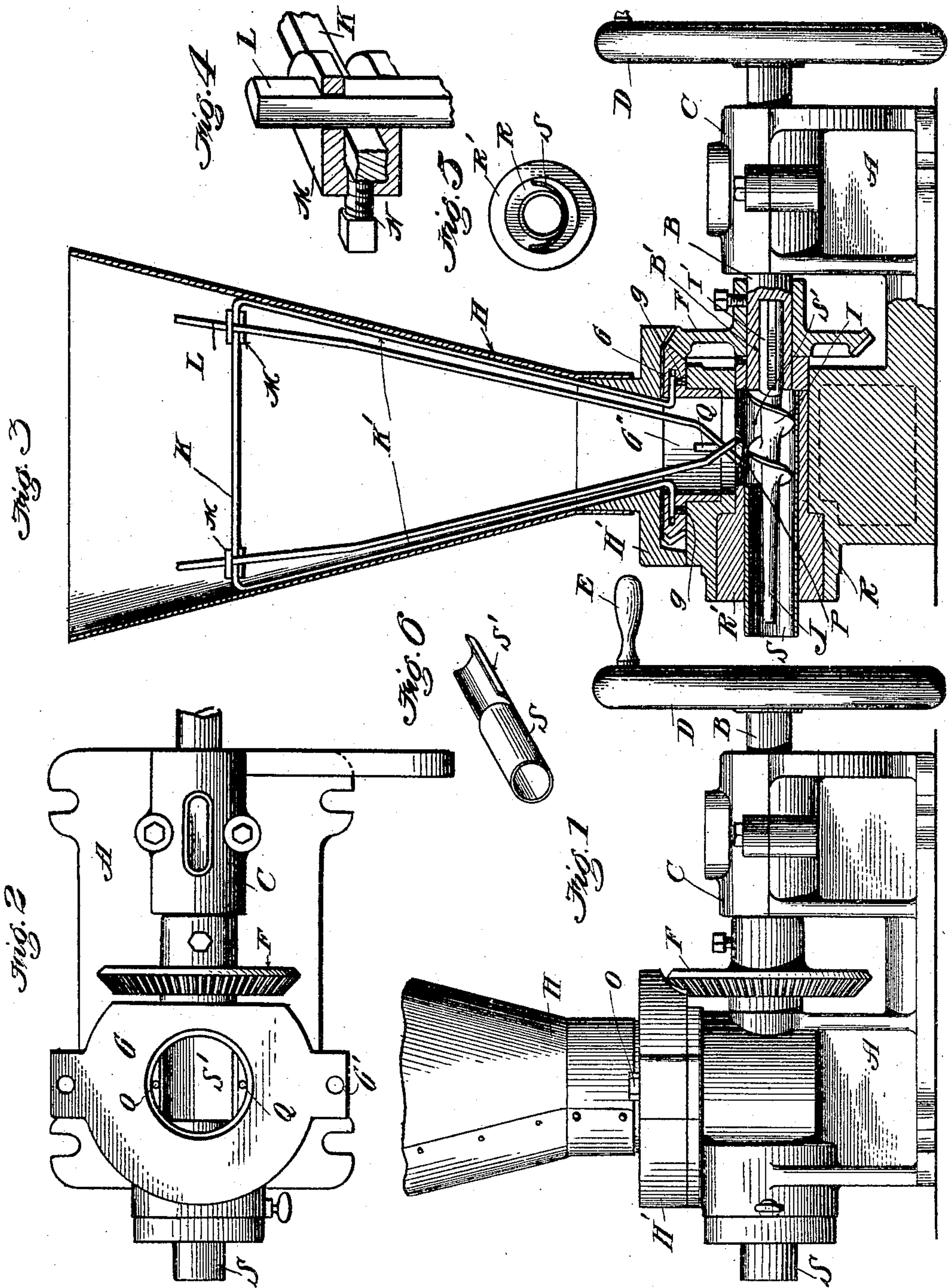


No. 824,433.

PATENTED JUNE 26, 1906.

J. S. NICHOLSON.
CORE MAKING MACHINE.
APPLICATION FILED MAY 31, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN S. NICHOLSON, OF LOS ANGELES, CALIFORNIA.

CORE-MAKING MACHINE.

No. 824,433.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed May 31, 1905. Serial No. 263,178.

To all whom it may concern:

Be it known that I, JOHN S. NICHOLSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Core-Making Machines, of which the following is a specification.

It is one of the objects of my invention to provide a simple, handy, and reliable core-making machine which will properly agitate the material out of which the core is made and reliably feed the same to the core-forming screw and prevent the material from packing in the bottom of the machine while in operation and at the same time dispense with a number of parts usually found in machines of this character. I accomplish these objects by means of the device described herein, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved core-making machine, the hopper being partly broken away. Fig. 2 is a plan of the machine with its hopper and its base, together with the fly-wheel and the upper member of the gearing by which the hopper is rotated, removed. Fig. 3 is a central vertical section of the hopper and the main body of the machine, the fly-wheel and its bearings being shown in elevation. Fig. 4 is an enlarged detail of the clamping device. Fig. 5 is an end view of the core-tube removed from the machine. Fig. 6 is a perspective view of the core-forming tube.

Referring to the drawings, A represents the frame upon which the machine is mounted. A main operating-shaft B, horizontally mounted, is revoluble in bearing C, bearing on its outer end the wheel D, provided with the handle E. Keyed to the main shaft is the vertically-revoluble miter-gear F, adapted to engage and rotate the horizontally-revoluble miter-gear G. The gear G has a large vertical opening G' therethrough, adapted when the gear is in place under the hopper to register with the discharge-opening in the hopper and form a passage-way leading to the upper part of the core-forming chamber P.

Carried by the shaft B and projecting inwardly therefrom is the screw conveyer I, having the inwardly-projecting core-vent-forming stem J. The shank I' projects into the socket B' in the shaft B and is held non-rotative therein. Upon the rotation of the fly-wheel D the miter-gear G will rotate,

carrying therewith the triangular upright feeder K, detachably secured in the upper part of the miter-gear G.

The triangular feeder is preferably made of quarter-inch square steel rod and is detachably secured to the spur-gear G by the two set-screws g, as shown in Fig. 3, which engage the outwardly-projecting ends K' of the feeder.

The downwardly-projecting members K' are disposed adjacent to and follow closely along the inner wall of the hopper and prevent the lodgment thereon of any core-forming material, these members having a tendency to elevate any material adjacent to the wall and prevent thereby its lodgment thereon.

Supported by and on the base of the triangular agitator K are adjustably secured the feeder-rods L. The manner of their attachment and the manner in which they are adjusted are shown in enlarged detail in Fig. 4. Their adjustment is accomplished by means of the clamping-lug M and the set-screw N.

The hopper H is secured to the base H' above the revoluble gear G by means of the locking-bolts O, (see Fig. 1,) the holes G' in the base (see Fig. 2) being adapted for the reception of the hopper-locking bolts O.

The feeder-rods L project downwardly into the top of the core-forming chamber P and move around in the chamber G' during the operation of the machine and agitate the material therein. Mounted on the frame and projecting upwardly into this chamber are the upright studs Q, two in number, the functions of which are to keep the walls of the cylindrical chamber G' freed of the core-making material when the machine is in operation.

The core-die R has a longitudinal opening therethrough for the reception of the core-tube S. The core-tube S is cut at the top and spread out into the outwardly and upwardly projecting members S', these members of the core-tube forming part of chamber P, as shown in Fig. 3. In Fig. 6 the core-tube is shown removed from the machine and in connection with so much of same as shown in Fig. 3 will make plain the functions and manner of placement of this tube in the machine.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a core-making machine the combination with the frame of a revoluble main shaft

carrying a core-forming screw on its inner end; a vertically-rotated spur-gear keyed on said shaft and meshing with a horizontally-rotated spur-gear having a central opening 5 therein and carrying an agitator K detachably connected therewith; feeder-rods L adjustably secured on the agitator and projecting downwardly into a core-forming chamber and adapted upon the operating of the 10 machine to rotate and agitate the core-forming material.

2. In a core-making machine of the character herein described the herein-described studs Q mounted on the frame and projecting 15 upwardly therefrom into the cylindrical chamber G'' down which the core-forming material is fed the studs being disposed adjacent to the walls of said chamber.

3. A machine for making cores comprising 20 a horizontally-rotating shaft mounted in the frame of the machine and carrying on its

inner end a core-forming screw; a miter-gear keyed on said shaft and meshing with a horizontally-rotating miter-gear having a central longitudinal opening therethrough, adapted 25 when in place in the machine to form a passage-way from the hopper to the core-forming chamber; a hopper disposed above said horizontally-rotating gear and having its discharge-opening concentric with the opening 30 in the gear, and means driven by said horizontally-rotating gear to agitate the core-making material substantially as herein shown and described.

In witness that I claim the foregoing I have 35 hereunto subscribed my name this 23d day of May, 1905.

JOHN S. NICHOLSON.

Witnesses:

HENRY T. HAZARD,
G. E. HARPHAM.