

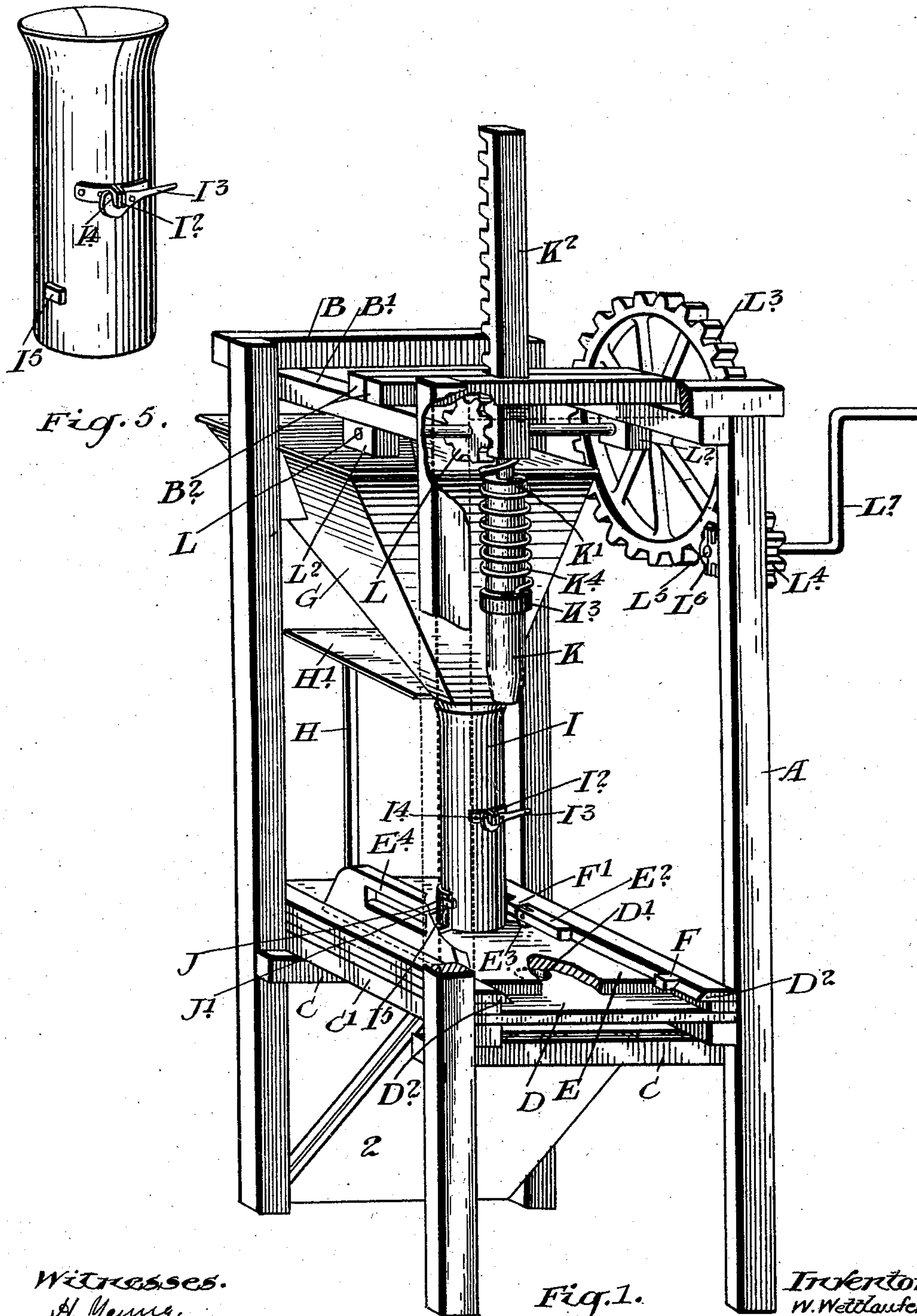
No. 860,000.

PATENTED JULY 16, 1907.

W. WETTLAUFER.
CONCRETE TILE MAKING MACHINE.

APPLICATION FILED MAR. 26, 1907.

2 SHEETS—SHEET 1.



Witnesses.
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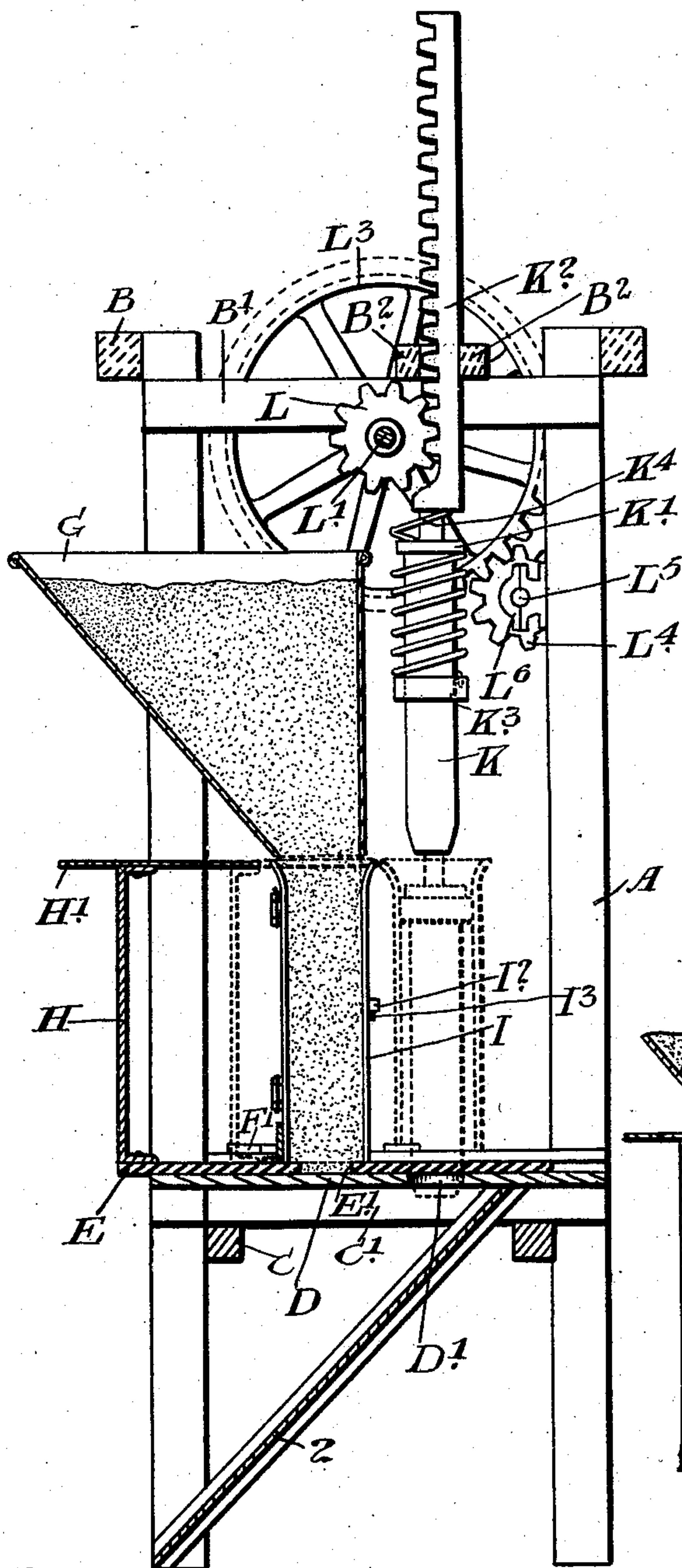


Fig. 2.

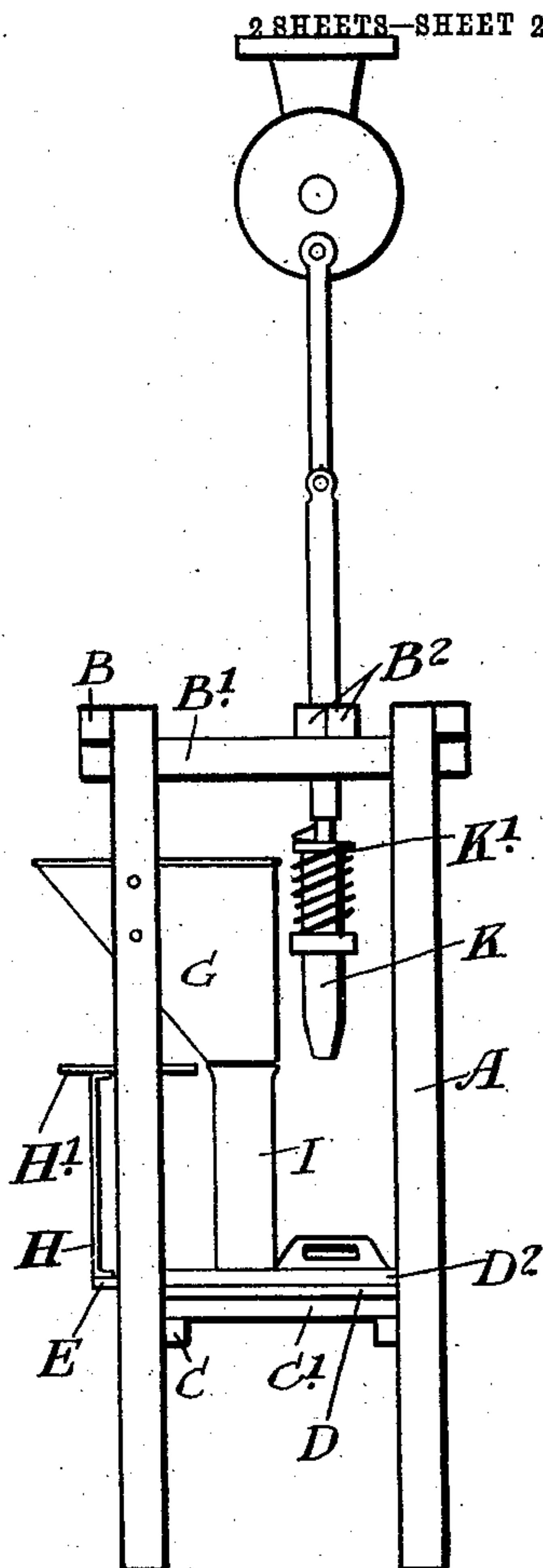


Fig. 3.

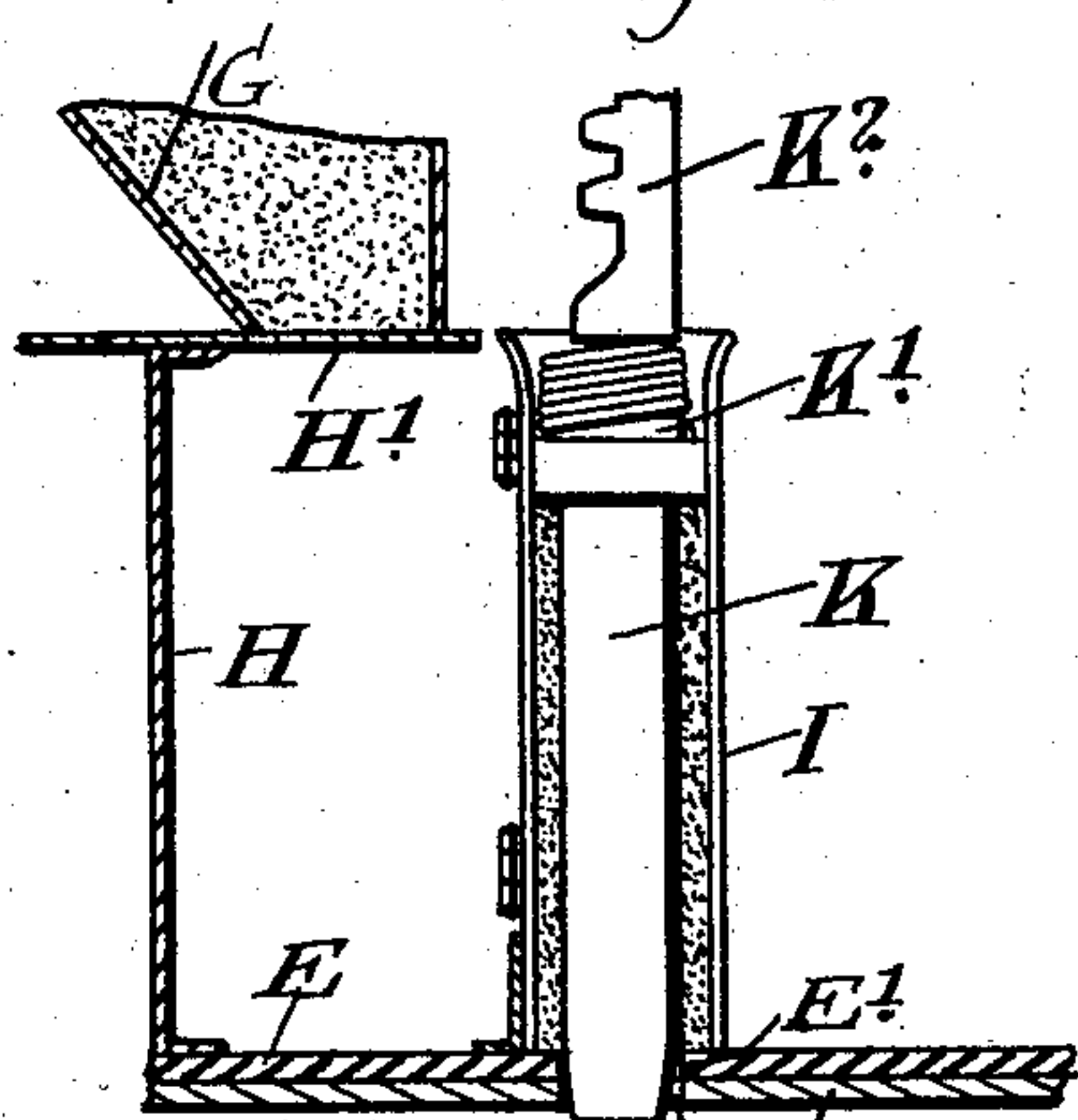


Fig. 4. D1 D

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UNITED STATES PATENT OFFICE.

WILLIAM WETTLAUER, OF STRATFORD, ONTARIO, CANADA.

CONCRETE-TILE-MAKING MACHINE.

No. 860,000.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed March 26, 1907. Serial No. 364,604.

To all whom it may concern:

Be it known that I, WILLIAM WETTLAUER, of the city of Stratford, in the county of Perth, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Concrete-Tile-Making Machines, of which the following is the specification.

My invention relates to improvements in concrete tile making machines, and the object of the invention is to devise a simple, quickly operated and effective machine of this class whereby a cement tile or block may be quickly and perfectly made.

A further object is to so arrange the machine that the tile or block may be withdrawn without having to leave it in the mold and thereby obviate the duplication of molds.

A still further object is to insure of the block being made without liability of fracture in the mold.

To effect these objects my machine consists of a suitable frame, a hopper supported thereby to receive the concrete in the damp state, a table supported by the frame, a mold supported by the table, an ejection plunger designed to co-act with the mold and means for imparting movement thereto into and out of the mold, the parts being otherwise arranged and constructed in detail as hereinafter more particularly explained.

Figure 1, is a perspective view of my improved concrete tile making machine. Fig. 2, is a vertical section. Fig. 3, is a view on a diminutive scale showing the plunger when operated by power. Fig. 4, is a view of the plunger in the mold during compression. Fig. 5, is a detail of the mold.

In the drawings like letters of reference indicate corresponding parts in each figure.

A are the vertical standards of the frame, B B' the top horizontal ties connecting the standards and C C' the bottom horizontal ties.

D is a table supported on the bottom ties C' and provided with a central orifice D' through which the plunger hereinafter referred to is designed to extend when in the lower position as will hereinafter appear.

2 is a slanting board or chute extending from a point in proximity to the opening D' to the back of the machine.

E is the sliding table supported on the table D and held in suitable guide-ways D² and provided with a hole E'.

F and F' are front and back stops secured on one of the guide-ways D² and E² is a swinging stop, which is pivotally connected to the lug E³ on the table E, and is designed to co-act with the stops F and F' as will hereinafter appear.

E⁴ is a handle attached to the table and by which it may be moved forward and backward.

G is a hopper, in which the damp concrete is placed.

H is a standard secured to the table and provided

with a cut-off plate H' designed to move with the table E when drawn forward.

I is the mold, which is formed in two sections connected together by hinges vertically disposed one above the other.

I² are two brackets provided with outwardly extending portions located at the two abutting edges of the two portions of the mold, the projections abutting each other as shown.

I³ is a lever having a notch I⁴ designed to connect the two parts of the mold together and yet allow of them being readily separated by tilting the lever.

I⁵ is a stop block secured one on each half of the mold.

J are brackets secured to the table opposite each other and provided with notches J' into which the stop block I⁵ fits when the mold is in position opposite the hole E' on the table E, and thereby insures such mold coming opposite such hole E'.

K is a plunger, which is tapered at the bottom and provided with a flange K' at the top, such flange being attached to or forming parts of a rack K², which is vertically disposed in a guide-way formed by the cross bars B² B² forming portion of the frame as indicated.

L is a pinion, which meshes with the rack K² and is secured on the cross shaft L' journaled in suitable bearings L² attached to the frame.

L³ is a gear wheel secured on the outer end of the shaft L' and L⁴ is a pinion secured on the stud shaft L⁵ journaled in bearings L⁶ secured to one of the standards A.

L⁷ is a crank operating handle secured to or forming part of the stud shaft L⁵.

K³ is a collar adjustably held on the plunger K and connected by the spiral compressible springs K⁴ to the plunger K'. The spring K⁴ encircles the plunger.

Having now described the principal parts involved in my invention I shall briefly describe its operation and utility.

Concrete in a sufficiently damp state is fed into the hopper G and the table E is so placed by the handle E⁴, so as to bring the divided mold I underneath the hopper. When the mold I is filled with concrete the table and the mold are brought forward by means of the handle E⁴ into the position shown by dotted lines in Fig. 2. The plunger is then brought down by the operating handle L⁷ through the registering openings E' and D' and a core is ejected from the concrete in the mold, which passes down the chute 2. As the plunger is being carried down the spring K⁴ compresses as indicated in Fig. 4, and immediately the movement of the handle L⁷ is reversed, so as to withdraw the plunger the spring K⁴ acts upon the collar K³, so as to make it perform the function of a stripper, that is to say it serves to compress the concrete forming the

tile and hold it from rising during a considerable period of the upward movement of the plunger. By this means the position of the now completed tile is not disturbed and all danger of fracture is avoided, which is an important desideratum. The density of the tile is also increased, so that it will hold together when being removed as hereinafter described. When the tile has been completed the hinged stop E^2 may be thrown upwardly, and the table may be drawn forwardly until the lug E^3 comes in contact with the stop F' . The two parts of the divided mold may now be uncoupled and the tile readily removed prior to stacking.

When the table E is brought forward as hereinbefore described it will be readily understood that the plate H' will cut off the feed of the concrete automatically.

In Fig. 3, I have shown the plunger as driven by an

ordinary crank motion from a power shaft, and it will be readily understood that various changes may be made in construction and arrangement of my machine without departing from the spirit of my invention.

What I claim as my invention is:

A tile making machine comprising a table having a hole therein, a slidable table thereon having a hole therein adapted in one position to register with the hole in the first table, a mold surrounding the hole in the slidable table and carried by said table, a hopper adapted to deliver material to the mold, a cut off plate for the hopper carried by the slidable table, a reciprocating plunger, and means for reciprocating the plunger through the mold and registered holes to force the core from the mold.

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