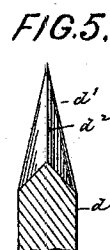
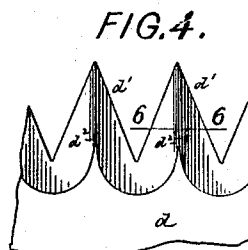
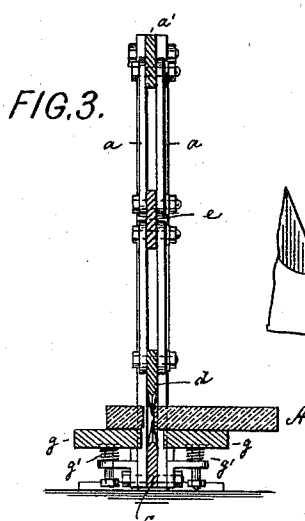
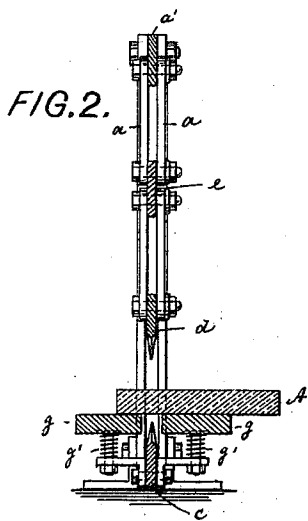
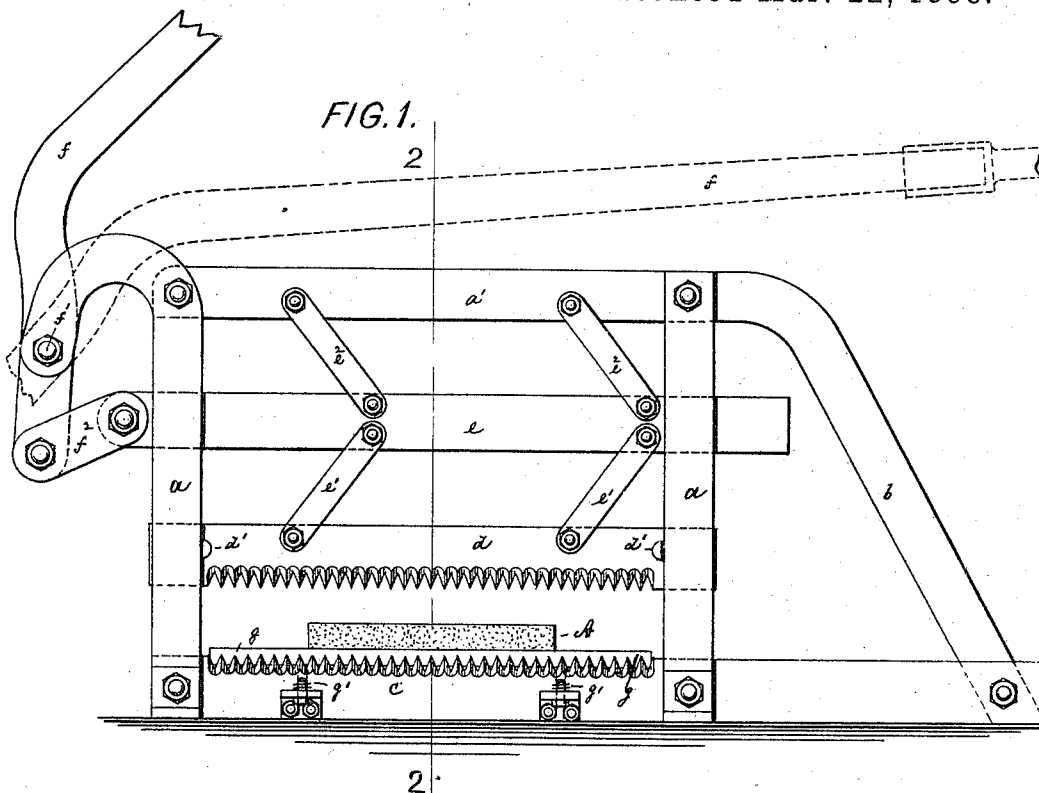


(No Model.)

S. G. BRINKMAN.
TILE CUTTING MACHINE.

No. 600,856.

Patented Mar. 22, 1898.



Witnesses:

John Becker.
William Schulz.

Inventor:

Sebastian G. Brinkman
by his attorneys
Roeder & Briesen

UNITED STATES PATENT OFFICE.

SEBASTIAN G. BRINKMAN, OF NEW YORK, N. Y.

TILE-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 600,856, dated March 22, 1898.

Application filed June 10, 1897. Serial No. 640,134. (No model.)

To all whom it may concern:

Be it known that I, SEBASTIAN G. BRINKMAN, of New York city, county and State of New York, have invented an Improved Tile-Cutting Machine, of which the following is a specification.

This invention relates to a machine for subdividing tiles into smaller sections, the invention being more particularly designed to fit the tiles for fireproof partitions.

By my invention I can cut the tiles in a quick and accurate manner without producing chips, breakage, or waste.

In the accompanying drawings, Figure 1 is a side elevation of my improved tile-cutting machine, the front half of the bed-plate being removed to expose the lower cutter. Fig. 2 is a vertical cross-section on line 2 2, Fig. 1, showing the upper cutter raised; Fig. 3, a similar section with the upper cutter lowered; Fig. 4, a detail face view of portion of one of the cutting-blades; Fig. 5, an end view of one of the teeth; and Fig. 6, a cross-section on line 6 6, Fig. 4.

My machine consists, essentially, of a frame carrying a pair of cutting-blades, of which one is movable, and provided with teeth of such a construction that they will wedge into and divide the tile without chipping or breaking it.

a a represent the split standards of the machine, braced, as at *b*, and provided with a fixed lower blade *c* and an upper vertically-movable blade *d*, though of course the lower blade may also be made movable.

In order to impart a powerful stroke to the movable blade, I prefer to employ the construction illustrated, and in which such blade is attached to a slide *e* by toggles *e'*, while the slide is in turn attached to a beam *a'* of the frame by toggles *e''*. The slide *e* is actuated by hand-lever *f*, fulcrumed to the machine-frame at *f'* and connected to the slide by means of a link *f''*. If the hand-lever is depressed, the slide will be drawn outward and will simultaneously descend to lower the blade *d*, which is guided in a rectilinear direction by means of abutments *d'*, gliding along the standards *a*. A raising of the hand-lever will cause a corresponding raising of the slide and blade *d*, as will be readily understood.

The lower blade *c* is flanked by the two sec-

tions *g g* of a divided bed, each section being spring-supported or cushioned, as at *g'*. Normally the face of the bed projects slightly above the cutting edge of blade *c*, Fig. 2, so as to form a firm support for the tile *A* to be cut; but when such tile is engaged by the upper blade and is thus depressed the bed will descend beneath the cutting edge of the lower blade, so that both blades may simultaneously operate upon the tile, Fig. 3.

The teeth *d'* of the serrated cutting-blades are so shaped that they operate as wedges and exert a lateral thrust within the grooves cut. To this effect each tooth increases in thickness not only from point to root, but also transversely from both of its inclined cutting edges toward the center, which I make in the form of a rounded corner *d''*, Fig. 6.

While the cutting edges of the blade are in a plane with the body of the blade, the cleaving edges *d''* are at right angles thereto, so that the teeth are diamond-shaped in cross-section. The edges *d''* extend to the roots of the teeth, while the adjacent inclined surfaces of the teeth are joined around the points of the reëntrant angles of the blade, as shown, to form a beveled clearing-surface.

Cutting-blades of this construction need only to enter the tile for a comparatively short distance, when by means of the lateral wedge-like action produced within the grooves cut the core of the tile will be split in a line between the grooves to produce a clean and very reliable cut.

By my machine I am enabled to form, more especially, the odd pieces of tiling used in building up a fireproof partition in a quick, accurate, and convenient manner and without producing waste or chips or running the danger of destroying the tiles entirely, as frequently occurs by hand-splitting.

The fireproof earthenware baked tiles which I contemplate to cut are of a very tenacious nature, and I have found that by the peculiar construction of cutting and cleaving tooth described a quick, clean, and accurate division may be effected.

What I claim is—

1. A cutting-blade having a serrated edge formed of pointed teeth diamond-shaped in cross-section, and presenting cutting edges in line with the body of the blade, and cleav-

ing edges at right angles thereto, said cleav-
ing edges extending to the bases of the teeth,
the adjacent surfaces of the teeth being joined
to form a beveled clearing-surface, substan-
5 tially as specified.

2. A tile-cutting machine composed of a
frame, a lower and upper blade having wedge-
shaped teeth, a slide, means for actuating the

slide, toggles that connect the slide to the up-
per blade and to the frame, and of a divided 10
spring-supported bed embracing the lower
blade, substantially as specified.

SEBASTIAN G. BRINKMAN.

Witnesses:

WILLIAM SCHULZ,
F. V. BRIESEN.