H. G. E. AGIER.

PARTITION OR WALL CONSTRUCTION.

APPLICATION FILED OCT. 17, 1918.

1,325,824.

Patented Dec. 23, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

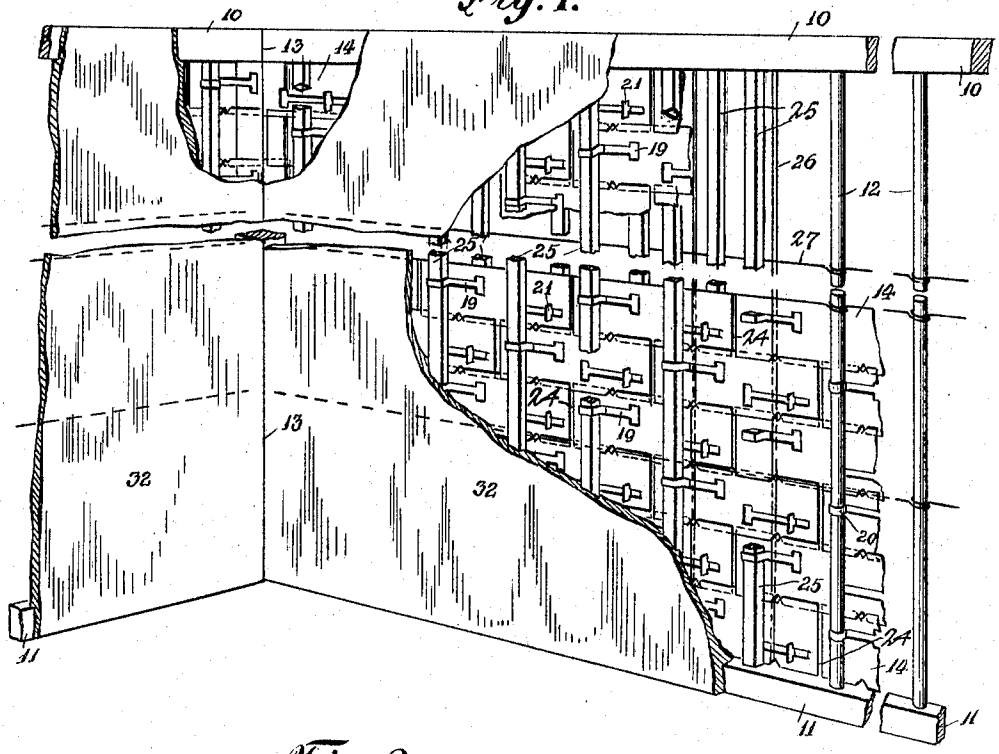
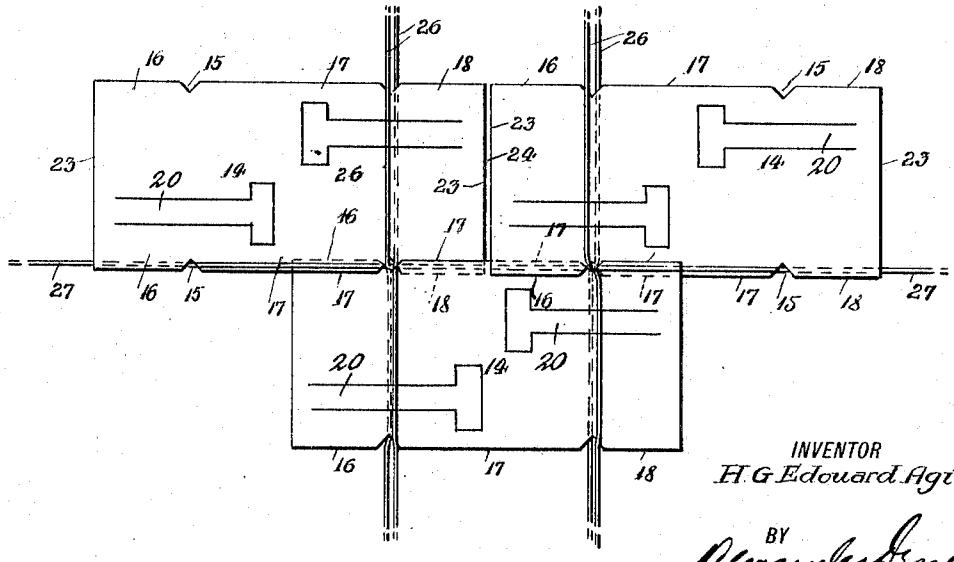


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

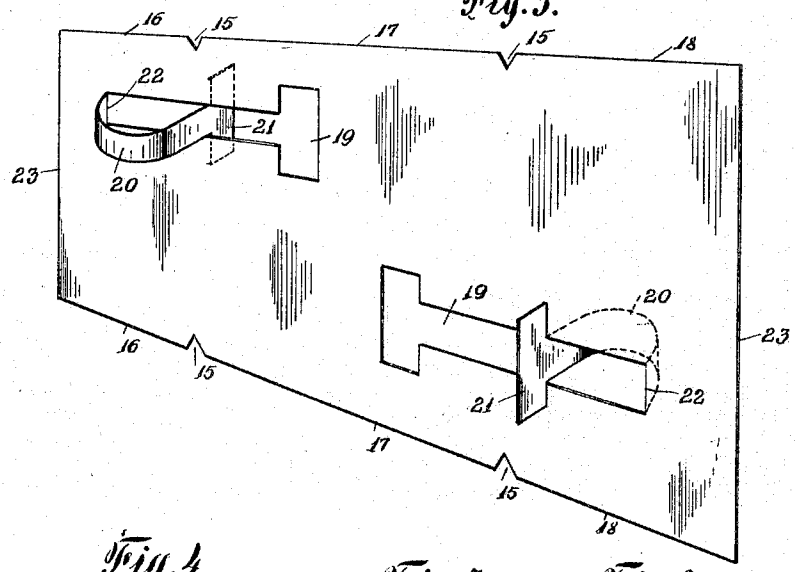


Fig. 4.

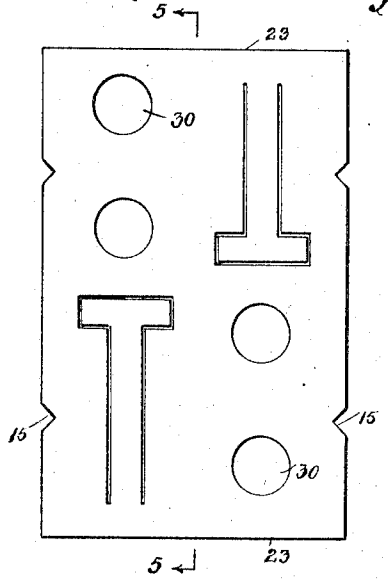


Fig. 5.

Fig. 6.

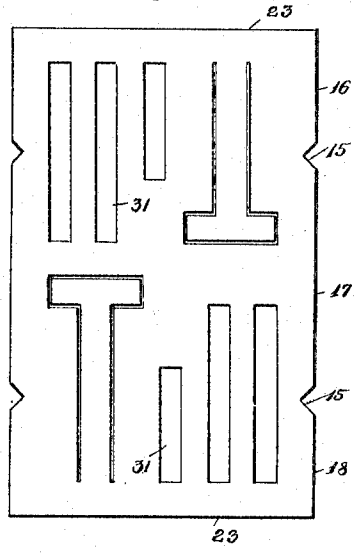


Fig. 7.

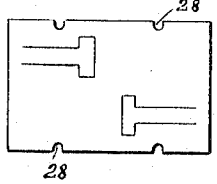
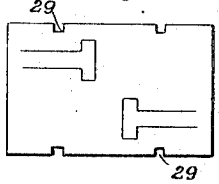


Fig. 8.



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PARTITION OR WALL CONSTRUCTION.

1,325,824. Specification of Letters Patent. Patented Dec. 23, 1919.

Application filed October 17, 1918. Serial No. 258,543.

To all whom it may concern:

Be it known that I, H. G. EDOUARD AGIER, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented new and useful Improvements in Partition or Wall Construction, of which the following is a specification.

This invention relates to improvements in the construction of partitions and walls, the invention being more particularly related to partitions and walls of the type wherein the structural materials are embedded in concrete, cement, plaster or the like.

A principal object of the invention is to provide a partition or wall built of standardized plates secured and bound in position in such manner that they form a suitable structural basis for the application, according to the circumstances and locality, of concrete, cement, plaster or like materials, adapted to produce a substantial structure.

Another object of the invention is the provision as a structural retaining feature for the partition or wall of similar interchangeable plates having marginal edges adapted to be over-lapped and having integral tongues from which retaining loops may be formed, the said plates being made of thin sheet metal and being adapted to be readily bent either transversely or longitudinally as required in order efficiently to produce corners or offset regions of the forms desired.

With the foregoing objects and others in view, the invention resides in the details of construction and in the arrangement and combination of parts hereinafter described, defined in the claims, and illustrated in the accompanying drawings forming a material part of this specification, and in which:—

Figure 1 is a view in perspective of a partition, fragmentally shown, made in accordance with my invention.

Fig. 2 is a detail view, showing in particular how the plates, through the alternate overlapping of their sectioned marginal edges, are interdependently engaged, and also how they are bound in position by retaining wires.

Fig. 3 is an enlarged view in perspective of one of the metallic plates.

Fig. 4 is a plan view of a metallic plate, formed with circular openings to provide keys for anchoring the concrete, cement or like material.

Fig. 5 is a section taken on the line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 4, but showing the plate provided with longitudinal keys.

Figs. 7 and 8 are plan views showing the plates provided with specifically different but equivalent forms of notching.

To illustrate the application of my invention, I show in the accompanying drawings, the parallel top and bottom rails 10 and 11, respectively, which are securely connected at appropriate intervals by the upright rods or posts 12, the parallel rails 10 and 11 at the corner region 13 being here shown as connected at right-angles in order to illustrate how my metallic plates may be bent upon themselves to produce a corner.

14 denotes my novel plates, which are made of thin sheet metal, preferably of tin, the same being produced in rectangular form and in standardized sizes. Each plate on each of its longitudinal marginal edges is provided with similar correspondingly spaced V-shaped notches 15 to provide sections as 16, 17 and 18, adapted to be bent outwardly to some extent on either side of the plate as desired. Each plate is also produced with two T-shaped slots 19, the material from which the slots are cut constituting headed tongues 20, which are capable of being bowed or arched outwardly on either side of the plate as desired; the bowing operation being readily accomplished by sliding the head 21 of the tongue along the longitudinal edges defining the slot and on the opposite side of the plate to that on which it is desired to bow the tongue. The tongues so formed, considered in connection with the plate itself, constitute loops within which may be received or through which may be passed means for securely maintaining the plate in position; and it will be observed that these loops may be varied in cross-section to receive different types of retaining means, accordingly as the head 21 is moved toward or away from the region 22, denoting the point at which the tongue merges into the plate. It will

further be observed that the tongues are produced in regions near the diametrically opposite corners of the plate, and that the same are movable longitudinally thereof.

As shown in Fig. 1, the plates 14 are arranged in the framework after the manner in which bricks are built into a wall with the joint or confronting edges of two plates in one course situated at the median portion of the plate in the adjacent course both immediately above and below. The notches 15, corresponding in position on each plate, come together so that the sectional marginal edges of one plate may overlap those of the adjacent plates on alternately opposite sides. Thus, for instance, as illustrated in Fig. 2, the sectional marginal edge 16 of the lower plate may overlap behind the sectional marginal edge 17 of the upper left-hand plate, while the sectional marginal edge 17 of said first plate overlaps first in front of the adjacent edge 18 of said second plate and then behind the adjacent edge 16 of a third plate. So through the alternately opposite overlapping of the sectional marginal edges, each plate is engaged with two adjacent plates, both in the course above and in the course below.

The plates 14 are thus interdependently engaged with their ends 23 slightly spaced from each other to provide longitudinal openings 24 (Figs. 1 and 2) which serve as keys for the substantially plastic material to be applied, and whereby to assist in securely anchoring the same. When the plates 14 are assembled, it will be seen from an inspection of Fig. 1 that the loops formed by the tongues are presented in vertically alined rows preferably alternating with one row on one side of the structure and the next row on the opposite side thereof. Through each vertically alined row of loops is passed a retaining strip 25, the opposite ends of which are secured rigidly in any suitable manner in the top and bottom strips 10 and 11, by which means the interengaging plates are held securely in position.

While in Fig. 1, I have shown the retaining strips 25 alternating on opposite sides of the structure, it will be obvious that the same may be arranged in a variety of ways, since the tongues may be bent to form loops upon either side of each plate. Thus, all the loops may be made on the inner side of the structure so that all the strips may be installed on the inner side of the wall; or they may all be made on the outer side of the wall so that all the strips may be introduced on that side; or again, the retaining strips may alternate on the outside and inside of the structure by sections. These returning strips may be made of wood or of metal, in any desirable form in cross-section.

Where the wall is to be constructed with a corner, as at 13, the plates 14 are bent transversely upon themselves at an angle, the mounting of the same being accomplished as before. In the production of curved corners, the plates may be bent upon themselves as may be necessary to produce the corner desired. Also, the plates may be angled or bent upon themselves longitudinally in order to provide for any angles, curves or offset regions that may occur in the height of the wall.

As a further means of securing and reinforcing the plates in position, I may provide between the top and bottom rails 10 and 11, the spaced pairs of wires 26, and also between the uprights as 12, the spaced horizontally extending wires 27. When the plates 14 are assembled, the corresponding V-shaped notches 15 appear in vertically and horizontally alined rows. Each pair of wires 27 are secured in position in alinement with a row of these notches so that the members thereof may pass upon opposite sides of each plate and then be crossed over each other at the confluence of the notches, as best illustrated in Fig. 2. In a similar manner, each horizontal wire 27 is located so as to cross each pair of wires in the confluent notches, passing along each plate first on one side and then on the opposite side thereof.

Instead of making the notches V-shaped, they may be formed with curved notches 28 as shown in Fig. 7, or else with square notches 29 as shown in Fig. 8. The plate 14 may also be made with either round apertures as 30, or with longitudinal slots 31 as illustrated in Figs. 4 and 6, respectively, in order to provide suitable keys for the material to be applied.

As shown in Fig. 1, the whole structure is built between the top and bottom rails 10 and 11, or equivalent supports, in such manner that it may be completely buried or embedded in plaster or concrete, herein represented as 32. The openings provided in the plates and between the ends thereof, the retaining strips, the wires and the projecting tongues, all provide keys by which the material to be applied may be anchored to the structure in an obvious manner.

In the accompanying drawings, I have illustrated how my improved structure may be employed in producing a partition, the horizontal rails 10 and 11 and the uprights 12 being employed as frame parts. A similar structure, without any substantial changes therein, may be employed to construct the exterior walls of buildings, in which case the supporting frame parts as 10, 11 and 12, will be replaced by the convenient beams, girders and uprights comprising the frame work of the building.

It will be understood that, while I have thus shown the preferred form of my invention, I do not want to be limited to the pre-

cise details disclosed, but may resort to such alterations and modifications as come within the scope of the claims hereunto appended.

Having thus described my invention, what I claim is:—

1. A structure for a partition or wall of the kind forming a foundation for plaster, concrete or the like, comprehending elements arranged to constitute a supporting frame, metallic plates therein arranged in brick like courses and interdependently engaged one with another, said plates being formed with corresponding struck out tongues, and means with which said tongues are connected extending between the frame elements for securely maintaining the plates in their proper positions.

2. A foundation structure for a partition or wall made of plaster, concrete or other material adapted to be applied in a substantially plastic state, comprehending elements arranged to constitute a supporting frame, tongued metallic plates arranged in courses so that the plates of every course cover the joints or confronting edges of those in the course adjacent thereto, said plates having sectioned marginal edges which are interengaged so as to establish interdependent relation, and retaining strips with which said tongues are engaged extending between the supporting elements to maintain the plates in their relative positions.

3. A foundation structure for partitions or walls made of plaster, concrete, or other material adapted to be applied in a substantially plastic state, comprehending supporting elements, wires stretched between the supporting elements, bendable metallic plates arranged in brick-like courses so that the plates of every course cover the joints or confronting edges of those in the course adjacent thereto, said plates having their marginal edges correspondingly notched to provide sections which are overlapped alternately on opposite sides and also having struck-out tongues, said wires passing through the openings formed by the confluent notches and extending first across one side of one plate and then across the opposite side of the adjacent plate, and rigid retaining strips engaging said tongues and connected with the supporting elements, whereby to secure the plates in their proper relative positions.

4. A rectangular plate for use in constructing partitions or walls and made of thin sheet metal in which is cut a T-shaped slot, the material which is cut out constituting a headed integral tongue capable of being slidably bowed or arched outwardly on either side of the plate to produce a loop adjustable to variable forms in cross section.

5. In combination with supporting frame elements, thin metallic plates arranged in courses and having their marginal edges correspondingly notched to enable them to be overlapped first in one direction and then in another to render them interdependent, said plates being formed with adjustable struck-out tongues and means engaging the tongues and connected with the supporting elements for maintaining the plates securely in their relative positions.

6. In a foundation structure for partitions or walls, the combination of thin metallic plates arranged in brick-like courses and having their opposite marginal edges sectioned and overlapping in alternate arrangement to establish the plates dependently one upon another, each plate having cut therein a T-shaped slot, the material from which comprises a headed flexible integral tongue adapted to be bowed or arched outwardly in either side to form an adjustable loop, and means for connecting the loops so formed.

7. The combination, in a foundation structure for a partition or wall, with a supporting frame and wire elements stretched thereacross, of thin metallic plates arranged in brick like courses and having their marginal edges correspondingly notched providing sections which are overlapped alternately on opposite sides, said wires crossing in the openings formed by the confluent notches and extending across opposite sides of adjacent plates, each of said plates being holed through to provide keys for the adhesion of plastic material to be applied.

In testimony whereof I have signed my name to this specification.

H. G. EDOUARD AGIER.