

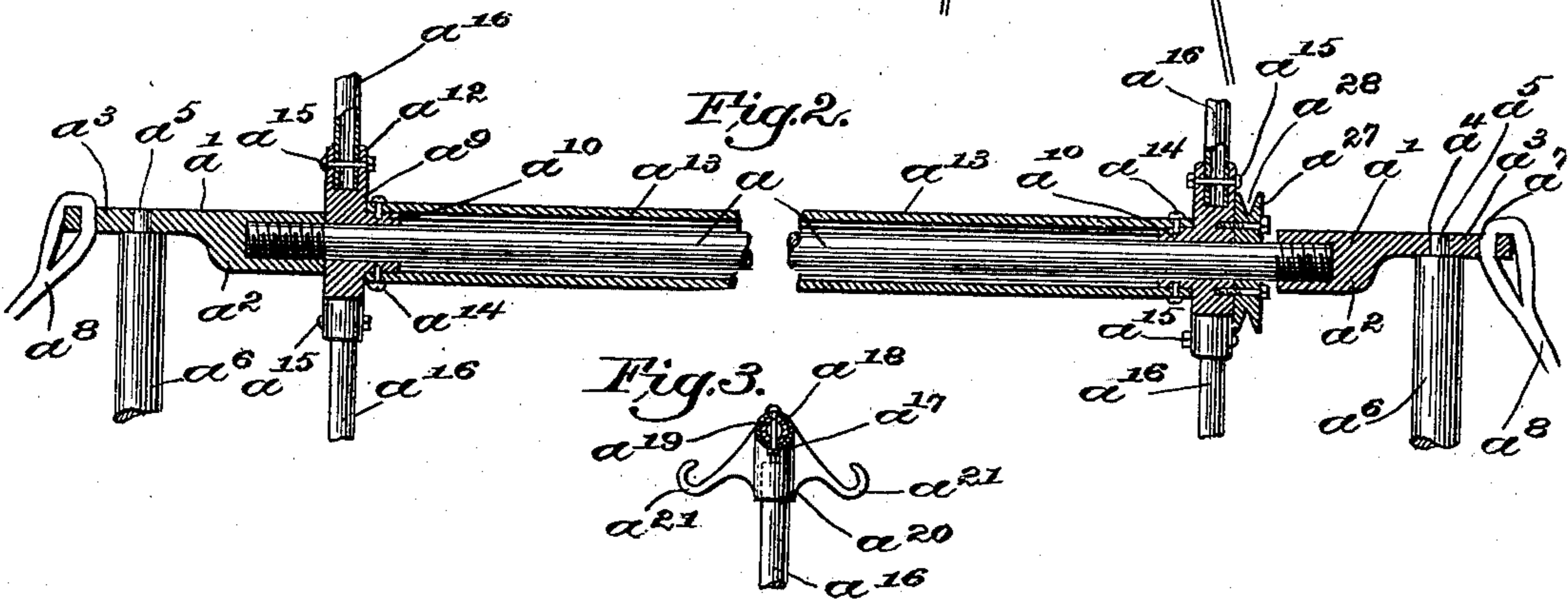
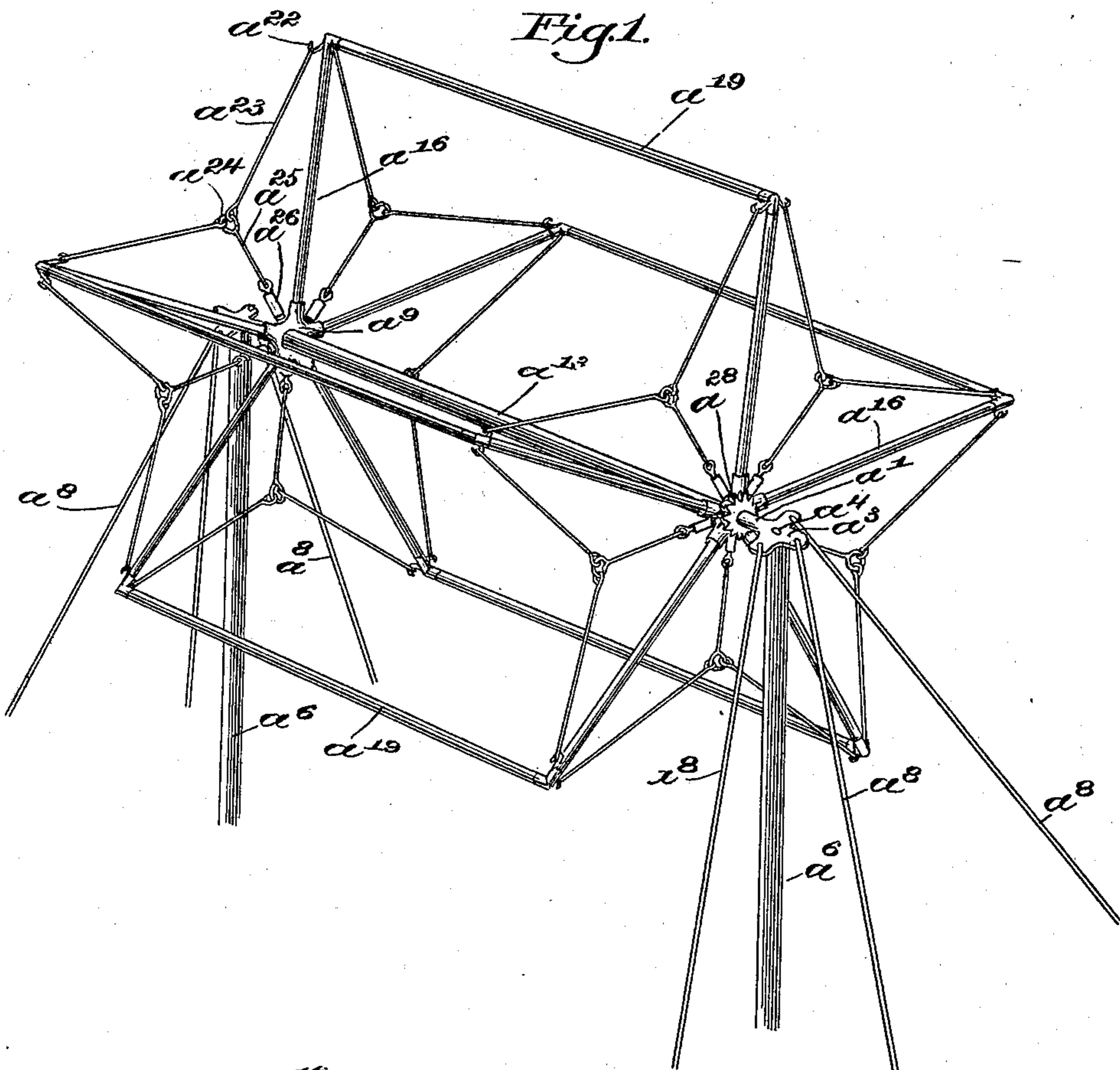
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Patented Nov. 28, 1899.

A. STIRK.
REVOLVING TRAPEZE.

(Application filed Apr. 10, 1899.)

(No Model.)



Witnesses.
Thomas J. Drummond
Gustav F. Maguire

Inventor
Albert Stirk.
by Mosby Gregory
Attys.

UNITED STATES PATENT OFFICE.

ALBERT STIRK, OF BOSTON, MASSACHUSETTS.

REVOLVING TRAPEZE.

SPECIFICATION forming part of Letters Patent No. 638,033, dated November 28, 1899.

Application filed April 10, 1899. Serial No. 712,395. (No model.)

To all whom it may concern:

Be it known that I, ALBERT STIRK, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Revolving Trapezes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is a revolving trapeze for the use of gymnasts, being specially adapted for circus-work and places where it is required to quickly set up and take down the apparatus, while at the same time insuring that the latter shall be perfectly stable and safe while in operative position.

The details of construction and advantages of my invention will be pointed out in the following description, reference being had to the accompanying drawings, illustrative of a preferred embodiment thereof, and the invention will be more particularly defined in the appended claims.

In the drawings, Figure 1 is a perspective view of my improved trapeze. Fig. 2 is an enlarged central longitudinal section through the supporting-rod or axis of revolution. Fig. 3 is an enlarged detail, partly in section and partly broken away, showing the frame-hooks.

In general my invention comprises a central axle or shaft on which the trapeze revolves, a trapeze-frame to revolve thereon, supports, and guy-ropes, all these parts being of special construction coöperating to produce extreme rigidity, lightness, compactness, and facility for being quickly erected and taken down.

Referring to Fig. 2, I provide a central shaft or rod a , which constitutes the axis of revolution on which the trapeze revolves, this rod being screw-threaded at its ends or otherwise provided to receive and retain supporting-brackets a' , herein shown as having an enlarged socket end a^2 and a flattened three-armed outer end a^3 , centrally perforated at a^4 to receive a spindle a^5 of one of the supports a^6 , the arms also being perforated at their free ends, as indicated at a^7 , to receive guy ropes or wires a^8 , as clearly shown in Fig. 1. Adjacent the opposite ends of the bar a I mount opposite hubs a^9 , having lateral extensions a^{10} on their inner sides and radiating sockets a^{12} , herein shown as five in number,

this number corresponding to the number of bars which are used in the trapeze. The two hubs a^{10} are held in rigid relation to each other by a tubular sleeve a^{13} , which is fitted over them and secured thereto by set-screws or other means a^{14} . In the sockets a^{12} are suitably secured, as by bolts a^{15} , radiating arms a^{16} , herein shown as metal tubes, and these arms are provided at their outer ends with castings a^{17} , (shown in detail in Fig. 3,) which have sockets a^{18} to receive the bars a^{19} and sockets a^{20} to receive the outer ends of the said arms. The castings a^{17} also have opposite hooks a^{21} to receive the eyes a^{22} of opposite tension or tie rods a^{23} , which are carried in pairs in the ring end a^{24} of radial rods a^{25} , secured to the hooks a^9 , as shown, between the sockets a^{12} and provided with a turnbuckle or other tightening device a^{26} , so that the apparatus may be quickly tightened or loosened.

To one of the hubs (herein shown as at the right-hand end viewing Figs. 1 and 2) I rigidly secure a pulley a^{27} , having a V-groove a^{28} and peripherally notched, as clearly shown in Fig. 1, so that a rope thrown over the pulley by an attendant may be pulled one way or the other and will correspondingly revolve the trapeze as desired, the V-groove and notches of the pulley serving to insure a firm grip of the rope, this being of importance, as it will be readily understood that in this class of apparatus the trapeze must at all times be under absolute control.

I am aware that it is not new to provide a revolving trapeze made of detachable pieces, so that it can be taken down and put up as desired, and I do not therefore claim the same, broadly, but a trapeze constructed in general as described, whereby lightness, cheapness, strength, and extreme facility of use are had.

In order to set up the trapeze, all that is necessary is to hook the eyes a^{22} over the hooks a^{21} , tighten the turnbuckles a^{26} , so as to make the frame of the trapeze rigid, and then insert the pintles a^5 of the supporting-poles a^6 in the brackets a' and raise the trapeze into position until the guy-ropes a^8 are taut.

In using the apparatus the trapeze-frame rotates freely on the supporting-shaft a , and there being five bars a^{19} for the performers to operate upon it will be seen that several may

perform at once, and by reason of the peculiar grooved pulley *a*²⁷ the trapeze may be revolved precisely as required according to the evolutions of the several performers.

5 While my main object in making this trapeze has been to gain strength, lightness, &c., as above explained, I have also striven to secure a construction embodying the idea of a symmetrical five-pointed star, and it will be
10 observed that the struts and tie-rods are so arranged that the strains are taken up along the proper lines of a typical star viewing the apparatus endwise.

Having described my invention, what I
15 claim, and desire to secure by Letters Patent, is—

1. A revolving trapeze comprising a horizontal stationary rod or axis, supports to which
20 the ends of said rod are rigidly fixed, hubs mounted to rotate on said rod adjacent to its ends, a tubular sleeve rigidly joining said hubs, radiating arms carried by said hubs in opposite pairs, horizontal bars supported at
25 the outer ends of said arms, stay-rods detachably connected to the adjacent arms at opposite sides of the device, and detachably-mounted means connecting the stay-rods in pairs to the hubs, said means including a tightening device.

30 2. A revolving trapeze including two hubs provided with radial arms in opposite pairs, horizontal bars mounted upon the outer ends of the respective pairs, stay-rods, in pairs detachably united to the adjacent arms at opposite
35 sides of the trapeze and connecting devices united to the rods and also to the hubs, each connecting device involving tightening means for the stay-rods.

3. In a trapeze, a stationary rod or axis

threaded at its ends, brackets having horizontal
40 sockets at their inner ends threaded to receive said rod, said brackets having flattened radiating outer ends, supports for said brackets, and guy-ropes connected with the brackets combined with hubs mounted to rotate on
45 said stationary rod between said brackets, a tubular sleeve rigidly secured to said hubs and out of contact with said rod, radiating arms carried by said hubs in opposite pairs, horizontal bars mounted in the free ends of
50 said arms, tie-rods secured adjacent the free ends of said arms and extending obliquely inwardly therefrom, and turnbuckles connecting said tie-rods with said hubs, substantially as described.

4. A revolving trapeze comprising a horizontal stationary rod or axis, supports therefor rigidly secured thereto at its ends, means
55 for holding said before-mentioned parts immovable, hubs mounted adjacent the opposite 60 ends of said rod to rotate thereon, a tubular sleeve rigidly joining said hubs and held by the latter out of contact with said rod, radiating arms carried by said hubs in opposite
65 pairs, horizontal bars mounted in the free ends of said arms, opposite hooks secured at the free ends of said arms, tie-rods having eyes caught over said hooks, said rods extending obliquely inwardly, and turnbuckles connecting the inner ends of said tie-rods to said
70 hubs, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT STIRK.

Witnesses:

JOHN C. EDWARDS,
AUGUSTA E. DEAN.