H. W. YEAGER.

DISCHARGE APPARATUS FOR CASTING MACHINES.

APPLICATION FILED JUNE 1, 1910.

1,015,374.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

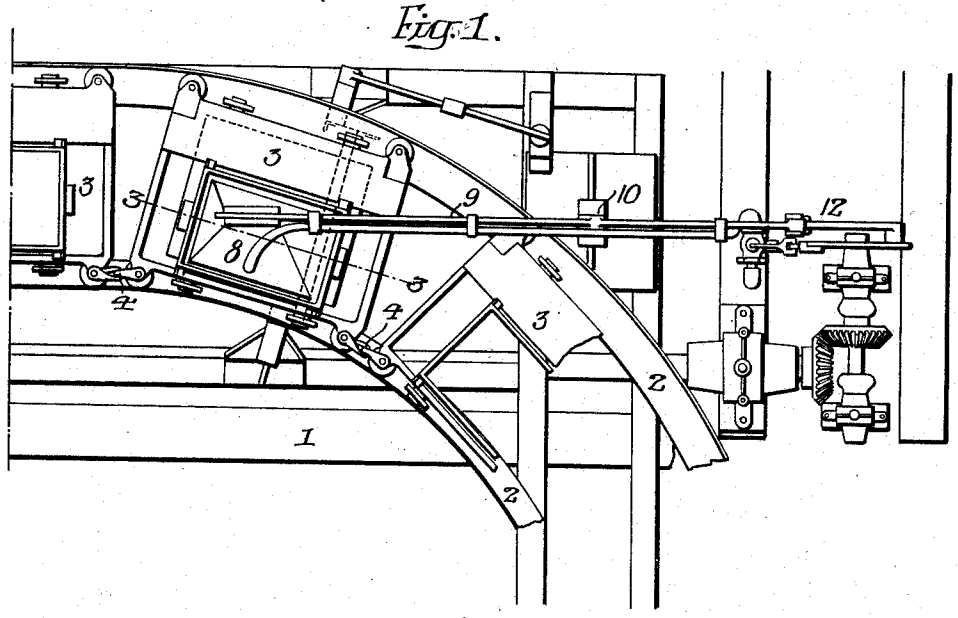
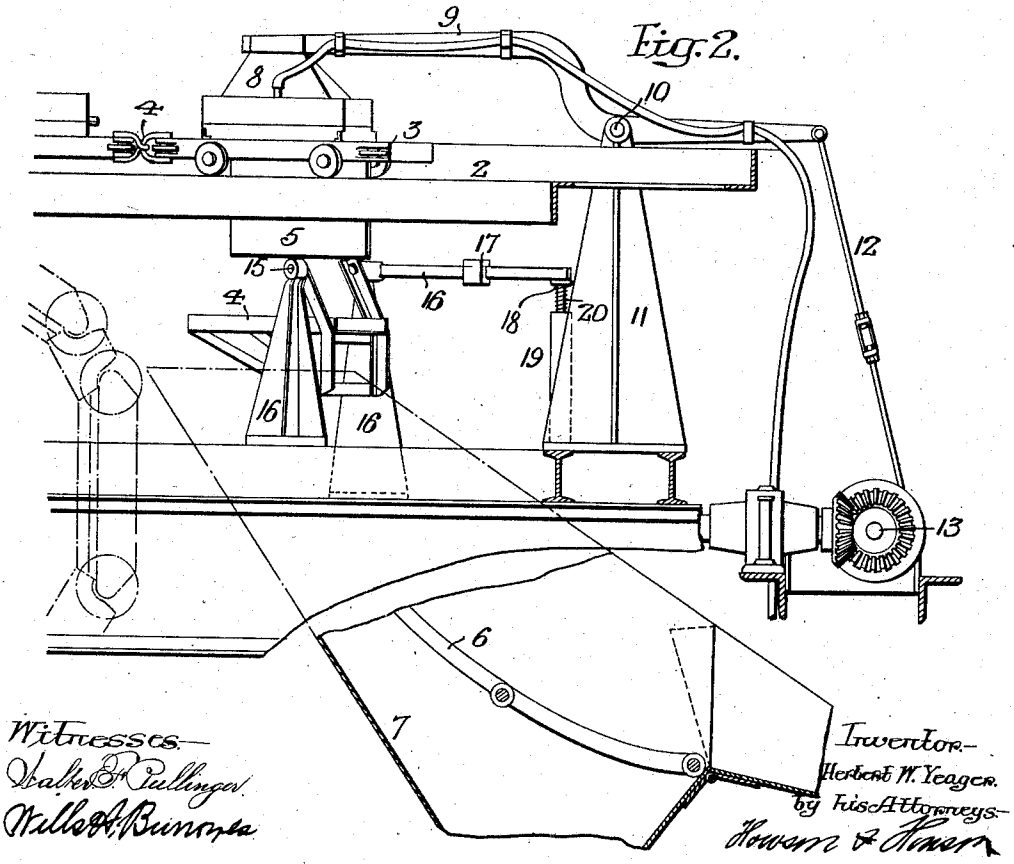


Fig. 2.



Witnesses—
Walter D. Gallinger
Willis A. Burrows

Inventor—
Herbert W. Yeager.
by his Attorneys—
Howson & Howson

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C

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2 SHEETS—SHEET 2.

Fig. 3.

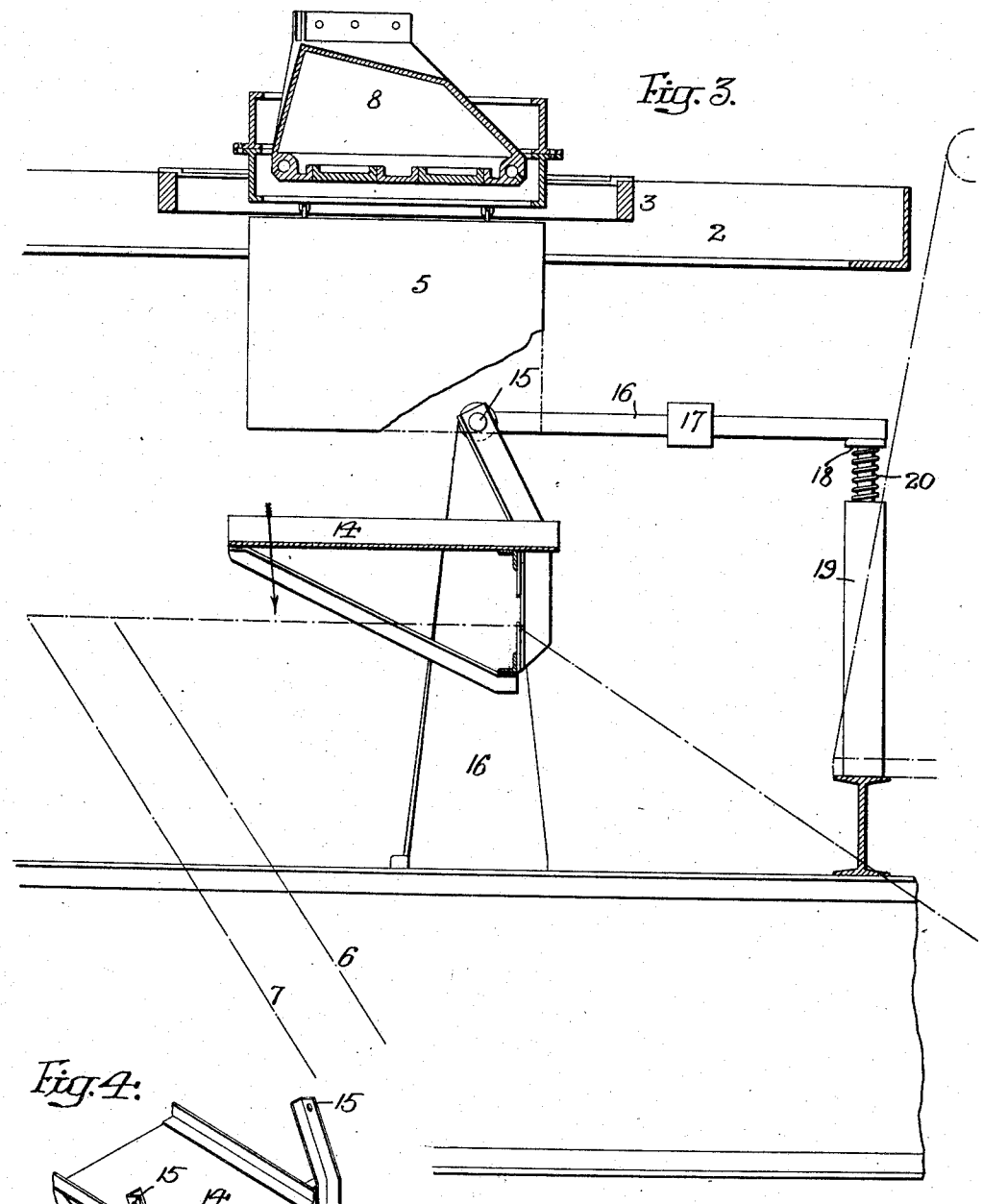
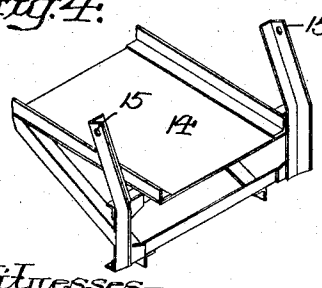


Fig. 4.



Witnesses—
Walter F. Pellinger.
Nelle A. Burrows.

Inventor—
Herbert W. Yeager.
by his Attorneys—
Howson & Howson

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HERBERT W. YEAGER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE ENTERPRISE MANUFACTURING COMPANY OF PENNSYLVANIA, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DISCHARGE APPARATUS FOR CASTING-MACHINES.

1,015,374. Specification of Letters Patent. Patented Jan. 23, 1912.

Application filed June 1, 1910. Serial No. 564,372.

To all whom it may concern:

Be it known that I, HERBERT W. YEAGER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Discharge Apparatus for Casting-Machines, of which the following is a specification.

My invention relates to certain improvements in the mechanism for discharging sand and castings from flasks of a continuous casting apparatus, the invention being a companion of the application for patent filed by John Wilson Brown, Jr., on May 6, 1910, Serial No. 559,775.

The main object of this invention is to break the fall of the castings and sand from the flask to the screen.

In the accompanying drawings,—Figure 1, is a plan view of sufficient of a continuous casting apparatus to illustrate my invention; Fig. 2, is a side view of Fig. 1, partly in section; Fig. 3, is an enlarged sectional view on the line 3—3 Fig. 1; Fig. 4, is a perspective view of the tilting table.

1 is the frame of the casting apparatus, 2—2 are the curved rails; 3, 3 are the flask rings having wheels adapted to the rails, and these rings are connected together by links 4 and form the horizontal conveyer. Each flask has a bottom board 5, hinged as shown, and this bottom board is released as the conveyer passes around the curve, dropping to the position illustrated in Fig. 2. When the flasks reach the position illustrated in Fig. 2, they are directly above a screen 6 mounted within the hopper 7 and the flask passes under a knock-out plunger 8. This plunger is carried by the long arm of a lever 9 pivoted at 10 to a bearing 11 carried by the frame of the machine. A short arm of the lever is connected by a rod 12 to a crank pin on the disk carried by a shaft 13 mounted in bearings on the frame.

The mechanism is so timed that when the conveyer, which is intermittently moved, brings a flask directly under the plunger 8 it has a downward movement, discharging any sand that may adhere to the flask after the bottom board has been released. This plunger and the mechanism connected with it form the subject of the application for patent mentioned above, my invention relating particularly to the means for breaking the fall of the castings as they are discharged from the flask on to the screen below.

14 is a table mounted directly under the discharge point for the flask, and this table is pivoted at 15 to bearings 16 secured to the frame of the machine. The table, in the present instance, is made of metal shapes secured together and braced so as to resist the fall of the castings, and on one of the pivots 15 there is a counter balance arm 16 having an adjustable weight 17, and the outer end of this arm rests on a plunger 18 adapted to a box 19 and supported by a spring 20 so as to break the force of the blow when the table assumes its normal position after being hit by the casting dropping from the mold. When the sand and casting are discharged from the mold they drop on to the table 14 and as this table is overhung it swings in the direction of the arrow, Fig. 3, and the casting will slide off of the table on to the upper portion of the screen 6, consequently the fall of the casting will be broken and the fragile casting are not so liable to be injured as they are discharged from the flask.

The form of the table may be modified without departing from the main features of my invention, and other counterbalancing means may be used than that shown.

The essential feature of the invention is to provide a yielding table for the plate upon which the casting will fall as it is discharged from the flask, and from which it will slide or drop on to the screen or other receptacle of the conveyer.

As the casting passes down the screen 6 it is freed of the sand which passes through the screen into the hopper 7, the casting will pass away from the screen and will be conveyed to the tumbling room or other locality to be finished.

I claim:—

1. The combination in a casting apparatus, of a flask, means for discharging sand and castings from the flask, a hopper, a screen therein for separating the castings from the sand, bearings, a table pivotally mounted on the bearings and under the discharge point of the flask and having a counterbalance weight so that as the castings

and sand are discharged from the flask they will drop onto the table and will be discharged by the table onto the screen.

2. The combination in a casting apparatus, of a flask carrier, flasks thereon, means located under the flask at the discharge point for receiving the casting and sand, a pivoted table located in the path of the falling casting, an arm connected to the table, and a spring cushion for cushioning the blow of the arm when the table returns to its normal position after discharging the casting.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HERBERT W. YEAGER.

Witnesses:

WILLIAM MCCHESNEY,

WALTER A. BILGER.