H. C. EHRICK.

ADJUSTABLE BRICK OR TILE DIE.

APPLICATION FILED NOV. 17, 1913.

1,114,870. Patented Oct. 27, 1914.

Fig. 1.

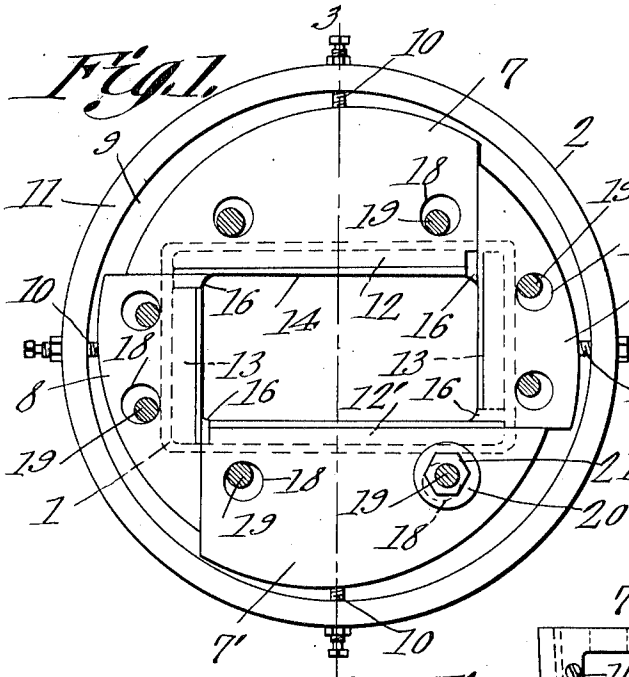


Fig. 3.

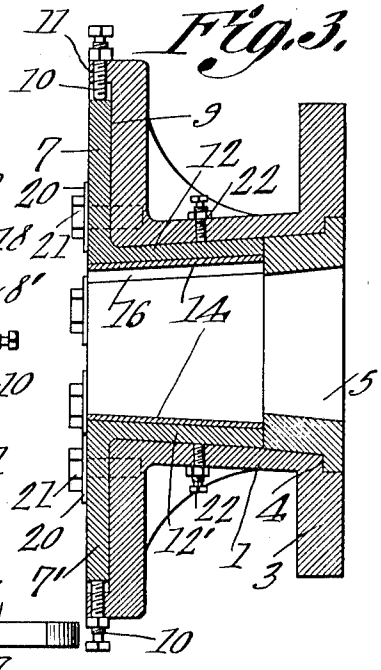


Fig. 6.

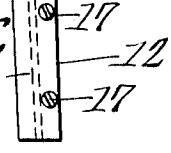


Fig. 2.

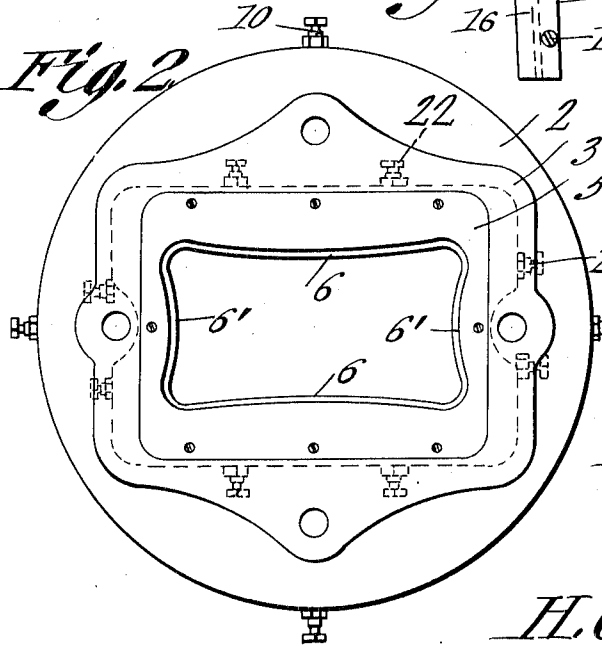


Fig. 4.

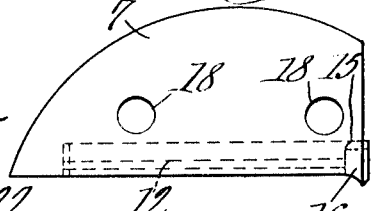
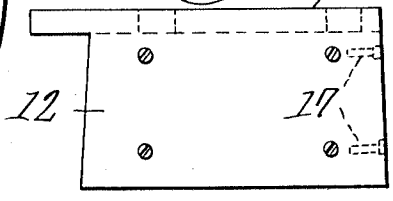


Fig. 5.



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UNITED STATES PATENT OFFICE.

HARRY C. EHRICK, OF BUCYRUS, OHIO.

ADJUSTABLE BRICK OR TILE DIE.

1,114,870. Specification of Letters Patent. Patented Oct. 27, 1914.

Application filed November 17, 1913. Serial No. 801,479.

To all whom it may concern:

Be it known that I, HARRY C. EHRICK, a citizen of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented a new and useful Adjustable Brick or Tile Die, of which the following is a specification.

The present invention relates to improvements in adjustable brick or tile dies, one object of the invention being the provision of a die, the members of which are adjustable to permit of the formation of various sized and shaped brick with the same die, thus providing a universally adjustable die adapted to be used with any brick or tile making machine and dispensing with the great number of costly dies now used and also the consequent removal and substitution of a different shaped die when it becomes necessary, the present structure being provided with a plurality of members that are readily adjustable without removal from the machine to form when desired bricks of different size and contour.

A further object of the present invention, is the provision of a die carrying member, in which there is disposed a plurality of adjustable parts which constitute a single die, the same being so constructed that the corners of the brick or tile may be made at right angles or rounded as may be desired and also so that the brick may be made narrow and longer, and in fact any desired dimension.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is an elevation of the outlet end of the die showing the adjusting taps in section to permit of the desired adjustment of the die members. Fig. 2 is a rear elevation of the die. Fig. 3 is a section taken on line 3—3 of Fig. 1. Figs. 4, 5 and 6 are detail views of one of the die members *per se*.

Referring to the drawings, the numeral 1 designates the casing or carrying portion of the die which in the present instance is in the form of a tapered sleeve having the front plate 2 and the rear plate 3, said rear plate 3 being countersunk as at 4 for the reception of the slicker or material guiding member 5, such member being secured by screws or other means to the flange 3 of the casing. As clearly illustrated in Fig. 2, the opening of the slicker 5 is provided with the curved walls 6 and 6′, although it is to be understood that the same may be made with straight walls as is the ordinary practice.

The adjustable die which is adapted to fit within and carried by the casing 1 and the flange or plate 2 thereof, consists of four plates 7, 7′, 8 and 8′, as clearly illustrated in Fig. 1. These plates are all constructed similarly, except that the plates 8—8′ are smaller than the plates 7—7′ and constitute the short end forming members of the die. These plates as shown, are adjustably mounted for the desired position within the recessed portion 9 of the flange or plate 2, and are locked in such desired adjustment against outward displacement by means of the adjusting screws 10 which are mounted in the flange 11 of the plate or flange 2, and as clearly illustrated in Figs. 1 and 3.

The plates 7—7′ are provided with the aprons 12—12′ respectively, while the plates 8—8′ are each provided with the depending aprons 13 respectively, such aprons constituting the die carrying walls and adapted to be disposed within the tapered portion of the casing 1, as clearly illustrated in Fig. 3.

Each one of the die members as clearly illustrated in Figs. 4, 5 and 6 is constructed similarly, being provided with lining 14 which is secured to the inner face of any one of the aprons 12—12′, or 13—13′, there being detachably attached as at 15 at the end of each one of the walls or aprons, the end forming member or liner 16, which is held removably in place by means of the fastening screws 17. These members may be made in any desired shape, so as to produce

the desired shaped corner upon the brick or tile formed by the respective die members, the same being readily removable to be interchanged when desired.

In order to permit of the desired adjustment of the die members to and from the center, to thus decrease or increase the size of the opening between the lining walls to regulate the size of brick or tile to be formed, each plate 7—7′ or 8—8′, is provided with two apertures or openings 18, through which are adapted to pass the locking bolts 19 made fast to the flange plate 2, the washers 20 and nuts 21 being provided to embrace the outer ends of such bolts and lock the members properly assembled upon the flange plate 2, while the screws 10 and 22 lock the said plates and die members against circumferential or outward movement. It is thus apparent that the die members may be readily adjusted and locked in such adjustment due to the peculiar shaped plates 7—7′ or 8—8′, and that with this construction of die, various sized and shaped bricks or tiles may be formed thus constituting a universal die in a single mechanism and one which may be readily adjusted without removing from the brick machine. It is also apparent, with this form of die, that the number of dies necessary usually to form various sized bricks are assembled in a single die and that therefore the cost of production is greatly reduced.

It is evident that the slicker 5 when properly positioned, will fit up tightly against the inner ends of the die forming aprons and liners carried by the plates 7—7′ and 8—8′, and thus will prevent the mud or brick forming clay from getting between the abutting surfaces of the said aprons and the adjacent portion of the carrying casing 1.

By making the plates 7—7′, 8—8′ with their outer edges curved as indicated, it is evident that the same may be moved outwardly to extreme position to engage the inner periphery of the rim 11, or moved inwardly at any desired point to decrease the size of the die for making smaller brick or tile. In this form of machine, the smaller sized building to the larger sized paving block may be formed, and ones with varying shaped corners.

What is claimed is:

1. A die, including a casing, having a plate at one end, a plurality of die sections mounted in the casing, coöperative means carried by the sections and the plate for permitting the adjustment of and the locking of the sections relatively to the casing, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

2. A die, including a casing, having a flanged plate at one end, a plurality of die sections mounted within the casing, each section being provided with a plate adapted to be placed co-extensive with the flanged plate of the casing, coöperative means carried by the plate of the sections and the flanged plate for permitting the adjustment of and the locking of the die sections relatively to the casing, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

3. A die, including a casing having a flanged plate at one end, a plurality of die sections, each of which is provided with a segmental plate at right angles to the die forming portion of the section and for seating against the flanged plate within the recess thereof, means carried by the flange of the flanged plate for engaging the segmental plate of each section and for holding the section against outward displacement, and coöperative means connected to the segmental plate and the flanged plate for locking the section against longitudinal movement.

4. A die, including a casing having a flanged plate at one end, a plurality of die sections, each of which is provided with a segmental plate at right angles to the die forming portion of the section and for seating against the flanged plate within the recess thereof, means carried by the flange of the flanged plate for engaging the segmental plate of each section for holding the sections against outward displacement, coöperative means connected to the segmental plate and the flanged plate for locking the sections against longitudinal movement, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

5. A die, including a casing having a plate at one end, a plurality of die sections mounted in the casing, coöperative means carried by the sections and the plate for permitting the adjustment of and the locking of the sections relatively to the casing, a liner plate detachably connected to the inner face of each section, and a corner forming liner detachably connected to each section.

6. A die, including a casing having a plate at one end, a plurality of die sections mounted in the casing, coöperative means carried by the sections and the plate for permitting the adjustment of and the locking of the sections relatively to the casing, a liner plate detachably connected to the inner face of each section, a corner forming

liner detachably connected to each section, and a slicker removably mounted at the opposite end of the casing to the die sections and sealing the space between the sections and the casing to prevent the intrusion of the brick forming material therebetween.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY C. EHRICK.

Witnesses:
T. C. KIESS.
E. W. CRALL.