(No Model.)

L. D. CASTLE.

CONVEYING APPARATUS.

No. 597,838. Patented Jan. 25, 1898.

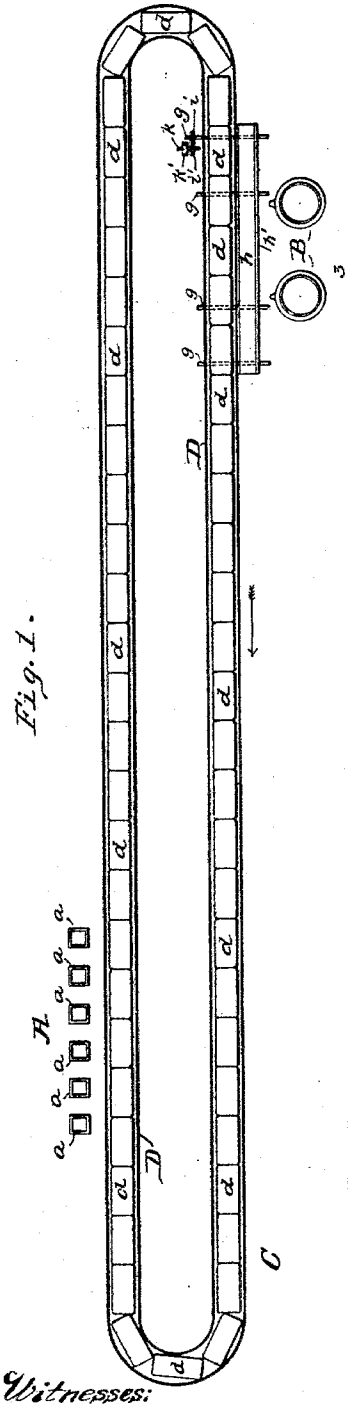


Fig. 1.

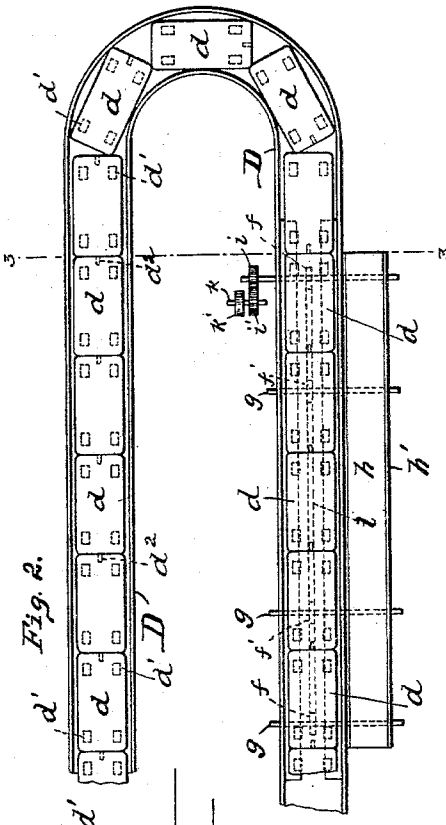


Fig. 2.

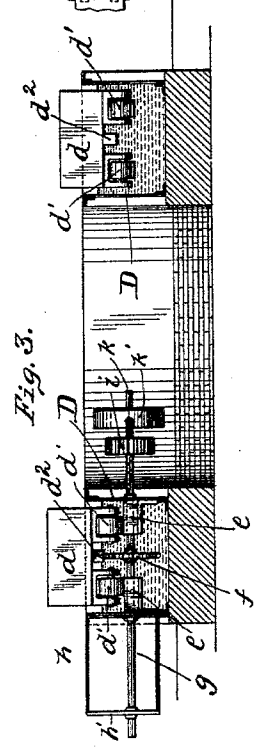


Fig. 3.

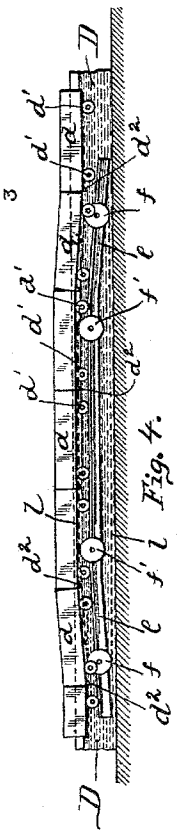


Fig. 4.

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UNITED STATES PATENT OFFICE.

LEWIS D. CASTLE, OF GREENSBURG, PENNSYLVANIA.

CONVEYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 597,838, dated January 25, 1898.

Application filed May 17, 1897. Serial No. 636,920. (No model.)

To all whom it may concern:

Be it known that I, LEWIS D. CASTLE, a resident of Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Improvement in Conveying Apparatus; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to conveying apparatus, and has reference to that type of conveying apparatus claimed, broadly, by me in an application filed of even date herewith, Serial No. 636,919.

In the accompanying drawings, Figure 1 is a plan view of my improved apparatus. Fig. 2 is an enlarged plan view of a portion of same. Fig. 3 is a cross-section on line 3 3, Fig. 2. Fig. 4 is a side view of a portion of the apparatus, with one side of the tank removed to show the interior thereof.

As in the companion application hereinbefore referred to, so in the present case I will illustrate and describe my invention as applied to a plant for casting metals.

Accordingly the letter A indicates the molding department, and *a* the molding-machines, where such machines are employed.

The letter B represents suitable cupolas, while C represents the cleaning-floor, or that place where the castings are taken from the floats after said castings have set, in the manner hereinafter set forth.

The endless tank D may be of any desired length and is constructed of metal or wood with water-tight joints. Within the tank D are the floats *d*, which may be formed of metal, wood, or other suitable material. The shape and size of said floats *d* may, of course, vary according to the requirements. In the present instance they are of such size and shape as to conveniently carry a flask or mold with the castings therein. The floats *d* are provided with the rollers *d'*, which are journaled in suitable bearings in the floats, while each float is further provided with a downwardly-projecting lug d^2, all for the purposes more fully hereinafter set forth.

At a point adjacent to the cupolas B the inner walls of the tank D for a proper distance are provided with the angle-bars *e*, which form tracks for the rollers *d'* to travel on. These tracks *e* are arranged to slope upwardly for a short distance, when they extend horizontally and then slope downwardly. In this manner, as will more fully hereinafter appear, the floats emerge partially or wholly, as may be desired, from the water and are carried for a short distance at this height and then descend again to their original level. At or adjacent to the ends of the tracks *e* are the sprocket-wheels *f*, while between the same are the intermediate sprocket-wheels *f'*. All these sprocket-wheels are mounted on suitable cross-shafts *g*, supported in bearings in the sides of the tank D and in the side *h'* of the pouring-platform *h*. One of the shafts *g* has the gear-wheel *i* thereon, which meshes with the gear-wheel *i'* on the shaft *k*. A pulley-wheel *k'* is mounted on the shaft *k*, and through it power is transmitted from an engine for driving the shaft *k*. An endless chain *l* passes around the sprocket-wheels *f*.

The operation of my invention as applied to a casting plant is as follows: When power is applied to operate the shaft *k* the end shafts *g* are also rotated, and through the endless chain *l* a like motion is imparted to all the sprocket-wheels. This causes the chain *l* to travel in the direction indicated by the arrow in Fig. 1. As the tank is full of the floats *d*, some of said floats will be resting with their rollers *d'* on the tracks *e*. Upon the movement of the endless chain *l* in the direction indicated the links of said chain will engage the downwardly-extending lugs d^2 on said floats. This engagement of the chain *l* with the lugs d^2 of said floats will cause said floats to be advanced along the tracks *e*. The movement imparted to the floats on the tracks will push forward the remaining floats, so that they all move with a continuous even motion. The floats are thus carried in succession up the tracks *e* and alongside the pouring-platform *h*. The speed at which the floats travel is to be regulated so as to give the workmen ample opportunity to pour the metal into the molds *m* as they pass the pouring-platform. The molds are placed upon the floats at the molding department A, whence they are carried alongside the cupolas B, where they are poured, thence they pass to the cleaning-floor C. Here the

castings are removed and the floats pass around to the molding department to be again loaded.

It is not necessary to connect the several floats, but they may be connected, if desired.

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

1. In conveying apparatus, the combination of an endless tank containing fluid at a common level, floats therein adapted to support the objects to be conveyed, and an endless chain adapted to engage said floats, substantially as set forth.

2. In conveying apparatus, the combination of an endless tank containing fluid at a common level, floats therein adapted to support the objects to be conveyed, rollers on said floats, tracks on the interior of said tank, and an endless chain adapted to engage said floats, substantially as set forth.

3. In conveying apparatus, the combination of an endless tank containing fluid at a common level, floats therein adapted to support the objects to be conveyed, rollers on said floats, gradually-sloping tracks in said tank, and an endless chain adapted to engage said floats, substantially as set forth.

4. In conveying apparatus, the combination of an endless tank containing fluid at a common level, floats therein adapted to support the objects to be conveyed, said floats having downwardly-extending lugs, and an endless chain adapted to engage said lugs, substantially as set forth.

5. In conveying apparatus, the combination of an endless tank containing fluid at a common level, floats therein adapted to support the objects to be conveyed, sprocket-wheels in said tank, an endless chain on said sprocket-wheels, said chain being adapted to engage said floats, substantially as set forth.

In testimony whereof I, the said LEWIS D. CASTLE, have hereunto set my hand.

LEWIS D. CASTLE.

Witnesses:
ROBERT C. TOTTEN,
ROBT. D. TOTTEN.