

(No Model.)

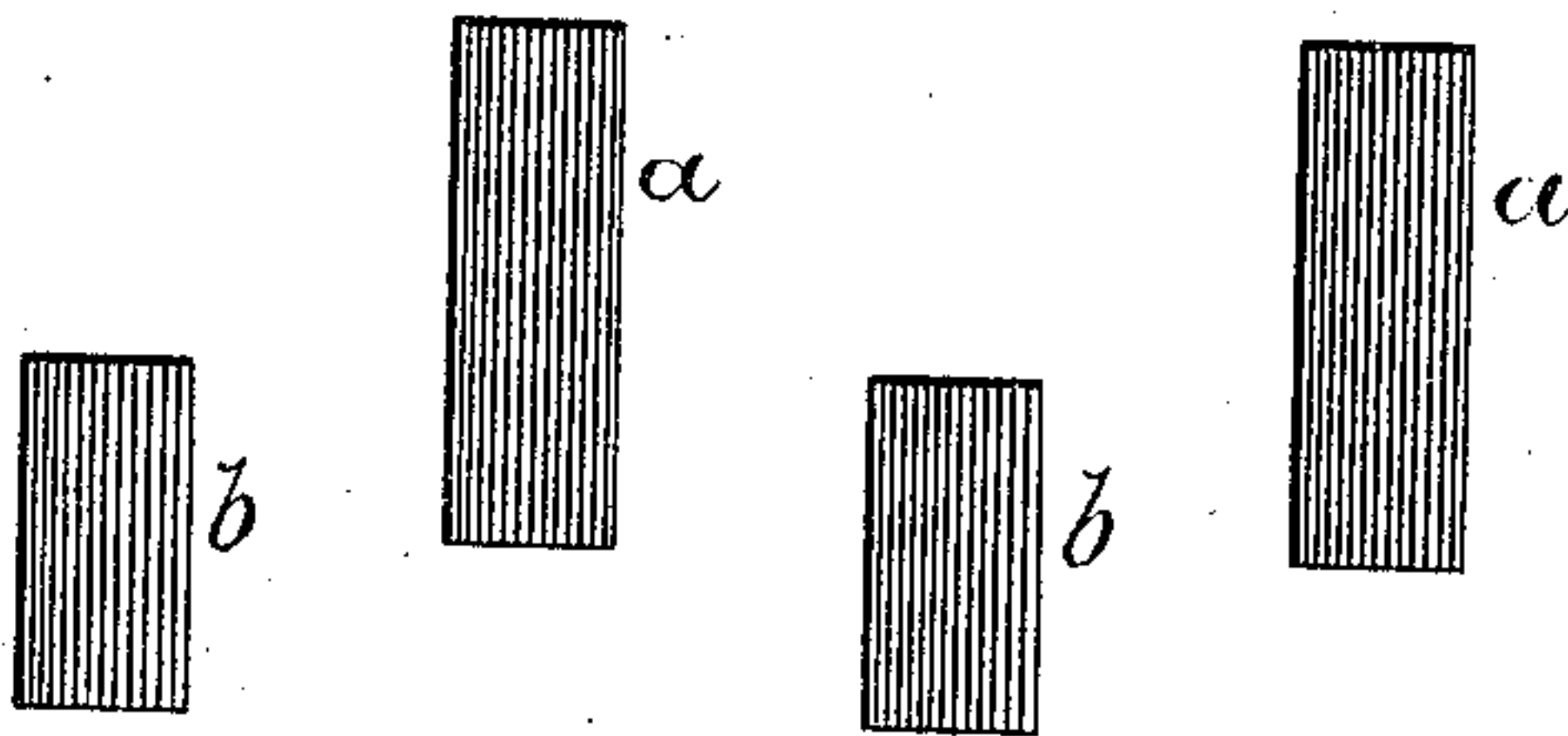
J. B. LOVE.

CONSTRUCTION OF BUILDINGS.

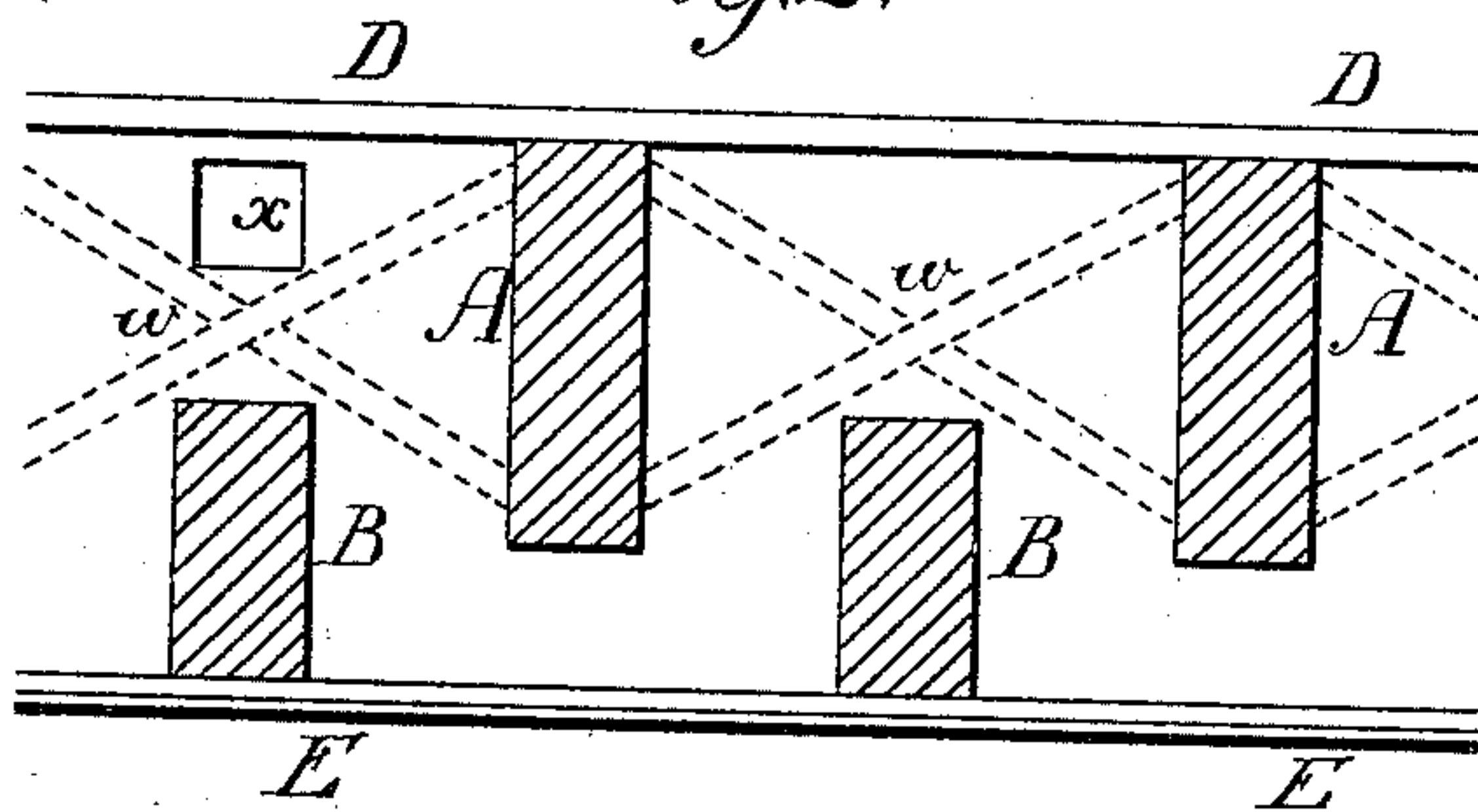
No. 249,645.

Patented Nov. 15, 1881.

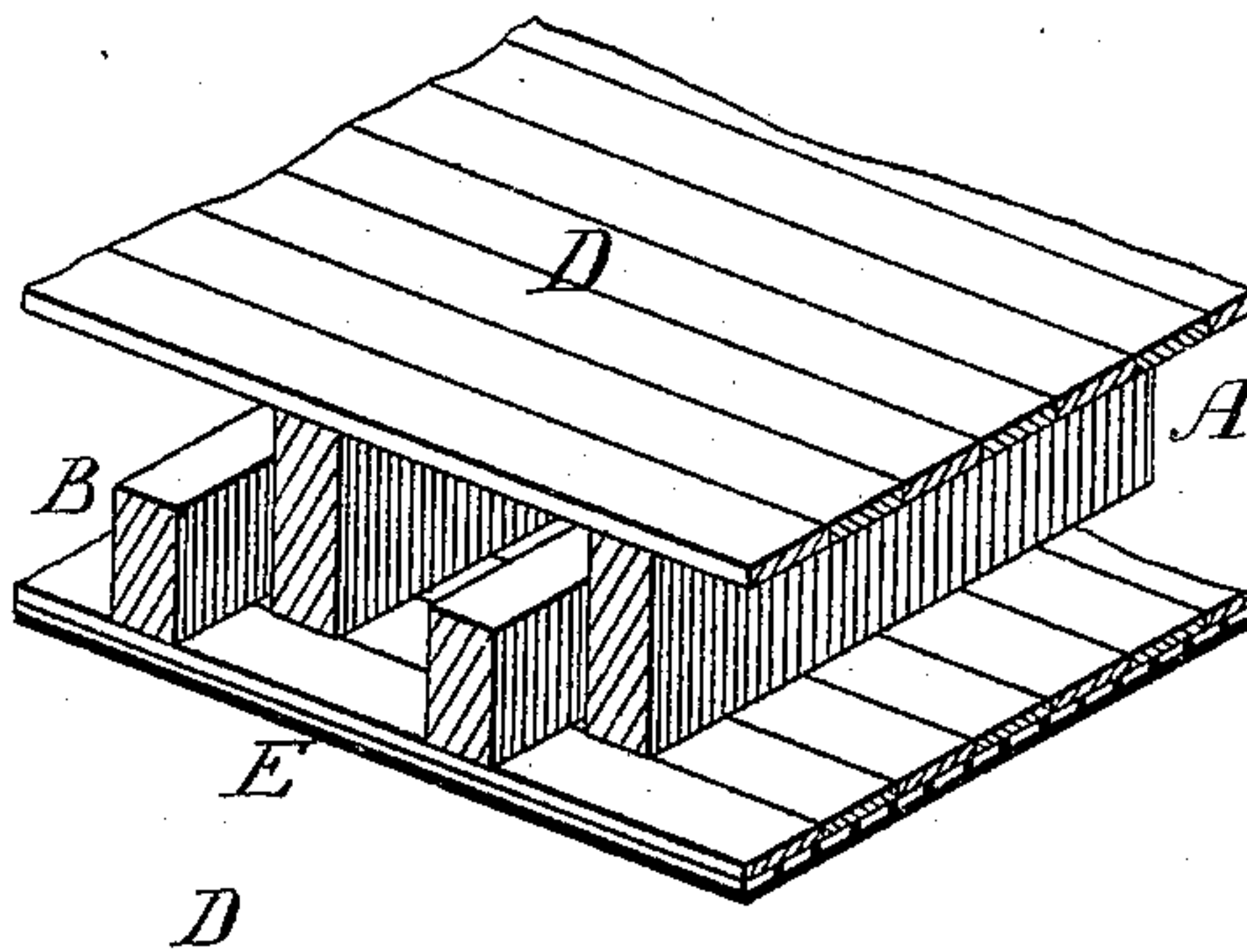
*Fig. 1.*



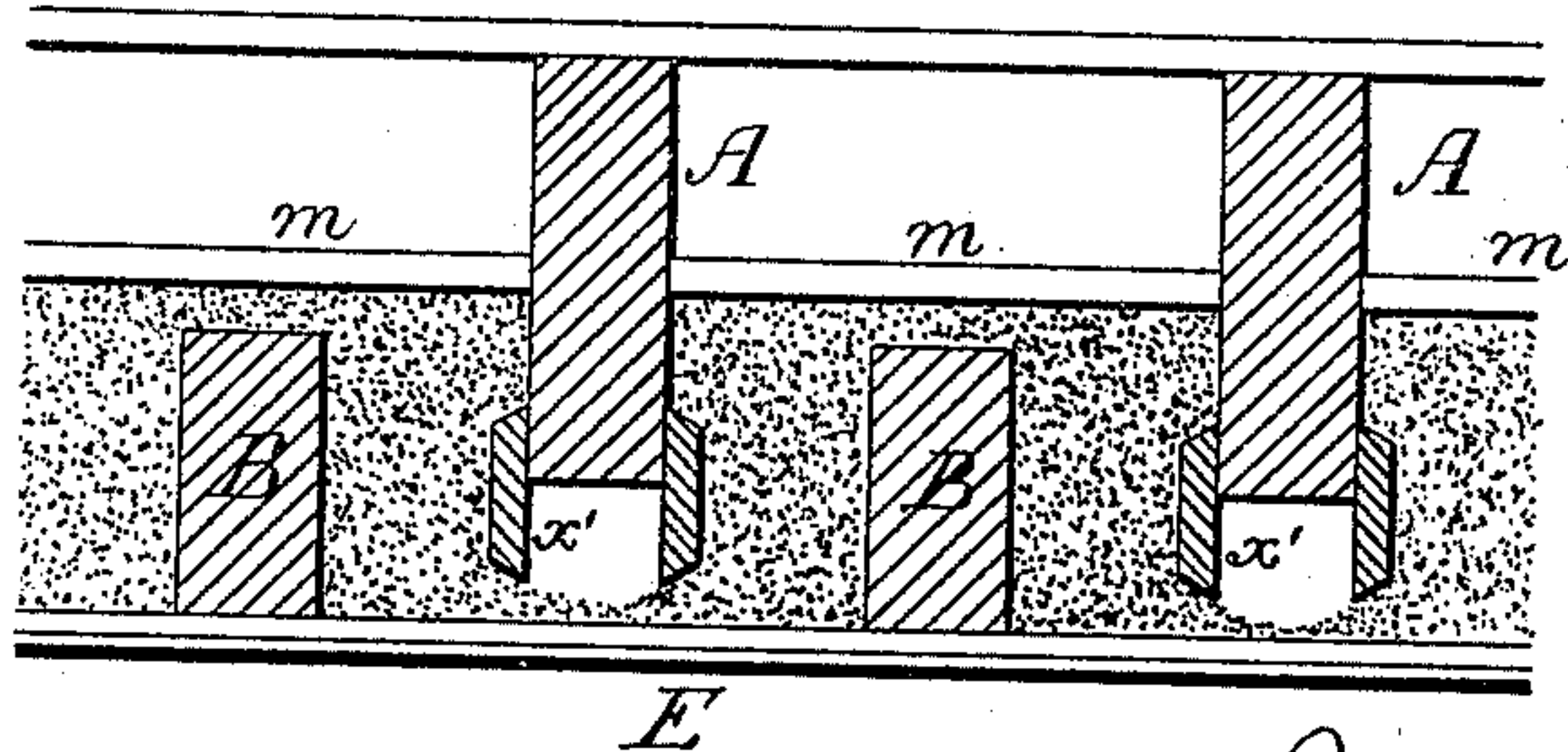
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses  
James F. Tobin  
Harry Smith

Inventor  
John B. Love  
by his Attorneys  
Howson & Son



# UNITED STATES PATENT OFFICE.

JOHN B. LOVE, OF PHILADELPHIA, PENNSYLVANIA.

## CONSTRUCTION OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 249,645, dated November 15, 1881.

Application filed February 4, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. LOVE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in the Construction of Buildings, of which the following is a specification.

My invention relates to the floors and ceilings of buildings; and the object of my invention is to so arrange two sets of beams, one set for supporting the floor and the other for carrying the ceiling, and to so isolate the said beams from each other that shocks and jars imparted to the floor will not be imparted to the ceiling below, and so that the structure may, in a great measure, prevent the communication of noises from one room to another.

In the accompanying drawings, Figure 1 represents the arrangement in the opposite walls of a building of the recesses in which the ends of two sets of beams, referred to hereinafter, are lodged; Fig. 2, a section of the floor and floor-beams and ceiling and ceiling-beams; Fig. 3, a perspective view of Fig. 2, and Fig. 4 a modification of Fig. 2.

A A are the main beams of the floor of a room; B B, the beams, which carry the ceiling E of the room below. These main beams are built into the opposite walls at points shown at *a a*, Fig. 1, and the beams B B at points *b b*, Fig. 1, so that the beams of one set shall be situated between those of the other set, thus permitting the beams A to extend downward below the upper edges of the beams B, an arrangement which diminishes the depth of the structure. The usual flooring-boards D are secured to the top of the main beams in the ordinary manner, and the laths for the plaster of the ceiling E are secured to the under side of the beams B B. The two sets of beams are entirely isolated from each other, the beams B being arranged between the beams A and projecting above the lower edges of the latter beams. An important feature of my invention for this relative arrangement of the two sets of beams permits a restriction in depth of the structure.

The arrangement of floor and ceiling, isolated from each other, is especially applicable to buildings in which upper rooms are used for manufacturing purposes, as the shocks and

jars imparted to the floor will not be communicated to the ceiling, while the two structures and the volume of air between them will prevent the free communication of sounds, incidental to manufacturing operations, from an upper room to the room below.

Another advantage of my invention is the facility which the space between the two structures affords for ventilating purposes, the external air, for instance, being admitted through the side walls at the point *x*, and being free to circulate between the structures, may be permitted to escape through registers in the flooring-boards, or the opening or openings *x* may afford an avenue of escape for the foul air which may be admitted to the space between the structures from the room below. The desired structure occupies little more space in depth than an ordinary floor, three or four inches at most. At the same time the lower beams do not interfere with the proper steady- ing of the upper beams by the usual diagonal beams *w*, shown by dotted lines in Fig. 2.

As a still further bar to the communication of noises from one room to another, saw-dust or spent tan may be deposited in the space between the two structures, either the entire space being filled, or the saw-dust deposited in masses between the beams B B, as shown in Fig. 4, strips *x' x'* being secured to the main beam to maintain the saw-dust in a dispersed condition and prevent it from accumulating in masses; or, if desired, partition *m m* may extend from main beam to main beam, and saw-dust may be lodged between these partitions and the ceiling or floor.

I claim as my invention—

1. The combination, in a building, as a structure for separating an upper from a lower room, of the beams A and flooring-boards D with the beams B arranged between and projecting above the lower edges of the said beams A, the two sets of beams being built separately and independently of each other into the walls and isolated from each other, all substantially as set forth.

2. The combination of the beams A and flooring D, and the beams B B and ceiling E, isolated therefrom with saw-dust or other equivalent sound-deadening material interposed be-

tween the ceiling and flooring, all substantially as specified.

3. The combination of the ceiling-beams B with the flooring-beams A, isolated from said  
5 ceiling-beams, and furnished with strips  $x'$ , as and for the purpose set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

JOHN B. LOVE.

Witnesses:

H. R. SHULTZ,  
HENRY HOWSON, Jr.