

No. 702,906.

Patented June 24, 1902.

A. M. ACKLIN.  
FLIGHT FOR CONVEYERS.  
(Application filed Apr. 14, 1902.)

(No Model.)

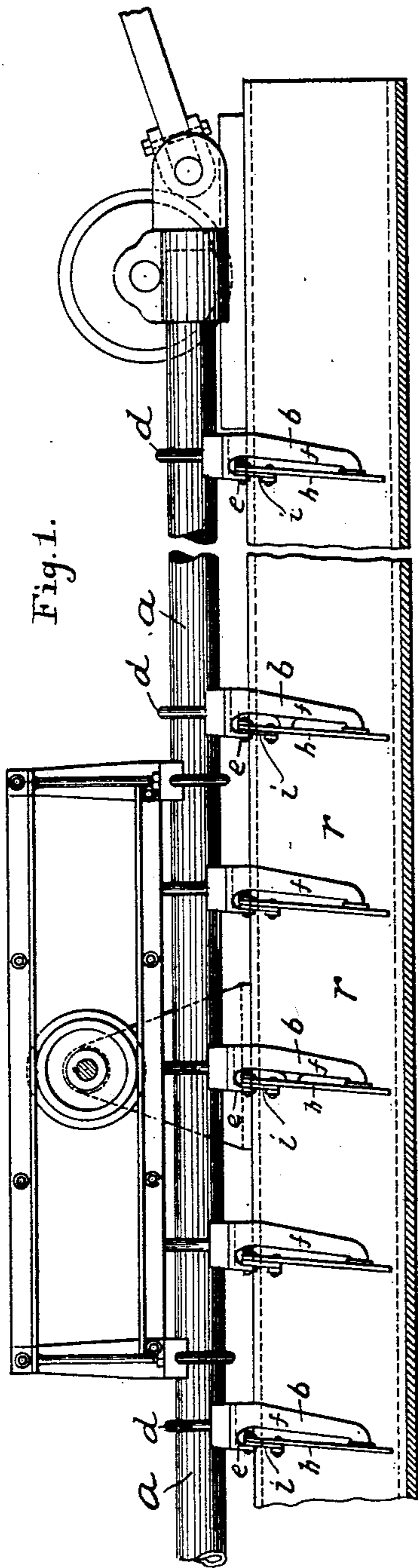


Fig. 1.

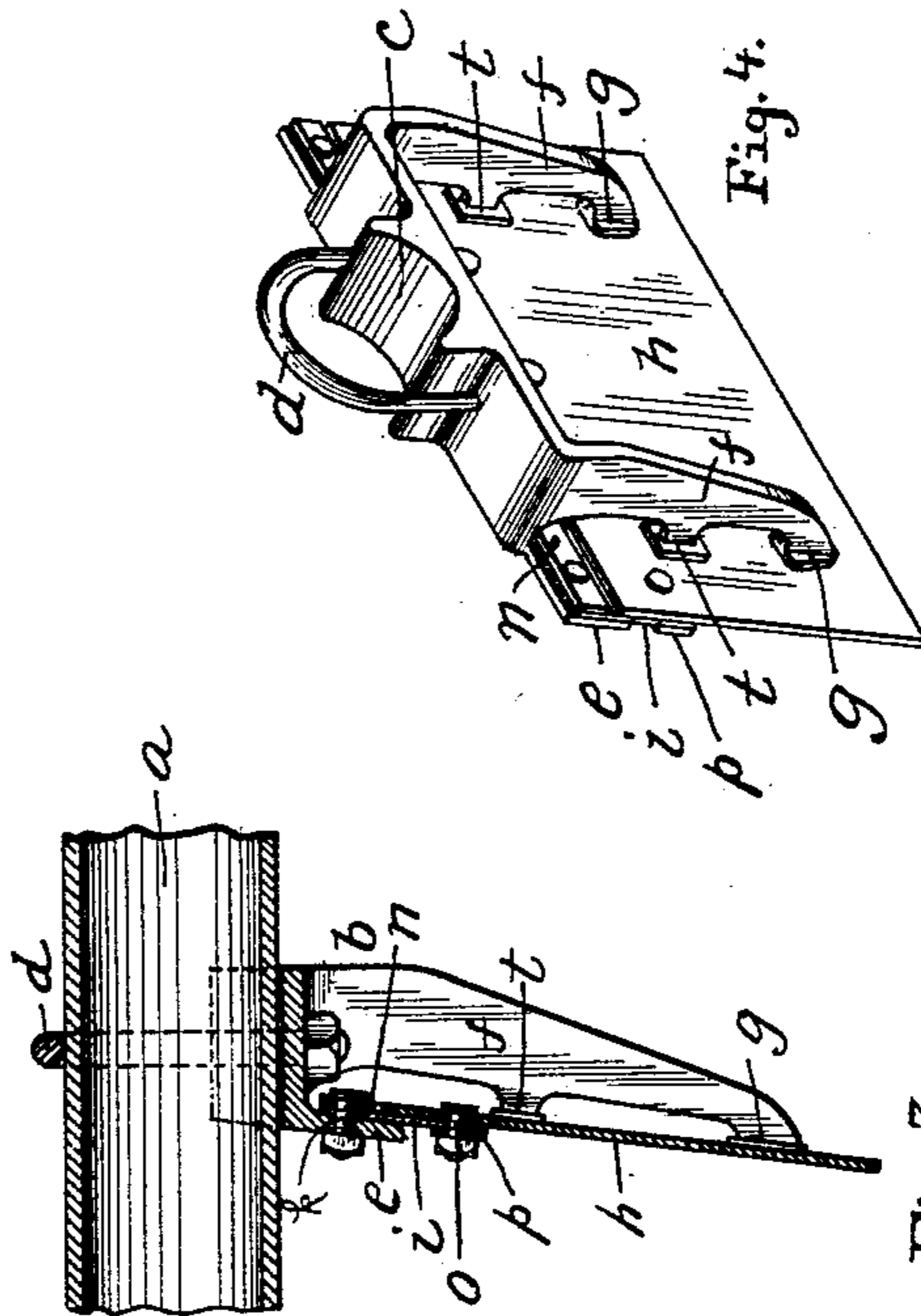


Fig. 3.

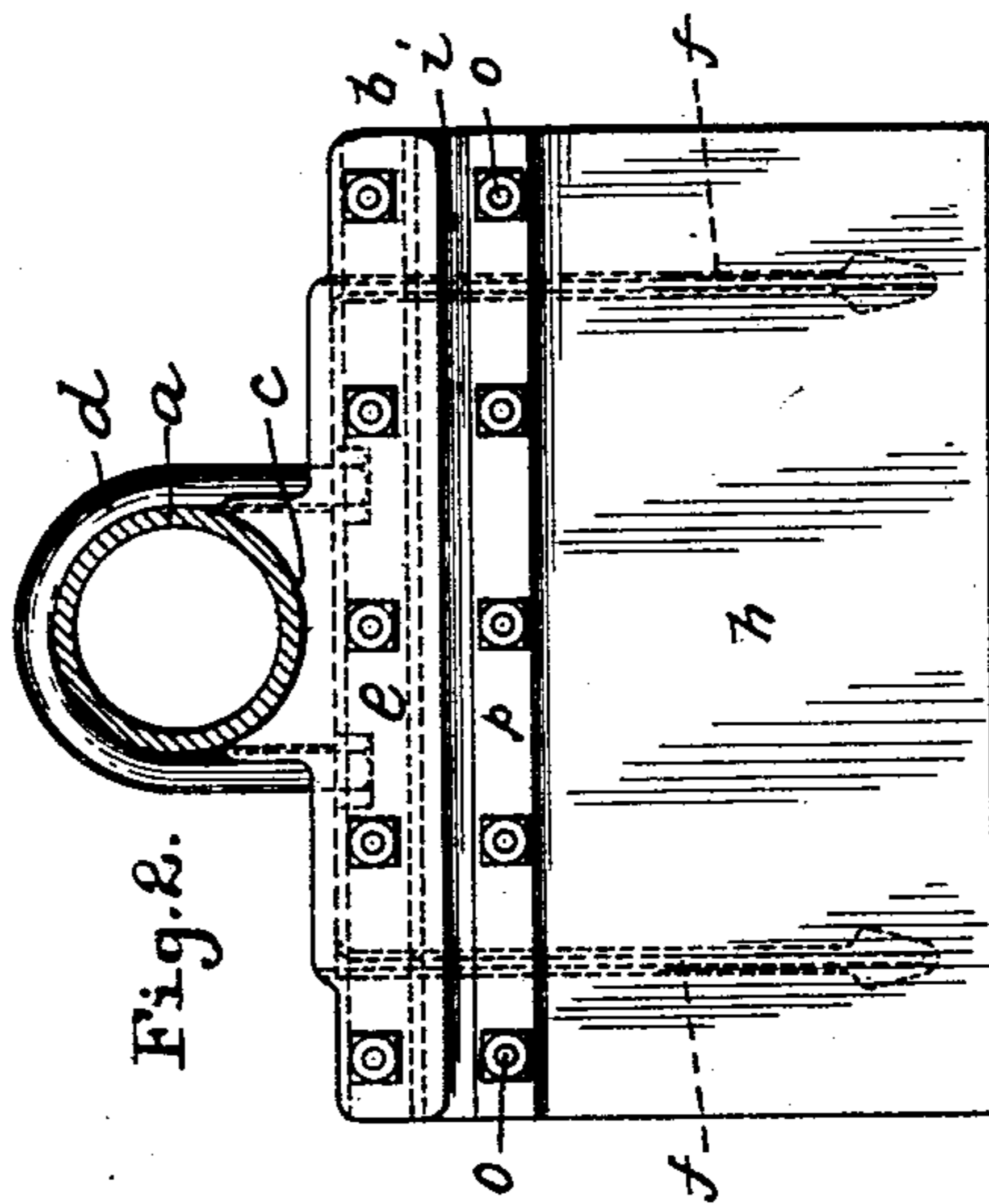


Fig. 2.

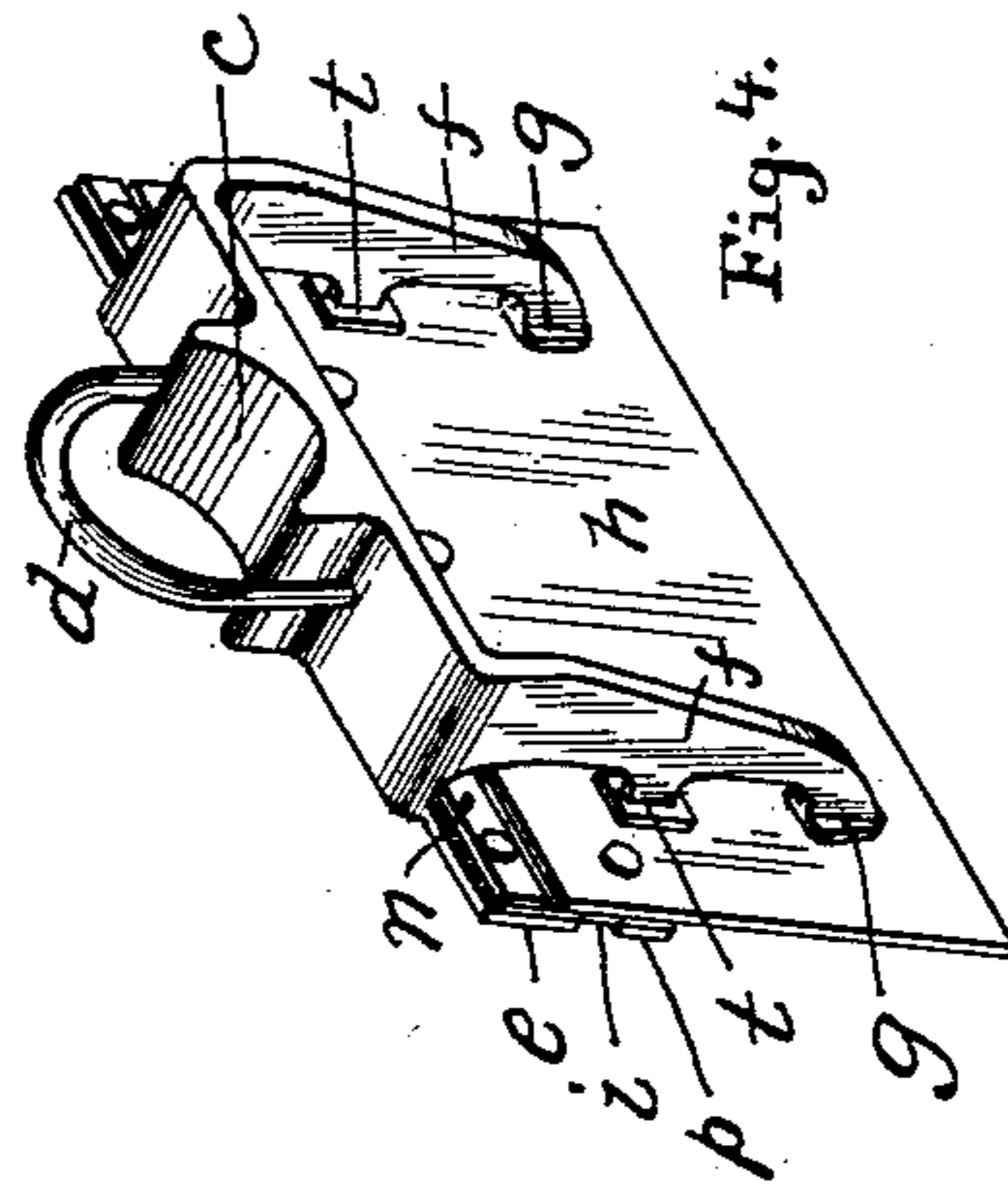


Fig. 4.

Witnesses:

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# UNITED STATES PATENT OFFICE.

ALFRED M. ACKLIN, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HEYL  
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## FLIGHT FOR CONVEYERS.

SPECIFICATION forming part of Letters Patent No. 702,906, dated June 24, 1902.

Application filed April 14, 1902. Serial No. 102,787. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED M. ACKLIN, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Flights for Conveyers; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to conveyers, and has special reference to the conveyer shown in Letters Patent No. 605,621, granted to me June 14, 1898, its object being to provide a simpler form of hinge between the flight-frame and the flight than that illustrated in the patent, so as to sustain the upper end of the flight against the strain brought against the lower end thereof in its forward movement.

It consists, generally stated, in a conveyer having a reciprocating flight-frame provided with a downwardly-projecting strip to which to connect the hinge and downwardly-projecting legs back of said hinge-strip, leaving a space between the strip and the legs, and a hinge of any suitable flexible material secured on the back of such strip and secured to the front of the flight, the body of the flight extending up beyond the base of the depending hinge-strip of the flight-frame, so that as the material operated upon presses against the base of the flight its upper end will be sustained from forward movement by the rear face of the hinge-strip.

It also consists in certain other improvements, which will be hereinafter more particularly set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of a portion of the reciprocating frame carrying the flight-frame, showing the parts in position for forward movement. Fig. 2 is a front view of the flight and flight-frame. Fig. 3 is an enlarged vertical longitudinal section through the cylindrical bar of the main frame, the flight-frame, and the flight; and Fig. 4 is a rear perspective view of the same.

Like letters indicate like parts in each of the figures.

As the general parts of the apparatus are the same as described in the said patent, it is not necessary to describe them in detail.

The cylindrical bar *a* of the main frame has secured to it the flight-frames *b* by means of concave seats *c* on the flight-frames and U-shaped bolts *d*, passing around the cylindrical bar and engaging the flight-frame. Depending from the forward end of such flight-frame is the metallic hinge-strip *e*, which is preferably made the full length desired for the hinge, and back of the same are the depending legs *f*, which support the flight in its forward movement, bearing against the rear face by means of the foot *g*. The flight *h* is formed of a metal plate, which is supported by means of the leather or like flexible hinge *i*. As shown in the drawings, this flexible hinge is connected to the rear face of the strip *e* by means of bolts *k*, passing through the hinge-strip *e*, the flexible hinge *i*, and the rear confining-strap *n*, the leather hinge being confined between the rear face of the hinge-strip *e* and such confining-strap *n*. The flight is secured to the hinge *i* in like manner, the flexible leather hinge extending down on the front face of the flight and bolts *o* passing through the flight, through the flexible hinge *i*, and through the confining-strap *p*. It will be noticed that the body of the flight extends up back of the base of the depending hinge-strip *e*, so that the upper end of the flight is sustained against forward movement by said depending strip through the leather hinge supporting the upper end of the flight and said hinge-strip *e*. In this way as the flight is reciprocated within the trough *r* the pressure of the grain, sand, ashes, or other material operated upon is sustained by the depending legs of the flight-frame, while the upper end of the flight is held from forward movement due to leverage-pressure of said material to be moved against the base of the flight by the depending hinge-strip *e*, extending below and in front of the upper end of the flight. In case any large body of material should gather in the trough, so that the leverage above the feet *g* of the legs *f* should be greater than the leverage below the same, which would have a tendency to push the up-

per end of the flight back and so bring unnecessary strain upon the leather hinge, I may employ the knees *t* upon the legs *f* some distance above the feet *g* thereof, which will  
 5 serve to receive such backward strain brought upon the upper portion of the flight and prevent any unnecessary tearing or like strain upon the leather or like flexible hinge.

The operation of the device is apparent. As  
 10 the flight moves forward the material pressing against the lower end thereof brings leverage upon the upper end of the flight, as above stated, and this upper end is sustained from forward movement by the downwardly-  
 15 projecting hinge-strip *e* without the necessity of any special piece other than the flight and the strip to sustain it in position. On the backward movement of the conveyer the flexible hinge permits the flight to swing forward  
 20 and pass over the material in the trough, so as to be ready to take a second hold upon the same upon the next forward reciprocating stroke of the conveyer. In case of the gathering of any large body at any point in the  
 25 conveyer the knee *t* sustains the upper por-

tion of the flight against backward movement and so protects the flexible hinge from injury.

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

1. In a conveyer, the combination of a flight- 30  
 frame having a depending hinge-strip and back of the same depending supporting-legs, of a flight having its upper end extending above the base of the hinge-strip, and a flexible hinge connecting the flight to the hinge- 35  
 strip.

2. In a conveyer, the combination with a flight-frame having a depending hinge-strip and back of the same depending supporting- 40  
 legs, of a flight having its upper end extending above the base of the hinge-strip and a flexible hinge secured to the back face of the hinge-strip and to the front face of the flight.

In testimony whereof I, the said ALFRED M. ACKLIN, have hereunto set my hand.

ALFRED M. ACKLIN.

Witnesses:

F. W. WINTER,

ROBERT C. TOTTEN.