Dec. 13, 1927.

1,652,634

H. G. OLIVER

BUILDING UNIT CONSTRUCTION

Filed Oct. 27, 1925

Fig. 1.

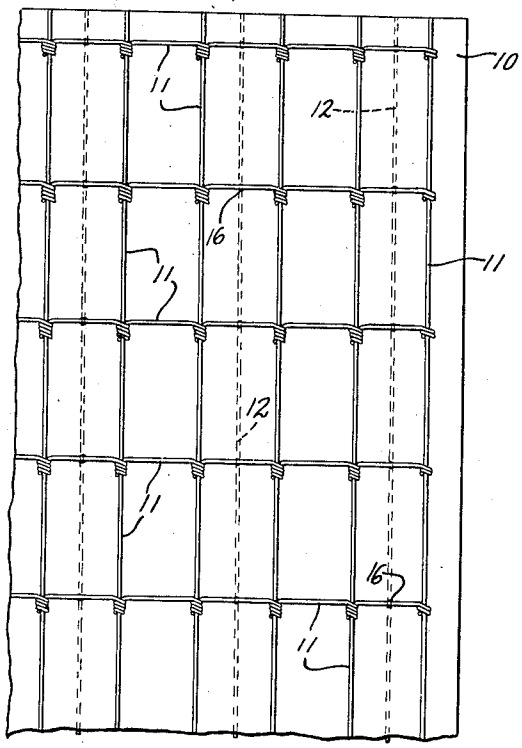



Fig. 2.

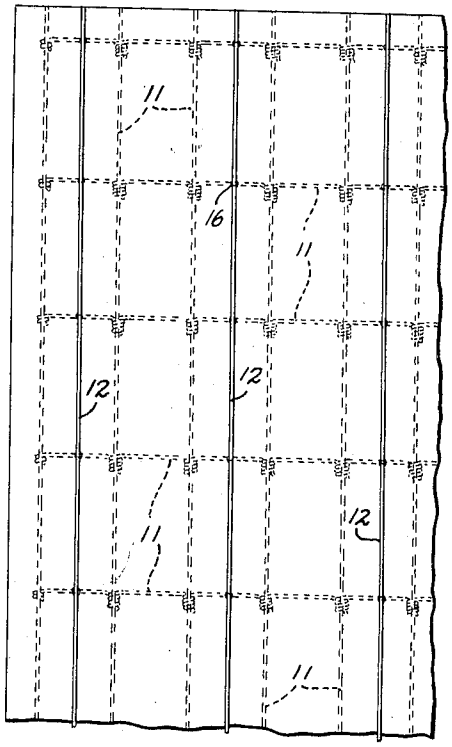



Fig. 3.

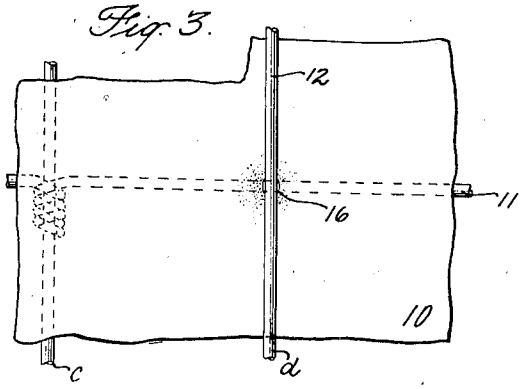



Fig. 4.

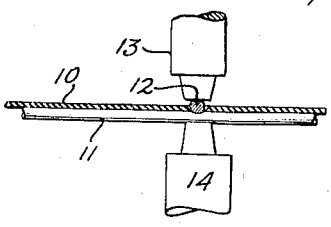
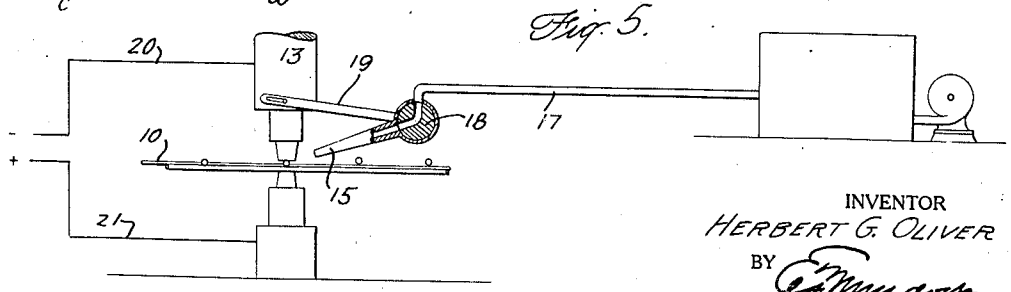



Fig. 5.




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# UNITED STATES PATENT OFFICE.

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## BUILDING-UNIT CONSTRUCTION.

Application filed October 27, 1925. Serial No. 65,115.

My invention relates to construction of building units employed in wall construction and plaster work. Among the principal objects which the present invention has in view are:—

To provide an improved building material in the form of a plaster ground sheet; to provide in a plaster ground a plurality of metal reinforcing bonds and a separating member held therebetween; to provide a sheet of material reinforced on both sides by metal to form a bond for plaster spread on said sheet; to provide an improved method of constructing a sheet of this character described; to provide a novel and improved reinforced plaster ground sheet; to provide a plaster ground sheet reinforced by metal on its opposite sides and strengthened by rigidly connecting the reinforcing members through the material of the sheet; to provide a reinforced plaster ground sheeting in which the reinforcing elements are rigidly connected through the material disposed therebetween; to provide an improved method of constructing plaster ground sheets and to provide a plaster ground sheet construction wherein the metal reinforcing at opposite sides of an interposed sheet is autogenously connected through the material of the sheet.

### *Drawings.*

Figure 1 is a front elevation of a plaster ground sheet constructed in accordance with the principles of the invention;

Figure 2 is a rear elevation thereof;

Figure 3 is a fragmentary rear elevation on an enlarged scale;

Figure 4 is a fragmentary section through a sheet of the material in process of construction illustrating electrodes applied thereto;

Figure 5 is an elevation of an apparatus for carrying out the method of the present invention.

### *Description.*

Plaster ground sheets constructed in accordance with the present invention are formed of sheets of heavy building paper or other suitable material, 10, on one face of which is disposed an open wire net work 11 and on the opposite face of which is disposed a plurality of longitudinal wire rods 12.

The wire net work 11 forms the front face of the plaster ground sheet and is of a relatively close mesh to provide an efficient bond for plaster or mortar spread thereover. At the back of the sheet the longitudinal wire rods 12 are extended at spaced intervals intermediate the longitudinally disposed wires of the net work 11 whereby to retain the paper strip 10 in position and to provide an efficient reinforcing element for the paper.

While in this embodiment of the invention a building unit is shown wherein only one face thereof is adapted to receive plaster applied thereover, it is intended that the back may also be covered with plaster which will be retained thereon by the bond of the reinforcing wires 12. It is intended that any suitable arrangement and disposition of wires, rods, or wire mesh may be made on both or either side of the building paper as desired and as best suited to meet the conditions of service.

Heretofore in the construction of plaster ground sheeting it has been customary to unite the plaster receiving net work with the reinforcing elements by means of clips and other suitable fastening devices passed through the paper forming the interposed sheet of material. In the plaster ground sheets of the present invention the elements of the metal framework at opposite sides of the sheet of building paper 10 are rigidly connected directly through the paper at their points of intersection by electric welding. In this construction the entire sheet structure has a rigidity and strength which is far more efficient than any similar material produced by hitherto known methods.

The plaster ground sheets of the present invention are constructed by the following method. A continuous sheet of paper 10 is interposed between the wire elements 11 and 12 and at each of the points of intersection of the wires electric welding electrodes 13 and 14 are applied from opposite sides in contact with the wires as illustrated in Figures 4 and 5. The welding current is then sent through the electrodes and due to the intense heat generated, the paper will be burned away between the wires 11 and 12 leaving a free weld between the parts. At the moment of welding a blast of air from a jet nozzle 15 is directed upon the burning paper promptly extinguishing the blaze and leaving a small circular burnt-out portion 16 surrounding the connected wires at each point of welding. As these burnt-out places are extremely small, the paper sheet 10 pre-

sents a practically continuous surface throughout the unit. Air directed through the nozzle 15 is supplied from a pressure tank through the conduit 17 to the valve 18, which valve may be controlled by an operating lever 19 having service connection with an electrode 13 whereby upon movement of the electrode the valve is opened to permit a blast of air from the nozzle. 20 and 21 are numerals indicating the leads of an electrical circuit in which the electrodes are included.

I claim:—

1. The method of forming a building unit construction which comprises disposing metallic elements on opposite sides of a continuous imperforate sheet of fibrous material and welding said metallic elements directly together through said interposed fibrous material by a welding heat sufficient to burn away the fibrous material at the points of welding and to permit the formation of free welds for the metallic elements.

2. The method of forming a building unit construction which comprises disposing metallic elements on opposite sides of a continuous imperforate sheet of fibrous material, welding said metallic elements directly together through said fibrous material whereby the welding heat serves to burn away the fibrous material at the points of welding, and subjecting the points of welding to the action of a cooling medium simultaneously with the welding whereby any flame is extinguished.

HERBERT G. OLIVER.