No. 773,215. PATENTED OCT. 25, 1904.

A. MENCZARSKI.

BUILDING CONSTRUCTION.

APPLICATION FILED OCT. 14, 1903.

NO MODEL.

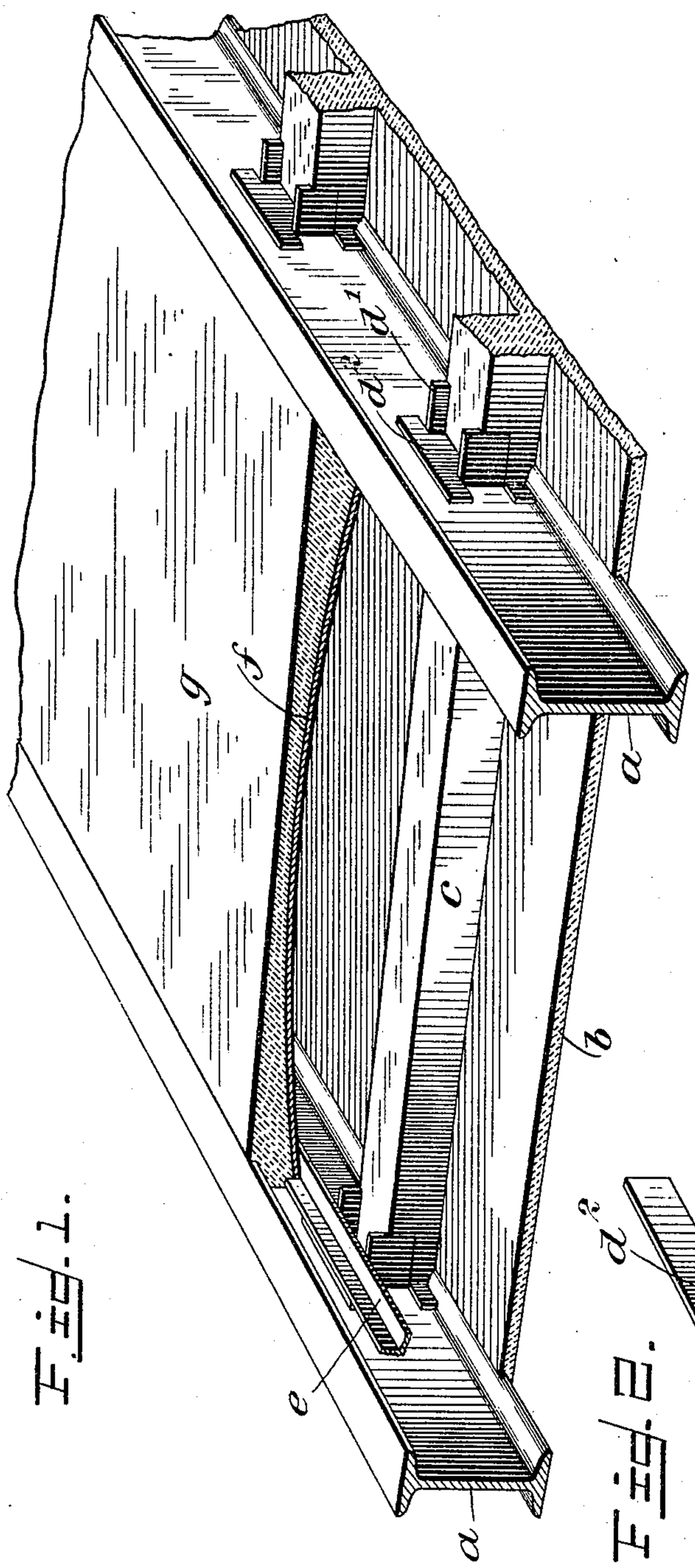

Fig. 1.

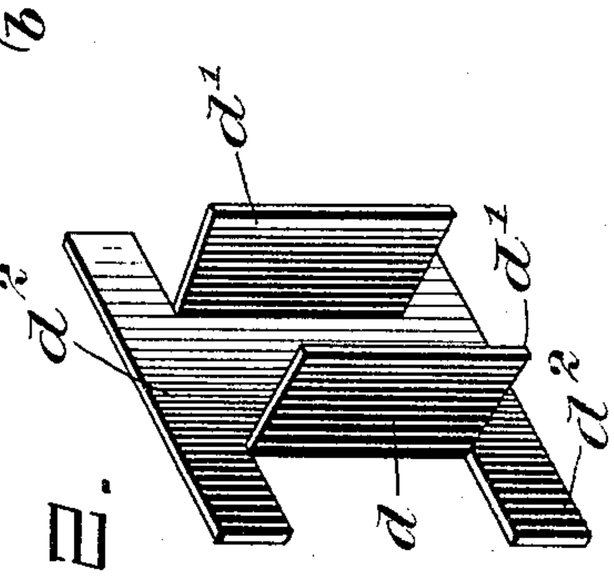

Fig. 2.

WITNESSES:

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No. 773,215. Patented October 25, 1904.

UNITED STATES PATENT OFFICE.

ALEXANDER MENCZARSKI, OF NEW YORK, N. Y.

BUILDING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 773,215, dated October 25, 1904.

Application filed October 14, 1903. Serial No. 176,993. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MENCZARSKI, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Building Construction, of which the following is a full, clear, and exact description.

This invention relates to fireproof buildings; and it constitutes an improved structure for forming the floors and ceilings of such buildings.

This specification is a specific description of one form of my invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional perspective view of the invention, and Fig. 2 is a perspective view of one of the floor-supports.

a indicates the usual metallic I-beams, which extend parallel with each other along each floor of the building.

b indicates the ceiling, which is formed of a suitable plastic compound of cement-like material. I prefer to employ a cement composition, such as is usually employed as a coating in pavement constructions, in the representation of artificial stone; but this is not essential.

Extending transversely from beam to beam and resting on the base-flanges thereof are the centers or ceiling-supports *c*, which are also formed of plastic cement-like material and serve to support the ceiling. The preferred arrangement of these parts is with the ceiling-supports resting on the base-flanges of the I-beams and with the ceiling itself extending under the I-beams and upward to the level of the base-flanges thereof, so that the ceiling and the supports may be made to adhere together in essentially a homogeneous composition.

In forming the ceiling and the supports thereof I prefer to proceed as follows: A suitable scaffolding is built under the I-beams, the top of such scaffolding lying below the base-flanges of the I-beams, so that the material forming the ceiling may be worked under said flanges to cover the same. The ceiling is now laid over the scaffolding and under the I-beams up to the level of the base-flanges thereof. When the plastic material forming the ceiling is partly set, a suitable boxing (not shown) is placed between the I-beams, so as to form troughs, the bottoms of which are formed by the upper ceiling *b*. In said troughs the centers or ceiling-supports are laid in the form of plastic cement-like composition, which is then allowed to set, these centers adhering to the ceiling and supporting the same and themselves resting on the base-flanges of the I-beams *a*. After the ceiling and ceiling-supports have finally hardened or set the boxing will be removed. The scaffolding will also be removed, and the ceiling structure will then be self-sustaining.

Before laying the centers or ceiling-supports *c* the floor-supports *d* are placed in position. Said floor-supports are formed either of wrought or cast metal, as desired, and constitute plate-like body portions with inwardly-projecting side flanges *d'* and T-heads d^2. The floor-supports are laid against the sides of the I-beams, as shown in the drawings, and the ends of the ceiling-supports or centers *c* abut against the floor-supports, thus holding the floor-supports securely in place, said supports, however, resting on the base-flanges of the beam. The T-heads d^2 of the floor-supports set flat against the inner sides of the I-beams and prevent the supports from rocking on the I-beams prior to emplacing the centers *c*. The floor-supports *d* and centers *c* having been thus placed in position, I next place on the flanges *d'* of the floor-supports longitudinally-extending angle-rails *e*, which may be either of wrought or cast metal and which are employed to support the arched plates *f*. Said plates extend between the beams *a* and are arched upward from the angle-rails *e*, so that their highest or middle portions will lie below the level of the upper edges of the I-beams *a*.

The final step in the preparation of the improved building structure is to lay in the space between the I-beams and over the arched

plates *f* the mass *g* of cement-like plastic material constituting the floor of the building, this floor being level with the upper flanges of the I-beams or, if desired, extended slightly above and over the same. The arched plates *f* may be constructed of wrought or cast iron, reticulate or imperforate, as may be desired. It will be observed that this structure provides for the expenditure of a minimum amount of material, and therefore may be very cheaply produced, and at the same time it is light and strong. The centers *c* serve the double purpose of supporting the ceiling *b* and of holding the floor-supports *d* in place. The centers may be raised up to the level of the angle-rails *e*, if desired, or they may be of less thickness, which latter arrangement is illustrated in the drawings. The floor *g*, reinforced by the arched plates *f*, has all the strength of an arch, and being firmly buttressed by the supports *d* and centers *c* it is given sufficient strength. It will further be observed that this construction provides a maximum dead-air space between the floor and ceiling, which is very essential in preventing the transmission of heat from one apartment to another, which transmission in case of fire would allow the flames to spread quickly throughout the building and also in lessening the weight of the construction to the minimum.

Various changes in the form, proportion, and details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the intent of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a building, the combination with the I-beams of ceiling-supports formed of plastic material extending transversely between the lower portions of the beams and resting on the base-flanges thereof, a ceiling laid under the I-beams and ceiling-supports and adhered thereto, floor-supports held against the sides of the I-beams by means of said ceiling-supports, and a floor extending between the upper portions of the I-beams and resting on the floor-supports, the floor being spaced from the floor and ceiling supports.

2. In a building, the combination with the I-beams, of ceiling-supports formed of plastic material extending transversely between the beams and resting on the base-flanges thereof, a ceiling laid under the I-beams and ceiling-supports and adhered thereto, floor-supports mounted on the base-flanges of the I-beams and lying between the ends of the ceiling-supports and the sides of the I-beams, an arched plate extending between the beams and rested on the floor-supports, and a floor formed of plastic cement-like material laid over the arched plate between the upper portions of the I-beams.

3. In a building, the combination with I-beams, of ceiling-supports extending transversely between the I-beams and rested on the base-flanges thereof, said ceiling-supports being formed of plastic cement-like material, a ceiling laid under the I-beams and ceiling-supports and adhered thereto, floor-supports rested on the base-flanges of the I-beams and held between the sides of the beams and the ends of the ceiling-supports, angle-rails extending longitudinally of the I-beams and mounted on the floor-supports, an arched plate extending between the I-beams and resting on the angle-rails, and a floor formed of plastic cement-like material laid over the arched plate between the upper portions of the I-beams.

4. In a building, the combination with the floor-beams, of ceiling-supports extending between the same, a ceiling sustained thereby, floor-supports at the ends of the ceiling-supports, and a floor sustained on said supports and extending between the upper portions of the beams.

5. A floor-support for buildings, said support having T-shaped ends or heads, and side flanges extending laterally from the support to an angle to the plane thereof.

6. In a building, the combination with the floor-beams, of a ceiling-support extending transversely between the lower portions thereof and formed of a plastic material molded into place, a ceiling formed of plastic material extending under the beams and ceiling-support and adhered to the latter, a floor formed of plastic material extending between the upper portions of the floor-beams, and means for sustaining the floor on the floor-beams independently of the said ceiling-supports.

7. In a building construction, the combination with the floor-beams, of a ceiling-support extending transversely between the lower portions thereof and formed of plastic material molded into place, a ceiling of plastic material extending under the ceiling-support and adhered to the latter, and a floor formed of plastic material extending between the upper portions of the floor-beams and sustained on the floor-beams above and independently of the said ceiling-supports.

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

ALEXANDER MENCZARSKI.

Witnesses:
ISAAC B. OWENS,
JNO. M. RITTER.