

No. 675,156.

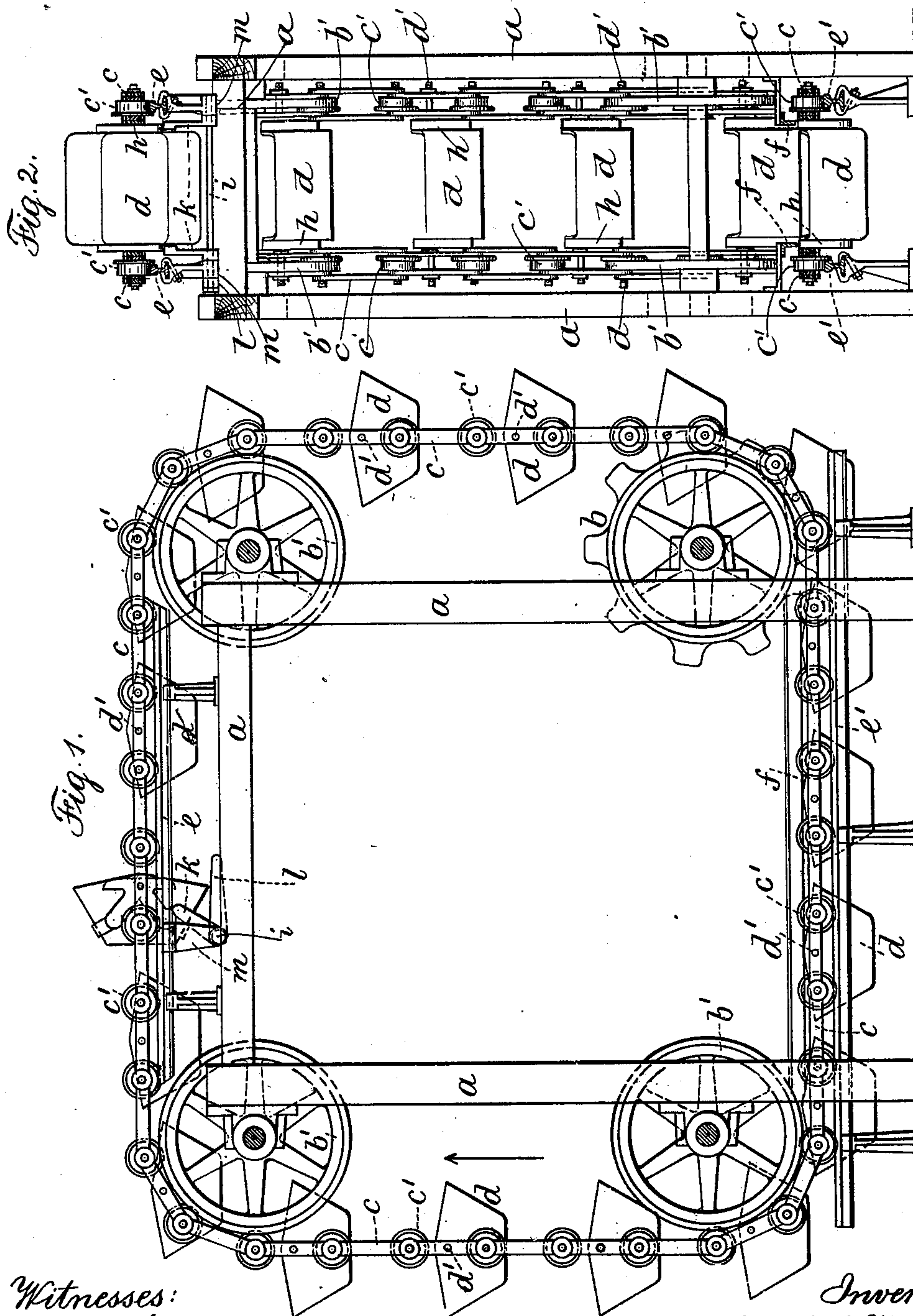
Patented May 28, 1901.

J. C. HOSHOR.
CONVEYER.

(Application filed Aug. 21, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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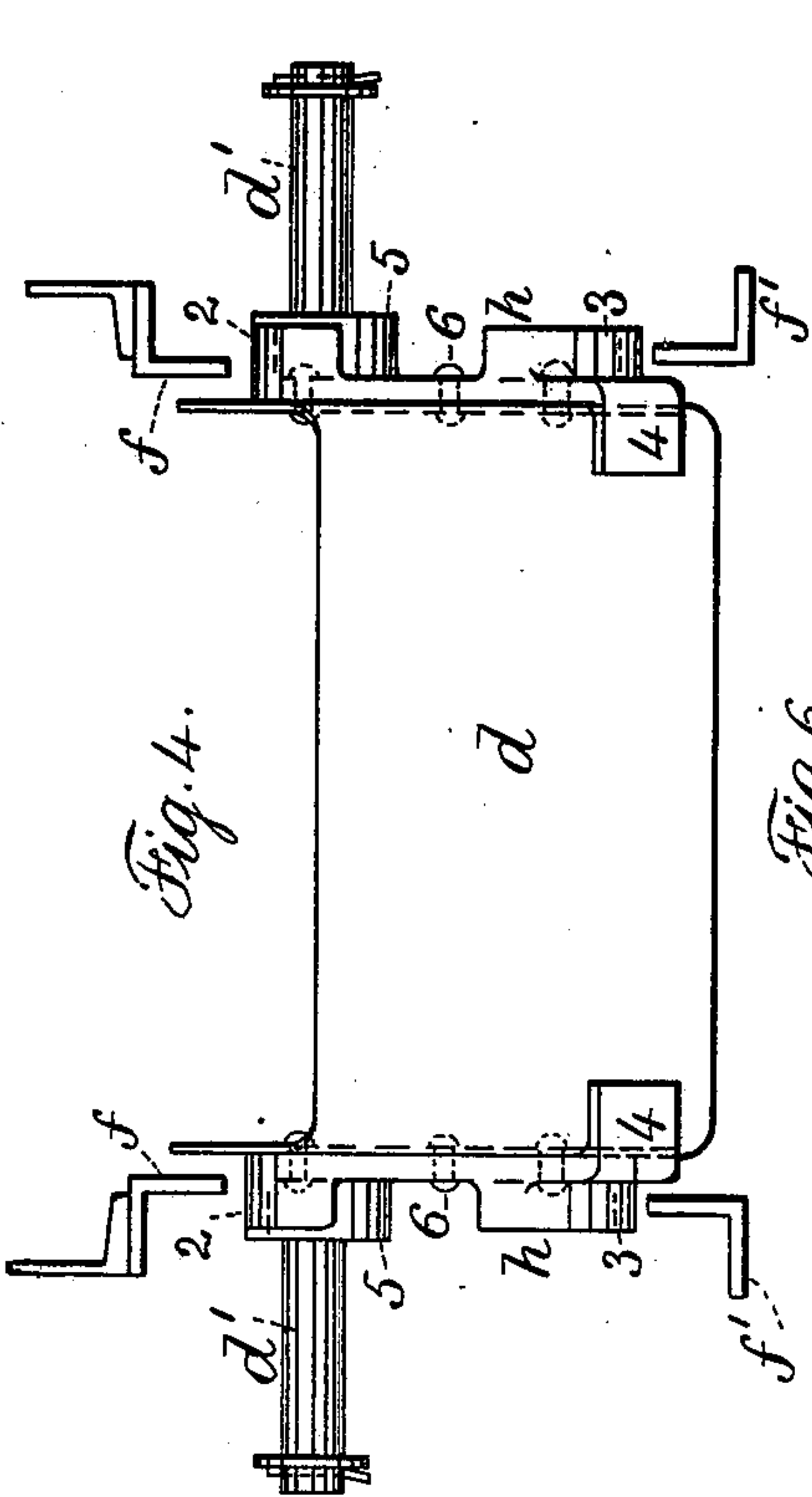
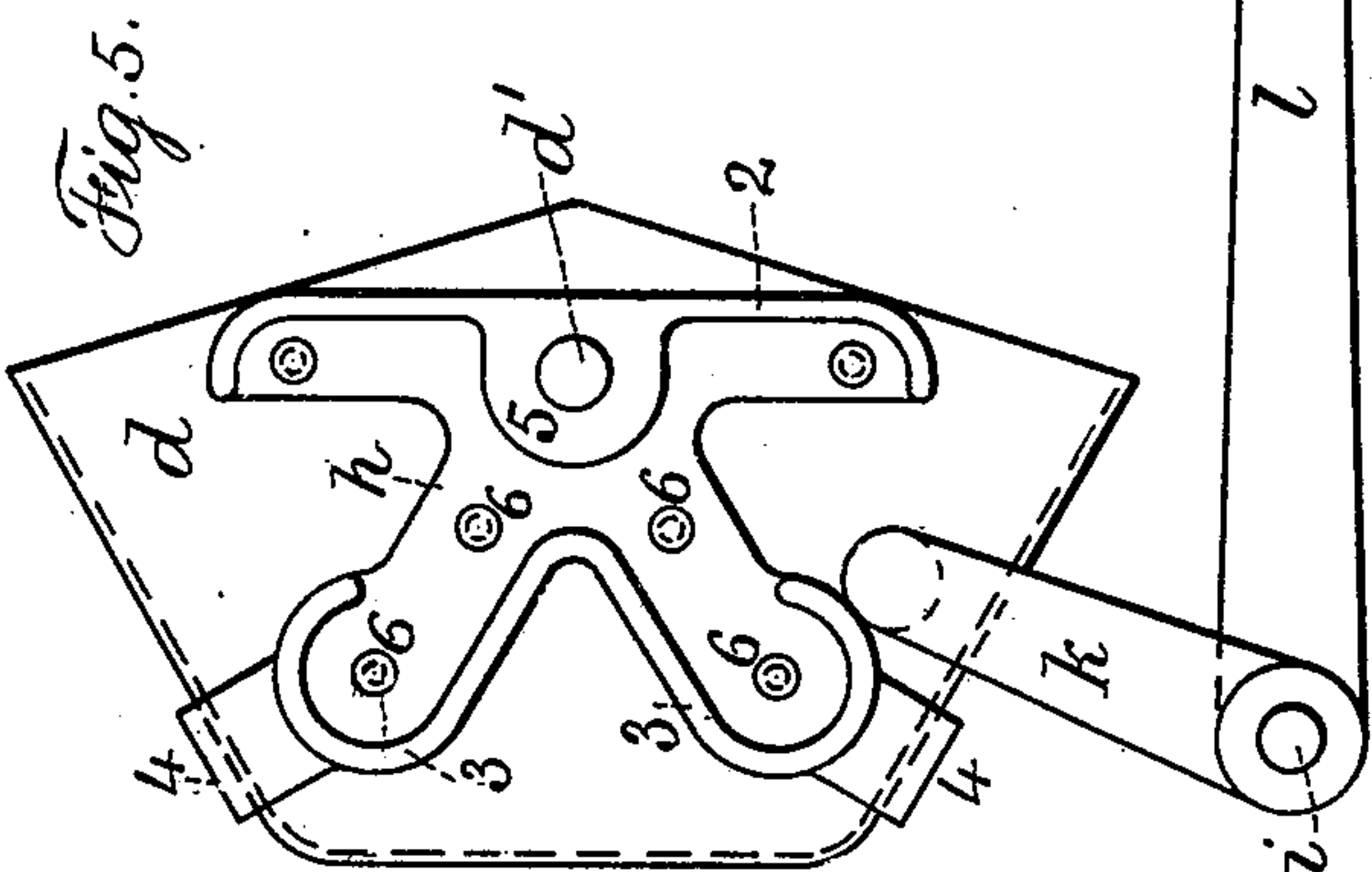
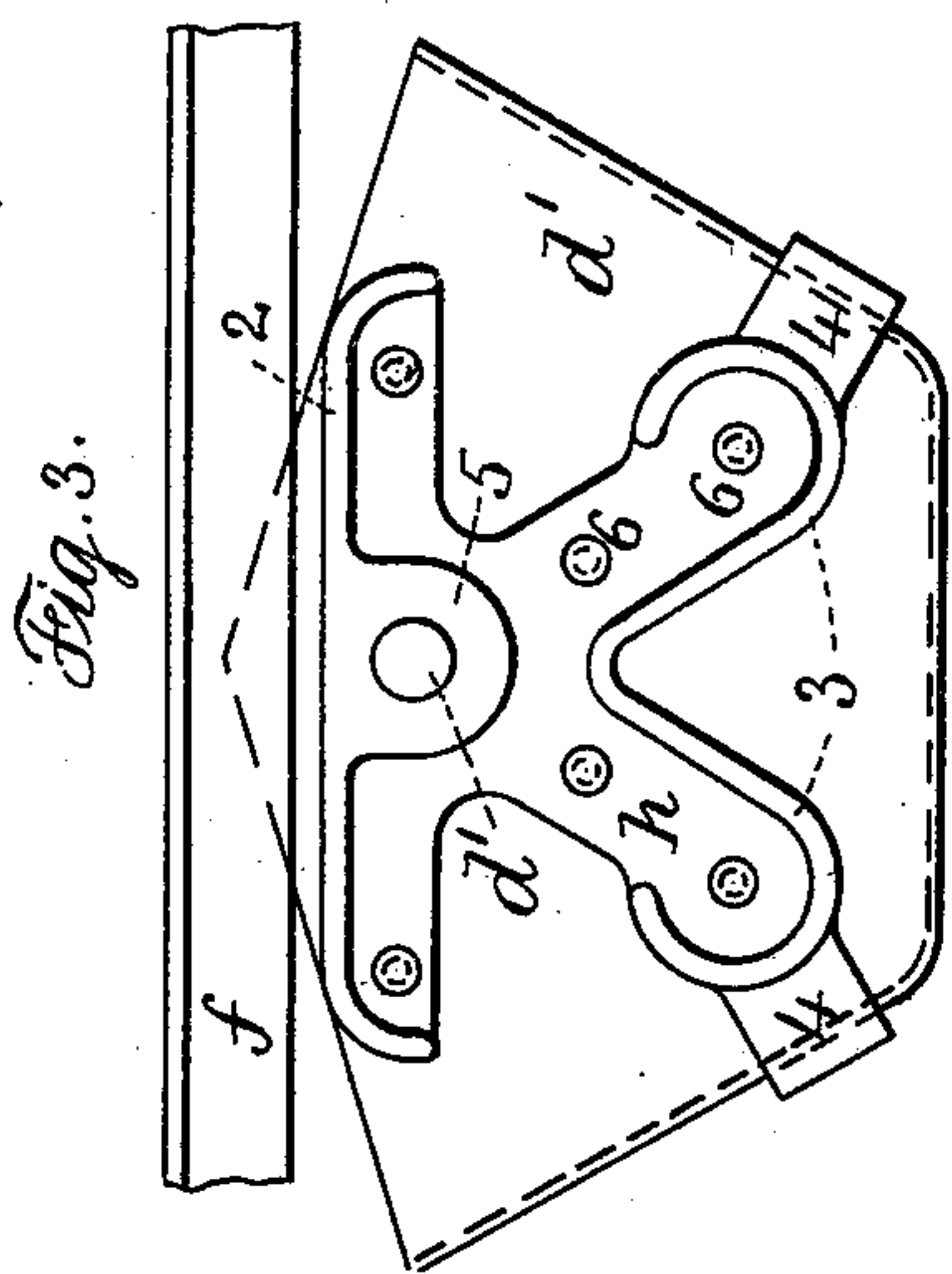
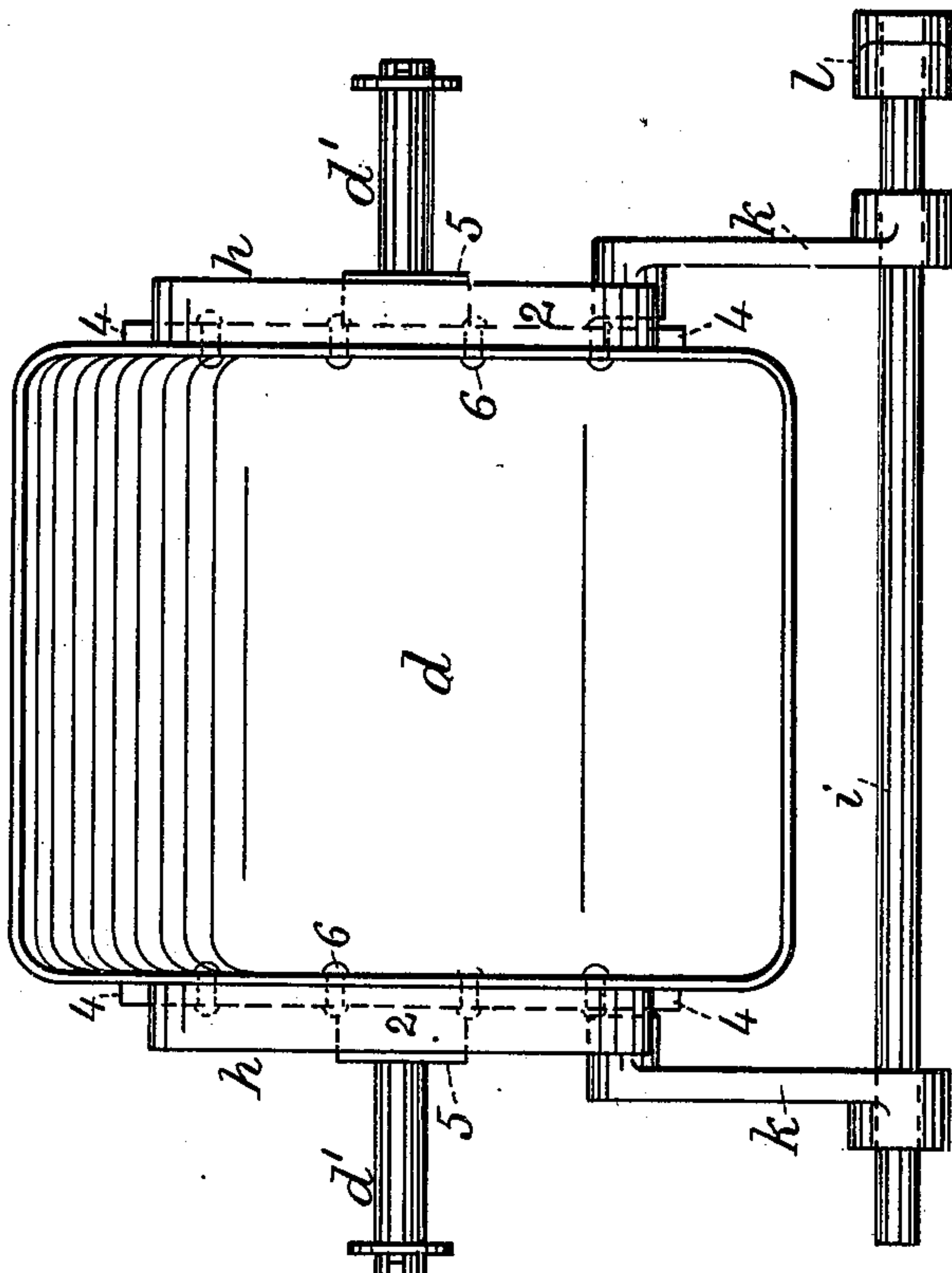


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH C. HOSHOR, OF PATERSON, NEW JERSEY, ASSIGNOR TO HIMSELF
AND THOMAS E. PLATT, OF SAME PLACE.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 675,156, dated May 28, 1901.

Application filed August 21, 1900. Serial No. 27,562. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. HOSHOR, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented an Improvement in Conveyers, of which the following is a specification.

My invention relates to improvements in conveyers for coal, ore, grain, and other articles of merchandise, the object being to stiffen the ends of the gravity-buckets, so that the buckets maintain their shape when forming a connection between the parts of the endless chain, and in connection with said stiffening device to provide means that act as guides with the rails and also contact with devices for tipping the bucket.

In carrying out my invention I employ end frame-plates of a peculiar form used to stiffen the gravity-bucket to prevent the same buckling: These end plates are made with stiffening-ribs, which form guides for the bucket, in connection with guide-rails employed in the device, and also stops for the buckets as the same come in contact with devices for tipping the buckets. These end frame-plates are provided with hubs for the pivot-pins and with finger-plates that extend around the corners of the buckets onto the sides, the said frame-plates being securely riveted to the respective ends of the buckets.

In the drawings, Figure 1 is an elevation of a conveyer illustrative of my invention. Fig. 2 is a vertical section of the same. Fig. 3 is an end view, and Fig. 4 a side view, of a gravity-bucket in its normal position. Fig. 5 is an end view, and Fig. 6 a side view, showing the said bucket in a tipped position. Figs. 3 to 6, inclusive, are shown of exaggerated size for clearness.

The frame *a*, illustratively shown in Fig. 1 and supporting the conveyer device, may be of any desired construction. The motor-wheel is represented at *b* and the guide-wheels at *b'*, said wheels being mounted in suitable bearings upon said framework and the conveyer extending around said wheels, the horizontal portions of said conveyer being supported by tracks *e e'*.

The conveyer-chain *c* is preferably composed of pairs of links of ordinary construc-

tion, there being rollers or wheels *c'* at the pivoted ends of the links.

The gravity-buckets *d* are of ordinary construction, and the same are pivoted at the pivot-pins *d'* to the links of the conveyer-chain. The gravity-buckets are provided with end frame-plates *h*. These are shown clearly in Figs. 3 to 6, inclusive. The frame-plates *h* at the respective ends of the buckets are made alike and each one provided with a substantially straight upper portion having a stiffening-rib 2 and a hub 5, said hub 5 having connected to it the pivot-pin *d'*, the lower part of said frame-plate being diverging and provided with a stiffening rib or edge 3, following the lower curve and central contour of the plate, the plate being connected to the end of the gravity-bucket by rivets 6. This frame-plate is also provided with finger-plates 4, formed as continuations of the diverging lower portions of the plate, the finger-plates preferably passing around the angles or corners of the buckets onto the sides. These may also be riveted to the buckets, if desired.

In Fig. 1 one of the side frame-plates is shown on the bucket in the tipped position, and it is to be understood that while said frame-plates are not shown on the other buckets it is my intention to employ said plates on all the buckets.

In Figs. 1, 2, 3, and 4 I have shown guide-rails *f* placed longitudinally of the conveyer-chains and directly above the stiffening-ribs 2 of the buckets, and by dotted lines in Fig. 4 guide-rails *f'*, which may be employed and placed below the lower edge of the stiffening-ribs 3 of the plate. These guide-rails serve to keep the gravity-bucket in a true path and prevent the same swinging, except to a very limited extent, with the movement of the conveyer, thus overcoming the tendency of the buckets to swing abnormally and spill some of the contents.

In connection with a conveyer of gravity-buckets of this construction I prefer to employ a shaft *i*, pivoted in brackets *m*, connected to one of the tracks *e*, said shaft carrying arms *k* and a lever *l*, the lever being employed in any convenient or well-known manner for turning the shaft to move the arms *k* into or out of the path of the travel-

ing gravity-buckets. In Figs. 1, 5, and 6 I have illustrated the arms k in the path of the buckets, so that the buckets are stopped in their movement by coming in contact with the arms k and are therefore swung on their pivot-pins d' .

The stiffening-ribs 3 on the sides of the bucket, and which are preferably formed integral with the end frame-plates h , constitute a convenient device to contact with the ends of said levers, as they are strong and securely connected to the buckets and adapted to readily swing the entire bucket on its pivots to deliver the contents into any convenient receptacle formed therefor, the said arms k being preferably made, as shown in Figs. 5 and 6, with enlarged free ends or bosses that contact with the stiffening-rib 3.

It will be noticed from the construction, Figs. 3 and 5, that the two ends of the stiffening-rib 3, forming an edge to the diverging lower ends of the frame-plate h , are at the same distance from the center of the pivot-pin d' . Consequently when the bucket tips and rides over the free ends of the arms k and swings downward to a normal position the same will swing free, because there will be nothing to come in contact with the arms k and check the movement of the bucket or stop the same midway.

I claim as my invention—

1. In a conveyer, the combination with the endless chain of the conveyer and the rollers pivoted thereto, of the gravity-buckets, plates connected upon the respective ends of the gravity-buckets and extending in different directions over the surface of the ends for stiffening the buckets, and pivots connected to said plates and to the chains of the conveyer, straight stiffening-ribs 2 being formed with said plates and the guide-rails f over the ribs 2, substantially as set forth.

2. In a conveyer, the combination with the gravity-buckets, of end frame-plates h , having stiffening-ribs and hubs formed integral therewith, pivot-pins secured to the said hubs and rivets for connecting the plates upon the ends of the buckets, there being diverging stiffening-ribs 3, with curved ends adjacent to the lower portions of the gravity-

buckets, guide-rails f' , below the ribs 3, and a tipping-lever against which the ribs 3 come in contact, substantially as set forth.

3. In a conveyer, the combination with the gravity-buckets, of stiffening frame-plates upon the respective ends of the buckets, each frame-plate having made integral therewith a straight stiffening-rib 2 and hub 5 and a diverging stiffening-rib 3 with curved ends on the opposite side or edge of the plate and coming adjacent to the lower portion of the gravity-bucket, the said ribs forming guides, and guide-rails connected to the conveyer mechanism in proximity to said stiffening-ribs for preventing the swinging action of the buckets, substantially as set forth.

4. In a conveyer, the combination with the gravity-buckets, of stiffening frame-plates upon the respective ends of the buckets, each frame-plate having made integral therewith a straight stiffening-rib 2 and hub 5 and a diverging stiffening-rib 3 with curved ends on the opposite side or edge of the plate and coming adjacent to the lower portion of the gravity-bucket, and finger-plates formed as continuations of the lower end portions of the frame-plate and extending around the angular corner of the bucket onto the sides, substantially as set forth.

5. In a conveyer, the combination with the gravity-buckets, of stiffening frame-plates upon the respective ends of the buckets, each frame-plate having made integral therewith a straight stiffening-rib 2 and hub 5 and a diverging rib 3 with curved ends on the opposite side or edge of the plate and coming adjacent to the lower portion of the gravity-bucket, and a tipping mechanism comprising a suitably-supported shaft, a lever and arms connected therewith, the free ends of the arms when in position forming stops against which the stiffening-ribs 3 of the buckets strike in order to tip the buckets and deliver their contents, substantially as set forth.

Signed by me this 16th day of August, 1900.

JOSEPH C. HOSHOR.

Witnesses:

GEO. T. PINCKNEY,
S. T. HAVILAND.