

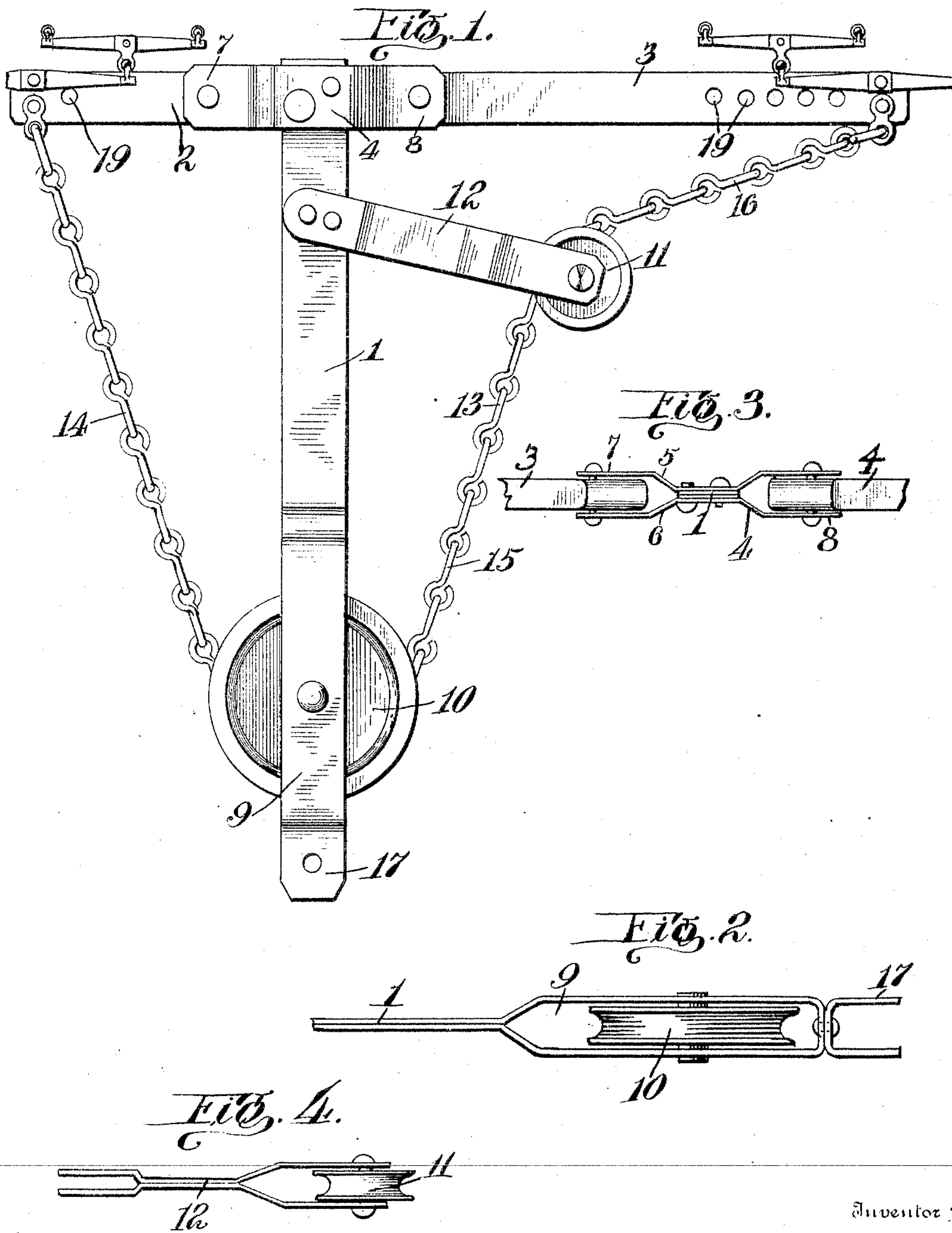
No. 777,151.

PATENTED DEC. 13, 1904.

W. T. SEELYE.  
DRAFT EQUALIZER.

APPLICATION FILED APR. 30, 1904.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 777,151, dated December 13, 1904.

Application filed April 30, 1904. Serial No. 205,835. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM T. SEELYE, a citizen of the United States, and a resident of Cresco, Howard county, State of Iowa, have  
5 invented certain new and useful Improvements in Draft-Equalizers; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying  
10 the novelty.

This invention relates to draft-equalizers, and is of that general type in which two unequal levers are pivoted on opposite sides of the pole and are connected by a flexible connector passing in rear of a guide member, such as a pulley, secured to the pole. The objection to these devices heretofore has been that unequal pressure was exerted by the connector upon the pulley on the opposite sides of  
15 the pole, thus tending to produce side draft.

It is the purpose of my invention to provide means whereby pressure of the connector upon the two sides of the guide member is equalized, side draft being thereby avoided.  
25 In the accompanying drawings, Figure 1 is a plan view of my device. Fig. 2 is a side view of the rear portion of the pole. Fig. 3 is a front elevation of the cross-bar, the unequal levers being broken away. Fig. 4 is a  
30 detail side view of the pulley-bracket and pulley.

The numeral 1 designates the pole, on opposite sides of which are pivoted the unequal levers 2 and 3. These levers are preferably  
35 pivoted in an expanded cross-bar 4, formed by two pieces of bent metal 5 6, riveted to the forward end of the pole, forming yokes 7 8. The rear end of the draft-pole is expanded to form an open-sided chamber 9, in which is  
40 pivoted a large pulley 10. A second pulley, 11, is pivoted to a bracket 12, secured to the pole and standing in the angle formed by the pole and long lever 3. A flexible connector 13, here shown as a chain, is secured at opposite  
45 ends of the unequal levers and passes in rear of the large pulley, forming the two sides of an angle 14 15. Side 15 is led inside of pulley 11, forming a reëntrant angle whose sides are formed by side 15 and extension 16.

The rear end of the pole is provided with a yoke 17 or other attaching means.

While I have described the two guide members as pulleys, it is to be understood that other similar devices might be used without departing from the spirit of my invention. 55 What is essential is that one guide member be mounted fixedly in rear of both levers and that the other guide member be mounted in the angle formed between the pole and the long arm, so as to produce a reëntrant angle  
60 in the connector. By "fixedly" I wish to be understood as meaning that these guide members are stationary with reference to the pole. Pulley 11 should be so located that sides 14 15  
65 of the first angle form substantially equal angles with the pole in the normal positions of the levers. By this means the pressure of the two sides of the angle of the connector upon the pulley 10 is equalized and swinging  
70 of the pole is avoided. While the distance from the point of attachment of the connector with the short arm to the pivot of this arm should always be less than the similar distance on the long arm, the leverage exerted by the  
75 horses may be varied within certain limits by attaching the ends of the connector to two series of holes 19 in the levers. It is preferred, however, that side 14 be adjusted but little, so as to avoid destroying the equality  
80 of the angles formed by the sides with the pole. Still as the range of adjustment on the short arm is limited, the pressure upon the two sides of the pulley 10 would scarcely be affected.

By locating pulley 11 in the angle formed  
85 by the pole and the long lever the end of this lever is caused to have several times the movement which it would possess if the pulley were not used. Thus greatly unequal forces  
90 may be balanced at the outer ends of the two levers, and by adjusting the leverage almost any application of power desired may be effected.

I have merely indicated draft-attaching means at the outer end of each lever. It is  
95 evident that the character of such means may be varied as the length of the levers and the points of attachment of the ends of the chain



are changed to suit various conditions, and I wish to reserve to myself the right to make all such changes in the details of construction and proportions of parts.

5 What is claimed as new is—

1. In a device of the character described, a pole, two levers pivoted in alinement with each other on opposite sides thereof, a fixed guide centrally-pivoted member on the pole  
10 in rear of said levers, and a second fixed guide member located in the angle formed by one of the levers with the pole; combined with a flexible connector secured at its ends to the two levers and passing in rear of the first  
15 guide member, forming two sides of an angle, one of said sides passing inside the second guide member forming a reëntrant angle.

2. In a device of the character described, a pole, two levers pivoted on opposite sides  
20 thereof, a pulley mounted directly on the pole in rear of said levers, a bracket rigidly secured to the pole, a pulley mounted thereon, and standing in the angle formed by one of the levers with the pole; combined with a  
25 flexible connector secured at its ends to the two levers and passing in rear of the first pulley forming the two sides of an angle which

stand at substantially the same angle to the pole, one of said sides passing inside the second pulley and forming a reëntrant angle. 30

3. In a device of the character described, a pole, two unequal levers pivoted on opposite sides thereof, a pulley mounted directly on the pole in rear of said levers, a second pulley mounted fixedly in the angle formed by  
35 the longer lever with the pole and between the first pulley and the levers; combined with a single chain secured at its ends to the levers and passing in rear of the first pulley diverging from the pole at the two sides of an angle, said sides forming substantially equal  
40 angles, one of the sides passing inside the second pulley forming a reëntrant angle, the distance from the pivot of the longer arm to the point of attachment of the connector thereto  
45 being greater than such distance on the shorter lever.

In testimony whereof I have hereunto subscribed my signature this the 25th day of April, A. D. 1904.

WILLIAM T. SEELYE.

Witnesses:

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