

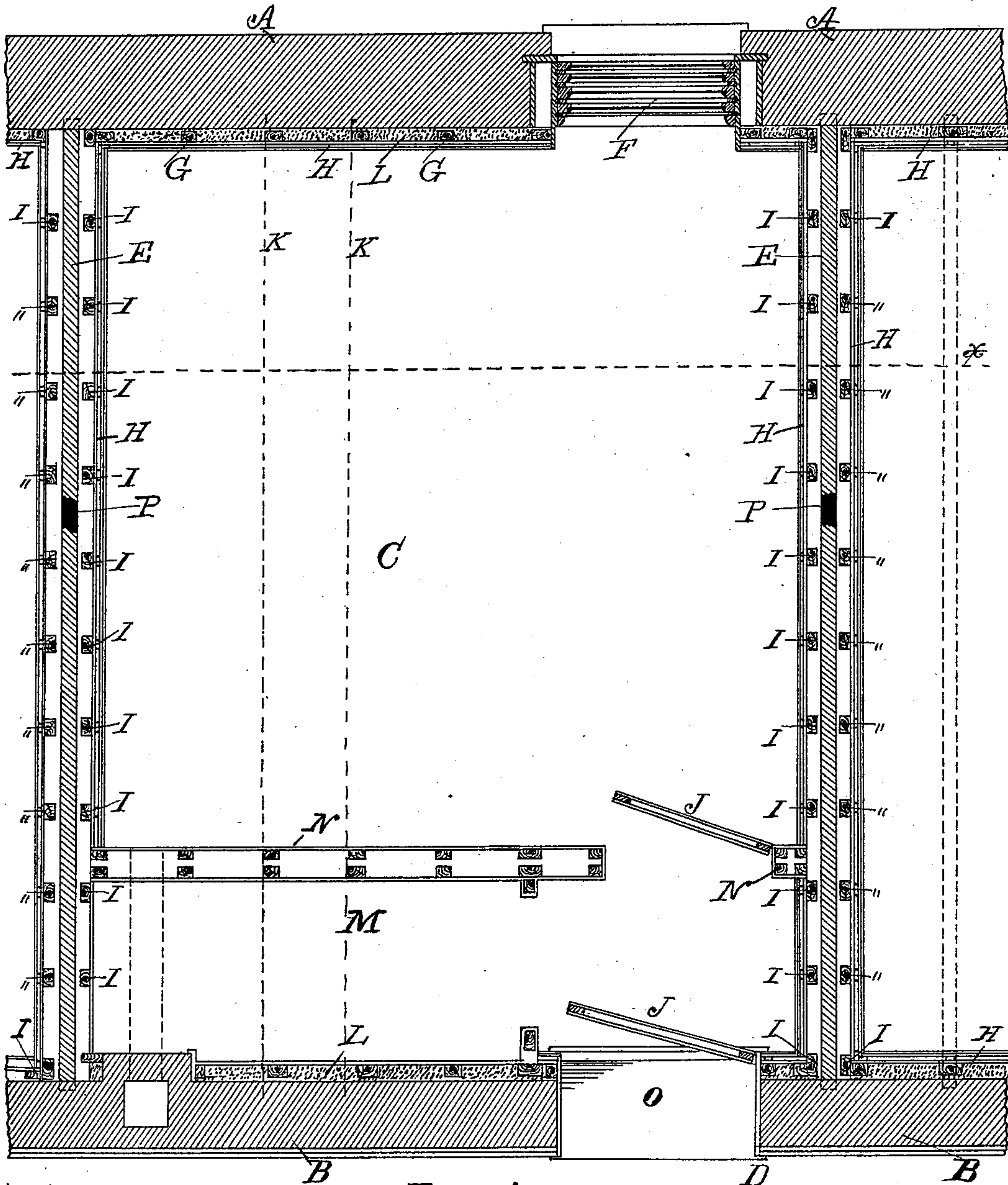
(No Model.)

2 Sheets—Sheet 1.

A. W. TUCKER.
CONSTRUCTION FOR DEAFENING BUILDINGS.

No. 539,457.

Patented May 21, 1895.



WITNESSES:
Fred W. Hersey.
W. E. O'Byrne.

Fig. 1.

INVENTOR:
Ambrose W. Tucker,
by G. L. Chapin, atty.

(No Model.)

2 Sheets—Sheet 2.

A. W. TUCKER.
CONSTRUCTION FOR DEAFENING BUILDINGS.

No. 539,457.

Patented May 21, 1895.

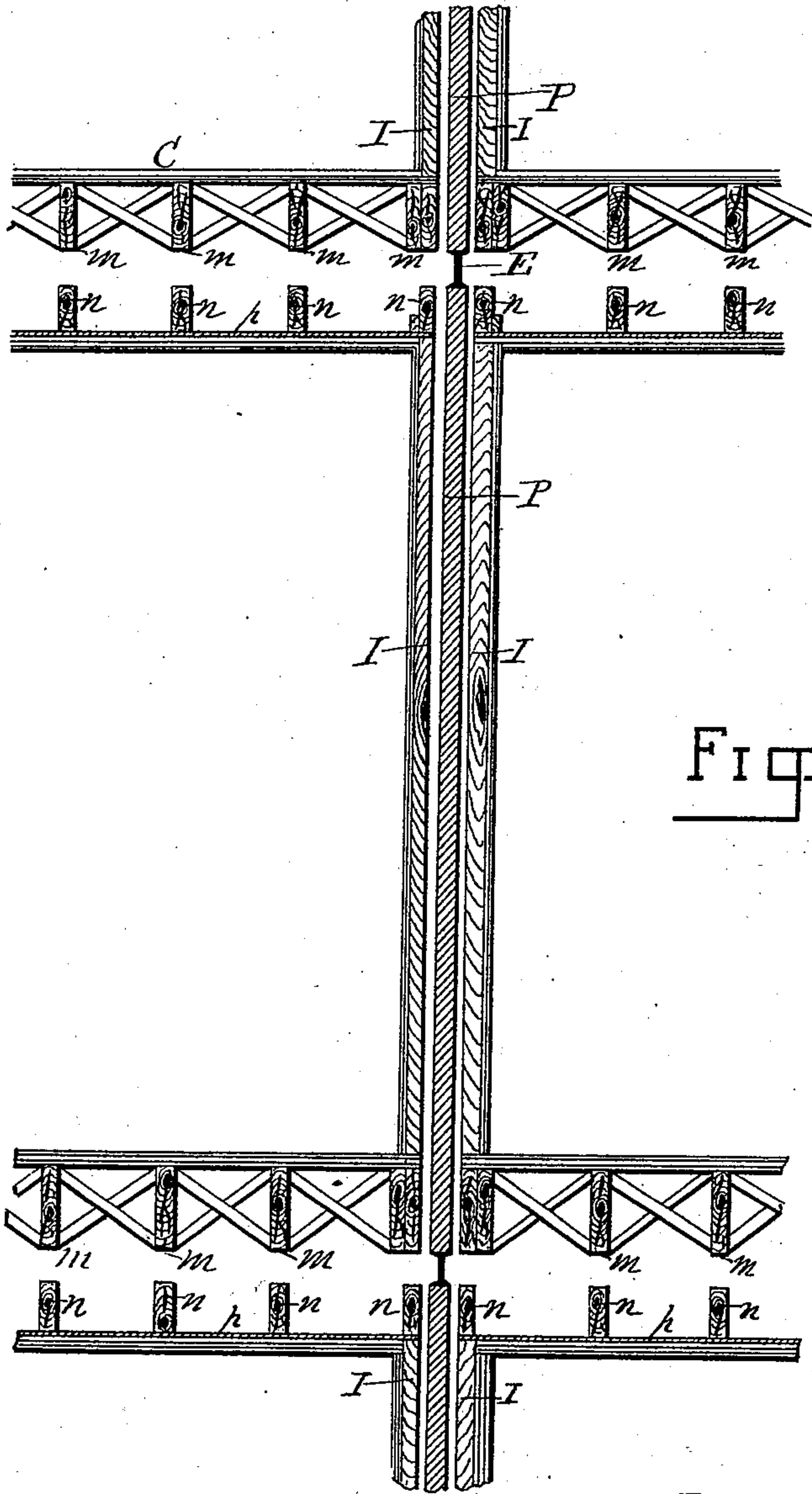


Fig. 2.

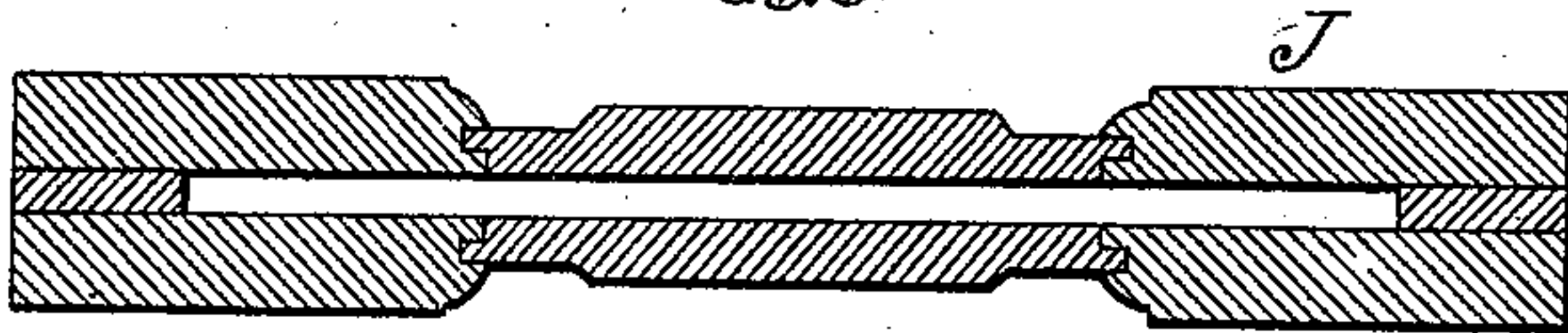


Fig. 3.

WITNESSES:
Fred W. Hersey,
W. E. O'Brien

INVENTOR:
Ambrose W. Tucker,
by G. L. Chapin Atty.

UNITED STATES PATENT OFFICE.

AMBROSE W. TUCKER, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
H. P. SKILES, ISAAC R. MUDGE, AND JESSIE R. MUDGE, OF SAME PLACE.

CONSTRUCTION FOR DEAFENING BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 539,457, dated May 21, 1895.

Application filed December 7, 1894. Serial No. 531,095. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE W. TUCKER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Constructions for Deafening Buildings, of which the following is a specification, reference being had to the annexed drawings, consisting of two sheets, illustrating the invention, in which—

Figure 1, Sheet 1, is a plan of one floor and parts of others of a building and a horizontal section of two brick walls and the partition and deafenings which divide the compartments; Fig. 2, Sheet 2, a sectional elevation of one double partition and a portion of the floors and separate ceilings to adjoining compartments on line X, Fig. 1. Fig. 3 is a horizontal section of a double door employed to prevent vibration.

The principal purpose of this invention is effectually to deafen the several compartments of buildings; but more especially hospitals, schools, asylums, and other buildings in which noise is a serious inconvenience.

The method of construction and nature of the invention are fully set forth in the following detail description.

A, A; B, B, Fig. 1, represent horizontal sections of two brick walls; the wall A, A, being an outside wall, and B, B, represent a wall which may separate the room c, from a hall D. I construct any desired number of other walls parallel to wall B, B, as the length of the building will permit, and construct the walls of such length as will connect with the exterior walls of the structure, whereby the joists of every compartment have their end bearings on brick walls. The floor joists m, therefore in all the building run in the direction indicated by dotted lines K and parallel thereto. Ordinary vertical furrings G are detached from the walls A, A, and B, B, and if the laths H are of metal the plastering thereon will be substantially fire proof. In order that the vibration of one compartment may not extend to any other compartment above or below, the spaces between the furring G, walls A and B, and lath H are filled with mineral wool, or some other non-vibratory conducting substance L. I, I, I,

&c., represent two rows of studding which are to be so duplicated as to separate every main room or any part of the building. Between these separate rows of studding is placed a metal beam P, Figs. 1 and 2, which has end supports on the brick walls; and vertically between the beams and between the partition walls of the compartments may be placed what I term mackolites P, which are built up of fire clay bricks, or any suitable plastic fire proof material compounded with mineral wool which serves the purpose both of fire proofing and a sound deafening substance and thereby creating an air space. The closet M is separated from compartment C by a double wall N, which being for the convenience of said compartment rests on the compartment floor C.

The opening for the door through the wall B, B to hall D is provided with a strong rubber, or other elastic non-vibratory sill o, lapping onto the floors of the two compartments, and bearing on the brick wall.

The ceilings of all the compartments are supported by separate tiers of joists n, n, n, &c., which also have their end supports in the said brick walls, and preferably the whole under area of the ceiling is sheeted by asbestos cloth, or other suitable fire proof material, securely fastened to the under edges of the joists n.

In addition to the construction described ordinary "building paper" may be employed as a floor lining to advantage where the noise in one room is wholly to be shut off to itself.

In a building embodying the features herein described and shown the deafening is substantially effective in excluding the sound in one room from an adjoining room.

I do not claim that double walls are new as an independent structure, but I do claim that the separation of the floor timbers and studding of compartments where the mackolites and iron beams are employed, as shown, is not known to the building art.

I claim as new and desire to secure by Letters Patent of the United States—

1. In the construction of deafened buildings two or more parallel brick walls and two or more principal compartments side by side, and each compartment separated from the

adjacent compartment by a hollow wall which extends vertically through all the stories and between the brick walls, the timbers forming the hollow wall being wholly disconnected;
5 as and for the purpose specified.

2. In the construction of deafened buildings the joists, studs and floors disconnected between adjacent compartments in combination with separate mackolite constructions
10 placed between the double rows of studs and between horizontal metal beams; as and for the purpose specified.

3. In the construction of deafened buildings the adjacent compartments between the
15 brick walls separated by vertical hollow

walls extending through all the stories longitudinally with the joists, mackolite constructions placed within the hollow walls and metal beam connections; as and for the purpose shown and described.

4. In the construction of deafened buildings with door passages through brick walls the floor joists disconnected by such passage and the floors united by a rubber door sill; as specified and shown.

AMBROSE W. TUCKER.

Witnesses:

JEANNETTE W. KENEREL,
G. L. CHAPIN.

2c