No. 678,742. Patented July 16, 1901.

J. KENNEDY.

METAL TRANSFER DEVICE.

(No Model.) (Application filed Nov. 2, 1900.) 3 Sheets—Sheet 1.

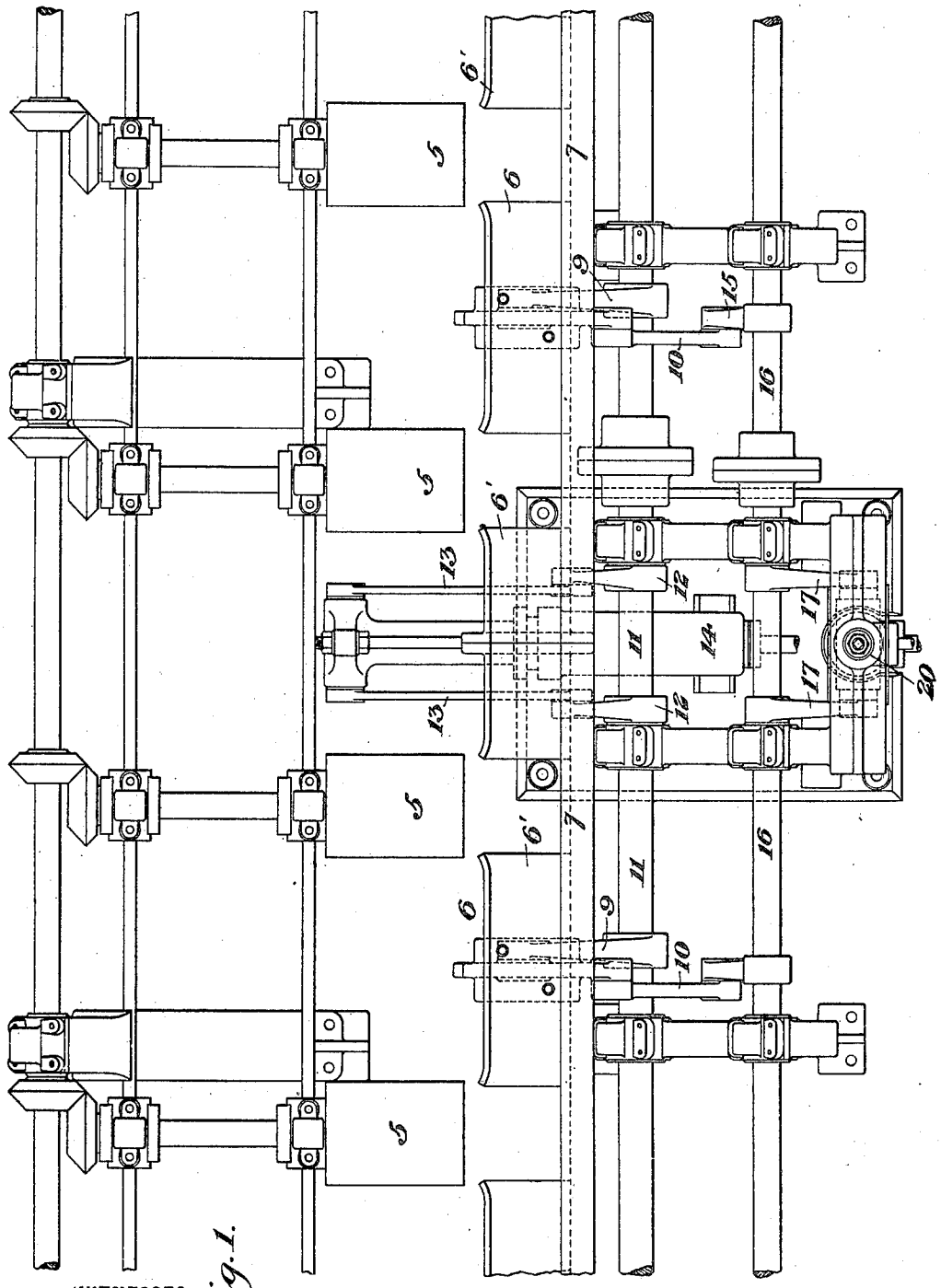


Fig. 1.

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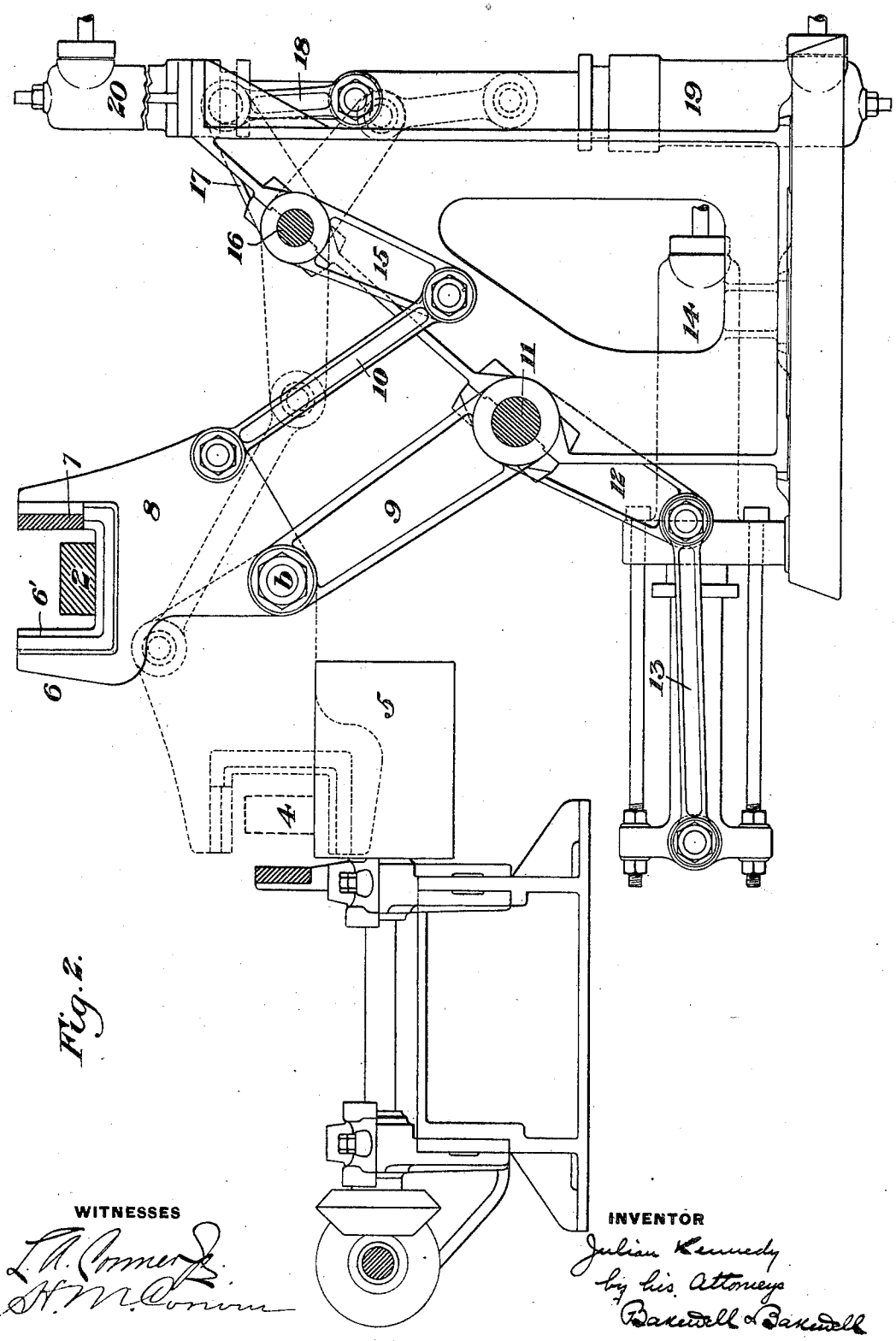


Fig. 2.

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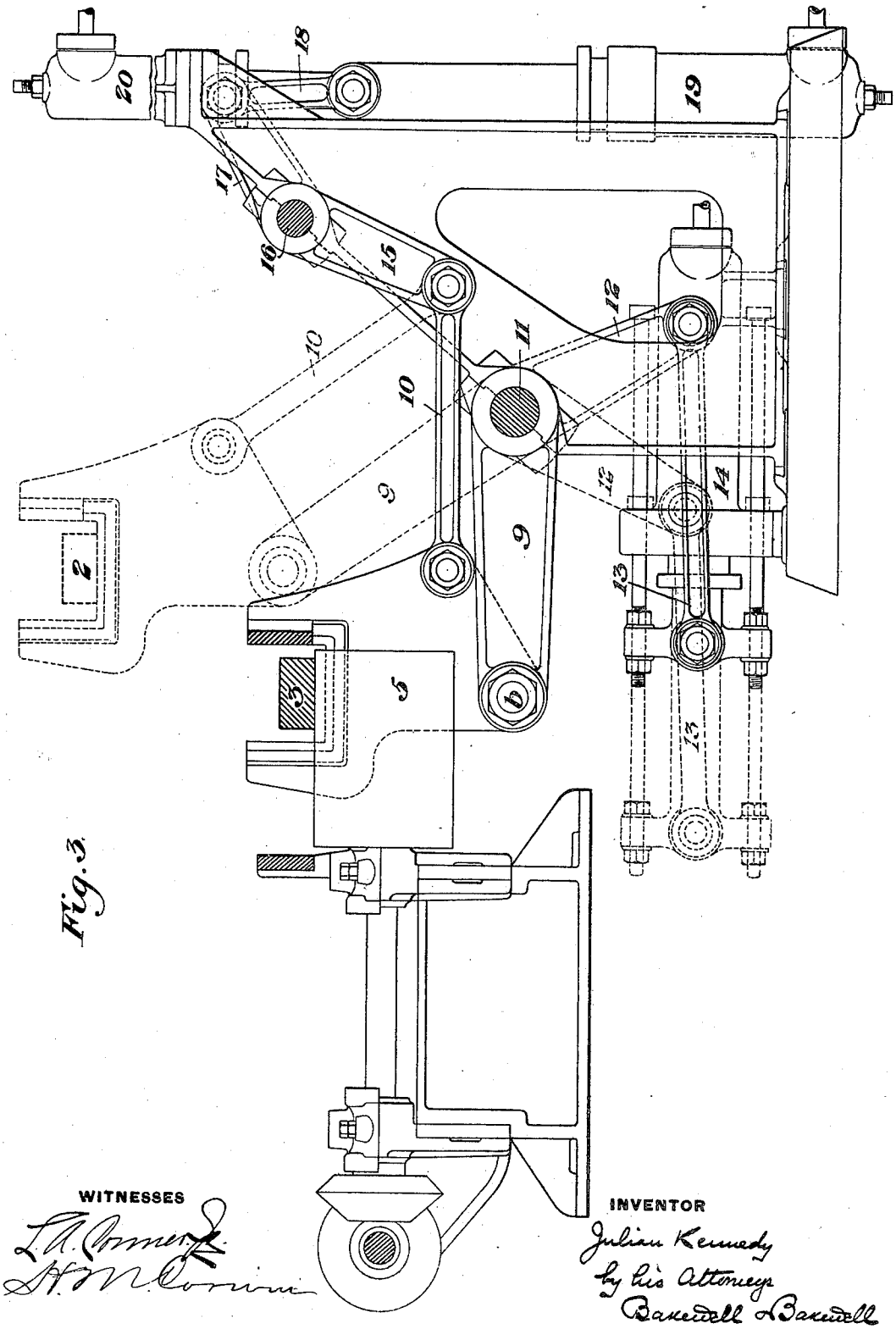


Fig. 3.

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UNITED STATES PATENT OFFICE.

JULIAN KENNEDY, OF PITTSBURG, PENNSYLVANIA.

METAL-TRANSFER DEVICE.

SPECIFICATION forming part of Letters Patent No. 678,742, dated July 16, 1901.

Application filed November 2, 1900. Serial No. 35,215. (No model.)

To all whom it may concern:

Be it known that I, JULIAN KENNEDY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Metal-Transfer Devices, 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 is a plan view showing my improved apparatus, and Figs. 2 and 3 are end views showing the parts in the different positions which they are capable of assuming.

The object of my invention is to provide means for the transfer of metal pieces from one roll-pass to another pass on a different level and to enable the piece to be turned or not, as desired, during its transfer.

In the drawings, 2, 3, and 4 represent, respectively, the metal piece in its different positions at three roll-passes, the pass 2 being at a higher level, the pass 3 being adapted to receive the metal when it is in the same position as at the pass 2, and the pass 4 being adapted to receive the metal when turned about ninety degrees.

5 5 represent a feed-table composed of rollers and adapted to carry the metal to the roll-passes 3 and 4. The metal-transfer carrier 6 has a trough-shaped portion 6′, in which the metal pieces are carried and which is preferably composed of a series of short troughs, to each of which is connected a guide-bar 7, which preferably extends along the whole series of trough-sections. The guide-bar 7 is carried by brackets 8, each of which is pivotally connected to parallel arms 9 10. The arms 9 are levers and are keyed to a shaft 11, which is connected by a lever 12 and pitman 13 to the plunger of a hydraulic cylinder 14. The arms 10 are connected to levers 15, which project from a shaft 16, and this shaft is connected by a lever 17 and pitman 18 of a plunger of a hydraulic cylinder 19. Said plunger also preferably operates in a second cylinder 20 of smaller diameter, which acts oppositely to the cylinder 19 and effects the return stroke of the plunger.

The operation is as follows: If the parts are in the position shown in Fig. 2, in which the metal-carrier is at proper position to receive the metal from the pass 2, and if it is desired to transfer the piece to the pass 4 and simultaneously to turn the piece, water is exhausted from the cylinder 19, whereupon the cylinder 20 will act, turning the shaft 16, moving the lever 15 into the position shown by dotted lines, the effect of which is to turn the brackets 8 on the connections *b*, by which they are pivoted to the ends of the levers 9, and to turn the metal-carrier laterally over into the position shown in dotted lines, the brackets 8 and the trough-sections passing between the feed-rollers and delivering the metal thereupon in a position substantially at right angles to that in which it was in pass 2. During this motion of the trough-sections the levers 9 do not move and the fulcrum *b* is a fixed axis. If it is desired to transfer the metal piece from the pass 2 to the pass 3 without turning it, the parts are operated as shown in Fig. 3. In this case the metal having been received in the trough-sections from the pass 2 the cylinders 19 and 20 are not operated, but water is exhausted from the cylinder 14 in such manner as to retract the plunger and through the shaft 11 to move the levers 9 from the position shown in dotted lines to the position shown in full lines. In this case the brackets 8 will be carried down with the levers; but as the arms 10 also move with the levers 9 and preserve their parallelism therewith the trough-sections are not tilted, but the piece is delivered upon the feed-rollers in the same position as that which it occupied at the pass 2. I am thus enabled by a single apparatus either to deliver the metal to the feed-rollers in a turned position or to deliver it without turning it, one motor or the other being operated in order to effect the desired result.

Within the scope of my invention as defined in the claims modifications may be made by those skilled in the art, particularly in respect of the motors and their connections, since what I claim is—

1. Metal-transfer mechanism comprising a metal-carrier arranged to be moved from one level to another, and supported from two pivotal points, and mechanism for swinging said carrier upon each of said pivots while the other pivot remains stationary, whereby the

carrier may be moved to a different level with or without tilting, as desired; substantially as described.

2. Metal-transfer mechanism comprising a carrier, parallel arms 9 and 10 connected therewith, a lever 15 connected with the arm 10, and motors connected respectively with said parts and arranged to swing either the arm 9 or the arm 15 without swinging the other of said arms; substantially as described.

3. Metal-transfer mechanism comprising a carrier, parallel arms 9 and 10 connected therewith, a lever 15 connected with the arm 10, shafts 11 and 16, and means for swinging either the arm 9 or the lever 15 without swinging the other of said members; substantially as described.

In testimony whereof I have hereunto set my hand.

JULIAN KENNEDY.

Witnesses:
L. A. CONNER, Jr.,
H. W. RANO.