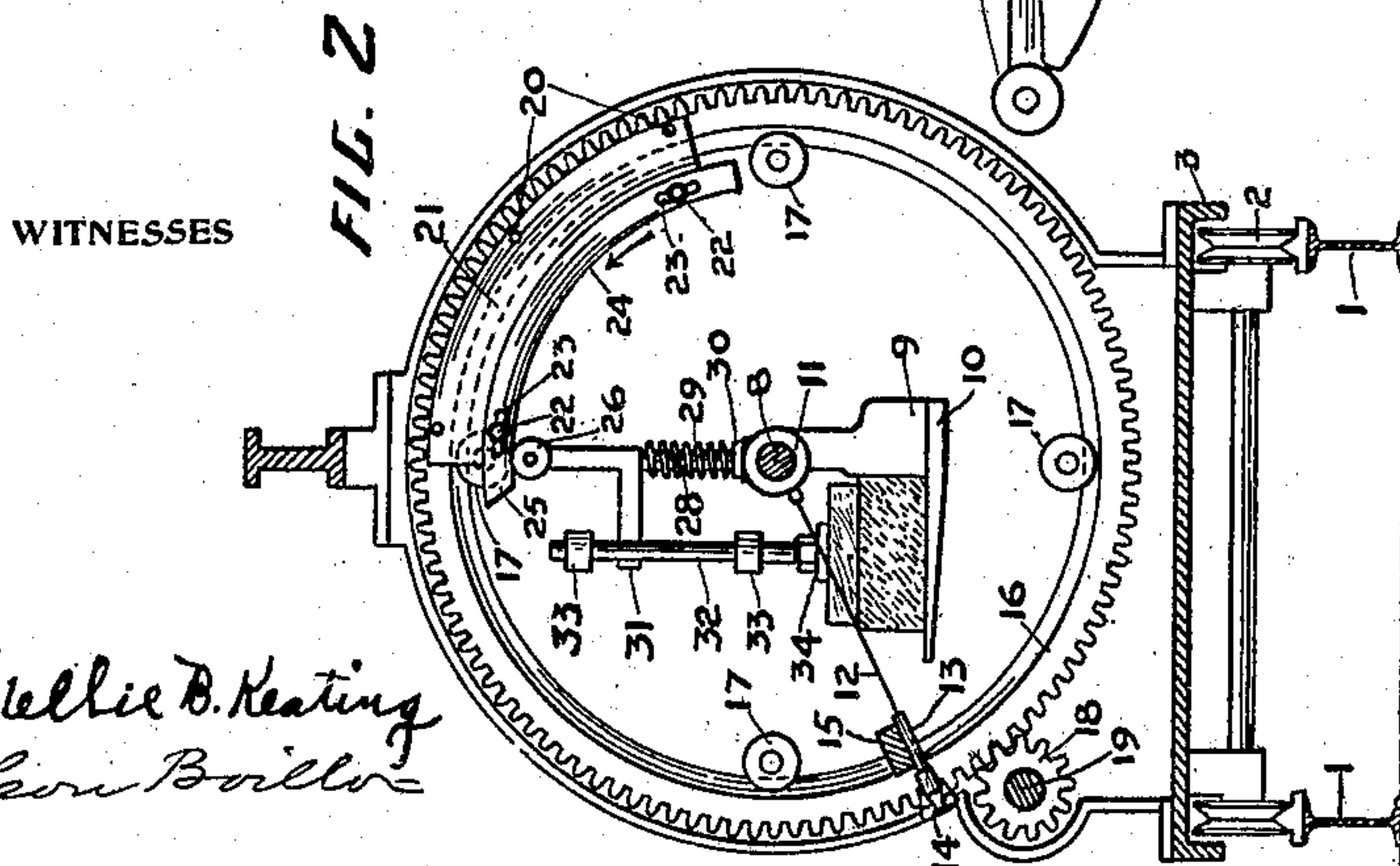
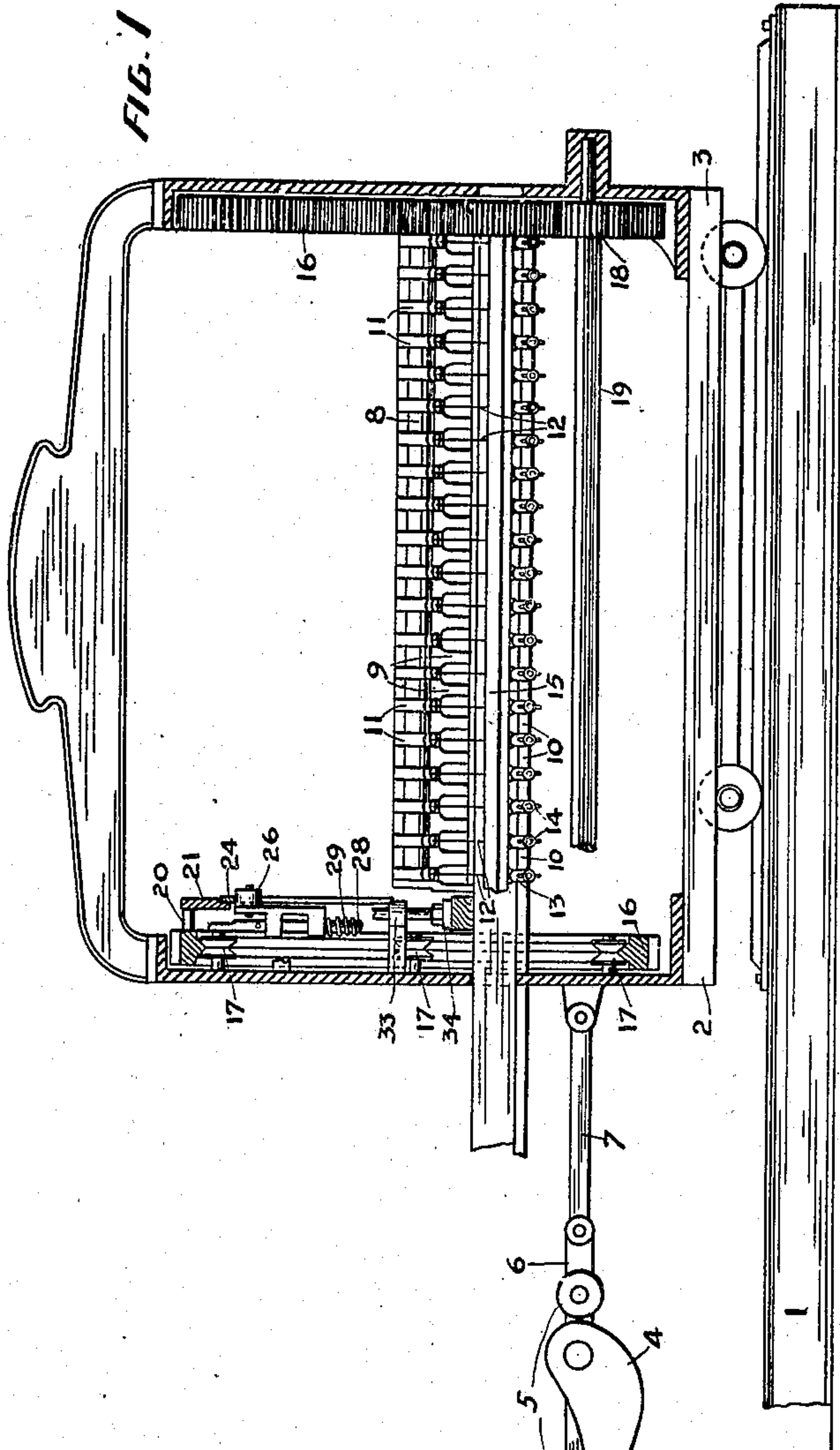


J. S. SMITH.
CUTTING TABLE FOR BRICKS AND TILES.
APPLICATION FILED DEC. 29, 1908.

924,113.

Patented June 8, 1909.



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UNITED STATES PATENT OFFICE.

JOHN S. SMITH, OF NILES, CALIFORNIA.

CUTTING-TABLE FOR BRICKS AND TILES.

No. 924,113.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed December 29, 1908. Serial No. 469,868.

To all whom it may concern:

Be it known that I, JOHN S. SMITH, a citizen of the United States, residing at Niles, in the county of Alameda and State of California, have invented new and useful Improvements in Cutting-Tables for Bricks and Tiles, of which the following is a specification.

This invention relates to improvements in cutting tables for bricks and tiles. In apparatus of this character difficulty has heretofore been experienced in making a cut exactly transverse to the bar of clay, due to the fact that there is a liability of a movement of said bar of clay transversely to the cutting plane the effect of which movement would be to produce a slightly sloping cut through said bar.

My invention has for its object to prevent the possibility of any such transverse movement, and thereby to insure always an exactly perpendicular cut.

In the accompanying drawing, Figure 1 is a longitudinal section of the apparatus; Fig. 2 is a transverse section.

Referring to the drawing, 1 indicates a two-rail track upon which travels a car 2 having a suitable frame 3. Said car is given a reciprocating motion by means of a cam 4 which works between rollers 5 on a longitudinally moving bar 6, which is connected by a link 7 with the frame.

Inasmuch as the present invention is confined to the specific improvement whereby the bar of clay is firmly held stationary while the wires are making the transverse cut, it is unnecessary to illustrate herein in further detail the mechanism for advancing the bar of clay with the table and for subsequently moving the table under the bar of clay so advanced.

The ends of the frame 3 are circular in form, and are closed except for the openings through which the bar of clay enters at one end and the severed portions of clay pass out at the other. Between said closed ends extends a central stationary shaft 8, upon which are rigidly suspended hangers 9, spaced from each other, to the lower ends of which are secured platens 10, the adjacent edges of which platens are spaced only sufficient to permit the cutting wires hereinafter described, to pass therebetween. Upon said stationary shaft are loosely mounted, between the hangers, collars 11 to which are secured the inner ends of the cutting wires 12.

The outer ends of said wires pass through short tubes 13 and are tightened by means of screws 14, said tubes being secured to a bar 15 which extends longitudinally of the frame, its ends being attached to two gear wheels 16. Said gear wheels, the cutting wires, the bar which connects said wires to the gear wheels, and the parts which revolve therewith form a cutting reel, as commonly used in the art. Each gear wheel is wholly supported by means of a suitable number, four being here shown, of rollers 17 having V-shaped peripheries in which travels the beveled inner edge of the gear wheel, and each gear wheel meshes with a pinion 18, said pinions being mounted upon a shaft 19, extending longitudinally in the frame of the apparatus, and, in the manner well known in the art, driven in unison with the means for moving the frame. By means of the rotation of said pinions 18, said gear wheels are also rotated about the axis of the frame, and thereby the cutting wires are caused to revolve about said axis, said wires passing through the bar of clay, and also between the platens suspended from the stationary shaft, making a complete cut in about 70° of the complete revolution of the gear wheels and of the cutting wires.

Secured by posts 20 to the gear wheel 16 at the rear end of the frame is a segmental plate 21, upon which is adjustably mounted, by means of screws 22 in slots 23, a segmental cam 24 having a sloping front end. As the gear wheels travel in the direction of the arrow, the advancing end of said cam impinges against a roller 26 carried on the upper end of a slide piece inward, or toward the axis of the frame, against the outward pressure of a coiled spring 29 interposed between the inner support 30 for the rod 28, and the end of said slide piece. The inner end of said slide piece is formed with an arm 31 extending over the path of the bar of clay, and connected with a rod 32 slidable in bearings 33 secured to the adjacent end of the frame. The lower end of said rod is connected to a presser foot 34 which hangs immediately over the end of the slideway or path of the bar of clay adjacent to the first of the series of platens.

From the above description, the operation of the apparatus will be readily understood. As the gear wheels rotate, and just before the cutting wires arrive at the position at which they enter and begin to sever the bar

of clay, the presser foot, by means of said cam 24 acting upon said roller 26, is pressed down upon the bar of clay and holds it firmly down upon the slideway, while the cutting wires are passing through the part of the bar in advance of the presser foot. Said presser foot is thus held down by means of the segmental cam until the cutting wires have entirely passed through the bar of clay, severing it into the proper portions or blocks, and, when this operation has been completed, the roller passes the rear end of the segment cam, and the spring thereupon immediately raises the presser foot, so that the succeeding portion of the bar of clay is immediately thereupon allowed to advance over the platens, pushing ahead of it the previously cut portions of the bar, in the manner well known in the art. This advance continues until the cutting wires have again approached to the proper position for making the cut, and then the cam 24 will again have arrived at the position when it presses inward the roller to depress the presser foot upon the bar of clay, firmly holding down the same while another cut is made in the same manner as before.

I claim:—

1. In combination with a support for a bar of clay, a cutting reel comprising cutting wires, means for rotating said reel, a presser foot for holding a bar of clay immovably on said support, means for so actuating said presser foot, and means arranged to be rotated with the reel for operating said actuating means, substantially as described.

2. In combination with a support for a bar of clay, a cutting reel comprising cutting wires, means for rotating said reel, a presser foot for holding a bar of clay immovably on said support, means for so actuating said presser foot, and a cam secured to said reel

and arranged to move said presser foot into its operative position immediately before the cutting wires enter the bar of clay, and to hold the same in operative position while said cutting wires pass through said bar, substantially as described.

3. In combination with a support for a bar of clay, a cutting reel comprising cutting wires, means for rotating said reel, a presser foot for holding a bar of clay immovably on said support, means for so actuating said presser foot, a cam secured to said reel and arranged to move said presser foot into its operative position immediately before the cutting wires enter the bar of clay, and to hold the same in operative position while said cutting wires pass through said bar, and means for adjusting said cam as to its angular position, substantially as described.

4. In an apparatus of the character described, the combination of a car, having a frame for supporting a cutting reel, a cutting reel in said frame having cutting wires, means for rotating said cutting reel, a longitudinal support for a bar of clay within said frame, a presser foot adapted to press said bar upon said support, a stem for said presser foot, suitable guiding means for said stem, and means carried by said cutting reel and arranged to actuate said stem to press said presser foot toward said support during the passage of the cutting wires through a given part of their revolution, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN S. SMITH.

Witnesses:

FRANCIS M. WRIGHT,
D. B. RICHARDS.