No. 691,977. Patented Jan. 28, 1902.

E. E. SLICK.

MEANS FOR EJECTING METAL PIGS FROM THEIR MOLDS.

(Application filed Nov. 23, 1898.)

(No Model.)

Fig. 1.

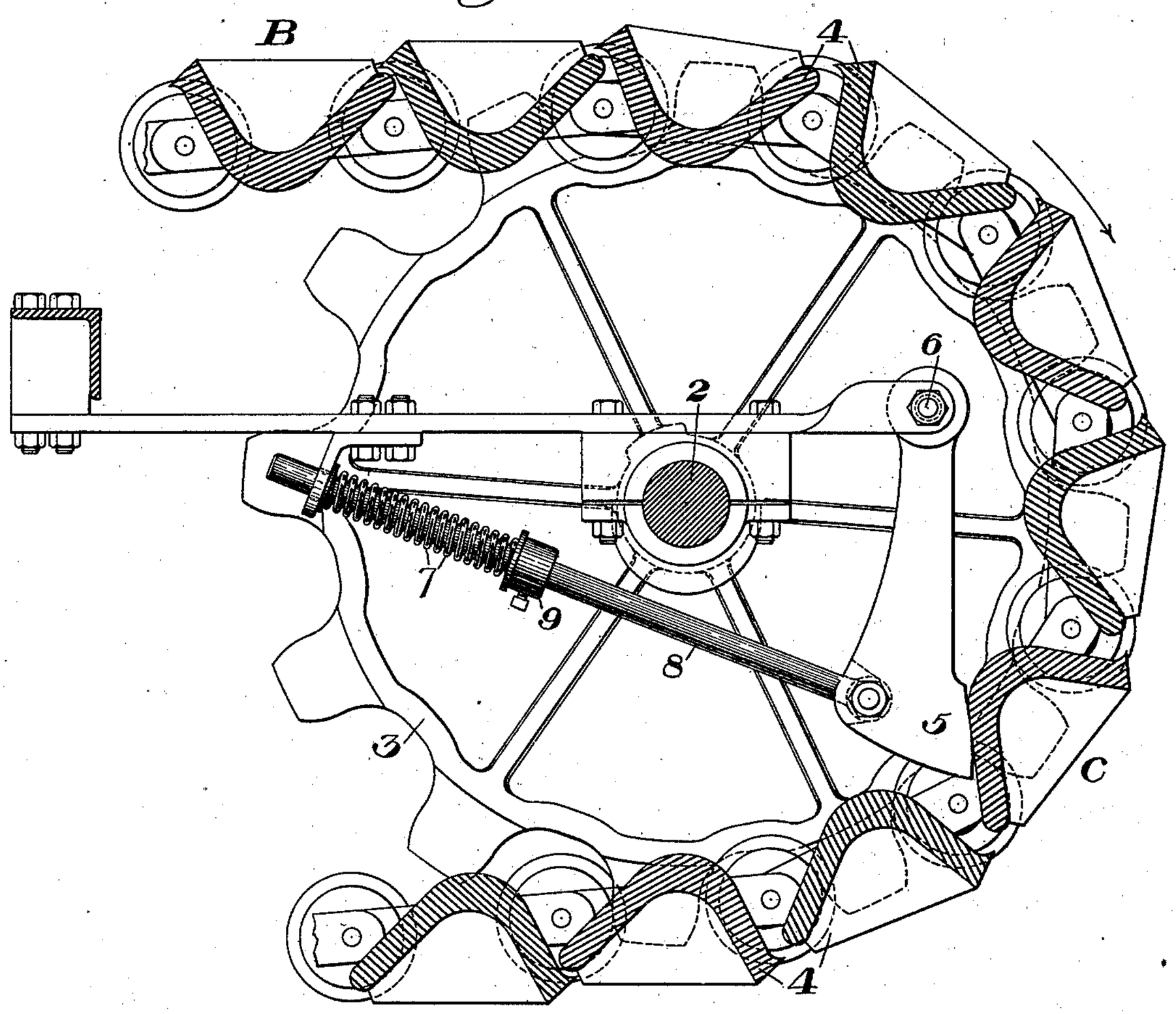
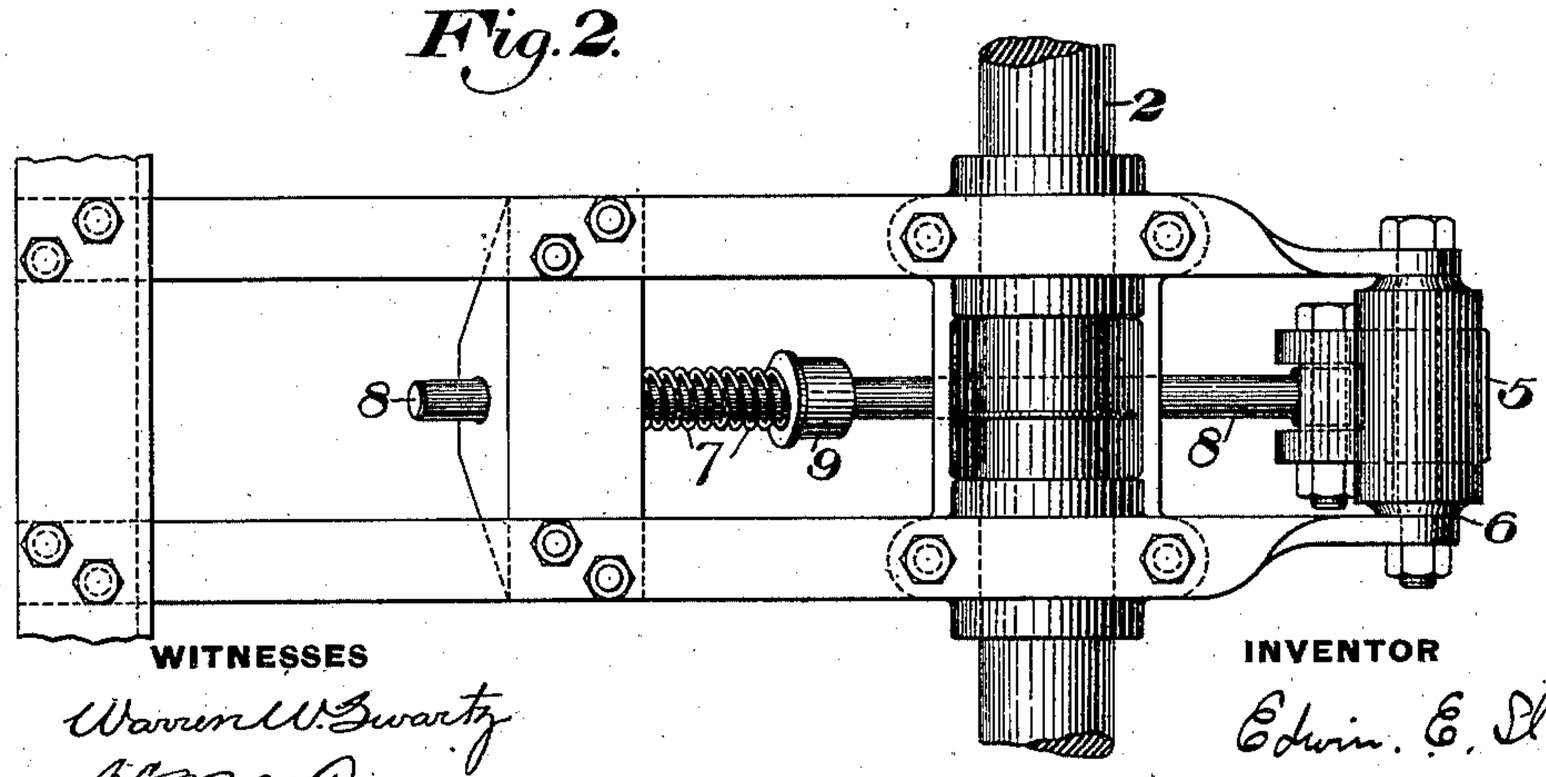


Fig. 2.



WITNESSES

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MEANS FOR EJECTING METAL PIGS FROM THEIR MOLDS.

SPECIFICATION forming part of Letters Patent No. 691,977, dated January 28, 1902.

Application filed November 23, 1898. Serial No. 697,261. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. SLICK, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Means for Ejecting Metal Pigs from Their Molds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows a sectional side elevation of the end portion of a pig-casting apparatus provided with my improved mechanism for ejecting the pigs from the molds. Fig. 2 shows in plan view my improved ejecting mechanism.

My invention is an improvement upon mechanism for casting pigs in which an endless series of pig-molds are carried around pairs of sprocket-wheels at opposite ends of a casting-frame; and it consists in improved devices for ejecting the pigs from the molds, said improvement comprising a knocker adapted to strike the molds on the rear sides, and thus to jar the pigs therefrom, as distinguished from striking the outer sides of the molds or pigs themselves. My invention consists also in an automatic knocker which is actuated by the motion of the molds themselves.

In the drawings, 2 represents the sprocket-wheel shaft at the delivery end of the casting mechanism, adapted to receive two sprocket-wheels 3 3, of which only one is shown; but my invention is not limited to any peculiar construction of this shaft or of the sprocket-wheels. The molds 4 are connected together in the usual way in an endless series, so as to constitute an endless chain of molds, and they pass around the sprocket-wheels 3, there being a set of sprocket-wheels at each end of the apparatus. The molds receive the molten pig metal while they are in the horizontal position (indicated at B in Fig. 1) and discharge the same when they come to the position indicated at C. Sometimes the metal pigs stick to the molds and do not drop therefrom, and it is for this purpose that I have devised my invention.

My improvement comprises a knocker 5, pivoted at 6 and adapted to swing by gravity or by the action of a spring 7, so that its head shall engage the bottom of each mold as it comes to the position C. As the series of molds travel in the direction of the arrow, they engage successively the head of the knocker 5, which they force back against the action of gravity and the action of the spring 7, and when the bottom of each mold clears the extreme end of the knocker it springs forward and strikes the bottom of the next succeeding mold a blow, jarring it sufficiently to dislodge the metal pig therefrom.

The action of the knocker is entirely automatic, and it operates on the molds in succession, just as a pawl will operate on the successive teeth of a ratchet passing in contact with it. By striking the mold as it passes over the wheel the weight of the pig and the direction of the blow aid in ejecting the pig, so that the blow need not be as heavy as would be needed elsewhere. Moreover, the pig always drops to the same spot, and the hammer is out of the way of the falling pig.

The spring 7 which I show in the drawings is desirable, as it supplies an added force for actuating the knocker. It encircles a rod 8 and bears upon a collar or shoulder 9 on the rod, so as to urge the rod and the knocker toward the series of molds.

My improved apparatus is compact and convenient. It is not apt to injure the molds and is very efficient for the apparatus for which it is intended.

I claim—

1. Apparatus for ejecting pigs from their molds, comprising in combination with a traveling series of molds, a knocker arranged to strike the rear sides of the molds, the said knocker constructed and arranged to bear against the series of molds and be moved backwardly thereby, and having means adapted to urge the knocker forward as it is cleared by each passing mold; substantially as described.

2. Apparatus for ejecting pigs from their molds, comprising in combination with a traveling series of molds, a knocker arranged to strike the rear sides of the molds, said knocker being suspended, and having a depending head adapted to engage the molds and to be actuated thereby in the manner of a pawl; substantially as described.

In testimony whereof I have hereunto set my hand.

EDWIN E. SLICK.

Witnesses:
F. F. SLICK,
E. H. HUTZEN.