Dec. 9, 1924. 1,518,336

J. F. MAKOWSKI

COMPOSITE WALL CONSTRUCTION

Filed Aug. 6, 1923

Fig. 1

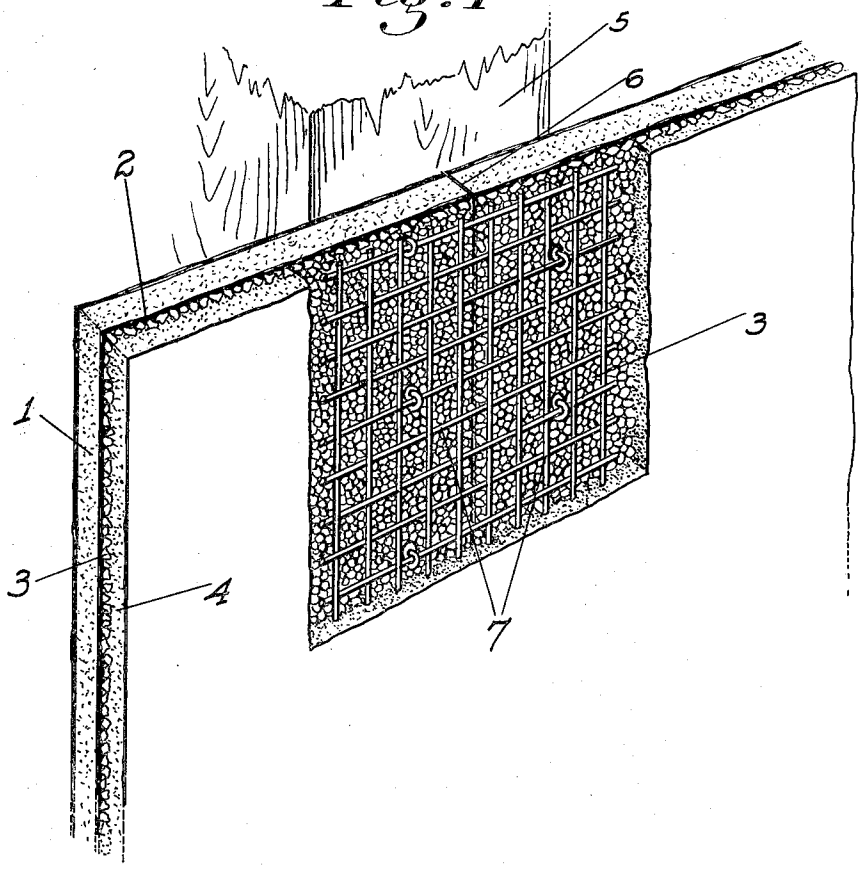
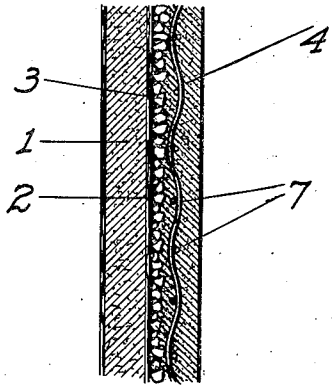


Fig. 2



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UNITED STATES PATENT OFFICE.

JOHN F. MAKOWSKI, OF STOCKTON, CALIFORNIA, ASSIGNOR TO THE CALIFORNIA CEDAR PRODUCTS COMPANY, OF STOCKTON, CALIFORNIA, A CORPORATION.

COMPOSITE WALL CONSTRUCTION.

Application filed August 6, 1923. Serial No. 655,859.

To all whom it may concern:

Be it known that I, JOHN F. MAKOWSKI, a citizen of the United States, residing at Stockton, county of San Joaquin, State of California, have invented certain new and useful Improvements in Composite Wall Construction; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in the building art and particularly to interior and exterior wall construction.

The primary object of the invention is to produce a relatively inexpensive wall to which may be applied a surfacing coat of plastic material, such as plaster or cement, the wall structure being such that the surfacing material will not crack or check when applied thereto. As far as I am aware all plastic wall structures now commonly used are subject to more or less cracking and checking, particularly outside walls having a cement or stucco surfacing. My improved structure practically eliminates this and at the same time is of a most inexpensive type and very easily constructed.

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

Fig. 1 is a perspective view of a fragmentary portion of my improved wall, partly broken out, and in section to show the elements of the structure thereof.

Fig. 2 is an enlarged vertical section through the wall structure.

The base of the wall is made up of sections of plaster board 1, on the surface of which is a coating of water-proof adhesive composition 2 made up preferably of magnesite and chloride of magnesium mixed with a suitable filler such as any of the known diatomaceous earths.

A quantity of mineral fragments 3, of irregular size and shape, such as fine gravel or the like, is embedded in the adhesive coating 2 and forms an irregular surface to present a continuous mechanical key structure to receive the plastic surfacing material 4.

In constructing the wall the lath board made as above is nailed to the studding 5 in such sizes as is found desirable. In doing this of course cracks 6 are formed between adjacent edges of such boards. Unless these are covered in some way before the surfacing plastic is applied to the wall, the latter, when finished, will check or crack in conformity to the cracks between the boards. To overcome this, I nail or otherwise fasten woven fabric strips 7 over all the cracks 6. This fabric is preferably a small wire netting. The protruding mineral fragments 3 prevent the fabric from laying close against the wall but tend rather to hold same out a slight distance so that when the plastic is applied it will, when soft, flow in and around the fabric strips and into the interstices between the mineral fragments and also into the cracks 6. Thus there will be a solid lock and bond across the cracks 6 which prevent checking or cracking at those points. The protruding, irregular surface formed by the mineral fragments 3 is an absolute essential to the success of the fabric cross bond over the cracks. Unless the fabric is clinched firmly to the wall board there would be no greater bond obtained by its insertion in the combination than if it was not used at all, since it will be readily apparent that if the cross lock or bond itself is not locked or bonded to the wall supporting base it can add no support for the plaster at the open cracks.

The mineral fragments 3 being in themselves a natural bond for plaster or cement and a bonding over the cracks 6 being provided for, the wall, when complete, forms a solid composite structure which I have found in practice can be erected inexpensively and yet will form a strong moisture proof wall which will not check, crack or crumble. The magnesite coating 2 between the board 1 and gravel 3 forms an insoluble moisture proof lamination of great adhesive properties.

In certain instances it might be found desirable to spread the fabric 7 over the entire surface of the wall. When this is done it will both serve its function in preventing cracking of the plastic material at the joining of the lath boards and will of course add a certain strength to the wall as a whole.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail 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:

A composite wall construction comprising lath boards secured to studding, a projecting mechanical key or bond structure arranged over the surfaces of the lath boards, a fabric laid against such projected key and over the spaces between the lath boards, and a plastic material spread over the whole, such plastic material being flowed through and around the fabric and clinched into the projected key to securely lock the fabric to the lath board.

In testimony whereof I affix my signature.

JOHN F. MAKOWSKI.