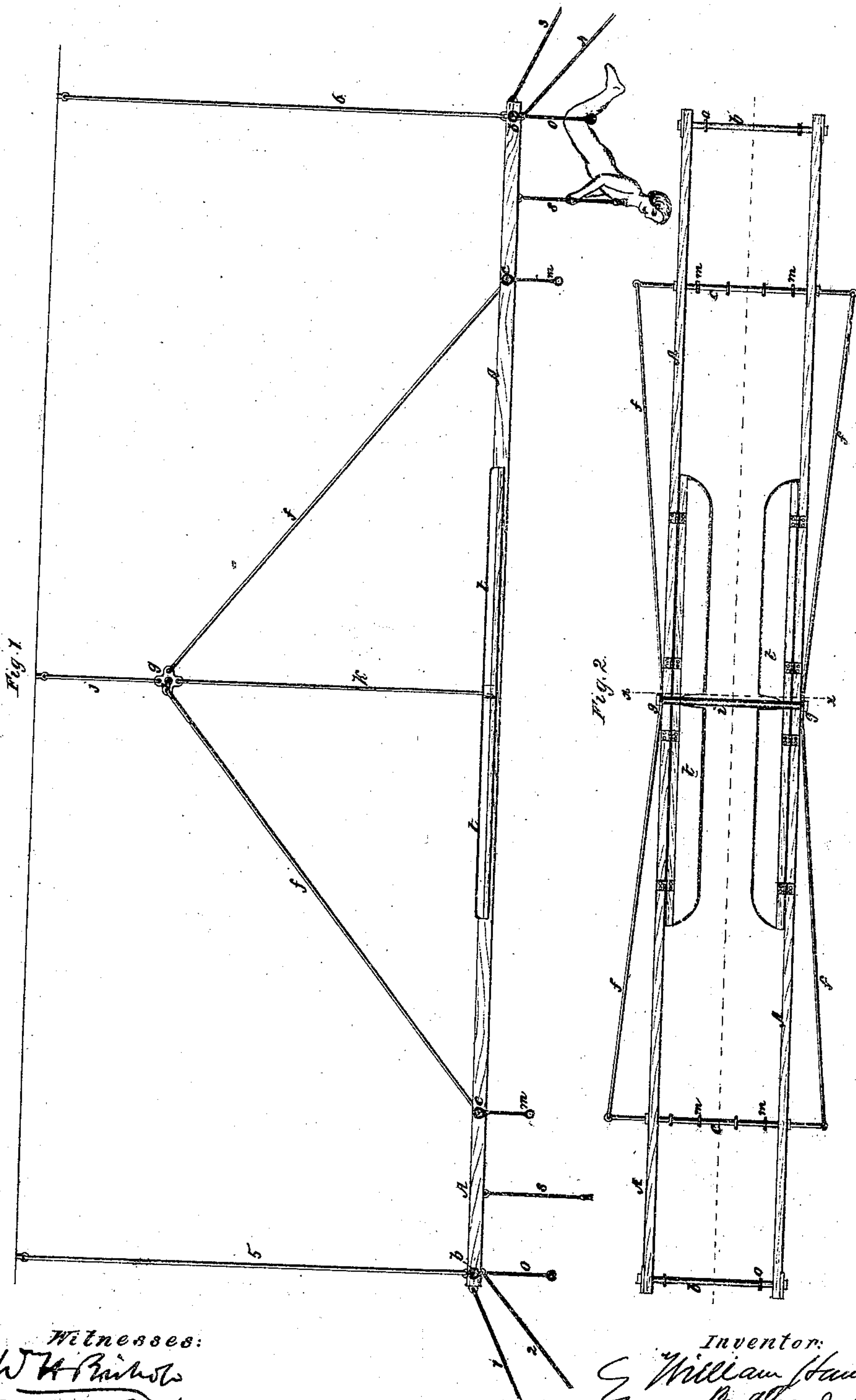


W. Hurlon,

Gymnastic Apparatus.

No. 28,587.

Patented Jan. 4, 1870.



Witnesses:
W. H. Birkholz
Edward C. Rockhill

Inventor:
William Hurlon
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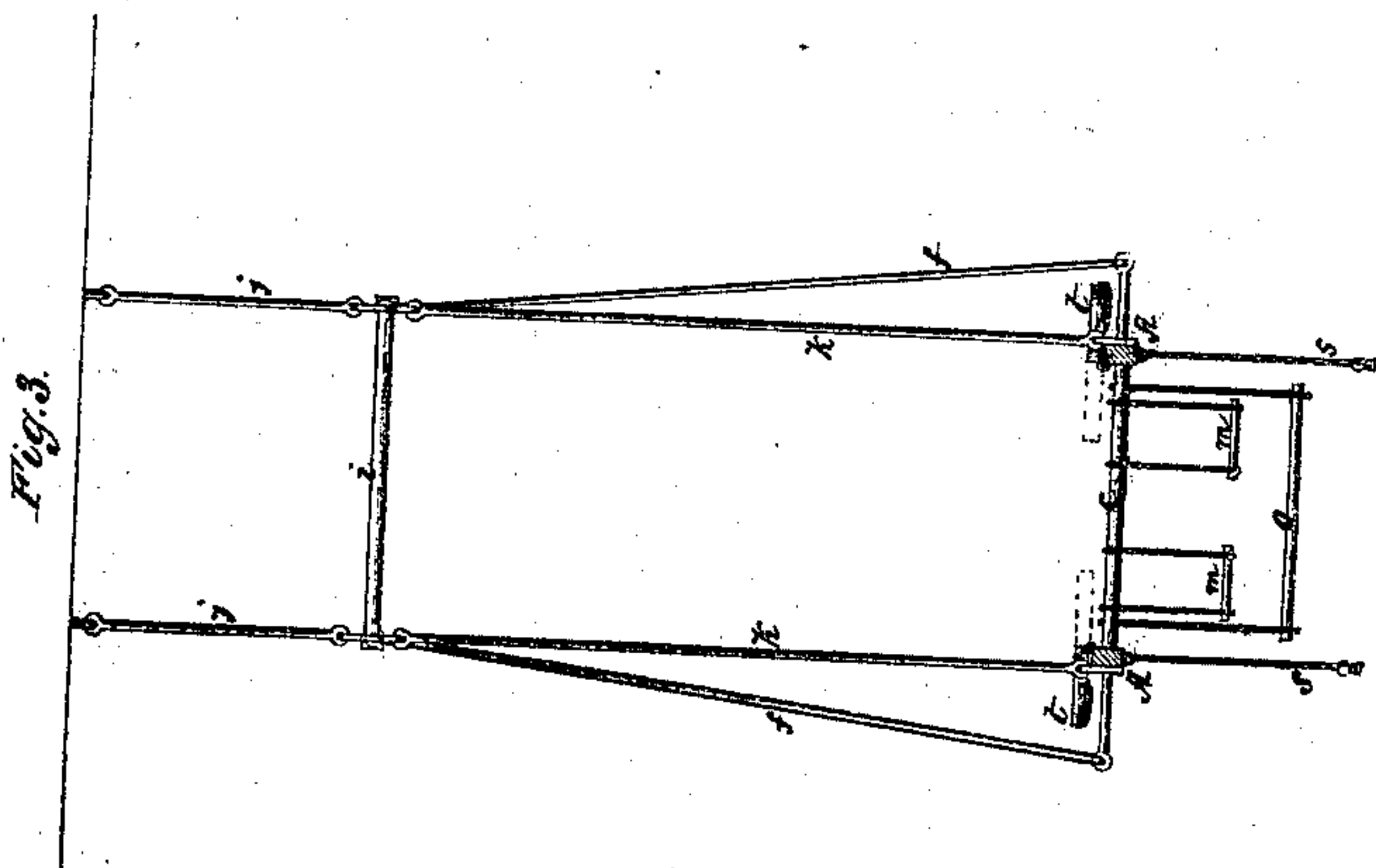
W. Hamlin,

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Gymnastic Apparatus.

No. 26,587.

Patented Jan. 4, 1870.



Witnesses:

W. H. Birch
Edward C. Reckell

Inventor:

William Hamlin
By [Signature]
J. M. Sutter

United States Patent Office.

WILLIAM HANLON, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND GEORGE, ALFRED, FREDERICK, AND EDWARD HANLON.

Letters Patent No. 98,587, dated January 4, 1870.

IMPROVEMENT IN GYMNASTIC APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM HANLON, of New York, of New York county, in the State of New York, have invented a new and useful Improvement in Gymnastic Apparatus; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to a novel apparatus for the execution of new gymnastic feats.

Previous to my invention various contrivances have been suggested and used for the performance of feats of strength and agility, in which the trapeze-swing has been combined with parallel bars, ladders, &c., and some of these have been adapted to the performance of various feats by both men and boys.

I have discovered, or conceived certain new feats or acts to be accomplished by a small boy, (or more than one,) in connection with one or more men, and have invented an apparatus, without the peculiarities of which these feats cannot be performed. These feats have already been publicly performed with great *éclat* by the "Hanlon Brothers," at the Tammany theatre in the city of New York, and have demonstrated the successful working of the apparatus employed.

Although the acts, especially that one known as the "great act," are very startling, or wonderful, they are rendered practicable by my new apparatus, and all danger of injury to the performers is avoided by the use, in connection with the apparatus, of a strong net properly padded, and so arranged, that in the event of falling, no one can be hurt in the least.

My invention has for its objects to so construct the apparatus, that the distance between the parallel bars may be varied readily, at pleasure, to suit the different feats of the performance on them, and to so arrange the whole that the person using the swing may be able to stop and start quickly, and at pleasure; and to these ends,

My invention consists in the employment, in connection with the parallel bars, of a suitable device by means of which the space between them may be varied, at pleasure, so that the performer can either rest on them, or pass freely between them, without danger of striking, as will be hereinafter more fully explained.

And my invention further consists in the employment, in combination with the trapeze, of what I designate "stop-ropes," whereby the performer can suddenly stop and start, at pleasure, while in the swing.

To enable those skilled, to make and use my invention, I will proceed to describe the construction and use of my new apparatus, referring by letters to the accompanying drawings, in which—

Figure 1 is a side or front elevation;

Figure 2, a top or plan view; and

Figure 3, a vertical cross-section at *x x*, fig. 2.

In the several figures, the same parts are designated by the same letter of reference.

A A are two bars, which are made suitably strong, (and light in appearance,) arranged parallel to each other, and which are firmly held in mid-air by suitable wire rods or ropes, 1, 2, 3, 4, 5, 6, arranged to brace and hold the bars in every direction securely.

These bars A A are further held laterally by cross-braces or bars, *b b* and *c c*, and from the latter, (which pass through the bars A, and project on each side, as shown,) extend upward from each end, brace-rods *f f*, which are connected at their upper ends to shoes or plates *g g*, in which is arranged a cross-bar, *i*, for purposes to be presently explained.

From the plates *g g* extend upward, stay-rods *j*, and downward, braces *k*, the latter being coupled securely at their lower ends to the bars A A. Of course the rods 5, 6, and *j*, are secured at their upper ends firmly to the ceiling, or other fixture of the apartment in which the apparatus is rigged, and the stay-ropes and rods 1, 2, &c., are all drawn tight, and fastened at their lower ends to stationary points of the apartment.

On the bars *c c* are arranged, (two on each bar,) small swings, as seen at *m*, adapted to be used by the performer in the usual manner, and on each of the bars *b* there is arranged a single trapeze, *o*, in which the performer hangs by the legs or feet in the usual way.

S S are stop-ropes, which are pendent from the bars A, arranged in pairs, as shown, each pair being located about midway between the swings *m* and *o*, (near each end of the bars.)

The location of these stop-ropes S should be such, that as the performer is swinging in the trapeze *o*, either by his feet or by his legs, (as illustrated at fig. 1,) he can readily grasp them with his hands, to suddenly stop his swinging, and take a fresh start, at his option, in order that he may regulate his time of vibration, as will be presently explained.

t t are two hinged flaps or rests, which are hinged to the bars A, as clearly shown, in such a manner that they can be placed either in the position shown, or be thrown or turned outward into the position illustrated by dotted lines at fig. 3, so as to leave the space or opening between the bars A the same all along during their entire extent.

The object and advantage of these flaps or rests, *t t* are these:

When in the position shown, one performer can hang through, resting his elbows or arms on each side on *t t*, so that another, swinging up from the trapeze, (head downward,) can grasp the first by the feet, and carry him down with him, and so that, after the act below, the one swinging in the trapeze, can swing the other one up through the opening between *t t*, (which is wide enough to permit the passage of the body,)

and allow him to lodge again on the flaps on his arms. In any feat where the flaps would be in the way, they are turned over or outward, as seen at dotted lines, fig. 3. For an instance: in the "great act," the boy stands erect on the cross-bar *i*, while a man swings in one of the trapezes *o* by his feet, (not legs, as seen at fig. 1.) As the man swings upward toward the bars and centre of the apparatus, the boy falls or flies downward, his body passing, in a nearly horizontal position, between the bars *A A*, and he catches, hand to hand, with the man, and both then swing, head to head, downward and outward, or toward the end of bars.

While thus swinging, the man can turn the boy in the air, end for end, catching him by the feet, and can then throw him through the air to another gymnast who is swinging from the other trapeze, at the opposite end of the bars. But to perform this feat of throwing and catching the boy, it is necessary for each swinger, (in the trapeze,) after throwing the boy, to suddenly stop, gauge or calculate the vibration of the other performer, (now swinging with the boy,) and swing anew at the precise moment, and with the proper velocity to bring himself in just the proper position and time to catch the boy on his return through the air to him.

Without the stop-ropes *S S*, or their equivalents, to enable the performer to quickly stop and start, these feats, in which one person is passed back and forth between the other two, could not be accomplished; and without some means of varying the actual space between the sides of the bars, or rather the size of the opening in the apparatus, the several feats, in which the performer has at some times to catch and rest on the apparatus, and at other times pass clean through, could not be accomplished. The flaps *t t* are so arranged that they can be instantaneously shipped from one position to another, and the stop-ropes are so arranged, that while they are readily available at the

time and for the purposes needed, they do not interfere with any of the movements or revolutions of the performers. The flaps *t t* are padded on top, to render them comfortable rests.

It will be understood that other devices may be employed to perform the same functions as the ropes *S* and flaps *t*, but I have found them simple and effective, and they have been employed most successfully to carry out my invention, the gist of which rests in the ideas of providing a simple and reliable means of varying the space through which the performer has to pass wholly or bodily at some times, and in which he has, at others, to suspend and support himself, as explained, and of also providing a suitable means for the performers in the end swings to stop and start by in their vibrations.

Having fully explained my invention, so that those skilled can fully comprehend it, and wishing to be understood as not limiting my claim of invention to any precise details or proportions of parts,

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

The use, in connection with the parallel bars, of the shifting-flaps, or other equivalent means for varying the central space, substantially as and for the purposes set forth.

Also, the employment, in combination with a trapeze and the sustaining or stationary portion of the apparatus, of stop-ropes *S*, or their equivalents, so arranged, that by means of said stops the person swinging by the feet can stop and start at pleasure, as hereinbefore set forth.

In testimony whereof, I have hereunto set my hand and seal, this 3d day of December, 1869.

WM. HANLON. [L. s.]

Witnesses:

J. MCINTIRE,

T. B. BEECHER.