J. M. CONNER.

Type-Casting Machines.

No. 144,066. Patented Oct. 28, 1873.

Fig. 1.

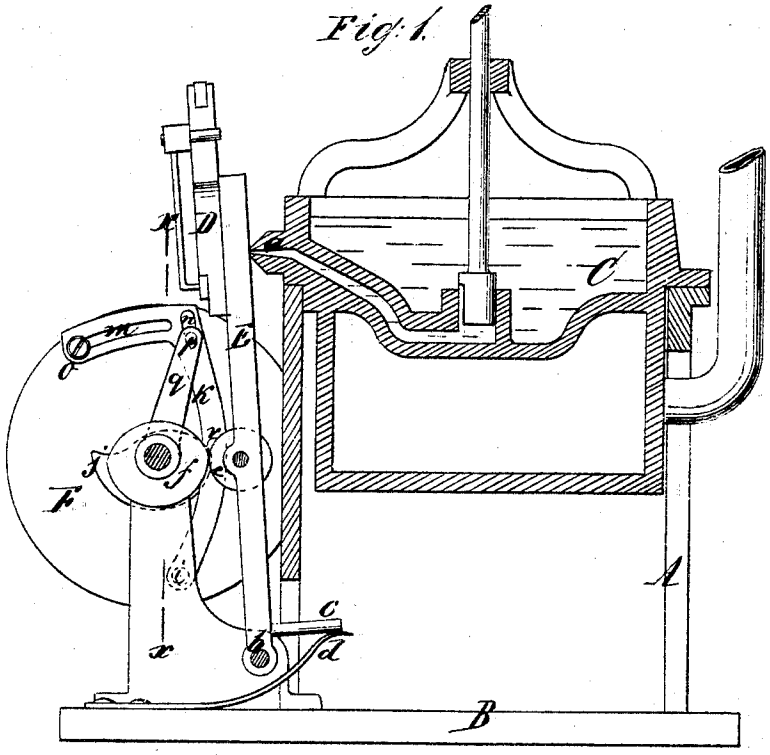


Fig 2

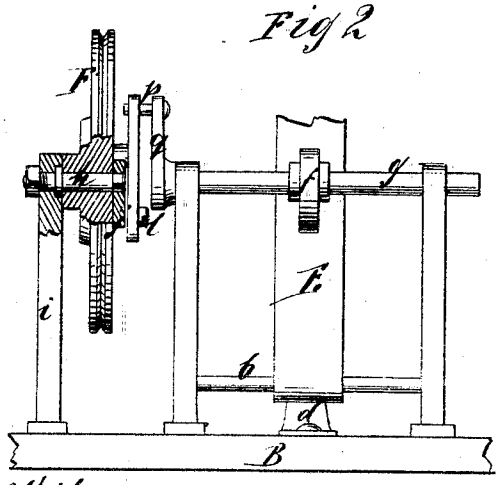
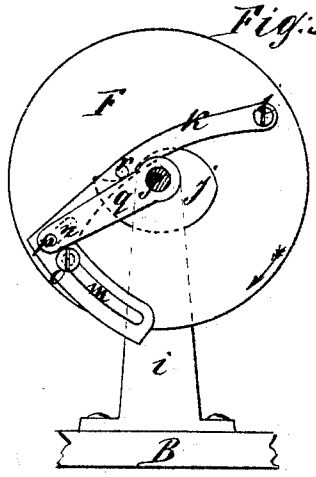


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES M. CONNER, OF GREENVILLE, NEW JERSEY.

IMPROVEMENT IN TYPE-CASTING MACHINES.

Specification forming part of Letters Patent No. **144,066**, dated October 28, 1873; application filed September 20, 1873.

To all whom it may concern:

Be it known that I, JAMES M. CONNER, of Greenville, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Type-Casting Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional side view of my invention. Fig. 2 is a transverse section of the same in the plane *x x*, Fig. 1. Fig. 3 is an inside view of the driving-pulley, showing the same in a different position from that which it occupies in Fig. 1.

Similar letters indicate corresponding parts.

This invention relates to an improvement on that class of type-casting machine for which a patent was granted to me July 16, 1872, No. 129,106. My present invention consists in combining with the lever which carries the mold a driving-pulley, which revolves independent of the cam-shaft that imparts an oscillating motion to the mold-carrying lever, the connection between said pulley and cam-shaft being effected in such a manner that, while the pulley continues to revolve without interruption, the cam-shaft remains stationary for a certain period during each revolution, and thereby the mold-carrying lever is allowed to dwell opposite the spout of the melting-pot a sufficient length of time to allow the metal in the mold to set before the finished type is discharged. The connection between the driving-pulley and the cam-shaft is effected by a crank and a slotted lever, which is pivoted to the driving-pulley, and the position of which is governed by a cam secured near the inner surface of the pulley. By securing the loose end of the slotted lever to the pulley the motion of the cam-shaft is rendered continuous, and the motion of the mold-carrying lever is governed entirely by the cam on the cam-shaft.

In the drawing, the letter A designates a frame, which rises from the bed-plate B, and on the top of which is secured the melting-pot C. From the side of this melting-pot projects the spout *a*, through which the metal is delivered to the mold D. This mold is secured to the top of the vibrating beam or lever E, which swings on a rock-shaft, *b*, and from the lower end of which extends an arm, *c*, that is exposed to the action of a spring, *d*, which serves to force the mold-carrying lever E back from the spout *a* of the melting-pot. In said lever is secured an anti-friction roller, *e*, which bears against the surface of a cam, *f*, being held in contact therewith by the spring *d*, so that, when said cam revolves, a vibrating motion is imparted to the lever E toward and from the spout of the melting-pot. The cam *f* is mounted on a shaft, *g*, that receives a revolving motion by means of a pulley, F, which, however, revolves entirely independent of said shaft, and connects with the same in the following manner: The pulley has its bearing on a stud, *h*, which is firmly secured in a standard, *i*, rising from the bed-plate B, and on the inner end of this stud is secured a cam, *j*, that prevents the pulley from running off. To the inner surface of the pulley F is connected a lever, *k*, which swings on a pivot, *l*, and the loose end of which is provided with two slots, *m n*, one of which engages with a pin, *o*, secured in the pulley F, while the other engages with a pin, *p*, projecting from a crank, *q*, that is mounted on the end of the cam-shaft *g*. On the lever *k* is also secured an anti-friction roller, *r*, which bears against the cam *j* on the axle of the pulley F. If a revolving motion is imparted to the pulley F the lever *k* and crank *q* transmit this motion to the crank-shaft *g;* but, during a certain stage of this motion, the pin *o* is permitted to slide in the slot *m* of the lever *k*, and the cam-shaft *g* remains stationary. The time when this takes place depends upon the shape of the cam *j*, which is fastened to the axle of the pulley F; and, in Fig. 3 of the drawing, I have shown the lever *k* in the position which it occupies just after the pin *o* has traversed the slot *m* from one end to the other, during which time the cam-shaft *q* remains stationary. This period coincides with the time when the cam *f* on the shaft *g* forces the mold-carrying lever up against the spout of the melting-pot, and said mold-carrying lever is caused to dwell in this position for a sufficient length of time to allow the metal in the mold to cool before the mold recedes and discharges its type. By fastening the slotted

lever *k* in the position which the same occupies in Fig. 1 the motion of the pulley F is transmitted without interruption to the cam-shaft *g;* and, in this case, the period during which the mold-carrying lever is permitted to dwell depends entirely upon the shape of the cam *f*. For this purpose the pin *o* is made in the form of a screw, so that by its action the lever *k* can be readily fastened whenever it may be desirable.

What I claim as new, and desire to secure by Letters Patent, is—

1. The pulley F, having an independent motion from the cam-shaft *g*, in combination with crank *q*, lever *k*, and the mold-carrying lever E of a type-casting machine, substantially as set forth.

2. The screw *o*, slotted lever *k*, pulley F, and crank *q*, in combination with the cam-shaft *g* and mold-carrying lever E of a type-casting machine, substantially as and for the purpose set forth.

JAMES M. CONNER.

Witnesses:
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