No. 685,051. Patented Oct. 22, 1901.

C. F. & A. W. KOCH.

SAGGAR FOR PAVING TILES OR THE LIKE.

(Application filed July 15, 1901.)

(No Model.)

Fig. 1

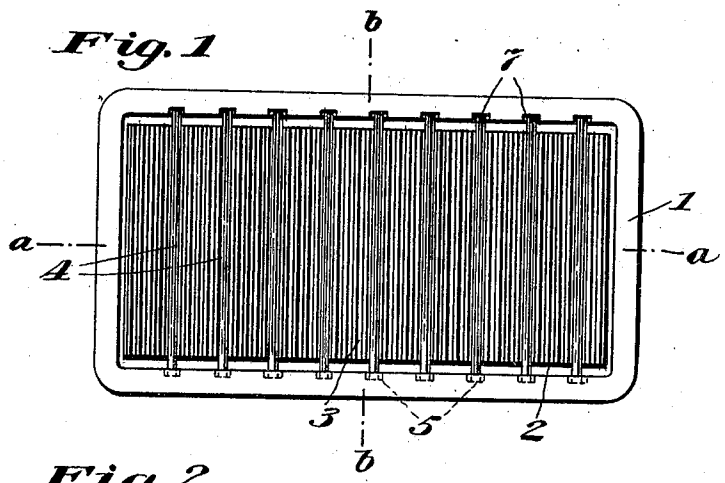


Fig. 2

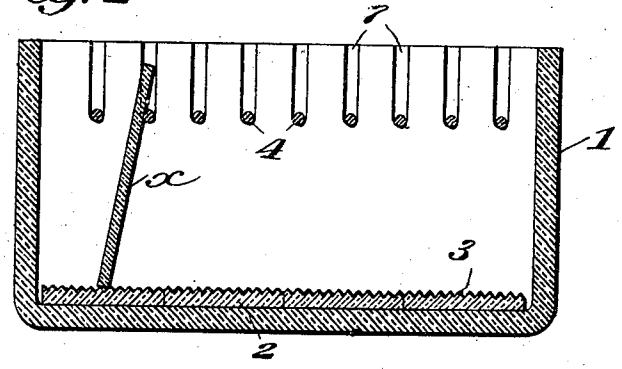


Fig. 3

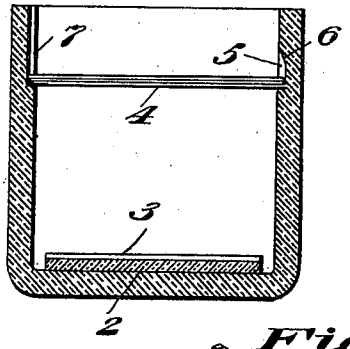


Fig. 4

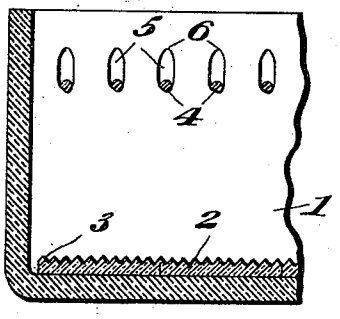
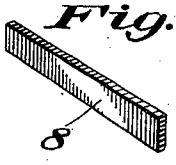


Fig. 5



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SAGGAR FOR PAVING-TILES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 685,051, dated October 22, 1901.

Application filed July 15, 1901. Serial No. 68,379. (No model.)

To all whom it may concern:

Be it known that we, CHARLES F. KOCH and AUGUST W. KOCH, citizens of the United States of America, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Saggars for Paving-Tiles or the Like, of which the following is a specification.

This invention relates to certain improvements in saggars such as are employed for holding or supporting tiles, pottery, bricks, and other articles formed from clay or other materials during the process of gloss or other desired firing; and the object of the invention is to provide a saggar of an improved and simplified construction and of a strong and durable nature, so as not to be liable to be broken during use, the means for supporting the articles in position for firing being of a novel and improved construction, so that the articles are more securely held in place and are not liable to drop or fall against each other.

The invention consists in part in a saggar having supports for the articles to be fired, the supports being extended continuously from side to side of the saggar, so as to give a secure and firm support for the articles to prevent them from dropping or falling against each other and becoming damaged.

The invention also contemplates certain novel features of the construction, combination, and arrangement of the several parts of the improved saggar, whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate our invention, Figure 1 is a plan view showing a saggar constructed according to our invention, and Fig. 2 is a vertical section taken lengthwise through the improved saggar in the plane indicated by the line *a a* in Fig. 1. Fig. 3 is a vertical section taken transversely through the improved saggar in the plane indicated by the line *b b* in Fig. 1. Fig. 4 is a partial section taken in the same plane as Fig. 2, but looking toward the opposite side of the saggar. Fig. 5 is a perspective detail view showing a modified form of supporting device adapted for use in the improved saggar.

In the views, 1 indicates the body portion of the saggar, herein shown as made in rectangular form and open at top to receive the articles to be held within the device, and 2 represents a saddle located in the bottom of the saggar and formed of flattened plates or tiles laid on the bottom of the device and secured in position in any manner, as by means of a coat of glaze, for example. The saddle has transverse serrations 3 extended across its upper surface and designed for engagement with the lower edges of the tiles or other articles when the same are in place in the saggar, as shown at *x* in Fig. 2. The serrations 3 by engagement with the lower edges of the articles hold said articles reared in proper position. The saggar is provided near its open top with a longitudinal series of transversely-extended supports for the tiles or other articles to be held in the saggar, each of said supports, as shown in Figs. 1, 2, 3, and 4, being formed of a rounded bar or rod 4, having its ends held in opposite side walls of the saggar-body 1 and having its central portion extended continuously across the interior space of the saggar to form a secure supporting means for holding the articles spaced apart from each other while being gloss-fired. The bars or rods 4 are detachably held at their ends in the opposite side walls of the saggar, so that in case any of such rods or bars are broken they may readily be replaced by new ones. One side wall of the saggar-body is formed with a longitudinal series of recesses or openings 5, forming seats, each adapted to receive one end of a bar or rod 4, and the other side wall of said body is provided with a longitudinal series of vertical grooves or notches 7, each extending up to the upper edge of the saggar, where it is open to permit one end of a bar or rod 4 to be dropped into the notch or groove when its opposite end has been entered in the corresponding recess or opening 5 at the opposite side of the saggar. The body portion of the saggar, together with the detachable rods or bars 4, will be, by preference, formed from fire-clay or similar refractory material, and the said rods or bars being detachably

held at their ends in opposite side walls of the saggar permit of being readily and conveniently replaced in case of breakage or other injury. When the rods or bars 4 are in position with one end of each in a recess or opening 5 at one wall of the saggar and the other end held in the groove or notch 7 at the other wall of the saggar, they will be securely and firmly held in place and will be prevented from dropping down in the saggar. Since said bars or rods are extended continuously across from side to side of the saggar, they are rendered much stronger and afford a much safer and more secure support for the tiles or other articles when in the saggar, so that such articles are prevented from falling against one another and becoming damaged during the firing process. The recesses 5 do not extend up and open at the upper edge of the saggar-body as do the grooves or notches 7, but are closed, as indicated at 6, at their upper ends, so as to afford still further security in the holding of the rods or bars in position in the saggar.

In Figs. 1 to 4 we have shown supports in the form of rounded or cylindrical rods or bars 4, with their ends detachably held in the walls of the saggar for supporting the articles during the gloss or glaze firing process; but it is evident that supports of other forms may also be employed. For example, in some cases supports in the form of flattened plates or parts 8, as indicated in Fig. 5, may be employed in lieu of said rods or bars 4.

The serrated upper surface 3 of the saddle 2 affords a secure holding means for supporting the lower edge of the articles reared against the supports 4, so that said articles are prevented from sliding or slipping along the bottom of the saggar and coming into contact with each other. The securing means for detachably holding the ends of the rods or bars 4 being formed in the walls of the saggar, as herein shown, it will be seen that no great strain is imposed upon said walls and the walls of the improved saggar are not materially weakened, either by being provided with such securing means or in the course of replacing the rods or bars when broken.

From the above description it will be seen that the improved saggar constructed in accordance with our invention is of an extremely simple and inexpensive nature and is especially well adapted for use in the firing of glazed articles, since the articles are supported in the saggar in a much more secure and firm manner than in other forms of saggar heretofore in use, and the supporting bars or rods may be readily replaced without danger of injury to the body of the saggar in case of breakage of said bars or rods. It will also be evident from the above description that the improved saggar is capable of some modification without material departure from the principles and spirit of our invention, and for this reason we do not wish to be understood as limiting ourselves to the precise form and arrangement of the several parts herein shown in carrying out our invention in practice.

Having thus described our invention, we claim—

1. A saggar formed of a body portion open at its top for the removal of articles after firing and provided with means for supporting articles to be fired, said means consisting of parts extended in a horizontal series continuously across the interior of the saggar and held at their ends in opposite walls of the saggar, substantially as set forth.

2. A saggar formed of a body portion open at its top for the removal of articles after firing, and provided with means for supporting articles to be fired, said supporting means being extended in a horizontal series across the body portion and being detachably held to the walls of the saggar, substantially as set forth.

3. The combination of a saggar, a saddle formed with a roughened or serrated surface at the bottom of the saggar for engagement with the lower edges of articles reared in the saggar, and supporting means for said articles, said means consisting of parts extended continuously across the interior of the saggar and detachably held at their ends in opposite walls thereof, substantially as set forth.

4. A saggar consisting of a body portion open at its top for the removal of articles after firing and provided with means for supporting articles to be fired, said means consisting of parts extended in a horizontal series continuously across the interior of the saggar and having their ends detachably held to opposite walls of the saggar below the open top thereof, substantially as set forth.

5. The combination of a saggar provided with an open top and having opposite walls formed with openings below said open top and a horizontal series of rods or bars having their ends detachably held in said openings and having their central parts extended continuously across the interior of the saggar, substantially as set forth.

6. The combination of a saggar having opposite walls formed with openings, the openings on one side of the saggar being in the form of grooves or notches the ends of which are open at the upper edge of the saggar, and bars or rods having their ends detachably engaged in said openings and their central portions extended continuously across the interior of the saggar, substantially as set forth.

Signed at Cincinnati, Ohio, this 12th day of July, 1901.

CHARLES F. KOCH.
AUGUST W. KOCH.

Witnesses:
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W. S. BEYER.