

(No Model.)

2 Sheets—Sheet 1.

C. T. FITCH & A. SCHANTZ.
BRICK CUTTING MACHINE.

No. 488,883.

Patented Dec. 27, 1892.

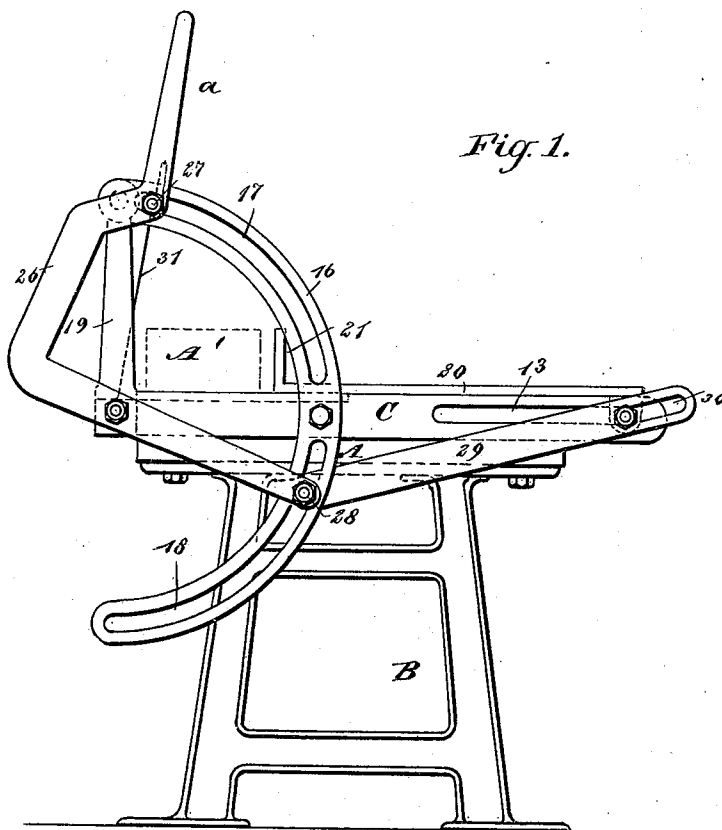


Fig. 1.

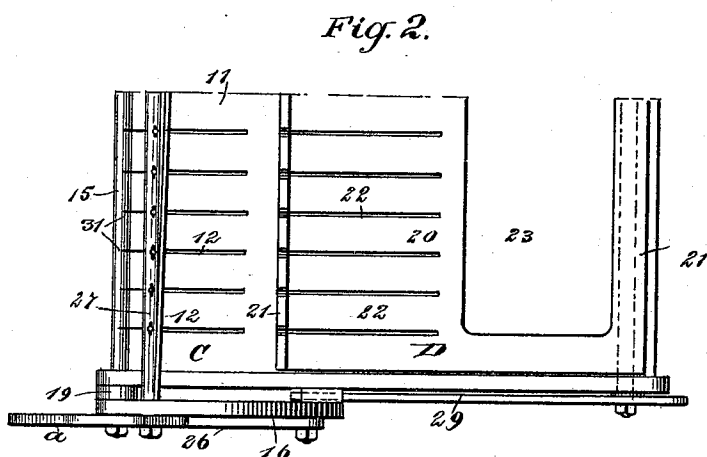


Fig. 2.

WITNESSES:

J. H. Criswell.
C. Sedgwick

INVENTORS

C. T. Fitch
BY A. Schantz
Munn & Co.
ATTORNEYS.

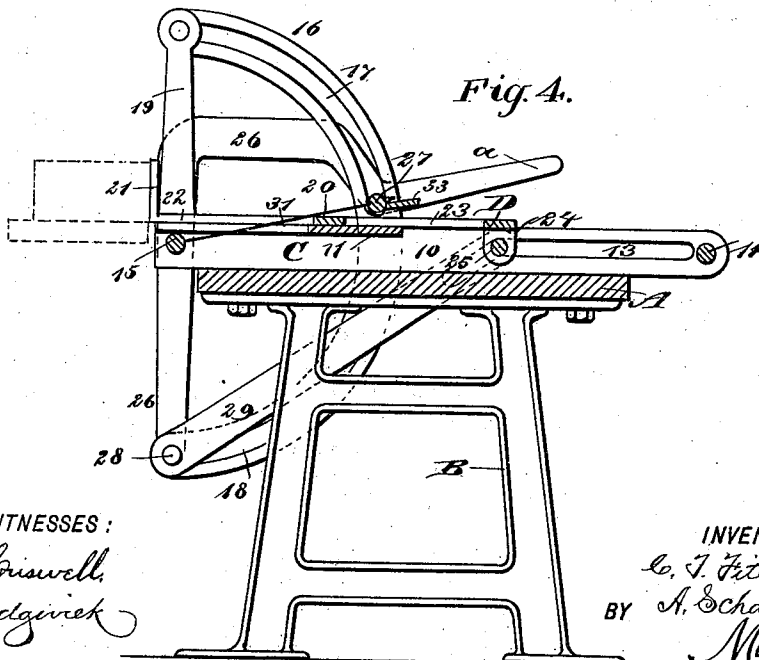
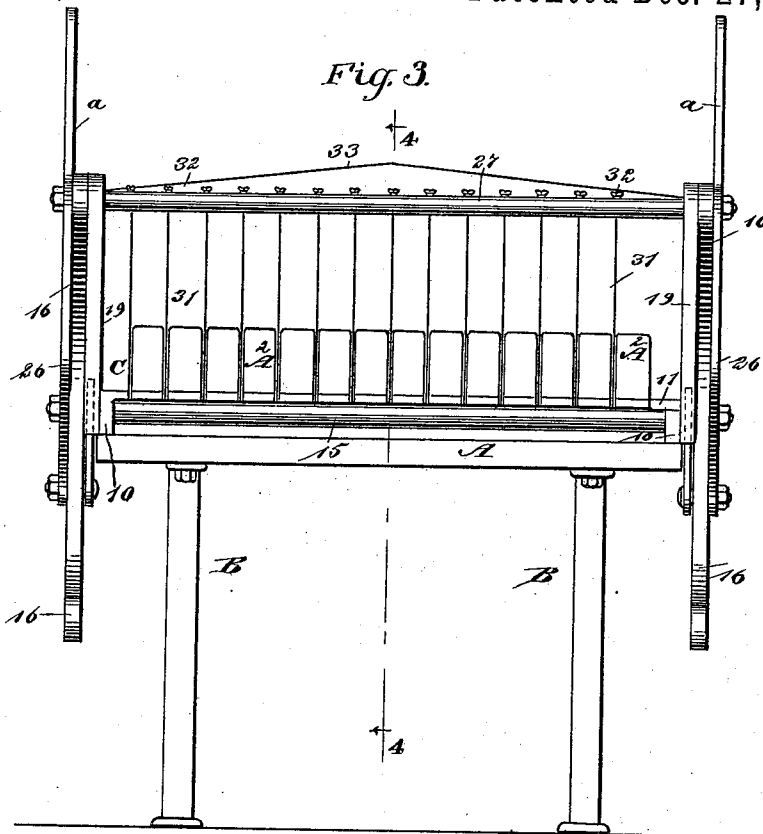
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2 Sheets—Sheet 2.

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WITNESSES :
J. A. Griswell
C. Sedgwick

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BY A. Schantz
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES T. FITCH AND ANDREW SCHANTZ, OF PERTH AMBOY,
NEW JERSEY.

BRICK-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 488,883, dated December 27, 1892.

Application filed April 22, 1892. Serial No. 430,196. (No model.)

To all whom it may concern:

Be it known that we, CHARLES T. FITCH and ANDREW SCHANTZ, of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Brick-Cutting Machines, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in brick-cutting machines, and has for its object to simplify the construction of such machines and to render the machine at the same time exceedingly effective in operation and capable of being conveniently and expeditiously manipulated.

Another object of the invention is to construct the machine in such manner that as the wires are presented to the mass of clay to cut said mass into blocks to be baked as bricks, the blocks as soon as cut will be automatically pressed from the cutters and delivered to a table, from whence they may be removed for drying or other purposes.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved machine; Fig. 2 is a plan view of one-half of the machine; Fig. 3 is a front elevation; and Fig. 4 is a vertical longitudinal section, taken practically on the line 4—4 of Fig. 3.

In carrying out the invention a base plate A, is supported in a horizontal position by legs B of any suitable construction. This base plate is adapted as a support for a table C. This table is bolted or otherwise attached to the upper surface of the base plate A, and consists of parallel side pieces 10, extending beyond the front and rear edges of the base plate, and connected by a horizontal platform or plate 11, the latter extending from the front edge of the table to a point at or near

its center, at which point it terminates. The platform section 11 of the table is provided with a series of slots 12, extending from its front edge some distance rearward, and these slots correspond in number to the number of cutters employed in the construction of the machine. Each side piece or side section of the table C, has produced at its rear end a longitudinal slot 13, and the side pieces of the table are also connected at the rear by a brace bar 14, and at the front by a shaft or spindle 15, the latter being journaled in the sides of the table.

At each side of the table near its front a semi-circular or segmental plate 16, is secured, these segmental plates being attached to the table at their central sections; and at each side of the center in each plate a slot is produced, conforming to the shape of the plate, and said slots are designated respectively as 17 and 18. In order that the segmental plates may be rendered as stiff and solid as possible, at the upper end of each plate an arm 19, is attached, and the lower ends of these arms are fastened in any approved manner to or upon the table C.

In connection with the table C of the machine an auxiliary table D, is used, which we term a feed table. This latter, or feed table, comprises a horizontal body section 20, and a flanged section 21, located at the forward end of the body section and extending from side to side. The feed table is provided with a series of longitudinal slots 22, corresponding in number to and registering with the slots 12 of the main table. The feed table is of less length than the main table, and in order that it may be made as light as possible the rear portion thereof is provided with quite a large opening 23. The rear portion of the feed table at each side is provided with a downwardly-extending lug 24, and these lugs pass downward over the sides of the main table, while both lugs 24, are connected by a pin 25, which passes through the slots 13 in the main table, the pin or rod being adapted to have sliding movement in said slots.

An angle lever 26, is located at each side of

the machine, the lever being fulcrumed at the forward or end portion of the table, the fulcrum point of the lever being at one side of the center of its lower or horizontal member.

5 The upper or vertical member of each lever extends upward beyond the upper section of the upper segmental plate 16, against which it bears, these portions of the levers above the plates serving as handles, and being designated by the reference letter *a*. The vertical
10 members of the levers 26, are connected by a rod 27. This rod is secured at its ends to the levers, and passes through the slots 17 in the upper sections of the semi-circular or segmental plates. The lower extremities of the
15 levers have movement in the lower slots of the semi-circular or segmental plates, a pin 28, being passed through this end portion of each lever and through the lower slots in the segmental plates; and each pin 28, is pivotally connected with the forward end of a
20 link 29, the links receiving movement from the lever, and the rear end of each link is provided with a slot 30, by means of which slot the feed table is not moved forward until the knives
25 have commenced their rearward movement.

The cutters consist of wires 31, and the upper bar 27, connecting the levers, forms the upper head of the cutting mechanism, while
30 the shaft 15, at the forward portion of the machine, constitutes the lower head, and the wires have one end secured in the lower head or shaft 15, and the other end of each wire is passed through the upper head or bar 27, and at their upper ends are provided with any
35 suitable form of tension mechanism 32. The rod or upper head 27, is usually strengthened by means of a plate 33, secured to it and extending practically from end to end.

40 In the operation of the machine, when the handles of the levers are in their upper position, shown in Figs. 1 2 and 3, the cutting wires are more or less perpendicular, and the links 29, will have been carried back a sufficient distance to bring the feed table to the
45 position shown in Figs. 1 and 2, in which the flanged section of the table is some distance back of the front edge of the main table. The clay, suitably formed to be operated upon the
50 and designated as *A'* in Fig. 1, is placed transversely upon the table in a solid piece back of the wires and in front of the flange of the table. A lever handle is then grasped and the handle is drawn downward and rearward, which action will impart such movement to the levers 26 that the wires will be
55 carried down by the levers in position to cut through the mass of clay, producing a cut both clean and with unbroken edges, forming a series of blocks *A*², as shown in Fig. 3, of a size suitable for a brick; and as the wires cut
60 through the clay, the links 29 will be drawn gradually forward, their forward movement corresponding practically to the rearward and downward movement of the cutters, and

the consequence is that as the clay is cut into brick blocks or lengths the feed table is moved forward, pressing the clay against the wires, and by the time that the wires have reached their lower position, shown in Fig. 4, the cut
70 clay will have been fed by the feed table past the front of the machine and delivered upon a carrier or support of any description located in front of the machine, as illustrated in dotted lines, Fig. 4.

75 Having thus described our invention, we claim as new and desire to secure by Letters Patent,—

1. In a machine for cutting brick, the combination, with a main table, and levers fulcrumed at the sides of the table, of a feed table held to slide upon the main table, a connection between the levers and the feed table, and a cutter comprising a head connected with the levers, a shaft journaled in the
80 frame and wires stretched between the head and the shaft, substantially as shown and described, whereby the cutters are actuated directly from the levers and the feed table indirectly, or through the medium of its connection with the levers, substantially as and for the purpose specified.

2. In a brick cutting machine, the combination, with a table, angle levers fulcrumed upon the table, one at each side, segmental plates or bars secured to the table back of the levers, said plates or bars being provided with slots, one at each side of the center, and a cutter, consisting of a head bar passed through the upper slots of the segmental
95 plate or bar and connected with the levers near their upper ends, a shaft journaled in the frame, and wires secured to the shaft and to the upper head, of a feed table held to slide upon the main table, a link connection between the feed table and the lower ends of the levers, and pins connecting the levers and the links, and passing through the lower slots in the segmental plates or bars, substantially as described.

3. In a brick cutting machine, the combination, with the levers, and cutters actuated by the levers, of a feed table, and a connection between the feed table and the levers, whereby when the cutters are moved in one
105 direction the feed table is simultaneously moved in an opposite direction, as and for the purpose specified.

4. In a brick cutting machine, the combination, with a table, angle levers fulcrumed thereon, and cutting devices carried by and attached to the levers, of a feed table, and a link connection between the feed table and the levers, substantially as shown and described, whereby as the cutters are moved
120 rearward the feed table is carried forward, delivering the material to be acted upon to the cutters, as and for the purpose set forth.

5. In a machine for cutting bricks, the combination, with the table, an angle lever
125 130

fulcrumed upon the table, and a cutting device, one portion of which is pivoted upon the table, the other portion being connected with the upper portion of the lever, of a feed
5 table held to slide upon the main table, the feed table being provided with a series of slots to receive the cutters, and a link connection between the feed table and the lower

end of the lever, as and for the purpose specified.

CHARLES T. FITCH.
ANDREW SCHANTZ.

Witnesses:

R. H. BARNES,
J. F. TEN BROECK, Jr.