

No. 668,366.

Patented Feb. 19, 1901.

W. N. WIGHT.  
FIREPROOF PARTITION.

(Application filed Apr. 14, 1900.)

(No Model.)

FIG. 1.

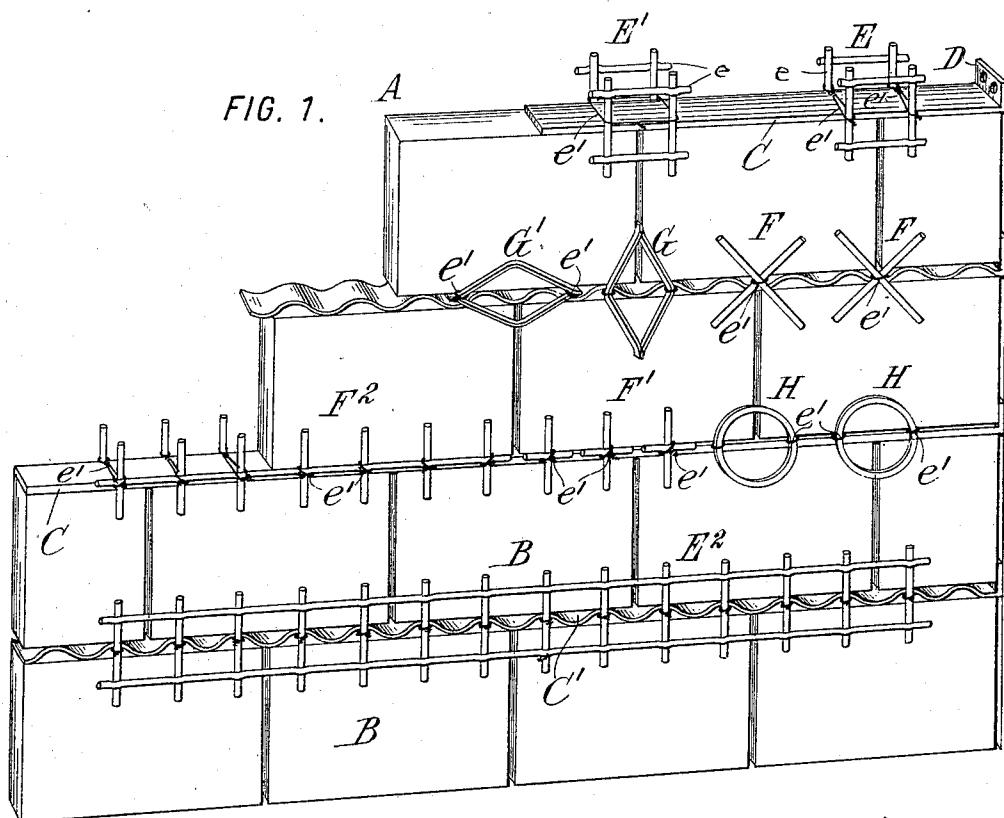


FIG. 2.

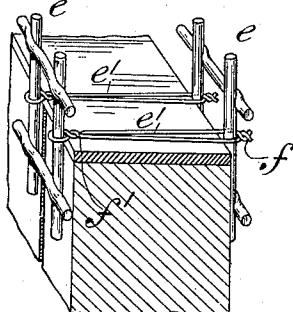


FIG. 3.



FIG. 4.

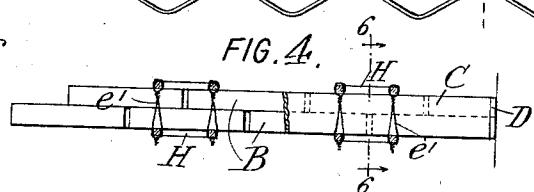
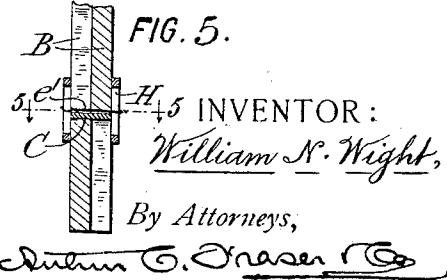


FIG. 5.



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# UNITED STATES PATENT OFFICE.

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## FIREPROOF PARTITION.

SPECIFICATION forming part of Letters Patent No. 668,366, dated February 19, 1901.

Application filed April 14, 1900. Serial No. 12,840. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM N. WIGHT, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Fireproof Partitions, of which the following is a specification.

This invention relates to partitions, and is particularly applicable to what are known as "dry-set" partitions, or those laid up without cement.

In the common form of dry-set partitions it is customary, in lieu of the usual mortar connection, to interpose a plate between each two adjacent courses to form a longitudinal bond and to bend up lips, tongues, or flanges from such plate, which engage the opposite faces of the blocks or grooves in the blocks to form a transverse bond. My invention provides an improved dry-set partition in which the individual blocks may be drawn into alignment, whereby the partition may be accurately trued before the plaster coating is applied. The means I employ for accomplishing this result comprises a clamp consisting of two oppositely-arranged braces which engage the faces of adjacent blocks on opposite sides and which are adapted to be drawn toward each other by a suitable connector, preferably a wire tie. In its preferred form each brace comprises a light flexible metal frame, which is best made of two or more lengths of wire or rod of suitable thickness and suitably connected or joined together. I prefer, as heretofore, to employ a longitudinal bond or metal plate, but dispense with the flanges formerly used, so that the blocks forming the partition may be drawn into alignment with such bond and the partition thereby trued. I utilize one or more of such plates to increase the height of the partition by forming such plates with corrugations and interposing them between the courses, either alternately with flat plates or at such intervals as will bring the partition to the required height.

In the drawings, in which I have illustrated several embodiments of my invention, Figure 1 is a perspective view of a partition in course of construction. Fig. 2 is a detail perspective view showing the preferred form of clamp.

Fig. 3 is an elevation of a modified construction of brace. Fig. 4 is a section on the line 5 5 in Fig. 5, and Fig. 5 a section on the line 6 6 in Fig. 4 of a modified construction of partition.

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In the drawings let A indicate the wall or partition, which is chiefly formed, as usual, by series of superimposed blocks B, arranged in courses in such manner that each course breaks joints with the two adjacent to it, according to the well-known method of construction. Between each two courses is interposed a plate C, which serves as a longitudinal bond and which is bent at its ends to form a flange D, by means of which the plate 65 is nailed or otherwise secured to the end walls or partitions. The plates C are preferably of the same width as the thickness of the blocks B and serve when connected to the blocks B by clamps E to hold each course 70 in proper position. At the top in Fig. 1 and in detail in Fig. 2 I have shown the form of clamp E which I prefer to employ. This preferably comprises two braces e, which are connected together by a connector or tie e'. 75 (Best shown in Fig. 2.) In the preferred construction each brace e comprises a light flexible open frame, of metal, which may be made by welding four short lengths of wire of suitable thickness, so that the resultant frame is 80 approximately rectangular in form. Each brace should be of sufficient size to engage the faces of three adjoining blocks—that is, each brace will engage a block of one course at the middle and two adjacent blocks of the 85 next course at their ends. By the flexibility of the brace its firm contact with the three adjacent blocks is insured, notwithstanding variation in thickness of the blocks. The form of brace shown in Fig. 2 is exceedingly 90 efficient, while light and durable. The connector or tie e' may be of any suitable form, so long as it is adapted to be adjusted to draw the braces e toward each other. As shown in Fig. 2, this tie comprises a single piece of 95 wire bent at its middle and passed around one of the members of the brace e and extending across the plate C to the opposite brace e, to which it is connected by twisting the ends of the wire, as shown at f. It is 100

desirable that each tie should be twisted at  $f'$  in order that it may frictionally engage the brace to hold it in its proper position before the partition is trued. In practice the 5 clamps E are furnished to the builder with their ties  $e'$  so adjusted that the blocks B may easily pass between the braces, and they are preferably placed at each joint in the partition when the successive courses are laid.

10 In constructing a wall or partition according to my invention the first course may be laid as shown and the plate C laid along the upper edges of the blocks and fastened to the end walls by its flanges D, whereupon the 15 clamps E may be placed at each joint and the second course laid directly over the ties  $e'$ . Thus course after course may be laid up. Thus far the blocks are but loosely connected and liable to displacement. The braces  $e$  of 20 each of the clamps E are now drawn toward each other by twisting the ends  $f$  of the ties  $e'$ , so that the latter are put under tensile strain and draw the edges of the adjacent blocks, together with the plates C, into alignment. When each clamp has been so 25 adjusted, the individual blocks are not only aligned, but each block is bound firmly to the four adjacent blocks and to the longitudinal plates C above and below it. By this means 30 an exceedingly strong and durable partition is made in which the partition without the aid of cement constitutes a practically integral structure. Another practical advantage is that the partition may be rapidly built up 35 without regard to precise alignment of the blocks and quickly trued with ordinary pliers. My invention secures the additional advantage that the braces  $e$  when in place upon the partition present portions which extend 40 outwardly of the face of the blocks, so that a space is formed behind the braces which forms an excellent bond for holding the plaster, thus securing all the advantages of metallic lath.

45 In the form of clamp shown in Fig. 2 two ties  $e'$  are preferably provided, each connecting the two opposite vertical members of the brace  $e$ , as shown.

It will be noted that in the plates C, I dispense with the flanges or lips heretofore used, as these would serve no useful purpose, but, on the contrary, might interfere with the truing of the wall.

While I prefer to use the clamp E constructed as shown in Fig. 2, yet this feature of my invention is susceptible of many modifications.

At E' in Fig. 1 I have shown a single tie  $e'$  passing around the vertical members of the braces  $e$ , with its ends twisted together at one side of the partition.

The braces  $e$  need not necessarily be of the rectangular construction shown in Fig. 2, but may consist of two members crossed at their 65 middles, as shown at F in Fig. 1. In this

construction but one tie  $e'$  will be used to connect the two opposite braces. Such a clamp may be arranged as at F', although better results may be obtained by arranging it as shown at F.

An efficient and durable clamp may be constructed of expanded metal by dividing a strip of the latter at the points indicated by dotted lines in Fig. 3; thus forming a light open framework, of metal, which may be conveniently utilized as a brace. A brace thus formed may extend vertically or longitudinally, as shown at G or G', respectively, in Fig. 1. In either case two ties  $e'$  are employed, as shown.

At H in Fig. 1 I have shown the braces as consisting of metal rings, which may be stamped from sheet metal or otherwise constructed in any well-known manner.

While I prefer that a separate clamp should be employed for each joint of the partition, yet good results may be obtained by employing a single continuous clamp extending the entire length of a course. Such a clamp may otherwise conform to the construction shown at E, which is preferred, or those shown in the modified forms. Thus at E<sup>2</sup>, Fig. 1, I have shown a construction which corresponds to the preferred form and at F<sup>2</sup> a construction which corresponds to the form shown at F'. The form of clamp corresponding to that shown at G' may be conveniently constructed by connecting two strips of expanded metal (such as shown in Fig. 3) by suitable connectors or ties. With any of these last-mentioned modified forms the braces may be connected together at such intervals as may be desirable and when in place are drawn up in the same manner as before described.

It sometimes occurs that the height of the ceiling is such that with a given size of block a space too small to accommodate an additional course would be left. My invention provides a means for avoiding the necessity in such cases of using a block of reduced size for the last course. This means comprises a plate C', which, as shown, is corrugated throughout its entire length and when in position between two courses is adapted to increase the distance between their adjacent faces. By using alternately the plates C and C', or as many of the latter as may be found necessary, the height of the wall may be adjusted so as to correspond with the height of the ceiling. When such a plate is used, the ties  $e'$  may conveniently be passed between the corrugations of the plate.

It is sometimes desirable, particularly with thin partitions, to use blocks of half the thickness of the partition. In this case each course will comprise two rows laid side by side. My invention is well adapted to such a construction, which is illustrated in Figs. 4 and 5. I have shown the form of clamp shown at H in Fig. 1. The plates C or C' are preferably

as wide as the thickness of the partition, as before.

I claim as my invention the following-defined novel features, substantially as hereinbefore specified, namely:

1. A clamp for partitions comprising two braces each consisting of an open frame, and a tie connecting said braces.

2. A clamp for partitions comprising two braces, each consisting of a flexible open frame and a tie connecting said braces.

3. A clamp for partitions comprising two braces, each consisting of an open frame of metal, a tie connecting said braces, and means for adjusting the length of said tie.

4. A clamp for partitions comprising two braces, each consisting of a flexible frame of metal, and a tie connecting said braces adapted to be adjusted to different tensions.

5. A clamp for partitions comprising two braces, each consisting of an open frame of metal, and a wire tie connecting said braces.

6. A clamp for partitions comprising two braces, each consisting of an open frame of metal, and a wire tie connecting said braces comprising a plurality of strands engaging both said braces, and adapted to be twisted at one end to vary its tensile strain.

7. A clamp for partitions comprising two braces, each consisting of a broad member adapted to engage the faces of two blocks of one course and a block of an adjacent course, and having a part for engaging a wire tie, and a wire tie engaging such parts.

8. A clamp for partitions comprising two braces, each consisting of an open frame, and a tie for connecting said braces, said tie connected to one of said braces between the upper and lower parts of said brace, so that the latter may be held in position during application of said clamp.

9. A clamp for partitions comprising two braces, each consisting of an open frame, and a wire tie for connecting said braces, said tie connected to one of said braces between its upper and lower parts, so that said brace may be held in position during application of said clamp.

10. A clamp for partitions comprising two braces, each consisting of an open frame, and a wire tie connecting said braces, said tie twisted about one of said braces and adapted to be twisted about the other of said braces to vary its tensile strain.

11. A clamp for partitions comprising two connected braces, each consisting of a broad member adapted for engaging two adjacent blocks, said braces so formed as to leave a space behind them when adjusted in position so as to form a bond for the plaster.

12. A clamp for partitions comprising two connected braces each consisting of an open frame the individual parts of which extend in different planes, whereby when the clamp is in position spaces are left between the latter and the partition.

13. A clamp for partitions comprising two braces each consisting of a number of lengths of wire connected to form a frame, and a tie connecting said braces.

14. A clamp for partitions comprising two braces each consisting of a number of lengths of wire connected to form a frame, and ties connecting said braces, each comprising two strands of wire engaging one of said braces, and adapted to be twisted at one end about the other of said braces.

15. A partition comprising a series of blocks, having braces upon opposite sides thereof, each comprising an open frame, and a connection between oppositely-arranged braces.

16. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising a flexible open frame of metal, and a connection between oppositely-arranged braces.

17. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising an open frame of metal and a wire tie connecting two opposite braces.

18. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising a broad member engaging two blocks of one course and a block of an adjacent course, and having a portion about which a wire tie may be passed, and a wire tie engaging such portions of two opposite braces.

19. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising an open frame engaging two blocks of one course and a block of an adjacent course, and a connection between two oppositely-arranged braces.

20. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising a wire frame engaging two blocks of one course and a block of an adjacent course, and a connection between two oppositely-arranged braces.

21. A partition comprising a series of blocks laid in courses, longitudinal plates interposed between the adjacent courses, and oppositely-arranged braces adapted to be drawn toward each other for bringing said blocks and plates into alinement.

22. A partition comprising a series of blocks having braces upon opposite sides thereof, each engaging two blocks of one course and a block of an adjacent course, a wire tie between each two oppositely-arranged braces, longitudinal plates interposed between the adjacent courses, and means for adjusting such ties to draw said blocks and plates into alinement.

23. A partition comprising a series of blocks having braces upon opposite sides thereof, each comprising a broad member adapted to engage two blocks of one course and a block of an adjacent course, and connecting devices between opposite braces, whereby the blocks are clamped together, said blocks and braces

so formed as to leave spaces between them for the entrance of plaster.

24. A partition comprising a series of courses of blocks having interposed between them 5 corrugated and flat plates so proportioned in number as to bring the partition to the required height without necessitating the employment of a course of reduced size.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM N. WIGHT.

Witnesses:

ARTHUR C. FRASER,  
GEORGE H. FRASER.