

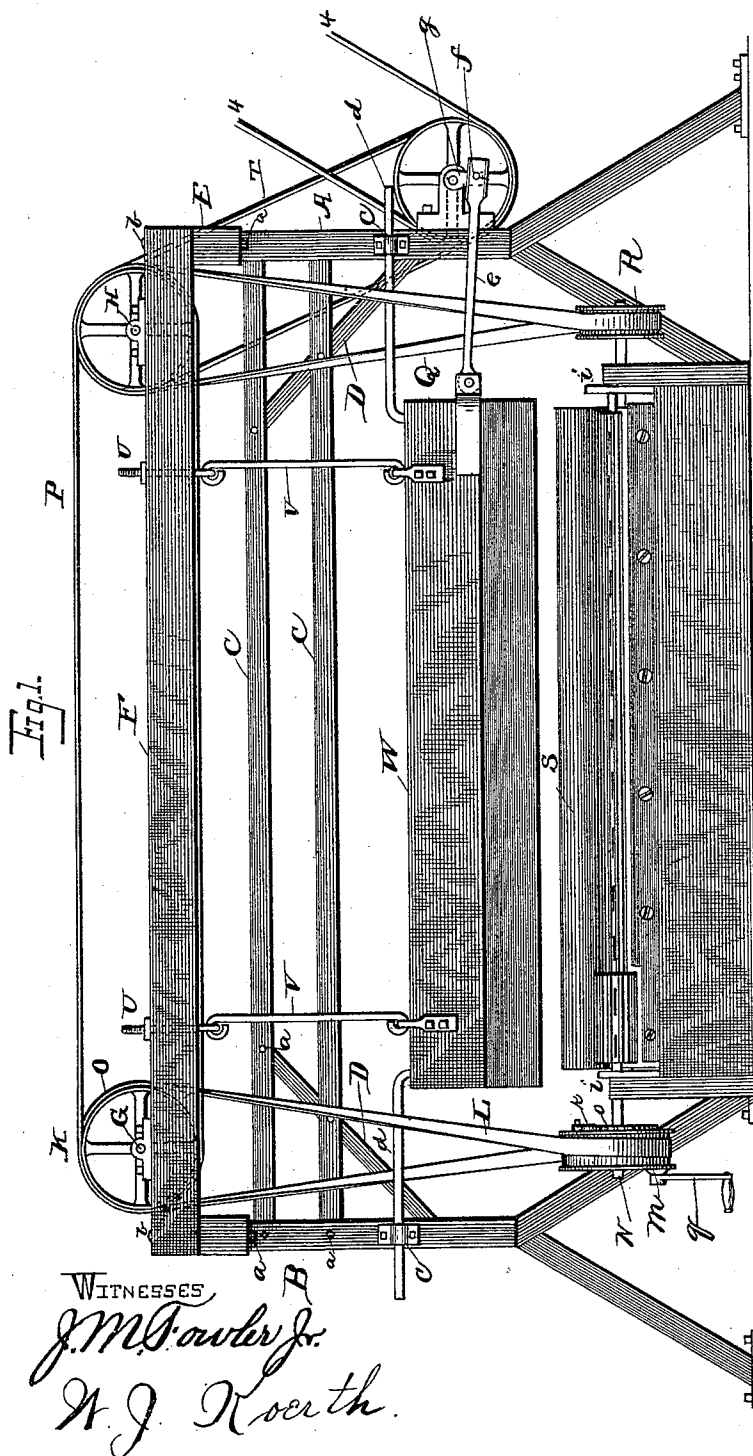
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4 Sheets—Sheet 1.

J. E. McCANNA.
CENTRIFUGAL CORE MAKING MACHINE.

No. 463,536.

Patented Nov. 17, 1891.



WITNESSES

J. M. Fowler Jr.
H. J. Koerth.

Inventor:
John E. McCanna
By Chas. E. Barber,
att'y.

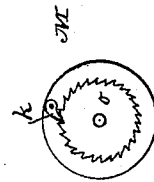
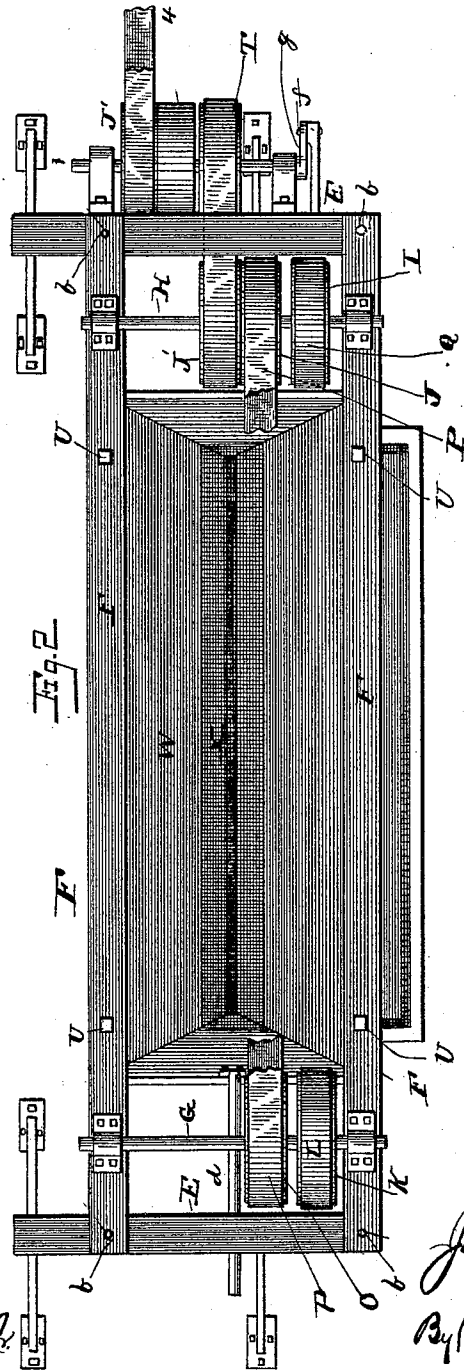
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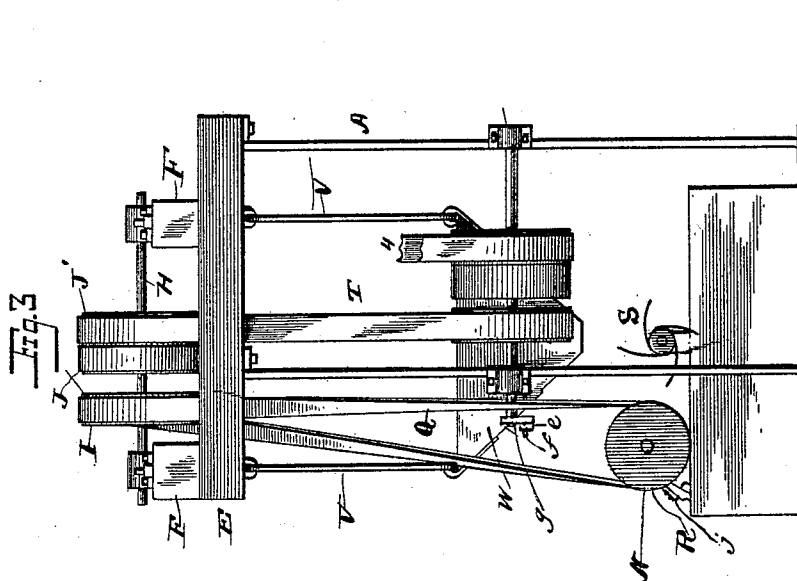
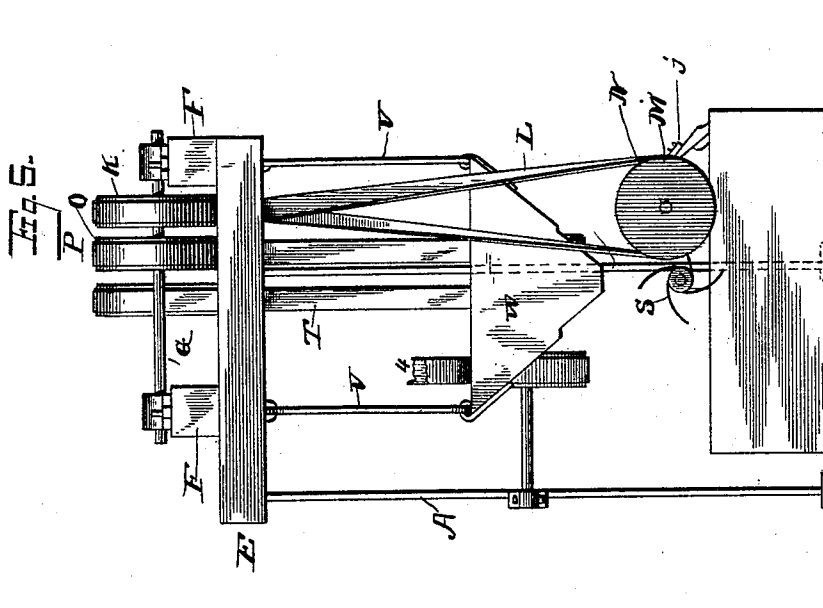
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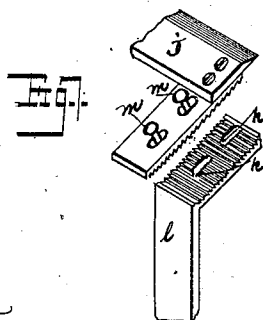
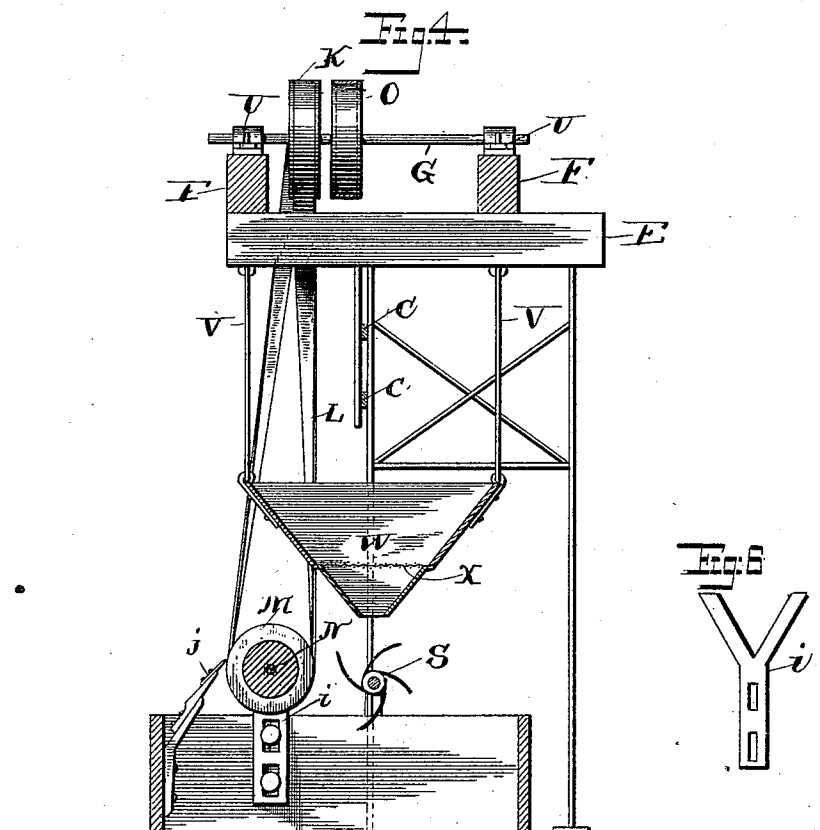
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4 Sheets—Sheet 4.

J. E. McCANNA.
CENTRIFUGAL CORE MAKING MACHINE.

No. 463,536.

Patented Nov. 17, 1891.



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UNITED STATES PATENT OFFICE.

JOHN E. McCANNA, OF BALTIMORE, MARYLAND.

CENTRIFUGAL CORE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 463,536, dated November 17, 1891.

Application filed January 17, 1891. Serial No. 378,084. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. McCANNA, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Centrifugal Core-Making Machines, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved device. Fig. 2 is a top plan view of the same. Fig. 3 is an end view. Fig. 4 is a cross-section. Fig. 5 is a rear end view. Fig. 6 is a detail view of the V-shaped journal-box. Fig. 7 is a perspective view of one of the scraper-supporting standards and the means for adjusting the scraper. Fig. 8 is an inside elevation of pulley M.

The object of my invention is to provide a centrifugal core-making machine by the use of which an operative can make the greatest number of perfect cores in the shortest possible time and with the least expense of physical and mechanical force.

Another object of my invention is to provide a core-making machine which will produce cores that will not crumble in handling. In the accompanying drawings, A designates the front standard, which is connected with the rear standard B by horizontal bars C C, re-enforced by diagonal braces D D, all of which are secured together by bolts or rivets *a a*. Two plates E E extend horizontally across the machine, and are supported by the standards A B, to which they are secured by bolts *b b*. Extending longitudinally and horizontally from the top of one plate E to the top of the other plate are two bars F F, which support the shafts G and H. The shaft H has pulleys I and J and J' while the shaft G has a pulley K, which has a belt L extending from it to the pulley M on the core-shaft N, thus rotating the core-shaft. A second pulley O on this shaft G is connected with a pulley on the shaft H by a belt P. A belt Q connects the pulley R on the shaft of the centrifugal sand-deflector S with the pulley I and another belt T connects the main drive-pulley with the pulley J' on the shaft H.

Power is applied to the driving-pulley through a driving-belt leading from the source of power. Two adjustable eyebolts U U at each end of the machine support two links V V, which in turn support the sand-box W, having a screen X above the deflector.

The standards are provided with eyebolts or guides *c c*, through which slide the guides *d d* on the sand-box W. The sand-box is reciprocated horizontally by a pitman *e*, connected to a wrist-pin *f* on the crank *g*. Directly beneath the mouth of the hopper-shaped sand-box W the deflector is located, and in front of it is journaled the core-barrel shaft N whose journal-bearings *i i* are V-shaped and adjustable vertically to accommodate cores of different sizes and to compensate for wear.

A knife or scraper *j* is located in front of the core-barrel shaft, and as the core-barrel is rotated the scraper shoves and scrapes the sand off and makes the core of uniform size throughout. The scraper is adjustable by means of the guides *k k* and screw-bolts *m m* on standards *l l*, secured to the box below the machine.

As a means for allowing the core-barrel to be turned by hand when desired, a ratchet-wheel *o* may be keyed on the shaft and a pawl *q*, pivoted on the band-pulley M. When power is applied through the belt L, the pulley M, through the pawl and ratchet, will rotate the shaft N; but when the belt L is not running the shaft N may be turned independently of the pulley by a crank *q'* applied to the end thereof.

The operation of my device is as follows: Motion is imparted to the machinery through the drive-belt 4, and molding-sand is put into the sand-box from which it is sifted and falls onto the deflector and is thrown thence by the blades S with great force against the core-barrel, on the roughened surface of which it packs hard and is planed smooth by the scraper and the core is finished.

I do not limit myself to the exact details of mechanical construction used in the device shown and described, as many of the elements may be altered and mechanical equivalents substituted therefor without departing from the spirit of my invention.

What I believe to be new, and desire to secure by Letters Patent, and what I therefore claim, is—

1. In a core-making machine, a core-barrel support and a deflector with radial curved blades journaled at one side thereof, in combination with a sand-box located above the deflector and capable of being longitudinally reciprocated and means for reciprocating the same, substantially as shown and described.

2. In a core-making machine, the combination of a rotary core-barrel, a deflector with radial curved blades journaled at one side thereof, a scraper for scraping and shaping the core, a sand-box supported above the deflector and capable of being longitudinally reciprocated, and means for reciprocating the same, substantially as shown and described.

3. In a core-making machine, the combination of a rotary core barrel, a deflector located at one side of the same, a scraper for scraping and shaping the core, a sand-box suspended above the deflector by vertically-adjustable links and capable of being reciprocated longitudinally, and means for reciprocating the same, substantially as shown and described.

4. In a core-making machine, the combination of a rotary core-barrel, a deflector located at one side thereof, a scraper for scraping and shaping the core, a sand-box located above the deflector and having within it a horizontal screen and having downwardly-converging side walls below the screen to form a contracted outlet, the said sand-box being capable of being longitudinally reciprocated, and means for reciprocating the same, substantially as shown and described.

5. In a core-making machine, a rotary core-barrel, a rotary deflector located at one side thereof, a sand-box having downwardly-converging sides and a screen above the outlet, the said box being suspended above the deflector by vertically-adjustable links and capable of being longitudinally reciprocated, and means for reciprocating the same, substantially as shown and described.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN E. McCANNA.

Witnesses:

CHAS. E. BARBER,
MARTIN J. MCSHANE.