

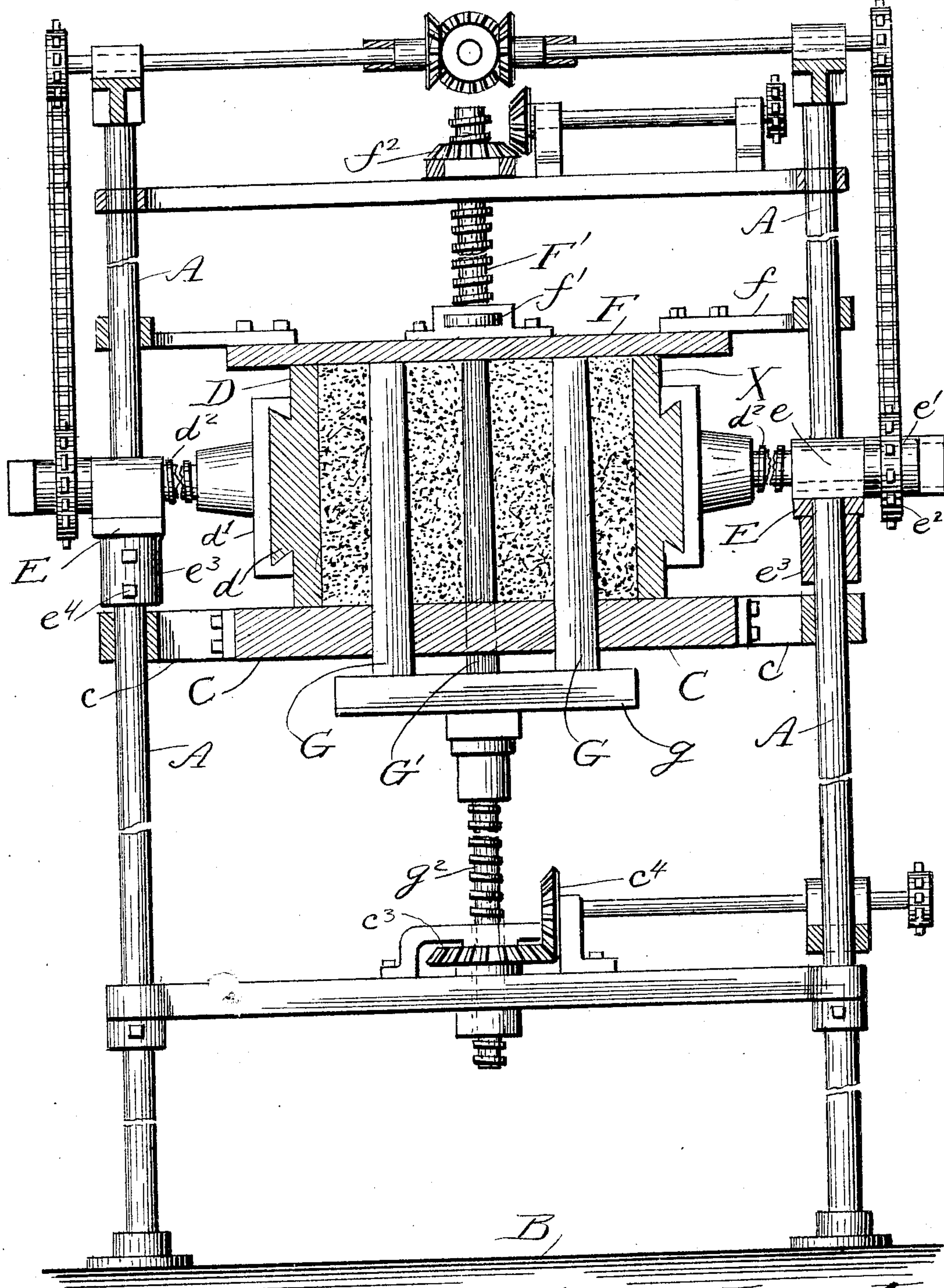
No. 803,092.

PATENTED OCT. 31, 1905.

V. BUECKERMANN.
MACHINE. FOR MAKING ARTIFICIAL STONE.

APPLICATION FILED SEPT. 24, 1904.

4 SHEETS-SHEET 1.



Witnesses:
H. Redlich
D. Reicher

FIG. 1.

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4 SHEETS—SHEET 2.

FIG. 2.

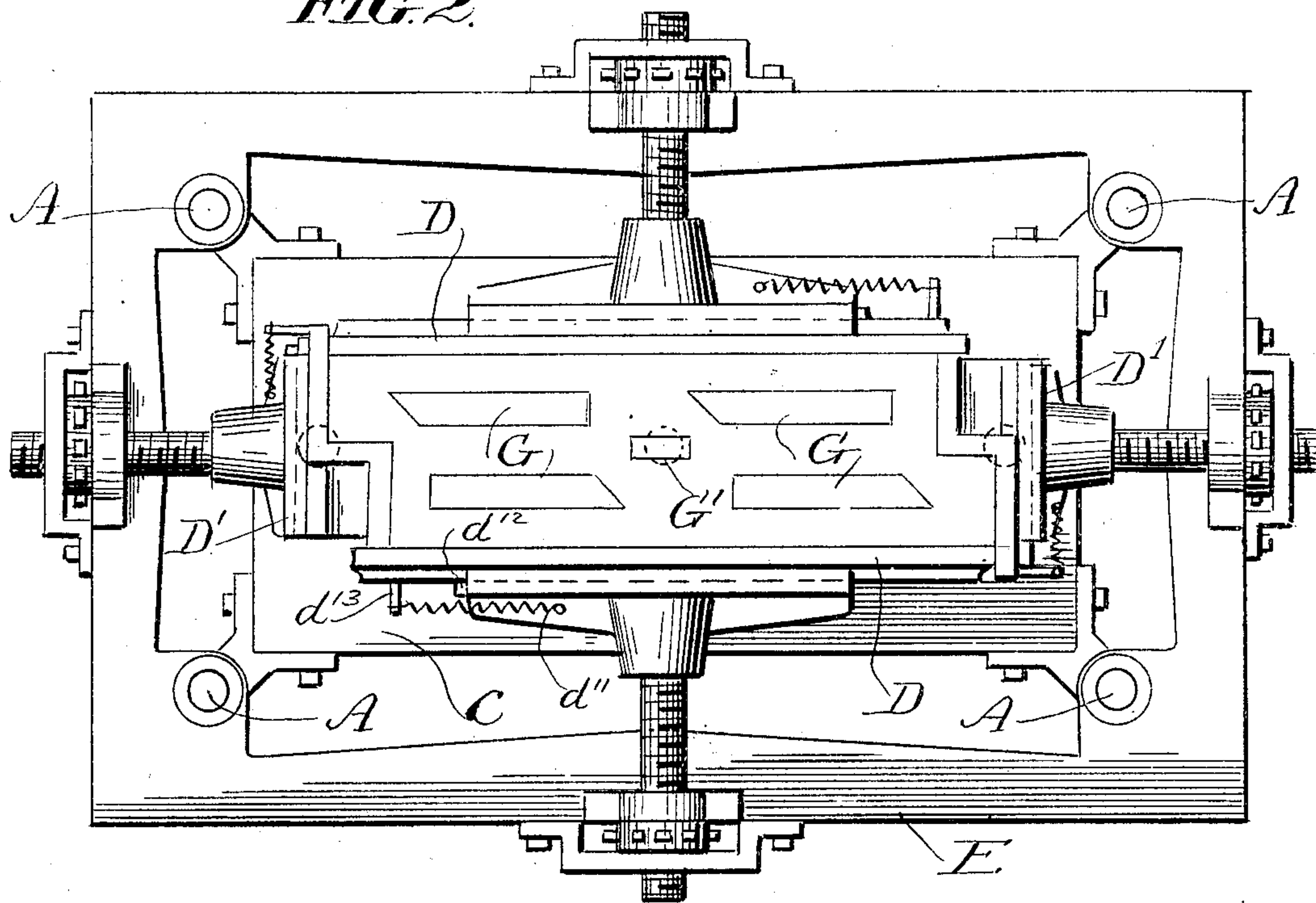
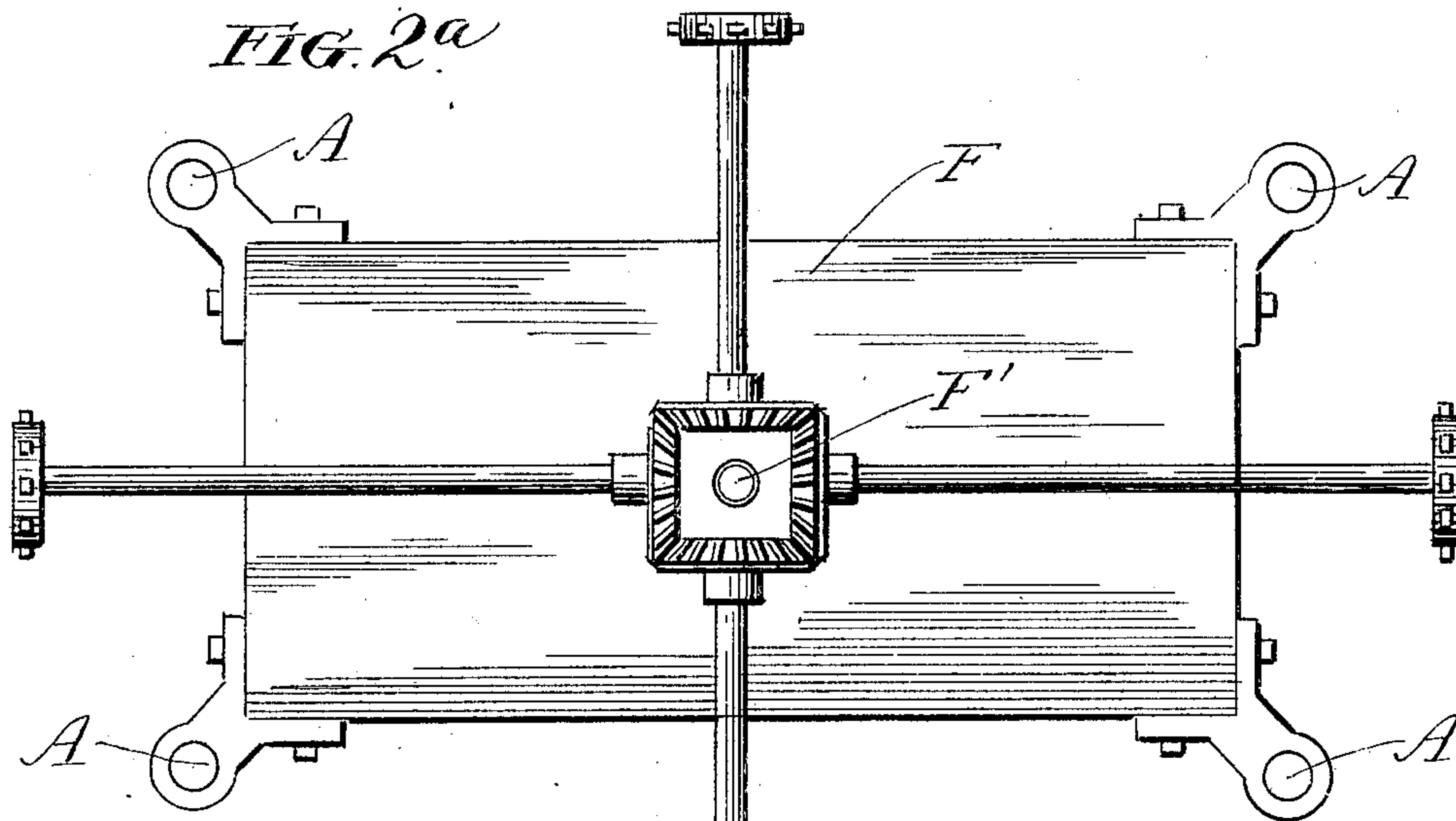


FIG. 2a



Witnesses:

X Realigned
D. Lecher

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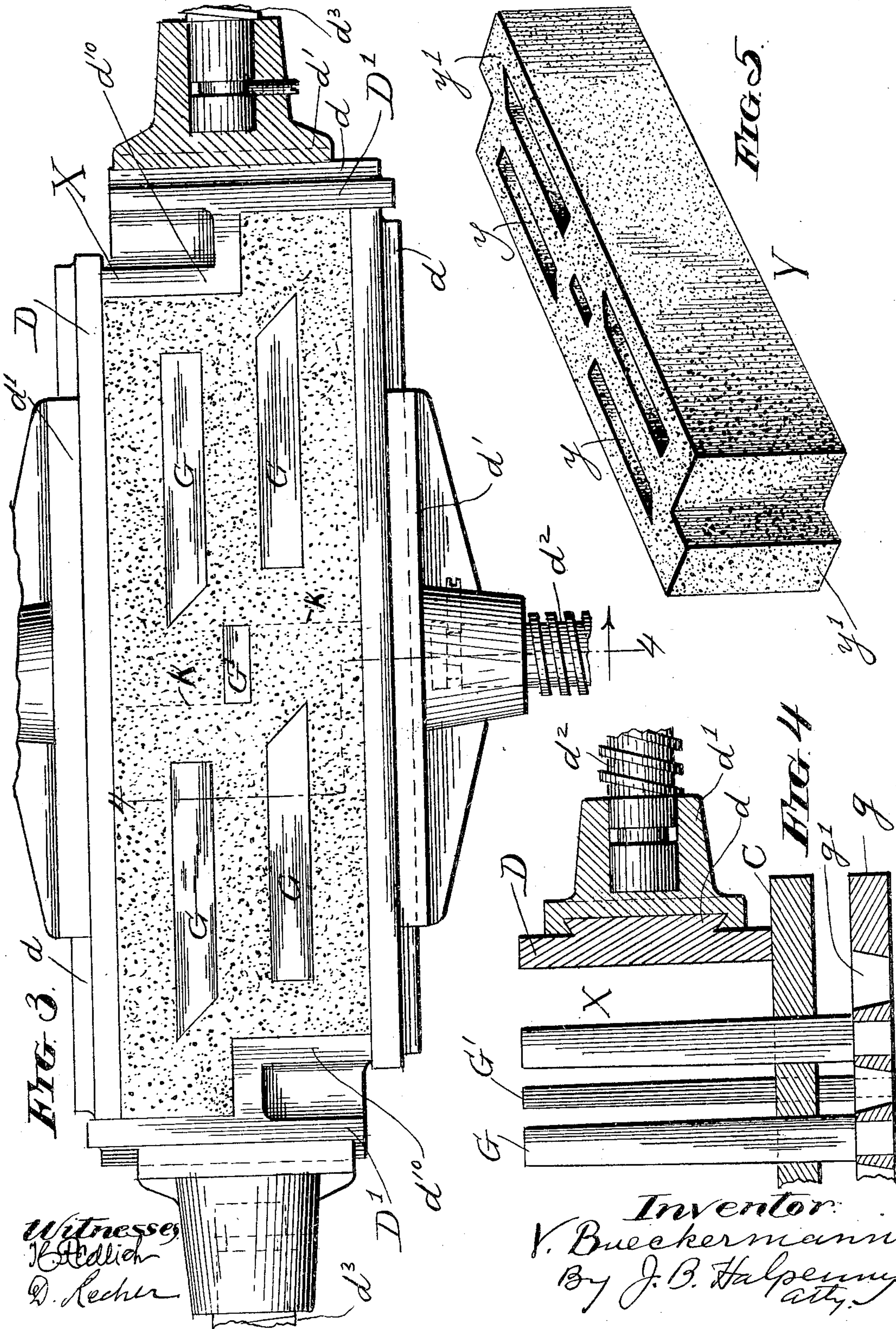
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4 SHEETS—SHEET 3.



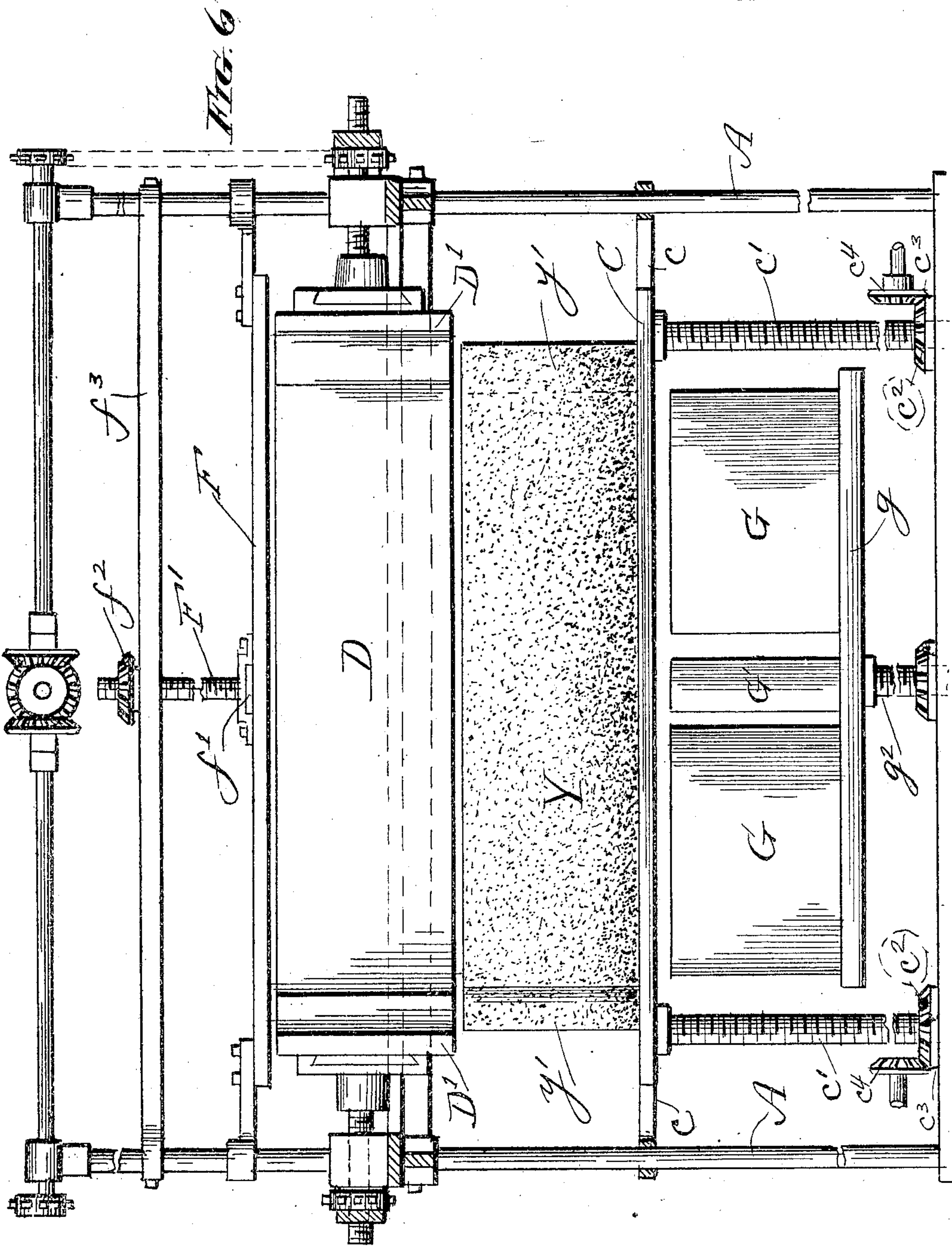
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4 SHEETS—SHEET 4



Witnesses
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UNITED STATES PATENT OFFICE.

VALENTIN BUECKERMANN, OF CHICAGO, ILLINOIS.

MACHINE FOR MAKING ARTIFICIAL STONE.

No. 803,092.

Specification of Letters Patent.

Patented Oct. 31, 1905

Application filed September 24, 1904. Serial No. 225,836.

To all whom it may concern:

Be it known that I, VALENTIN BUECKERMANN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Making Artificial Stone, of which the following is a specification.

The present invention relates to a machine for molding and pressing artificial stone—such as may be made out of concrete, cement, or a similar material—the object being to provide a device for executing the work in a comparatively simple and effective manner. This I accomplish by novel means, the principal features of which are a press or mold having compressible sides, a device having sliding tongues for forming hollows in each stone, a movable table, and means for actuating the various parts. These features are illustrated in the accompanying drawings and will hereinafter be fully described.

In the drawings, Figure 1 is the sectional elevation of a machine embodying features of my invention. Fig. 2 is a plan view of the press, the top plate being removed. Fig. 2^a is a plan view of the top of the machine, which shows principally the gearing on the top of same. Fig. 3 is an enlarged view of the mold or press with the top plate removed. Fig. 4 is a sectional detail taken on the line 4 4 of Fig. 3. Fig. 5 is a perspective view of a stone made by the said machine. Fig. 6 is a longitudinal section showing the parts in the position for removing the stone.

In carrying out this invention it is my intention to make a simple machine which may be operated by hand or at a greater speed by suitable power mechanism, the stone to be made being especially intended to have vertical air-spaces and overlapping longitudinal parts. In doing this I provide a table which is downwardly removable from the side or lateral pressers, so as to carry the stone below same and be readily removable. These side pressers are so constructed as to not leave any gaps or open spaces at the corner of the stones.

The framework of the machine consists of four heavy metal vertical standards or posts A, mounted on any suitable base B. These posts are situated approximately at the corners of the machine and are intended to serve as supports for the stationary parts of the machine, as well as guides for certain of the movable parts, such as the table upon which the concrete is pressed into stone.

Y refers to the stone having air-spaces or hollows *y* and tongues *y'*.

C is a table or plate, preferably movable, which serves as the bottom of the mold X, X referring as a whole to the compressible mold. The table C has corner-extensions *c c*, which slide on the vertical posts A. Beneath the table C are one or more vertically-movable supporting parts *c'*, which consist, preferably, of screws. These are moved up or down by internal screws *c''*, driven by suitable gears—such as the wheels *c'''* and *c''''*, which have a chain-drive from the top of the machine.

D D refer to the vertical sides of the mold, and D' D' the vertical end pieces, (these parts, however, are referred to in a general way as "side pieces" or "pressers,") the said pieces being movable laterally or in a horizontal direction and are actuated by suitable mechanism to press laterally and inwardly, so as to compress the sides of the material forming the stone and also release themselves when it is desired to remove the stone. The sides D consist of longitudinal plates overlapping at opposite ends one of each of the end plates D'. This allows each of the plates to move across one of the end plates without causing an open corner, while each of the end plates D' overlaps opposite ends of the side plates. This construction is shown in Fig. 3, and this allows the plates to be moved inwardly without making open joints to any extent.

To preserve the position of the plates so as to retain or make approximately a rectangular form, I place on each plate D or D' a horizontal rib or dovetail *d*. This slides in a fixed bracket *d'*, the said brackets being mounted on screws *d'' d'''* on the sides and the end parts of the machine, respectively. These screws have bearings *e* on a heavy stationary rectangular frame E, and the said screws are actuated by internal screws *e'*, driven by sprockets *e''* or other gearing devices, preferably from the top of the machine. The said rectangular frame E is supported by means of fixed brackets or collars *e'''* and set-screws *e''''* on the posts A; but any other suitable means may be employed for supporting the frame E in a fixed position.

F refers to the top plate of the machine, the said plate having corner-pieces *f*, which slide on the posts A.

F' is a screw attached to the plate F at *f'*, the said screw having an actuating-gear *f''*, mounted on a cross-bar *f'''* and which is driven by suitable gearing.

G G' are vertically-movable blades mounted on a sliding table or support g , provided with a screw-support g^2 , which is actuated by suitable gearing to move the table g up or down.

5 The said table has apertures or openings g' between the blades, as shown in Fig. 4. The said blades are intended to form hollows in the stone.

The operation of the machine is as follows:

10 The top plate F is raised up out of the way, and the movable lower plate or table C is brought up against the side plates D D', these plates being in a position in excess of the dimensions of the stone to be formed. The
15 blades G G' are placed in a position such as shown in Fig. 4. The mold or press X is now filled with a suitable mixture of concrete or cement or other material of which the stone is to be made, any superfluity of material on
20 the top being scraped off. The top plate is now lowered into a position as shown in Fig. 1, and the plates D D' are moved inwardly, so as to compress the material and form a very compact stone. The resulting stone is then
25 removed, the blades G G' being first drawn out, the plates D D' being moved outwardly to some extent, and the table brought into a position below the said plates. To make a half-size stone, a thin piece of metal, as shown

at the dotted lines at K in Fig. 3, may be in- 30
serted. The machine is also adapted to make other forms of stone than that shown, as it is apparent that the invention is not necessarily restricted to the shape shown in Fig. 4; but
35 the said shape is preferable. In forming artificial stone with overlapping pieces or tongues y' the end pieces D' are each made with an offset d^{10} , as shown in Fig. 3; but this is not absolutely essential excepting in making that particular shape. 40

What I claim is—

A block-press comprising a base, standards rising therefrom, a bottom plate and a top plate both of which have corner extensions which are slidably mounted on the standards, 45
means for operating the plates, a frame supported on the standards and having bearing-blocks, screws threaded through said blocks, brackets carried by the screws, side and end plates mounted in the brackets, and means for 50
actuating the screws to advance and retract the side and end plates.

Signed at Chicago this 20th day of September, A. D. 1904.

VALENTIN BUECKERMANN.

In presence of—

A. F. DICKSON,

J. B. HALPENNY.