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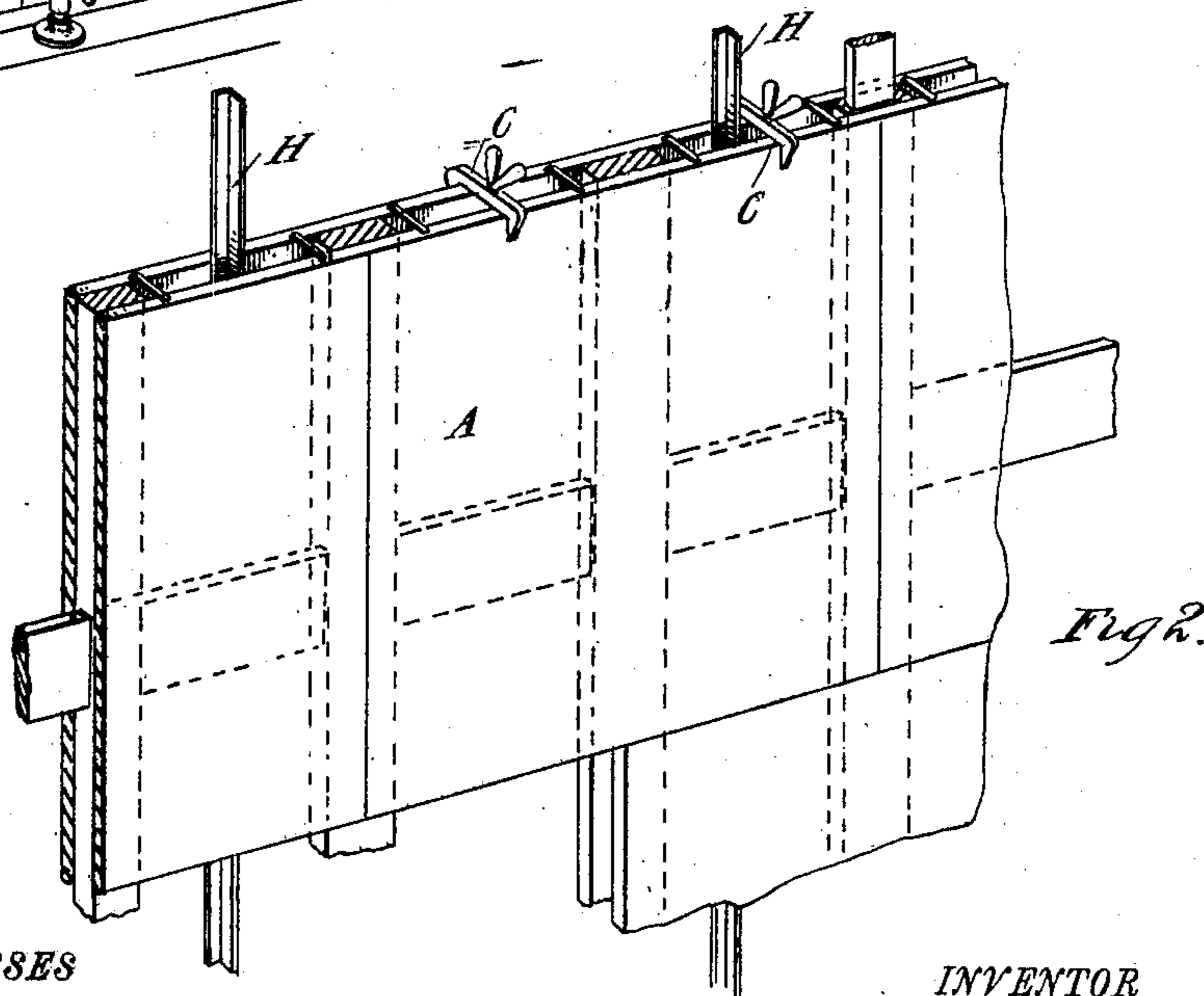
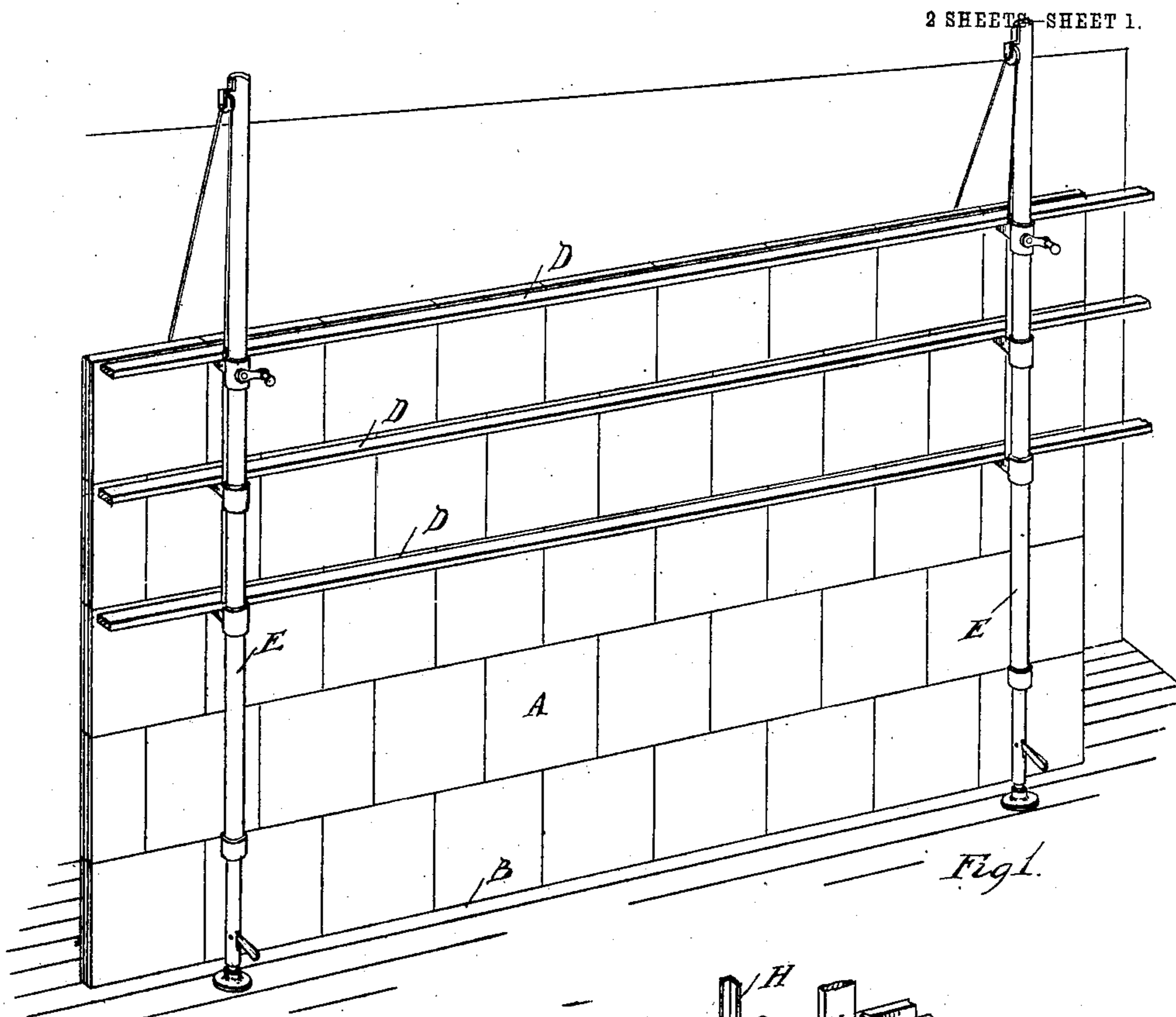
PATENTED AUG. 28, 1906.

A. C. RAYMOND.

PARTITION CONSTRUCTION.

APPLICATION FILED JUNE 8, 1903. RENEWED MAY 4, 1905.

2 SHEETS SHEET 1.



WITNESSES

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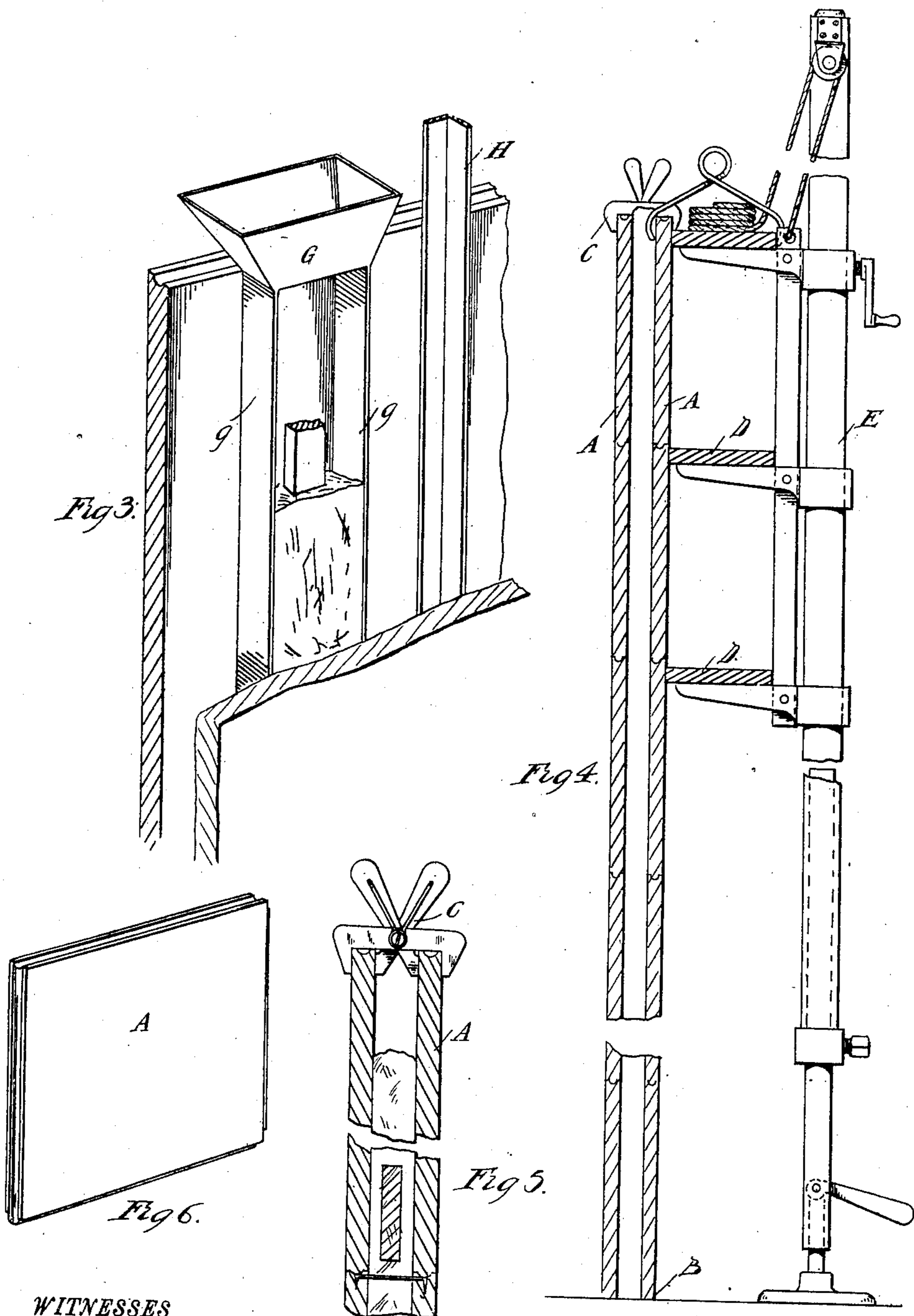
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2 SHEETS—SHEET 2.



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ALONZO C. RAYMOND, OF DETROIT, MICHIGAN.

PARTITION CONSTRUCTION.

No. 829,671.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed June 8, 1903. Renewed May 4, 1905. Serial No. 258,891.

To all whom it may concern:

Be it known that I, ALONZO C. RAYMOND, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Partition Constructions; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to partition construction in buildings; and it consists in the combinations and arrangement of material hereinafter described and claimed.

It has for its object the construction of a partition which shall be of comparatively light weight, in which the variation of thickness shall not materially increase the expense, which shall possess sound and heat resisting qualities, be firm under all reasonable circumstances, and be cheaply constructed.

To this end the partition is built up of thin blocks or tiles on either side and the two surface walls thereof joined together to form a single partition in the manner hereinafter pointed out.

In the drawings, Figure 1 is a perspective view showing the partition in process of construction, especially showing the manner in which the same is made vertical and true. Fig. 2 is a perspective view showing details of construction and the combination with metallic studding for the purpose of adding stiffness where the partition is of unusual length or height. Fig. 3 shows the manner in which the intermediate staff or mortar columns are formed. Fig. 4 shows the manner of truing up the sides thereof. Fig. 5 shows the manner of spacing the two sides. Fig. 6 represents a single tile or block in perspective from which this partition preferably is made, although any suitable form may be used.

Similar letters refer to similar parts.

In the construction I have shown various apparatus adapted to construct such partitions, and which I have made the subject-matter of another application.

In the drawings, A A represent thin tile, usually made of plaster-of-paris or some of its compounds, cement, clay, or other material, and preferably about one inch in thick-

ness. Beginning at the bottom at B, resting upon a floor, joist, ceiling, or any flat surface, as the case may be, two rows of tile are erected and spaced one row from the other by means of the implement shown in Fig. 5 at C and held firmly and true against straight edges D D, as shown in Fig. 1. These straight edges are erected upon posts E E and are carried up as the partition is elevated, the posts E E being previously erected and plumbed, so that each row of tile of the partition shall be plumb as the construction of the partition proceeds. After one or more rows of tile have been so erected a funnel, such as shown in Fig. 3 at G and having two wings thereof, *g g*, is taken and the wings inserted between the rows of blocks in the interior of what will be the partition, and semiliquid staff or mortar is poured or placed in the funnel and is prevented from spreading by the two sides *g g*. The staff comes in contact with the interior faces of the opposite blocks or tiles, and thus allowed to set or harden, when it adheres strongly to the tiles, combining the two opposite tiles together. Preferably this semiliquid column of staff or mortar is placed as shown in Fig. 2, covering and sealing all the vertical joints from the inner face of the tile or blocks and when the funnel is withdrawn leaving a substantially flat and straight column. When one series of blocks through the horizontal length of the partition has thus been erected and bound together as described, the straight edges are raised for the purpose of truing the next series of tile or blocks, which are laid upon the first edgewise and in a similar manner to build the partition upwardly. When they are adjusted, the funnel is inserted immediately above the mass of staff or mortar already in place and semiliquid staff or mortar poured therein, as in the former case, directly upon the upper end of the partially-completed column of staff, to which in hardening it cements firmly. These columns of staff are thus built up throughout the partition from end to end, leaving vertical air spaces or chambers much wider than the columns themselves. The partition is thus built up to the ceiling in this manner, and when so built up it is obvious it is made up of the two thin layers of tile or blocks, one upon either side, held and cemented firmly together by solidifying staff or mortar columns reaching

from floor to ceiling, between which are vertical dead-air spaces.

If desired, to extraordinarily stiffen the partition by reason of its unusual height or length a long angle or channel iron column may be first erected and then built around in the air-spaces at any predetermined points or intervals depending upon the stiffness required. These are shown in Fig. 2 at H. H.

Door-jambs also can be stiffened in the same manner by angle or channel columns running from their upper corners to the ceiling and built around with the staff or mortar, and at the top of the door-jamb a cross-beam or header supports the blocks or tiles, which are then continued above the door to the ceiling precisely in the same manner as hereinbefore described. When the partition is thus built up, as hereinbefore described, and approaches the ceiling, so that it is impossible to use the apparatus, the last of the tile fitting the ceiling may be laid up on one side with a trowel, a part of a column of thickened staff may be made to adhere to the tile thus erected and trued up, and then upon the opposite side a mass of staff may be laid upon the tile, its edge placed upon the edge of the one already in position, and then forced upwardly, compressing the two masses of staff together until the second tile thus placed in position is trued up vertically, when the masses of staff adhere, continuing the column to the ceiling, and by continuing this process finishes to the ceiling. Another expedient is to nail a strip to the ceiling midway between where the two edges or rows of tile will come and plastering or attaching to this strip a mass of staff longitudinally along it, the strip forming its axis, and then placing the tile in position with their upper edges against the mass of staff, which when it hardens adheres to the ceiling and to the tile, forming a rigid solid joint between the partition and the ceiling.

It is obvious that if the partition is desired to be of unusual thickness it is only necessary to increase the space between the foundation rows when first laid and that the funnel with its sides *g* shall be wide enough to occupy the space so increased between the tiles or blocks.

It is obvious from this that the only change necessary in thickening the partition is merely the widening or thickening of the columns of staff or mortar and that all of the extra material which is so used in thickening the partition consists of staff or mortar, which is a comparatively cheap material. The outer faces of the tile or blocks may be left in their natural condition or they may be plastered upon or covered with any suitable covering.

This, however, I do not claim as a part of my invention. This method of construction also dispenses entirely with the use of mortar as a binder or support between the horizontal or perpendicular edges of the tile, as is now common in all block systems, and a much

stronger, as well as a much lighter partition, is secured by the solid staff or mortar vertical columns between the inner faces of the tile or blocks. The staff or mortar used in the construction of the binding and supporting columns is composed of stucco or hydraulic cement, excelsior, or other fiber and warm glue, thoroughly mixed with water, preferably warm.

Where a partition is or may be subject to a heavier load than that ordinarily imposed upon the before-described staff-columns, it is obvious that the crushing strength of the partition can be greatly increased by placing small steel or iron columns in the vertical air-spaces and free from contact with either wall at such intervals as may be desired. This form of construction is especially adapted to dwelling or other buildings where the dividing-partitions also assist in carrying the load of the building. It is also obvious that the vertical air-spaces in this form of partition are well suited to inclosing pipes and irons of every description and that the pipes, wires, or angle-iron columns heretofore mentioned may be easily examined by merely perforating the tile and viewing the condition thereof, when the hole may be again stopped and plastered over, this without disturbing any of the columns or any of the structure or weakening the same, which would be required if the metal elements were embedded therein. Of course the iron or steel columns, as well as other metallic parts, should first be coated with rust-proof paint or any other suitable material. For the secure attachment to this partition of what is known as "carpenter's trim"—such as base-boards, chair-rails, brackets, &c.—there may be inserted between the rows of tile and embedded in the staff, either horizontally or vertically, strips of wood to which such elements may be nailed or otherwise fastened from either or both sides of the partition. It is obvious to those skilled in the art how it can be done without any further description.

Having thus described my invention, what I claim is—

1. In building construction, a partition composed of two thin walls of tile united together by binding-columns of adhesive fireproof material, and having between the columns dead-air spaces, substantially as described.

2. In building construction, the combination of double separated walls consisting of blocks of fireproofing material, said walls presenting adjacent opposing substantially plane surfaces, columns of adhesive fireproof material formed between said walls and adhering thereto, thereby supporting said blocks, substantially as described.

3. In partition construction, the combination of thin tile or blocks placed edgewise in two parallel plane surfaces, columns of fire-

proof adhesive material between and binding the same together, air-spaces between said columns and metal columns in said air-spaces, substantially as described.

5 4. In partition construction, the combination of thin tile placed edgewise in two parallel rows, united by columns of fireproof adhesive material and wooden nailing-blocks

embedded in the columns, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

ALONZO C. RAYMOND.

Witnesses:

NETTIE V. BELLES,
R. A. PARKER.

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