Oct. 14, 1941. S. G. MEEK 2,258,955

BUILDING CONSTRUCTION

Filed April 20, 1939

Fig. 1.

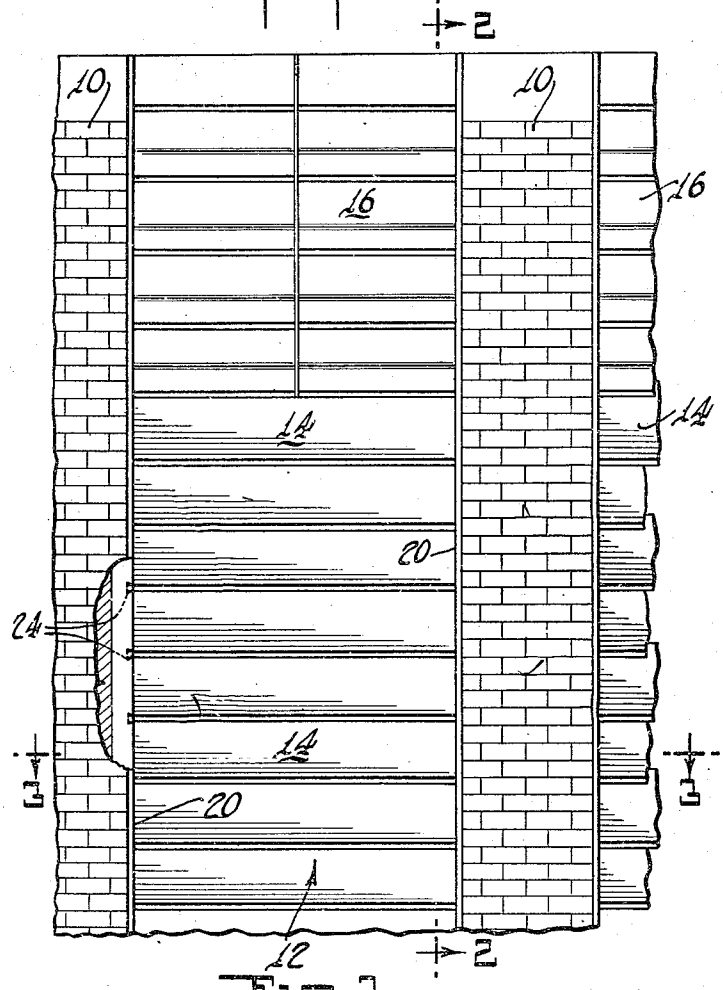


Fig. 2.

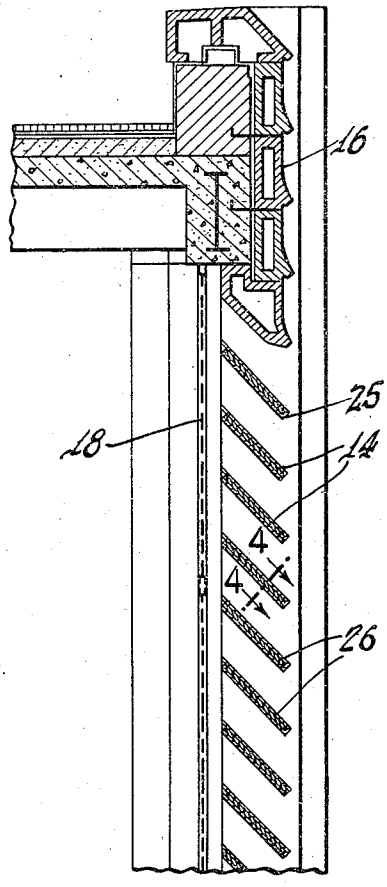


Fig. 3.

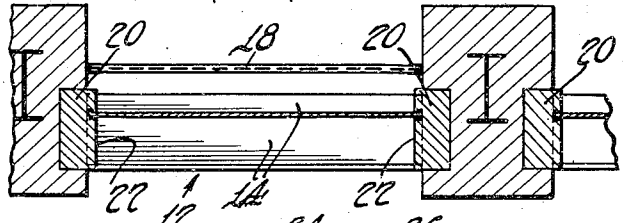


Fig. 4.

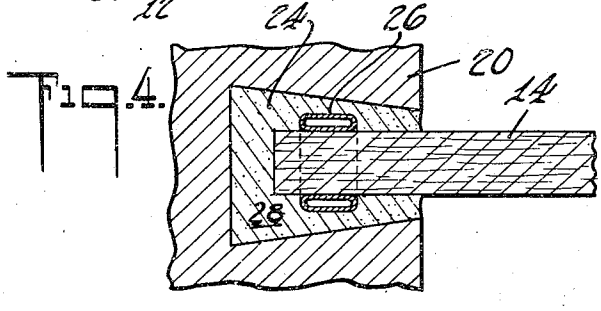
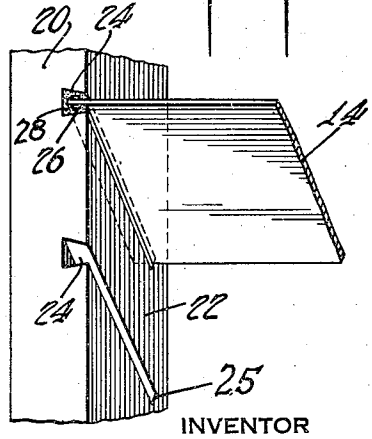


Fig. 5.



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UNITED STATES PATENT OFFICE

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BUILDING CONSTRUCTION

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Application April 20, 1939, Serial No. 268,853

7 Claims. (Cl. 98—121)

The present invention relates to building constructions, particularly of the masonry type, and to a louver structure employed therein. The invention is especially applicable to structures such as ventilating towers or buildings, the walls of which are provided with intake openings through which large quantities of air are drawn for ventilating purposes, as for example, for the supply of ventilating air to vehicular tunnels and the like.

A principal object of the invention is the provision of louvered air-intakes of an improved construction for towers or buildings of the type referred to.

Another object of the invention is the provision of a louvered structure in which louver blades of a hardened compressed cementitious material are set in the masonry of the wall structure proper.

A further object of the invention is the provision of a structure as described above in which the louver blades are removably but securely held in position against unintentional displacement.

A still further object of the invention is a louver construction for ventilating towers, buildings, or the like which presents an improved appearance.

My invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the more detailed description thereof which is to follow and to the accompanying drawing, in which

Fig. 1 is a partial elevational view with parts broken away of a building and louver construction in accordance with the present invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a detail sectional view on an enlarged scale taken on the line 4—4 of Fig. 2; and

Fig. 5 is a detail perspective view illustrating a portion of the instant invention.

Referring now to the drawing, and particularly to Figs. 1 and 2, the invention is depicted as embodied in a building structure such as a ventilating tower or the like. Suitably, the building is formed generally of any conventional type of concrete or masonry construction including a brick or other ornamental facing as shown at 10. It will be understood that any of the known building constructions may be employed. The walls of the building or tower define openings or areas indicated generally at 12, serving as the air-intake for the ventilating air drawn into the tower and distributed to the tunnel or the like in conjunction with which the ventilating tower is employed. The spaces or air-intake openings are formed as a series of louvers defined by louver blades indicated generally at 14, supported, as will hereinafter be more fully described, by louver posts or jambs 20 formed as a portion of the wall structure and facing the side edges of the openings or spaces 12.

The air-intake openings 12 may comprise any desired proportion of the wall area of the building. In the exemplary embodiment illustrated in the drawing, the openings are shown as extending substantially to the top of the building tower, decorative masonry work 16 being located thereabove to cap or finish off the cornice or parapet of the building. Suitably, screens or the like 18 of any desired character may be employed in a conventional manner behind the louvers defined by the blades 14. It will be understood that the screen structure and the particular cornice structure form no part of the instant invention.

In accordance with the present invention, the louvers through which the air is admitted are defined by louver posts or jambs 20 extending vertically of, and suitably inset in, the masonry walls of the opening 12 and including opposed faces 22 between which extend the louver blades 14. The louver posts are suitably constructed of terra cotta or other ceramic building material and may be made in the form of blocks of any desired length, as many of the blocks being employed, placed end on end and cemented in position, as are required to line the margins of the openings 12.

The louver posts 20 are provided with louver blade receiving slots 24 (see particularly Figs. 2, 4 and 5). The slots 24 extend from the rear edge of each post downwardly and substantially across the face of the post to have a closed end 25 forming an abutment for the lower end of the louver blade. The slots are preferably of dovetail cross section, as illustrated particularly in Figs. 4 and 5. The louver blades preferably comprise slabs of a hardened, highly compressed, asbestos-cement composition. Suitably, asbestos fibres, such as chrysotile, crocidolite or amosite, and cement, such as Portland cement or calcium aluminate cement, may be employed for the asbestos-cement composition. The proportions of the material of the composition may be, say, 25 to 70 parts of the fibres to 100

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parts of the total mixture. The slabs are impregnated either during or after their formation with a moisture-resistant composition such as asphalt or the like. Suitably, asphalt, having a melting point of 115° to 125° F. as determined by the ring and ball method and a penetration of between 45 and 60 as determined by standard penetration tests, is employed as the impregnating material. The slabs forming the louver blades may be of any suitable thickness as required for the particular installation, but, for example, it may be stated that blades approximately ⅝" in thickness are satisfactory where the length of the blade is to be, say 4' to 5' or greater.

The louver blades are secured within the slots **24** of the louver posts **20** in a manner to prevent loosening or rattling of the blades under the action of high winds or the like, and at the same time, to permit their removal as may be required from time to time. The means for securing the blades is most particularly disclosed in Figs. **4** and 5 and comprises a packing element **26** wrapped around the ends of the blade inserted within the slots and a yieldable caulking composition **28** filling the spaces between the ends of the blades and the slot walls. Suitably, the packing member **26** is formed of a tubular asbestos material in flattened form. The caulking material may comprise any suitable composition conventionally employed for similar purposes which adheres well to the composition of the blades and the louver posts, but which does not become unduly hard or crack over an extended period of service.

In forming the louver construction of the invention after the masonry work is completed and the louver posts **20** cemented in position, the slots are coated with the caulking compound **28** and the ends of the blades are wrapped with one thickness of the asbestos tubing **26** and pressed carefully into the slots and leveled to true position. The remaining spaces in the slots are then filled with the caulking compound which is forced tightly into the grooves.

The present invention provides a louver structure in which the louver blades are securely maintained in proper position within the masonry walls of the openings **12** to form, in effect, a continuation of the masonry structure. The blades are highly resistant to destruction or damage over long periods of exposure to the weather, due both to the hardened, highly compressed, asbestos-cement material of which they are composed and to the yieldable manner in which they are secured within the slots of the louver posts as previously described. The material of which the louver blades are formed, furthermore, renders the same resistant to the corrosive action of smoke and other fumes. Also, the louver construction presents an attractive appearance and does not require the use of metal flashings or other extraneous elements as have been previously necessary where louvers of conventional types have been used.

Having thus described my invention in rather full detail, it will be understood that these details need not be strictly adhered to, but that various changes and modifications will suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What I claim is:

1. A building construction comprising spaced louver posts of a masonry material defining an opening therebetween, slots in said posts extending from a side edge substantially across opposed faces thereof, louver blades comprising a hardened asbestos-cement composition including end portions inserted in opposed of said slots, a resilient packing material extending between said blades and the walls of said slots, and a caulking composition substantially filling the remaining space within said slots.

2. A building construction comprising spaced louver posts defining an opening therebetween, slots in said posts extending substantially across opposed faces thereof, and louver blades comprising a hardened asbestos-cement composition impregnated with a bituminous waterproofing composition including end portions inserted in opposed of said slots.

3. A louver construction comprising louver posts of a ceramic building material defining an opening between opposed faces thereof, said faces including slots extending from a side edge downwardly and substantially across said faces, louver blades comprising a hardened compressed asbestos-cement composition extending in parallel relationship across said opening and having end portions inserted in opposed of said slots, and a resilient packing material between said end portions and the walls of the slots.

4. A louver construction comprising louver posts of a ceramic building material defining an opening between opposed faces thereof, said faces including slots extending from a side edge downwardly and substantially across said faces, louver blades comprising a hardened compressed asbestos-cement composition extending in parallel relationship across said opening and having end portions inserted in opposed of said slots, a resilient packing material extending between the blade ends and the walls of the slots, and a yieldable caulking composition substantially filling the remaining space within said slots.

5. A louver construction comprising louver posts defining an opening between opposed faces thereof, said faces including slots extending from a side edge substantially across said faces, said slots being dovetail in cross section, louver blades of a hardened compressed asbestos-cement composition extending in parallel relationship across said opening, and having end portions inserted in opposed of said slots, a resilient packing material extending between said end portions and the walls of the slots, and a caulking composition filling the remaining portion of said slots.

6. A louver blade for mounting in slots formed in opposed faces of louver posts, said blade comprising a slab of hardened, highly compressed, asbestos-cement composition containing a waterproofing impregnant.

7. A louver construction comprising spaced louver posts defining an opening between opposed faces thereof, said opposed faces having slots extending from a side edge thereof, louver blades extending in parallel relationship across said opening and including end portions inserted in opposed of said slots, a resilient packing material between said end portions and the walls of said slots, and a caulking composition substantially filling the remaining space within said slots.

STUART G. MEEK.