G. L. GRIMES.

CORE MAKING MACHINE.

APPLICATION FILED APR. 10, 1911.

1,018,823. Patented Feb. 27, 1912.

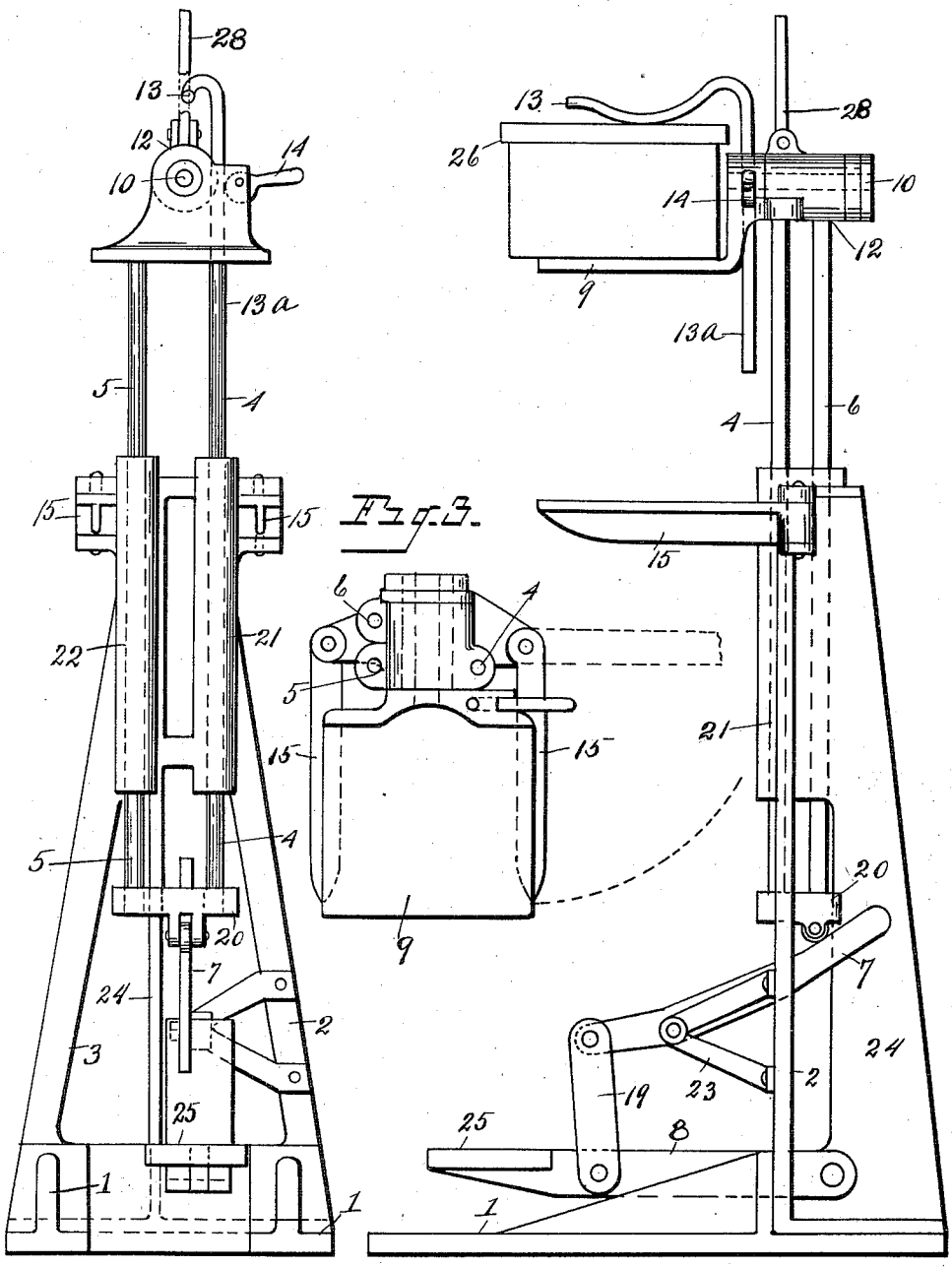

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

O. B. Baenziger.

J. C. Spratt.

Inventor

George L. Grimes

By Parker & Burton

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE L. GRIMES, OF DETROIT, MICHIGAN.

CORE-MAKING MACHINE.

1,018,823. Specification of Letters Patent. **Patented Feb. 27, 1912.**

Application filed April 10, 1911. Serial No. 619,928.

To all whom it may concern:

Be it known that I, GEORGE L. GRIMES, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Core-Making Machines; and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to core-making machines.

It has for its object an improved machine adapted to support and jar the core box in which cores are made, turn the box to deliver the cores and lift the overturned box off the completed core, and thus to facilitate the rapid production of cores.

In the drawings:—Figure 1, is a front elevation. Fig. 2, is a side elevation. Fig. 3, is a plan view of the top or head part of the machine.

From the base 1 rise standards 2, 3, 24, which support vertical guide sleeves 21, 22, and a system of levers 7, 8, connected by link 19; the lever 8 is pivoted to the rear standard 24; the lever 7 is supported on a bracket 23 on the standard 2; the two levers 7 and 8 are coupled by link 19 and are so weighted that the pedal 25 normally rises; vertical rods 4, 5, 6, carrying an anti-friction roller on their bottom member 20, reciprocate through guides 21, 22 and support at their upper end a rotatable table 9 whose pivotal connection with the rods 4, 5, 6, comprises a trunnion pivot 10 journaled in the head 12 which is sustained by the rods 4, 5, and 6; an arm 13 provided with a vertical sliding stem 13^a and held in position by an eccentric clamp 14 extends over the table. The three rods 4, 5, 6, are arranged to brace one another to prevent either lateral or direct oscillation of the head and of the table and core box supported thereon. When a core box filled with sand is placed in position with respect to the table 9 and its adjacent parts, the entire structure supported by the rods 4, 5, and 6 is raised by foot pressure on the pedal 25 and then allowed to fall with a jolt by the cessation of pedal pressure, thus compacting the sand within the box. Arms 15, preferably pivoted to the frame, are adapted to support an unloading tray over which the core box is thereafter reversed, and which then supports the core from which the core box is lifted.

When the core box is reversed the table 9 assumes a position somewhat higher than the trunnion 10; the tray board 26 is brought to rest on the arms 15, with the clamping arm between said arms 15.

When the trunnion 10 and its related parts have been brought to a satisfactory position, they may be locked against unintended and injurious movement by any desired means; the means here illustrated consists of a pivoted lever 28 whose short end adjacent the trunnion is sufficiently cam-shaped to bear frictionally against the trunnion when the upper or handle branch of the lever is swung from its normal vertical position.

There is then provided a machine of moderate weight which has a very rigidly carried head, which can be lifted and dropped by foot action for the purpose of compacting the sand, and which can be lifted easily and directly upward to deliver the core from the box, leaving it supported by the arms 15.

What I claim is:—

1. In a core-making machine, in combination with a table adapted to sustain the core box and a clamp adapted to hold the core box securely thereon, a pair of vertically sliding rods, a foot lever and an auxiliary lever adapted to give to the core box a greater throw than the movement of the foot lever, and a pair of swinging arms adapted to receive the core from the core box, substantially as described.

2. In a core making machine, in combination with a base frame, a plurality of rod members vertically slidable with respect thereto, a table member supported by said rod members and capable of limited movement with respect thereto, a lever member pivoted to said base frame, whereby said rod members and their supported parts may be actuated, an adjustable clamp member adapted to hold a core box in desired position with respect to said table member, and a pair of swinging arms adapted to support the core when removed from the box, substantially as described.

3. In a core making machine, in combination with a frame having a plurality of vertically slidable members, a table supported by said slidable members, means for holding a core box in position on said table, a

pedally actuatable lever whereby said slidable members and their supported parts may be raised and allowed to fall, and a pivoted arm member adapted to receive the core box and to sustain the core itself when the box is removed by further actuation of said slidable members, substantially as described.

4. In a core-making machine, a frame provided with vertical guides, a plurality of sliding rods engaging in said guides, said rods being arranged to brace against oscillation, a table pivotally connected to the top of said rods, a compound lever, adapted to actuate said rods in vertical movement and a pivoted bracket arm supported by said frame, upon which the contents of a core box may be deposited upon the reversal of the supporting table, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

GEORGE L. GRIMES.

Witnesses:
CHARLES F. BURTON,
VIRGINIA C. SPRATT.