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C. E. KAIN
MEANS FOR COLLECTING MUD, FOOT SCRAPINGS, WATER, AND THE LIKE
DEPOSITED ON STEPS
Filed Aug. 18, 1922

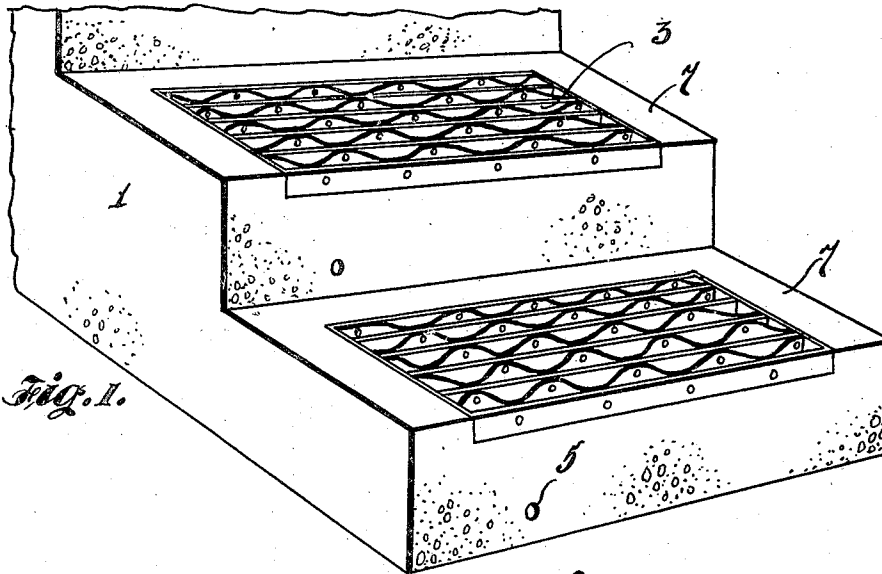


Fig. 1.

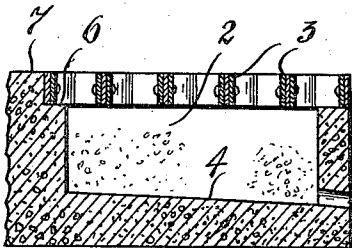


Fig. 2.

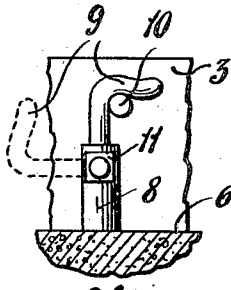


Fig. 4.

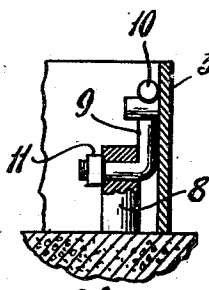


Fig. 5.

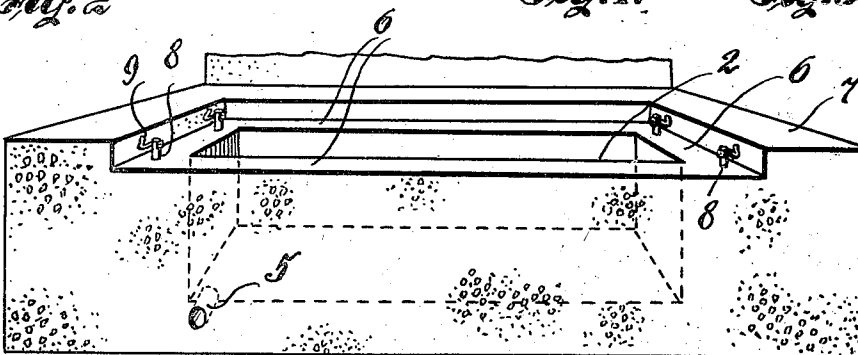


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES E. KAIN, OF DALLAS, TEXAS.

MEANS FOR COLLECTING MUD, FOOT SCRAPINGS, WATER, AND THE LIKE DEPOSITED ON STEPS.

Application filed August 18, 1922. Serial No. 582,742.

To all whom it may concern:

Be it known that I, CHARLES E. KAIN, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas have invented certain new and useful Improvements in Means for Collecting Mud, Foot Scrapings, Water, and the like Deposited on Steps, of which the following is a specification.

This invention relates to improvements in building construction and in such connection it relates more particularly to a new and practical means adapted to eliminate mud, scraping, dirt, and the like, ordinarily deposited on the steps and grating.

The invention aims to provide a trap or box to be placed underneath each step and wherein the mud, dirt, and scrapings may fall through the grating of the step and be deposited into the trap or box for removal from time to time.

Another object is to provide means for drainage of water and moisture from the trap or box and to provide means for removably securing the grating in place.

The invention will be more fully understood by reference to the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a perspective view of a pair of steps embodying the invention.

Figure 2 is a cross-sectional view, through one of the steps.

Figure 3 is a front perspective view of one of the steps; and

Figures 4 and 5 are respective detail views of the means for fastening the grate over the step box or mud trap.

In the drawings, the numeral 1 denotes a portion of a step construction of concrete or other material at the entrance to a school or public building. In the case of concrete construction, a box 2 is formed in the moulding of the concrete step construction and wherein the mud and dirt scraped onto the grating 3 from the shoes of persons entering the building is deposited. This recess, box or mud trap has a sloping floor 4 for escape of water which passes out through an opening 5. The top of the box or trap has a rim 6 upon which the grating 3 is supported. The grating when in position will thus rest upon the rim and lie flush with the top 7 of the steps.

In Figures 4 and 5 are shown a preferred means for detachably holding the grating in place. This consists of a small post 8 embedded in the concrete and provided with an eye through which an angle bolt 9 is pivoted. One end of the bolt is bent in such a manner as illustrated in the drawings, as to provide a catch when passed over and against a pin 10 affixed to the grating. A nut 11 is advanced onto the bolt sufficiently tight to hold it in place and permit the bolt to rotate. It should be understood, however, that the means for removably fastening the grating in place may be modified, also that any suitable type of grate construction may be used as will permit mud and foot scrapings to fall through into the box or trap.

What is claimed is—

1. In a step construction, a concrete body having a mud-receiving chamber and formed with a cut-out extending through the riser of the step an along the sides and ends of the chamber and through the top of the tread of the step to form a shoulder, and a removable grating conformably fitted in the top of the chamber and seated on said shoulder and having its front side disposed flush with the front face of the riser.

2. In a step construction, a concrete body having a mud-receiving chamber formed below the tread of each of the steps, and a grating for the top of each chamber, each chamber having a downwardly and forwardly inclined bottom and each riser having a drainage opening arranged to discharge water onto the grating of the adjacent lower step.

3. In a step construction, a concrete body having a mud-receiving chamber and formed with a cut-out extending through the riser of the step and along the sides and ends of the chamber and through the top of the tread of the step to form a shoulder, a removable grating conformably fitted in the top of the chamber and seated on said shoulder, means embedded in the concrete and extending above the shoulder to secure the grating in position, and means carried by the grating at the ends and below the surface thereof to engage the first named means.

4. In a step construction, a concrete body having a mud-receiving chamber and formed with a cut-out extending through the riser of the step and along the sides and

ends of the chamber and through the top of the tread of the step to form a shoulder, a removable grating conformably fitted in the top of the chamber and seated on said 5 shoulder, posts embedded in the concrete and extending above the shoulder, horizontal pins carried by the grating below the upper face thereof, and devices carried by the posts and movable into and out of engagement with the pins to secure the grating on the 10 shoulder.

In testimony whereof I have signed my name to this specification.

CHARLES E. KAIN.