

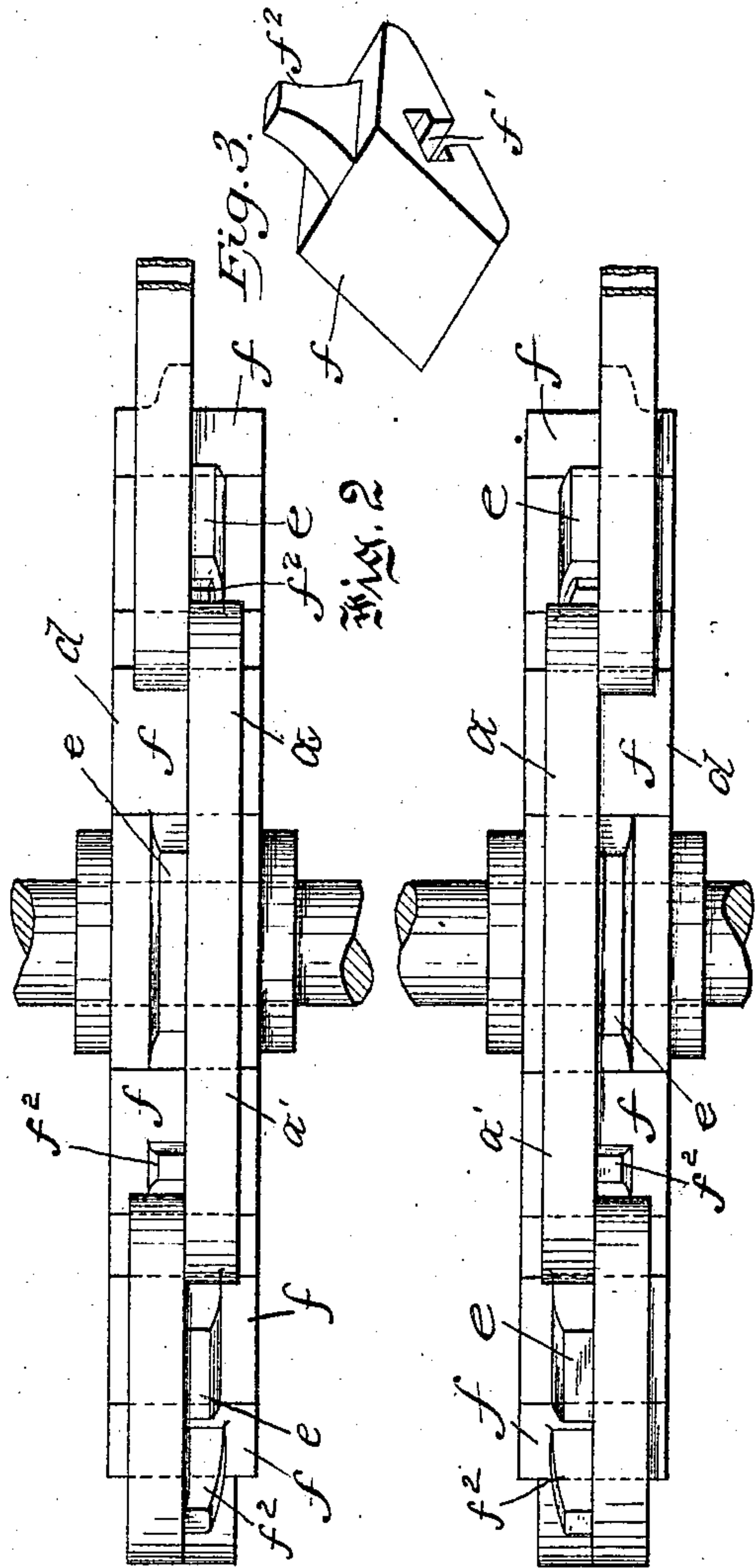
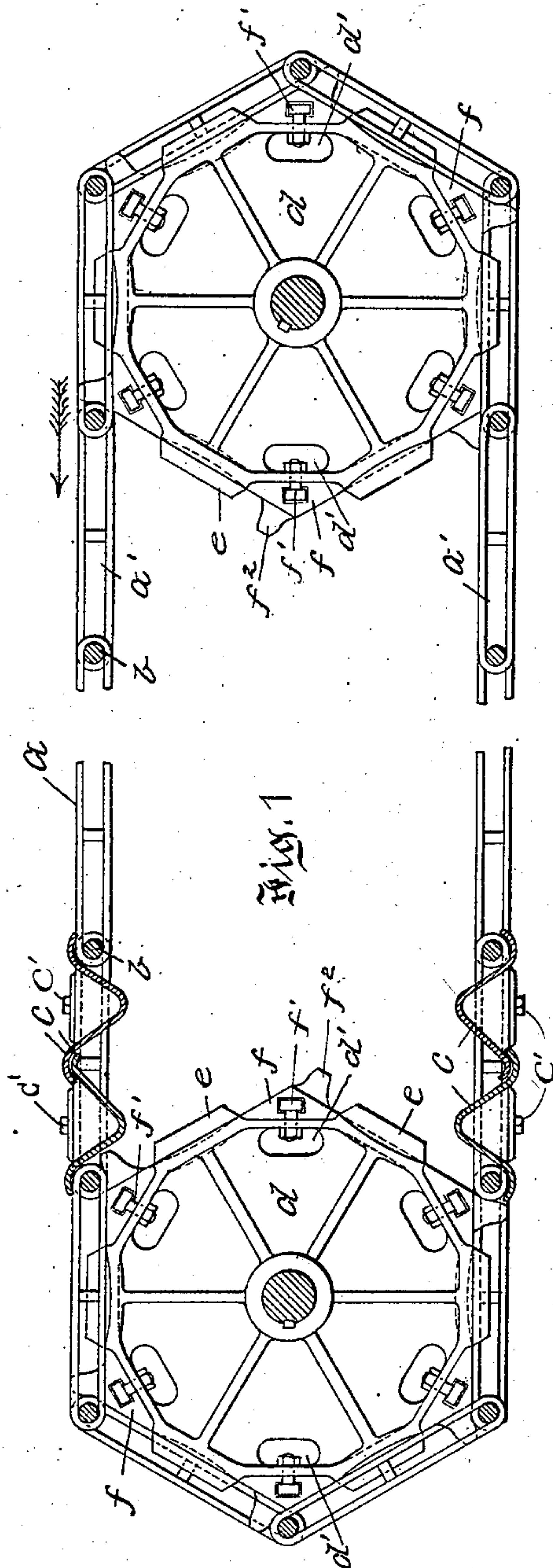
No. 667,174.

Patented Feb. 5, 1901.

A. M. ACKLIN & W. J. PATTERSON.
CHAIN CONVEYER.

(Application filed Mar. 11, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

ALFRED M. ACKLIN AND WILLIAM J. PATTERSON, OF PITTSBURG, PENNSYLVANIA, ASSIGNORS TO HEYL & PATTERSON, OF SAME PLACE.

CHAIN CONVEYER.

SPECIFICATION forming part of Letters Patent No. 667,174, dated February 5, 1901.

Application filed March 11, 1899. Serial No. 708,694. (No model.)

To all whom it may concern:

Be it known that we, ALFRED M. ACKLIN and WILLIAM J. PATTERSON, residents of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Chain Conveyers; and we do hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates, primarily, to chain-and-sprocket gearing, and, secondarily, to conveyer mechanism embodying such gearing.

One of the objects of our invention is to provide a chain-and-sprocket gear which shall possess unusual strength and durability and at the same time be comparatively inexpensive and easily assembled and one in which the parts that are most subject to wear may be readily removable and replaceable.

A further object of our invention is to provide a chain and sprocket which shall be specially adapted for use in connection with metal-casting apparatus or with other apparatus embodying conveyer mechanism.

With these ends in view we have devised the means shown in the accompanying drawings, in which—

Figure 1 is a view, partially in section and partially in side elevation, of a conveyer-chain and drive-wheels constructed in accordance with our invention, a portion of the chain being broken away. Fig. 2 is a plan view of two of the wheels and a portion of the chain shown in Fig. 1, and Fig. 3 is a perspective view of one of the removable blocks.

Referring now to the details of construction illustrated in the drawings, the endless chain *a* is composed of open links *a'*, the adjacent ends of which overlap sufficiently to receive rods *b*, the projecting ends of which may constitute axles for supporting wheels in cases where such devices are employed in connection with a track for guiding and supporting the chain and its load between its drive-wheels. As shown in the present case, each link *a'* partially supports two molds *c*, the projecting flanges at the ends of the molds being bolted to the link, as indicated at *c'*. It will be readily understood without further illustration or description that when the links are employed for the purpose just indicated

two chains of like construction will be employed and located side by side a sufficient distance apart so that both ends of the molds will be supported in the manner indicated in the drawings. It will be further understood that buckets or receptacles of any suitable form and dimensions may be employed in lieu of molds, according to the relations in which the mechanism is to be used.

In order to support and propel the chain *a*, we employ two sprocket-wheels *d*, the distance between the shafts of which is obviously determined by the length of the chain and the amount of slack that it is desirable or permissible for it to have. Each sprocket-wheel *d* has a polygonal periphery, and each of its sides is provided with a lug *e*. These lugs are alternately arranged at opposite sides of the central plane of the wheel in order that they may engage either the inner or the outer sides of the corresponding links of the chain, and thus prevent it from either slipping off the wheel or getting out of alignment. Intermediate the lugs *e* are triangular-shaped blocks *f*, preferably formed of chilled iron or some other hard metal. The blocks *f* are secured to the body of the wheel by means of bolts *f'*, having heads fitting into T-slots in the blocks and provided with nuts, openings *d'* being provided in the wheel to permit of ready application and removal of said nuts. Each of the triangular blocks *f* is provided with a lug *f''* in such position as to engage the rear end of a corresponding link of the chain, the lugs being alternately located at opposite sides of the central plane of the wheel, as well as properly spaced around the periphery in order to secure this result.

While we have shown the lugs *e* and *f''* as arranged alternately at opposite sides of the central plane of the wheel *d*, it is to be understood that such dividing-plane need not be equidistant from the peripheral edges. In fact, the lugs may be alternately located on opposite sides of any plane that is perpendicular to the wheel-axis, provided sufficient supporting-space is afforded at each side.

It will be readily understood from the illustration and the foregoing description that the construction described possesses unusual mechanical strength, is not liable to get out of

order, and is so designed that if any of the parts become broken or worn out in service they may be readily replaced. It will also be apparent that the mechanism is adapted
 5 for use in many relations where it is desired to transmit power or to convey materials from one point to another.

We desire it to be understood, therefore, that our invention is not limited to the exact
 10 details of construction shown and described or to use in the relations specifically mentioned.

We claim as our invention—

1. The combination with an endless chain
 15 having overlapping links, of a drive-wheel therefor having removable peripheral blocks provided with lugs which are alternately located at opposite sides of a plane of the wheel that is perpendicular to its axis so as to en-
 20 gage the rear ends of the chain-links, substantially as described.

2. The combination with an endless chain having overlapping links, of a polygonal drive-wheel therefor having peripheral blocks
 25 bolted thereto and provided with lugs that are located at the angles of the wheel and alternately at opposite sides of a plane that is perpendicular to the wheel-axis so as to engage the rear ends of the chain-links, sub-
 30 stantially as described.

3. The combination with an endless chain having overlapping links, of a drive-wheel

having removable blocks provided with lugs and having guide-ribs intermediate said lugs, said guide-ribs and said lugs being both lo-
 35 cated alternately at opposite sides of a plane of the wheel that is perpendicular to its axis, substantially as described.

4. The combination with an endless chain having overlapping links provided with re-
 40 ceptacles, of polygonal drive-wheels for said chain each of which has removable blocks provided with lugs that are arranged alternately at opposite sides of a plane of the wheel that is perpendicular to its axis so as
 45 to engage the rear ends of the links, substantially as described.

5. The combination with an endless chain having overlapping links provided with re-
 50 ceptacles, of sprocket-wheels for said chain each of which has guide-ribs arranged alternately at opposite sides of a plane of the wheel that is perpendicular to its axis and propelling-lugs arranged in like manner, to
 55 engage the rear ends of the links.

In testimony whereof we, the said ALFRED M. ACKLIN and WILLIAM J. PATTERSON, have hereunto set our hands.

ALFRED M. ACKLIN.
 WILLIAM J. PATTERSON.

Witnesses:

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 ROBERT C. TOTTEN.