B. PEARSON.

PLATEN.

APPLICATION FILED DEC. 7, 1915.

1,238,049. Patented Aug. 21, 1917.

FIG. 1.

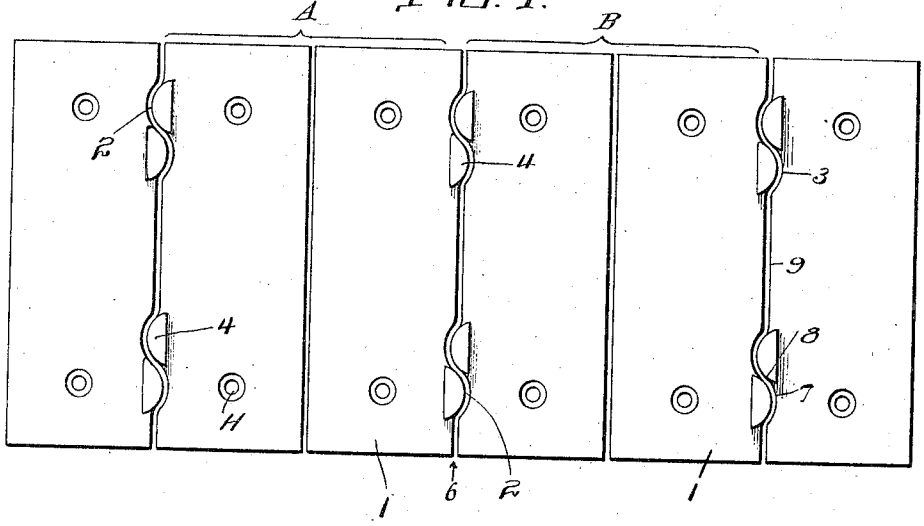


FIG. 2.

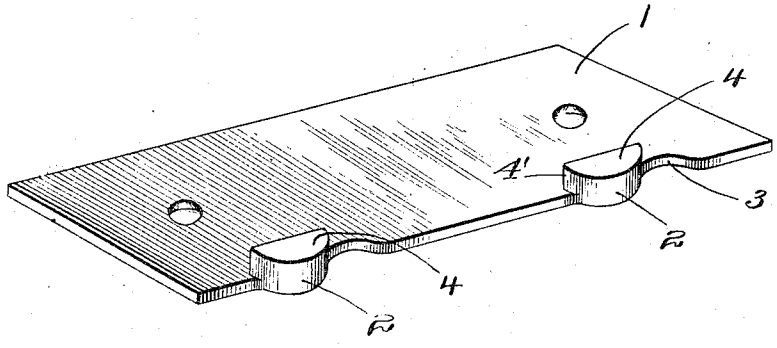
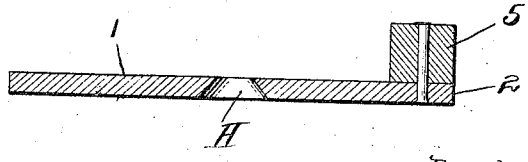


FIG. 3.



Witnesses.

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PLATEN.

1,238,049. Specification of Letters Patent. Patented Aug. 21, 1917.

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To all whom it may concern:

Be it known that I, BURLEY PEARSON, a citizen of the United States, residing at West Terre Haute, in the county of Vigo and State of Indiana, have invented new and useful Improvements in Platens, of which the following is a specification.

This invention relates to plastic block and earthenware apparatus, and more especially to reciprocating cutters; and the object of the same is to produce a platen made up of plates having irregular contiguous edges producing sinuous guides for the passage of the wires for cutting bricks, so as to provide the latter with ribs and grooves for purposes well known in the art.

The invention consists in the specific shaping of the edges of the plates so as to avoid sharp angles in said guides and the consequent abrupt deflection of the wires from their general line of progress, thereby minimizing the wear on the edges of the plates and on the wires themselves and increasing the effective life of parts.

The following specification sets forth the details of invention as applied to the uppermost of a pair of platens between which the clay is fed as usual, and in the drawings which show only the platen.

Figure 1 is a plan view of several plates made up of sections, Fig. 2 is a perspective view of one section, and Fig. 3 is a sectional view illustrating a slight modification.

As a whole, the platen herewith illustrated is made up of a number of plates whereof one is designated A and another B in Fig. 1, and each plate is herewith shown as made in two sections 1 as seen in Fig. 2. For the purpose of the present invention, it is immaterial whether the plate is in one piece or section, or in several, but in any event each plate of the lower platen will be mounted on a suitable bed or support, whereas each plate of the upper platen will be mounted beneath and carried by a suitable support which is preferably hinged so that this platen may be raised as well understood in the art. For attaching the plates or sections to their supports, they are shown as provided with holes H through which suitable fastening devices such as screws may be passed. These details, as well as the materials of parts, the size and configuration of each plate, and the number of plates in a platen, are features of the brick machine rather than the cutter. The cutting of the clay is performed by passing wires transversely through guides in both platens and across the clay stock, and I have not thought it necessary to illustrate the wires nor the means for holding and moving them. To produce guides for these wires during their transverse movements, the several plates in each platen are spaced slightly along their contiguous edges and the wires travel in said spaces. To produce ribs and grooves in the opposite faces of the bricks being cut, the contiguous edges are made irregular as by forming a projection on one edge extending into a depression in the opposite edge. The wire in its passage is deflected and caused to travel around such depression with the result that both the edge and the wire are worn, and the parts need replacing quite often. Heretofore, anti-friction rollers have been employed on the projections and the wire traveled over the outer sides of said rollers through a path necessarily part of a circle. I find that this expedient is advantageous in several ways but objectionable in others, and the principal objection is that where the traveling wire strikes on the side of the roller it is deflected abruptly from a straight line rather than gently. Again, I find it desirable to produce bricks having an ogee irregularity on each side which would be produced by a projection and an adjacent depression in each edge; and in order to cause the wire to travel through the sinuous path required to produce such an irregularity, and yet not make abrupt turns or angles throughout its path, I have adopted a construction best seen in the accompanying drawings.

As shown herewith, each platen plate is made up of two sections 1 whose inner edges may or may not be spaced from each other as preferred, or as above stated, the sections could be part of a single plate, and we will therefore disregard this detail. The several plates are disposed edge to edge throughout the length of either platen, and attached to their respective supports in the manner suggested, and the cutting wires (not shown) pass through the spaces between the contiguous edges while the platens are engaged with the clay stock. At a suitable point on each side edge of each plate I provide the same with an outcurved projection 2, and next adjacent the projection I provide each with an incurved depression 3. These irregularities are shown in the drawings as duplicated at

each edge, so that every brick will be provided with two irregularities on each face, or four irregularities in all. However, the number of irregularities and their exact disposition will depend upon the wishes of the manufacturer, and it is obvious that the platen plates may be removed from their supports and replaced by others when bricks having differently disposed ribs and grooves are to be produced. The working face of each projection is arcuate, being by preference about ninety degrees of a circle as shown by the dotted diagram at the left of Fig. 1, and the working face of the opposite depression 3 will of course correspond. The working faces of the next adjacent depression and projection are similar parts of the same circle but differently disposed. It follows that the channel or guide 6 is straight where it passes between the straight portions of the contiguous edges, is arched or curved as at 7 where it passes around one depression, is oblique to the straight portion 6 where it passes between the two arches 7 at the midlength of this irregularity as indicated at 8, and is then again arched and finally straight throughout the remainder of its length as at 9 unless interrupted by another irregularity near the other end of the plate as shown in the drawings.

With this construction a wire entering the guide as shown by the arrow at 6 moves first straight forward, then is deflected through a gentle obtuse angle to the right and travels over the first arch 7, then moves through the oblique portion 8 and into and over the second arch 7 at the left, whence it passes through a second gentle angle from this arch along the straight course 9; and throughout this movement it has encountered no abrupt angles where its course was suddenly changed, and therefore excessive wear on the edges of the plate and on the wire itself is avoided, and an ogee irregularity has been produced on the side of the stock.

In order to lengthen the life of the parts still further, I preferably provide each plate on its outer side (which is that face removed from the clay stock) with a reinforcing element, the same being shown in Fig. 2 as a lug 4 cast integral with the projection 2, and in Fig. 3 as a separate element or block 5 preferably riveted upon such projection. In any event, however, the reinforce has its outer wall coincident with the outer wall or wear face of said projection. As the latter is arcuate, the outer wall of the projection must follow the same contour, although of course it could be extended back onto the plate beyond the straight edge as seen at 4′ in Fig. 2—in fact the shape of other parts of this element than its wear face is immaterial. No reinforcing element is necessary in conjunction with a depression 3, because the projection and reinforce on the opposite plate extend into this depression and will receive the impact and wear of the moving wire.

What is claimed as new is:—

1. In an apparatus for cutting brick clay, a pair of plates spaced at their contiguous edges to produce a guide for a cutting wire, the edge of each plate having an outcurved projection and an adjacent incurved depression whose walls merge into each other on a line oblique to the general length of said edge, said irregularities mating with complementary irregularities on the contiguous plate and producing an ogee curve within the length of said guide.

2. A platen for the purpose set forth comprising a series of plates flat on their inner sides and spaced at their contiguous edges to produce a guide for a cutting wire, every plate having at each edge irregularities consisting of adjacent projections and depressions whose walls merge into each other on lines oblique to the general length of said edge, said irregularities mating with corresponding irregularities on contiguous plates, and reinforcing elements upon the outer sides of the plates overlying the projections thereof and having walls coincident with the walls of said projections.

In testimony whereof I affix my signature in presence of two witnesses.

BURLEY PEARSON.

Witnesses:
ROBERT BENNETT,
O. L. PEARSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."