of a floor plate and to the floor plate, and to a king stud and a trimmer which are aligned with each other and located at the same side of the floor plate;

FIGURE 5 is an enlarged perspective view of the device of FIGURE 4;

FIGURE 6 is a fragmentary perspective view of an arrangement similar to FIGURE 3, but utilizing a further form of device of the invention;

FIGURE 7 is an enlarged perspective view of the device of FIGURE 6;

FIGURE 8 is a fragmentary perspective view, showing a double door framing involving a still further form of device of the invention, nailed to a floor at one end of a floor plate and to the floor plate, and extending to opposite sides of the floor plate, transversely spaced pairs of engaged and aligned king studs and trimmers being engaged in and nailed to the device;

FIGURE 9 is an enlarged perspective view of the device of FIGURE 8; and

FIGURE 10 is a horizontal section taken on the line 10—10 of FIGURE 9.

Referring in detail to the drawings, wherein like and related numerals designate like and related parts throughout the several views, and first to FIGURES 1 and 2, a wall framing A is shown, which comprises a floor plate P secured to a floor F, an upstanding king stud K resting

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upon and secured to the floor plate P and aligned with the free end 10 thereof; and a vertical trimmer T, aligned with and spaced inwardly from the king stud K. These wall framing components are maintained in accurate relation to each other by means of a combined anchor and brace device 12.

The device 12 comprises a rectangular bottom plate 14, positioned in line with the floor plate P, having inner and outer ends 16 and 18, respectively, the outer end 10 18 being in abutting relation to the inner end 10 of the floor plate P and its inner end 16 flush with the inner surface of the trimmer T. The bottom plate 14 has upstanding longitudinal side walls 20, along its longitudinal side edges, which extend from the inner end 16 15 of the bottom wall, beyond the outer end 18 thereof, for a distance approximately equal to the thickness of the king stud K.

The bottom plate 14 is provided with nail holes 22, through which nails N are adapted to be driven into the floor F, for anchoring the device 12 in alignment with the floor plate P. The longitudinal side walls 20 are formed, near the bottom wall 14, with longitudinally spaced nail holes 24, through which nails N are adapted to be driven into the floor plate P and into the trimmer T. Longitudinally spaced horizontal slots 26 are provided in the side walls 20, above the nail holes 24, to pass other suitable fastening means (not shown). The length of the bottom plate 14 can be gauged so that securing the same to the floor plate P, with its outer edge 18 abutting the inner end 10 of the floor plate P, automatically locates its inner edge 16 the proper distance from the inner end of the floor plate for properly positioning the trimmer T, with its inner surface flush with the inner edge and the inner ends 28 of the side walls 20.

A different form of device 12a is utilized in the framing A' shown in FIGURES 4 and 5 of the drawings, which comprises a floor plate P, longitudinal studs S bearing upon and secured to the floor plate, and a king stud K' which is located at one side of the floor plate and spaced between adjacent studs S, with a trimmer T' engaged with the outer surface of the king stud K' and registered therewith.

The device 12a comprises a rectangular bottom wall 14a, of a length equal to the combined thicknesses of the king stud K' and the trimmer T', and having upstanding transverse end walls 30 along its end edges. The bottom wall 14a is provided with nail holes 22a to receive nails N driven into the floor F. The end walls 30 are provided therealong with nail holes 32 through which nails are driven into the edges of the king stud K' and the trimmer T'. The end walls 30 have outer ends 34, flush with the outer surface of the trimmer T', and inner ends which merge into oppositely directed longitudinal flanges 20a, which correspond to the side walls 20 of FIGURES 1 and 2 and are provided with nail holes 24a and slots 26a. The flanges 20a and the end walls 30 have longitudinally spaced slots, and the flanges 20a have single nail holes 24a.

With the bottom wall 14a and the flanges 20a nailed to the floor F and the floor plate P, the king stud K' and the trimmer T' are easily aligned and registered with each other and properly positioned relative to the floor plate P, by placing their lower ends on the bottom wall 14a between the end walls 30, and nailing the king stud and trimmer in place, by driving nails through the related holes.

A further form of the device 12b is utilized in a framing A'' shown in FIGURES 6 and 7, which involves a floor plate P, studs S resting upon and secured to the floor plate, a king stud K'' bearing against one side of the floor plate, and a trimmer T'' engaged with the outer

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surface of the king stud, in an arrangement similar to that of FIGURES 4 and 5.

The device 12b differs from the device 12a of FIGURES 4 and 5 only in that its flanges 20b are on the ends of or are connected to the ends of a single inner longitudinal side wall 36, which engages the floor plate P, along with the flanges 20b.

FIGURES 8 and 10 show another wall framing A'', involving a still further form of device 12c, and composed of a floor plate P, a stud S, spaced from the inner end of the floor plate, a king stud K''' bearing upon and fixed to the floor plate, flush with its inner end, and dual assemblies, located at opposite sides of the floor plate, and each composed of a pair of engaged and aligned trimmers T'''.

The device 12c is positively aligned with, centered relative to, and anchored to the floor plate P, by means of nails N, driven through nail holes 24c or slots 25c, provided in longitudinal flanges 20c, corresponding to the flanges 20b of FIGURES 6 and 7, with the flanges 20c engaged with the opposite sides of the floor plate. The flanges 20c are on and extend laterally from the inner ends of similar, spaced sections 40 of the outer end wall 30' of the device, which are spaced from each other at a distance equal to the width of the floor plate P. The flanges 20c are preferably the same in length as the thickness of the king stud K'''.

It will be seen from the foregoing that the various components of the wall framings and the door opening trimmers are, by means of the above described devices of the present invention, easily and accurately placed relative to each other, merely by accurately securing the devices to the floor plates, engaging the components in the device, and anchoring the same securely and permanently in place, by driving nails through the devices into the components.

While there have been shown and described preferred forms of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structures of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A wall assembly comprising a floor, a floor plate superimposed upon and secured to the floor, said floor plate having a free end, an upstanding king stud bearing upon said floor plate and having a surface flush with said free end, a pair of engaged and registered trimmers located at each of the opposite sides of the floor

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plate outwardly of the free end of the floor plate and adjacent said stud, a combination anchor and brace comprising a transversely elongated bottom wall longer than the width of the floor plate and extending to opposite sides of the floor plate, upstanding first and second end walls on and extending along the bottom wall, said pairs of trimmers received between said end walls and resting on said bottom wall, first fastener means securing the end walls to the edges of pairs of trimmers, said second end wall comprising longitudinally spaced wall sections having inner ends, and lateral flanges on said inner ends engaged with opposite sides of the floor plate, and third fastener means securing the flanges to the floor plate.

2. In combination, a floor, a floor plate superimposed upon and secured upon the floor, said floor plate having a free end, an anchor and brace assembly located at said free end, said assembly comprising a bottom wall secured upon the floor, said bottom wall being longer than the width of the floor plate and extending beyond opposite sides of the floor plate, said bottom wall having upstanding first and second laterally spaced side walls extending substantially the length thereof, said first side wall being flush with the free end of the floor plate and having spaced lateral flanges thereon secured to the opposite sides of the floor plate; a trimmer means on each of the opposite sides of the floor plate and bearing upon the bottom wall of the assembly between the side walls, and means securing the side walls to opposed sides of the trimmer means.

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