March 23, 1926. 1,577,633

C. COLLINS

STUDDING

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Fig. 1

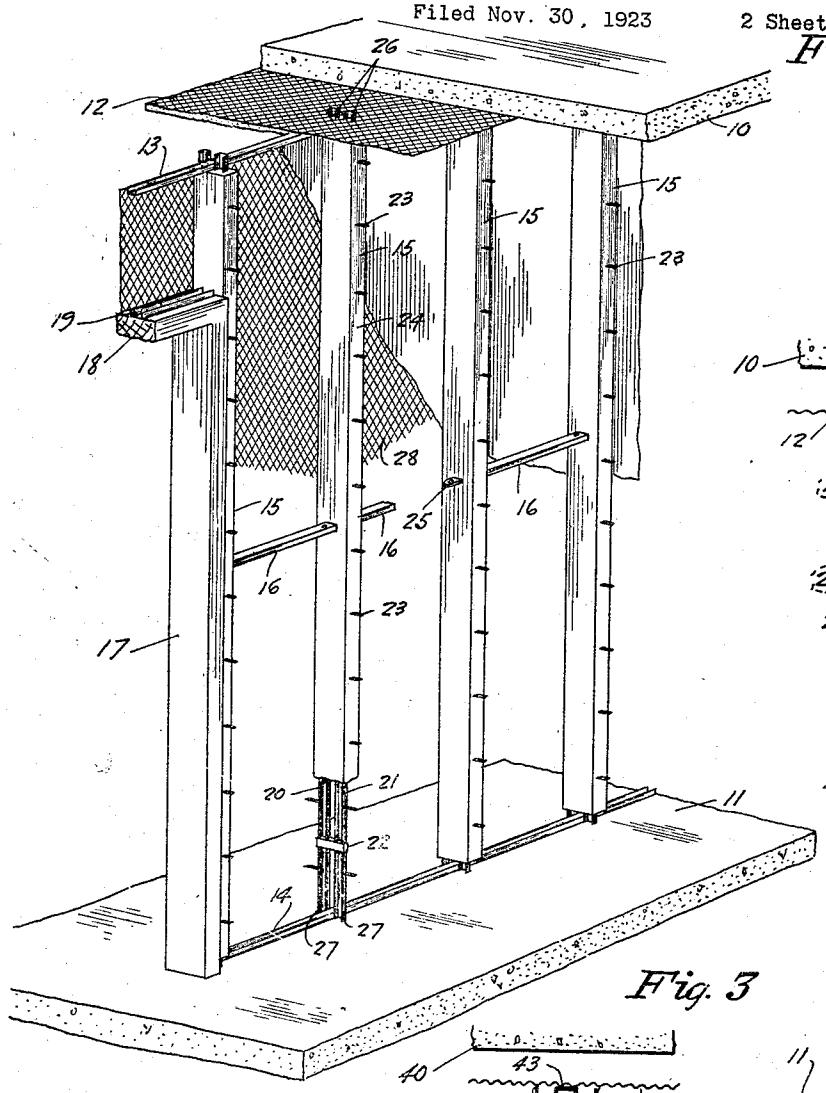


Fig. 2

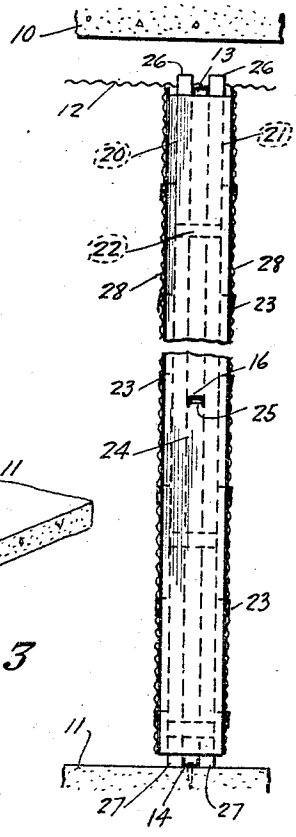
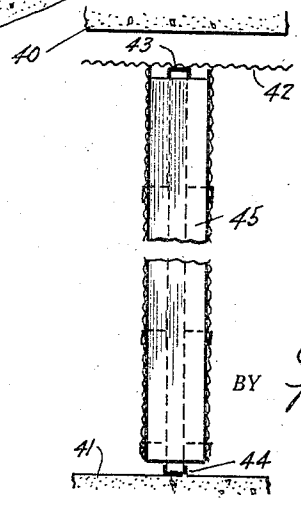


Fig. 3



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Fig. 4 Fig. 5 Fig. 6 Fig. 7

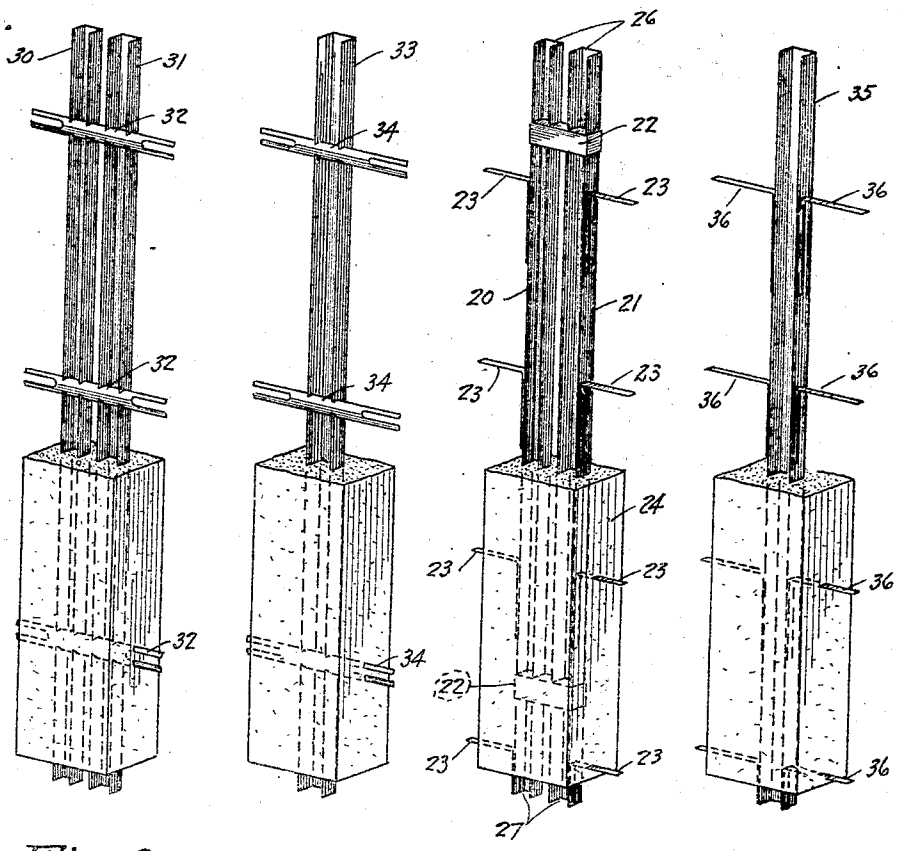
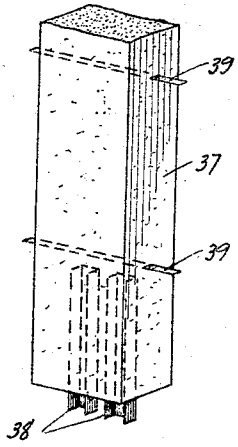


Fig. 8



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Patented Mar. 23, 1926. 1,577,633

UNITED STATES PATENT OFFICE.

CORNELIUS COLLINS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ARTHUR W. NASH, INC., OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

STUDDING.

Application filed November 30, 1923. Serial No. 677,669.

To all whom it may concern:

Be it known that I, CORNELIUS COLLINS, a citizen of the United States, and resident of Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Studding, of which the following is a specification.

This invention relates to a studding for walls, partitions and like building elements. The primary object of this invention is to provide a stud which has strength both when under tension and compression, is light in weight, incombustible, rigid, and economical. It is another object of this invention to provide a studding of the character described which will permit nailing of parts thereto.

In addition to the objects above enumerated, there are other objects which will be apparent from the subjoined specification and drawing, in which:

Fig. 1 is a perspective view of a hollow partition employing my improved studding; Fig. 2 is a transverse section through the partition illustrated in Fig. 1 showing one of the studs in elevation; Fig. 3 is an elevation of a stud employing one channel as the skeleton; Figs. 4 to 7 inclusive show studs with portions of the cementitious material broken away showing different types of foundations; and Fig. 8 is a perspective view of a stud having only the end connections.

Broadly the stud comprises a foundation or skeleton member and lath securing members formed of metal embedded in a cementitious body. Referring more particularly to Figs. 1 and 2, floor slabs are indicated by 10 and 11. Suspended from the slab 10 is a ceiling 12 composed of a metal lath with a plaster finish. Secured on the under side of the ceiling at the plane of the partition is a plate 13. This plate is preferably a metal channel and may be secured to the ceiling in any approved manner.

In registration with the channel 13 and secured to the slab 11 is a plate 14. The studs are indicated generally by 15 in Fig. 1, and consists of cementitious bodies having skeletons formed of metallic plates extending beyond the body at the ends thereof to provide fingers for grasping the plates 13 and 14. Extending from the body are prongs to hold the metal lath in place. Cross braces 16 are disposed between the studs. A wooden stud 17 for a door frame is nailed to one of the studs, an overhead plate being indicated by 18. Disposed on the upper side of plate 18 is a plate 19.

Referring more particularly to the details of the stud, best shown in Fig. 6, the skeleton consists of metal channels 20 and 21 spaced by clips 22. Turned outwardly from the channels are prongs 23. In the present instance, they are shown as cut from the body of the channel and upset therefrom. The skeleton is embedded in a cementitious body 24 formed of plaster or any suitable material, and, if surface reinforcement is desired, then a paper covering may be applied to the body in the manner of plaster board. As shown herein, the stud is a beam or column rectangular in cross section with prongs 23 projecting beyond the body and the channels 20 and 21 extending beyond the end of the body to form fingers. There may be embedded in the stud, bars 25 as particularly shown in Figs. 1 and 2. These bars are such as to be received with the channels of the cross braces 16 shown in Fig. 1. The bars and cross braces may be secured together by rivets, bolts, or like fastening devices. It will be noted that the bars are of such width that they pass freely between the channels 20 and 21. In placing a stud in position, openings are formed through the plastic body in the ceiling, the meshes of the metal lath being opened sufficiently. These openings are formed on the sides of the plate 13 so as to permit the fingers 26 at the top of a stud to pass therethrough as particularly shown in Figs. 1 and 2. The fingers 27 at the lower end of the stud are placed on opposite sides of the plate 14. The braces 16 are then installed, and the wire lath 28 placed against the studs with the prongs 23 extending through the meshes. The prongs are then bent downwardly against the lath so as to firmly hold the latter in position, the whole constituting a unitary structure. The plaster is then placed over the lath and the wall finished in the usual manner. The plate 19 in Fig. 1 upon the top of the door frame serves for the fingers of short studs placed between the ceiling and the top of the door frame.

Heretofore a very satisfactory partition construction has employed metal channels

provided with prongs, such as those forming the skeleton of the present stud. Metal lath has been secured to the stud and the same covered with plaster in the usual manner. The plaster has protruded through the meshes of the lath to the rear side forming a substantial thickness of plaster on the rear side of the metal lath. This has provided material to strengthen the partition. Metal lath is now on the market, which lath has secured thereto on the rear face a backing of paper. Thus, the plaster applied to the face of the lath will intrude between the meshes but will not protrude on the opposite side thereof. With such a construction, the amount of plaster is such as to lend little reinforcement, resulting in the necessity of a more rigid stud. My present stud employs this metal channel as a skeleton and a cementitious body, such as plaster. This provides a rigid, light, fire resistant stud having all the advantages of the metal stud. Futhermore, members can be nailed to the stud, such as base boards, chair rails, and the like, it not being necessary to provide nailing blocks.

The plaster body may be easily broken away to permit the passage of bars or to expose the skeleton for any purpose desired.

Referring particularly to Fig. 4, channels 30 and 31 are secured together by separators 32. These separators are independent elements and are provided at the ends with bifurcations forming pairs of fingers serving as prongs. The skeleton is covered by the cementitious body forming a column or stud similar to the form shown in Fig. 6. Fig. 5 is similar to Fig. 4 in construction, except that a single channel bar 33 is employed for the skeleton, clips 34 being secured thereto. The ends of clips 34 have prong fingers similar to the separators 32 of Fig. 4. The skeleton is covered with a cementitious body. Fig. 7 is a structure similar to Fig. 6, but having a single channel 35 with prongs 36 upset from the body thereof. The skeleton is covered to form a finished stud. Fig. 8 shows a stud having a body 37 of cementitious material, from which projects channels 38 embedded in the ends of the studs. Also embedded in the body and projecting laterally therefrom are prongs 39 for attaching the metal lath in place.

In Fig. 3, floor slabs are indicated by 40 and 41. Suspended from floor slab 40 is a ceiling 42. A channel 43 is placed upon the ceiling in alignment with the plane in which the partition is placed, and in registration therewith on the floor slab 41 is a channel plate 44. This type of construction serves for studs such as are shown in Fig. 5 or 7, such a stud being indicated generally by 45 in Fig. 3. The metal lath is fastened to the stud 45 and brought up to the ceiling and downwardly to the floor.

It is obvious that various modifications may be made in the structure without departing from my invention which is defined in the appended claims.

What I claim is:

1. A stud comprising a metallic channel bar covered by a comparatively soft cementitious body, said bar being provided with bendable attachment prongs supported thereby projecting through said body.

2. A stud comprising a metallic skeleton having a columnar bar extending the length thereof, said skeleton being covered by a comparatively soft cementitious body and bendable metallic attachment prongs secured to said bar so as to be supported thereby and projecting from said body.

3. A stud comprising a metallic skeleton having a metallic bar, said skeleton being covered by a cementitious body and having metallic attachment prongs embedded in and projecting from said body, said skeleton projecting beyond the ends of said body to provide fingers adapted for securing said stud in a building structure.

4. A stud comprising a metallic skeleton provided with laterally projecting attachment prongs, said skeleton being covered by a cementitious body, said prongs and the ends of said skeleton being exposed whereby to provide fingers adapted for securing said stud in a building structure.

In witness that I claim the foregoing I have hereunto subscribed my name this 24th day of November 1923.

CORNELIUS COLLINS.