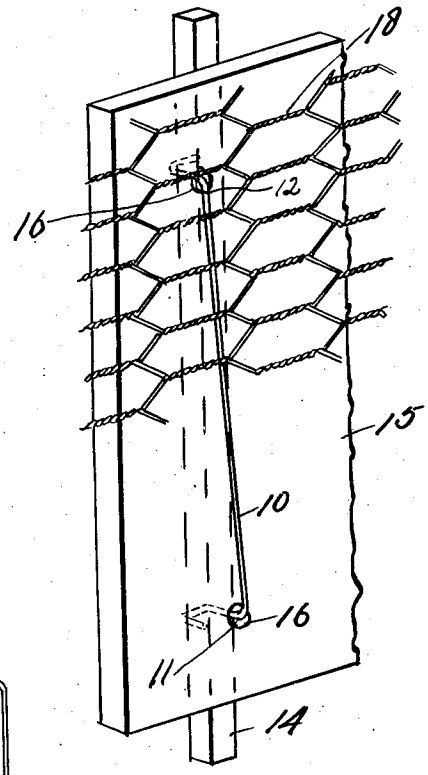
Aug. 30, 1927. 1,640,468

J. S. RAYNOR

PLASTER BOARD FASTENING MEANS

Filed Aug. 24, 1926 2 Sheets-Sheet 1

Fig. 1.



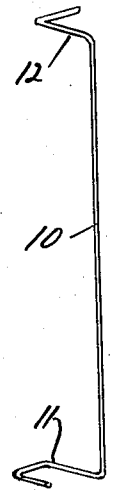


Fig. 2.

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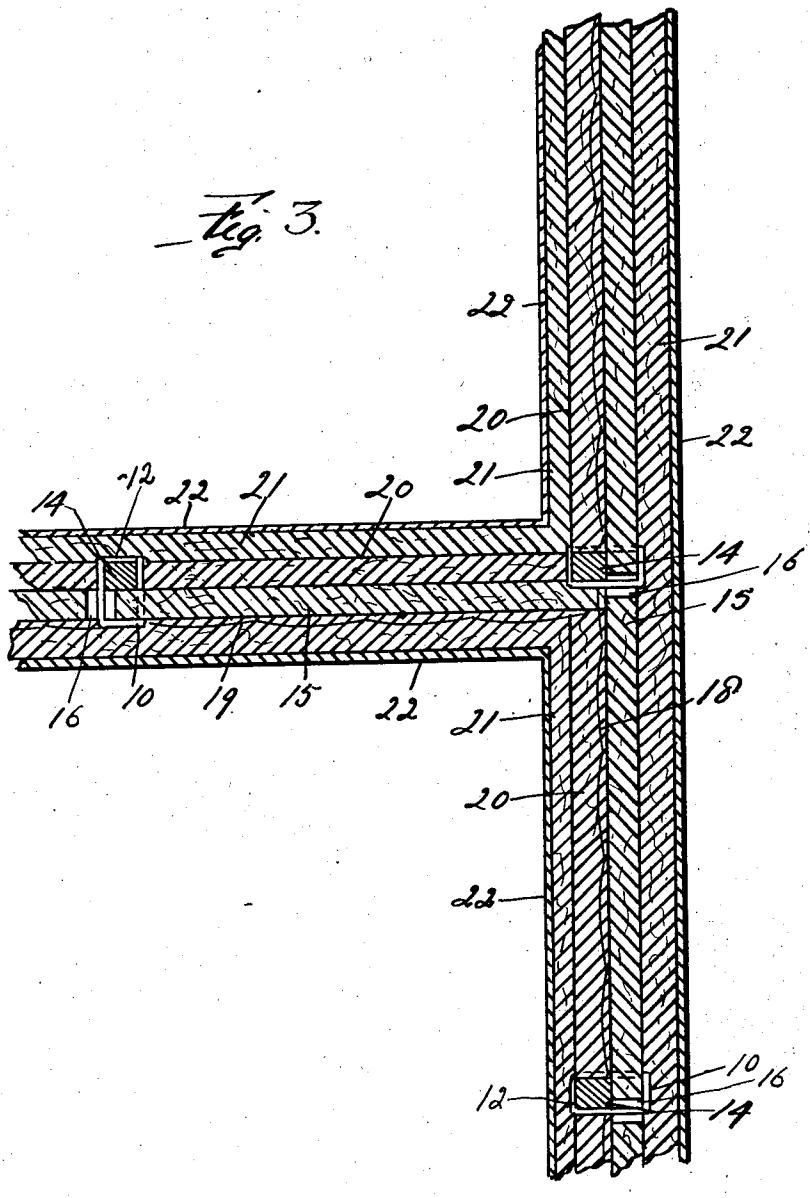
Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN S. RAYNOR, OF PHILADELPHIA, PENNSYLVANIA.

PLASTER-BOARD-FASTENING MEANS.

Original application filed May 12, 1926, Serial No. 108,478. Divided and this application filed August 24, 1926. Serial No. 131,239.

My invention relates to new and useful improvements in a plaster board fastening means, the same being a division from my application bearing Serial Number 108,478, filed May 12, 1926, and has for its primary object to provide an exceedingly simple and effective method of securing plaster board, hereinafter called sheet material, against furrings, studding, or joists, hereinafter called supports, which may be installed without skilled mechanics.

Another object of the invention is to provide a clip to fasten the sheet material to the supports, which can be used in only one way, therefore making it fool proof, and providing a practical safe construction.

A further object of the invention is to provide a building construction wherein the wall furrings can be set any distance from the super work and be made strong and durable, as well as providing the proper space for air, which space may also be used for the installation of insulating materials and fixtures, such as electric wires, gas pipes, conduits and the like.

One of the main advantages of my invention is that the base for the plaster is of the same or similar material, and therefore is less likely to deteriorate than where metal lath is used as the base for a plaster wall.

Another advantage of my invention is the reduced cost of constructing solid walls or sub-division partitions between rooms, because it eliminates one application of plaster, or what is known as the scratch coat. In ordinary wall construction the lathing is first fastened to the supports, and the scratch coat applied thereto, this being true where metal lathing is used. After the scratch coat has dried, the backing-up coat is applied to fill out the space between the lath and the faces of the supports opposite those on which the lath is secured, after which two applications of straightening coats are made, and each of these covered with a finishing coat, so that six coats of plaster are actually applied, and the first coat in particular must be allowed to dry for approximately twenty-four hours before the other coats can be put on.

With my invention there is a considerable saving in time, labor and material, because the plaster board is applied by the use of my improved clips instead of lathing which eliminates the use of the scratch coat, so that only five coats of plaster are applied. The elimination of this one coat of plaster saves material and labor, as well as the time which is required to permit the drying thereof. The reason this time is saved is that the affinity of the plaster coats for the plaster board causes the former to firmly adhere to the latter as soon as applied.

A further advantage of the construction referred to herein is that when the wall is completed, an absolutely fireproof structure is provided, which has few or no voids or air cells, which do often occur in the present day construction of walls.

My invention is also particularly adapted for use in ceiling construction because the clips engage the sheets over a greater area than where nails, tie wires, bolts or screws are used.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains, may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:

Fig. 1 is a fragmentary perspective view of one plaster board illustrating the way of securing it in place and showing a piece of poultry wire thereon.

Fig. 2 is a perspective view of the clip.

Fig. 3 is a horizontal sectional view of the intersection of two walls, thereby providing a corner or division of space, illustrating the manner in which my invention will lock the base materials of the walls when it is necessary to start building from another wall of the same material.

In carrying out my invention as herein embodied, 10 represents the body of the clip which is rather long, and has a substantial U-shaped locking leg 11, at one end, and an L-shaped leg 12 at the other end, said legs being so arranged that their terminals project in opposite directions or to opposite sides of the clip body.

In constructing a wall by my method, the line of the wall is designated, and this line then spaced off at intervals, after which the supports 14, such as studding or furring bars are erected. A sheet of plaster board 15 is then set in place with one edge butting

against the starting point or vertical wall, and holes 16 are made in the plaster board adjacent the support on opposite sides thereof in spaced relation equal to the distance between the clip legs, and this may be done with any desirable tool, as with a small hand reamer. The locking leg 11 of the clip is then entered through one of the holes, and the clip rotated and turned in corkscrew fashion until the locking leg passes behind and engages the support, and near the end of this action, the stay leg will enter the other hole on the opposite side of the support and grip the support on the face opposite that against which the plaster board rests, which will firmly hold the plaster board against the support, and of course, it is to be understood that any number of these clips may be used according to the dimensions of the plaster board and the number of supports associated therewith.

After the first plaster board is secured in place another one is placed in endwise alignment therewith, and this is continued until the desired number of sheets are erected. The uppermost sheets are then erected with their lower edges resting on the upper edges of others in such manner that the succeeding sets of boards will be in staggered relation to the preceding ones, thus breaking all vertical joints.

In suspended ceiling construction where holes are used they are first laid out on the sheets of plaster board according to the specifications of spacing, and are then drilled before the sheets are erected.

When ready the sheets are jacked into place by the help of an old man, which latter supports the load until the clips can be made fast.

In ceiling work particularly, and on vertical work, if desirable, a small amount of plaster, preferably calcined plaster, (plaster of Paris) is mixed and placed in the hole through which the stay leg projects, and as this calcined plaster dries very quickly, the clip will be secured against movement in a short time, or a tie wire 17 may be temporarily placed about the stay leg and the support.

I have found by actual tests, that where sheets of plaster board approximately 4 x 6 feet and 3/8 of an inch or 1/2 inch thick are used with supports 3/8 of an inch or 1/2 of an inch square with this base core and one and one-half inches of plastering, it is more rigid than a wall of two inches of steel studding, metal lath and plastering. This rigidity is due to the stiffness of the base element or plaster board when held in position by the clips described herein.

It is to be understood that in a solid wall construction, the supports are embedded within the wall, whereas in wall furring, the studding is in the rear or behind the plaster board and finished surface. Where double wall furrings are used, the first furring and plaster boards are plastered before the next furring is erected, thus offering a clear space between the two furrings for the circulation of fresh air or heat.

In walls of greater thickness than those referred to above, the excess amount of plastering on the support side is taken care of, or securely bound by means of poultry wire, 18, or other similar material is placed against the supports and tied at each end. When this has been done, the plaster boards are erected in the same manner as before described, and the clips will hold said poultry wire in place, as well as the plaster-boards. This reinforcement of poultry wire will receive the backing up coat of plaster, and will coact with the plaster board, so as to securely hold it and prevent it from becoming loosened which does occur when the weight of the excess plaster is too great for the adhesive qualities thereof.

In stucco and other wall constructions where a binder for the plaster is desired, the poultry wire may be placed on the outside of the plaster boards as shown at 19, Fig. 3, and will be held in place by the clips which hold the plaster boards. In actual practice, the plaster boards are temporarily fastened in place by means of a few clips, and the poultry wire is then disposed over the faces of the plaster boards, and all parts then fastened by the balance of the clips. When this has been done, the few clips which are covered by the poultry wire may be removed or cut out by the use of nippers, and then replaced with new clips, which will pass through the poultry wire. This method can also be carried out by the use of single clips, under which conditions, the stay leg is secured to the poultry wire with light gage tying wire, so as to prevent the possibility of dislodgment of the stay leg.

I desire to call attention to the fact that in hollow wall construction, there are two lines of supports with horizontal spacers at intervals to hold the two walls in spaced relation, and these inside spaces being clear of all foreign materials are adapted for the reception of insulating or whatever other materials may be desired.

In Fig. 3 I have illustrated a backing up plaster coat 20 on one side of the plaster boards or sheets 15, a straightening plaster coat 21 on the other side of the plaster boards and over the backing up coat, and a finishing plaster coat 22 over each of the straightening coats.

Of course I do not wish to be limited to the exact details of construction as herein shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:

1. The herein described combination of a support; a sheet of stiff material lying against said support and having apertures therethrough at each side of the support; a clip including a body to span the space between the two apertures; a U shaped leg at one end of said body; an L shaped leg at the other end of said body, said legs projecting in opposite directions to each other and passing through separate ones of said holes for coaction with the support.

2. A wall construction including supports; plaster boards disposed across said supports; poultry wire on one face of the plaster boards; clips having legs passing through apertures in the plaster boards and interlocking with the supports; a backing up plaster coat on one side of the plaster boards; a straightening plaster coat on the other side of the plaster boards, another straightening plaster coat on said backing up coat; and a finishing plaster coat on each straightening coat.

3. A building construction which includes supports, sheets of stiff material engaging said supports; said sheets having holes formed therein on opposite sides of the supports, and clips, each of which has a body and a pair of legs, said body being disposed across a face of the sheet and the legs thereof passing through a pair of holes spaced a distance equal to the length of the clip body and on opposite sides of a support whereby said legs will coact with said support.

4. A wall construction including supports; plaster boards disposed across said supports; poultry wire on one face of the plaster boards, and clips including bodies disposed across the poultry wire and having legs for engagement with the supports to hold the plaster boards and poultry wire in place.

In testimony whereof, I have hereunto affixed my signature.

JOHN S. RAYNOR.