

(No Model.)

B. RUSSELL.
CONSTRUCTION OF BUILDINGS.

No. 484,244.

Patented Oct. 11, 1892.

Fig. 1.

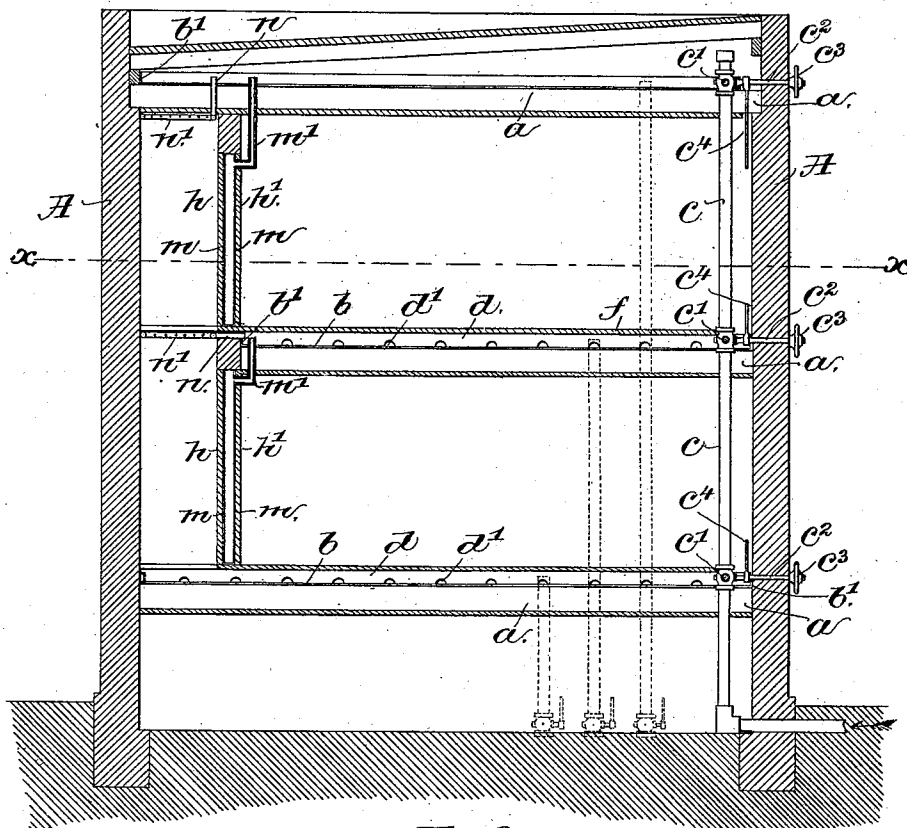
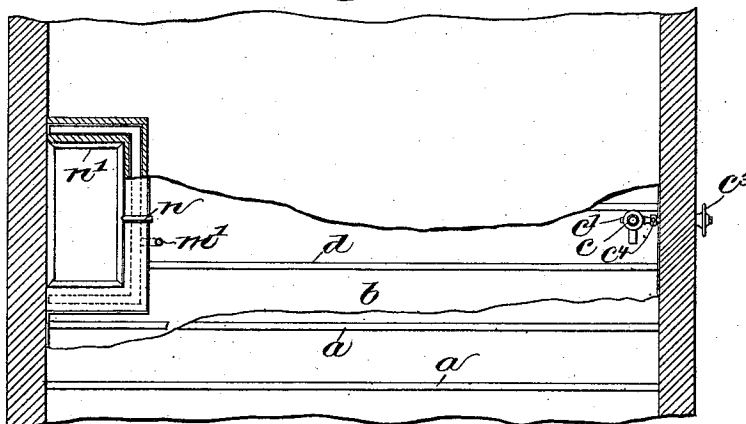


Fig. 2.



Witnesses.

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BENJAMIN RUSSELL, OF PORTSMOUTH, NEW HAMPSHIRE.

CONSTRUCTION OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 484,244, dated October 11, 1892.

Application filed September 29, 1891. Serial No. 407,118. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN RUSSELL, of Portsmouth, county of Rockingham, State of New Hampshire, have invented an Improvement in the Construction of Buildings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object an improved construction of buildings whereby the spread of fire may be prevented.

15 In accordance with this invention the floors of a building to be protected are provided each with a tank covering substantially the entire floor area, the said tank being adapted to be flooded in case of fire to prevent the fire from penetrating the floor.

20 The invention also comprehends a double partition to leave a space to constitute a reservoir or tank, which may also be flooded to prevent spread of fire through the wall, which is herein shown as surrounding a stairway or elevator-well.

25 Other features of invention will be herein-after described, and pointed out in the claims.

30 Figure 1 represents in vertical section a building constructed in accordance with this invention; Fig. 2, a partial plan view of one of the floors, a portion of the latter being broken away to show the floor-timbers, the tank around the elevator being also shown, partly in section.

35 Referring to the drawings, A A represent the walls of any usual building, and *a* the usual floor-timbers.

40 In accordance with this invention, a metallic floor composed of tin, galvanized iron, or other suitable material *b* is laid upon the floor-timbers *a* and turned up at the edges on all sides, as at *b'*, thus forming a water-tight tank, which may be filled with water from suitable valves *c'* in a supply or stand pipe *c*, arranged in the present instance upon the inside of the building, the valve-stems *c²* being extended through the wall of the building and provided on the outside thereof with suitable operating-handles *c³*, by which the valves may be opened from the exterior of the building and the floors flooded without entering the building, the said valves being operable from the interior of the building by

handles *c⁴*. A series of joists *d* are laid on the tank-floor *b*, preferably immediately over and in line with the floor-timbers *a*, the usual floor *f* being laid upon and secured to these joists, as represented in Fig. 1, the joists being provided with limbers or cut-away portions *d'* at intervals to permit the water admitted to the tank to circulate through the said joists.

45 *h h'* represent a double partition constructed in accordance with this invention and extended around the stairway or elevator-well on three sides, the main wall A of the building forming the fourth side of said well, the inner walls of the said partition being lined with tin, galvanized iron, or other suitable metal *m*, forming a narrow tank extended throughout the partition, and which may be placed in direct communication with the floor-tank or may communicate therewith by means of a pipe or pipes *m'*, which rise above the bottom of the floor-tanks, so that the said floor-tanks when full will overflow into and fill the partition-tanks.

50 By referring to Fig. 1 it will be seen that a partition-tank formed as described is located on each floor, extending from the floor of one story to the ceiling above, the tanks being independent of each other, each being flooded from an adjacent floor-tank. The separate tanks thus inclose the well from the top to the bottom of the building, it being of course understood that openings are made for doors, whereby access may be had to either stairs or elevator, as the case may be. The floor-tanks may also be provided with other outlets *n*, which lead to the perforated pipes *n'*, surrounding the stairway or elevator-well, the water from the floor-tank also overflowing into these pipes and being distributed in spray form in all directions in the well or stairway to assist in preventing a spread of fire through these avenues. If desired, in mills and other similar buildings where no ceiling is provided the floor-tank may be provided with a number of perforations or openings *p*, which may be closed with fusible solder or other similar material, which shall fuse or melt under the influence of excessive heat, as when a fire is in progress in the room below, to thus permit the water admitted to the floor-tank to be sprayed in all directions

to check the fire below it. In case of fire the occupants in the interior of the building may by means of the valves *c'* flood any particular floor or partition to prevent a spread of fire, or if impossible to gain access to the valves from the interior of the building they may be opened from the exterior at any floor or partition and flooded, as desired, to best check the progress of the flames. The tank-floors also serve to prevent the damage of ceilings by bursting of water-pipes, &c. This invention is not limited to the exact construction shown, as it is evident the same may be somewhat varied to meet the various requirements of building construction.

In the particular arrangement herein shown and described a single stand-pipe is used, all of the tanks being supplied from this pipe; but I desire it to be understood as within the scope of this invention that each tank may be provided with its own independent supply or stand-pipe, which may be controlled by suitable valves on the street-floor or basement, as represented by dotted lines, Fig. 1, within ready access from the street, the arrangement and construction being varied according to the various circumstances and requirements. As the separate partition-tanks receive water from adjacent floor-tanks and the latter are flooded independently of each other, it follows that the partition-tanks are flooded independently and separately.

I claim—

1. The herein-described building construction, which consists in a series of independent partition-tanks composed each of upright double partitions lined with waterproof material and extending from floor to ceiling of each story, forming three sides of the stairway or elevator-well, and means for flooding

said tanks independently by water in case of fire, substantially as described.

2. The combination, with a series of floor-tanks, of a stand-pipe *c*, placed in the interior of the building and provided with valves *c'*, having their stems extended through the wall of the building and accessible from both the interior and exterior of the building for the operation of the valve, substantially as described.

3. The herein-described improved building construction, which consists in a series of independent floor-tanks and vertical tank-partitions in communication with each other and adapted to be flooded in case of fire, substantially as described.

4. In a building having elevator-wells or stairways, the combination, with a floor-tank, of a perforated pipe placed in said well or stairway and in communication with said floor-tank, substantially as described.

5. The combination, with the floor-tank, of a partition-tank to receive the overflow from the said floor-tank connected therewith, substantially as described.

6. In a building having elevator-wells or stairways, the combination, with a floor-tank provided with a series of perforations in its bottom normally closed by fusible solder, of a perforated pipe placed in said well or stairway and in communication with said floor-tank, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN RUSSELL.

Witnesses:

FREDERICK L. EMERY,
EMMA J. BENNETT.