

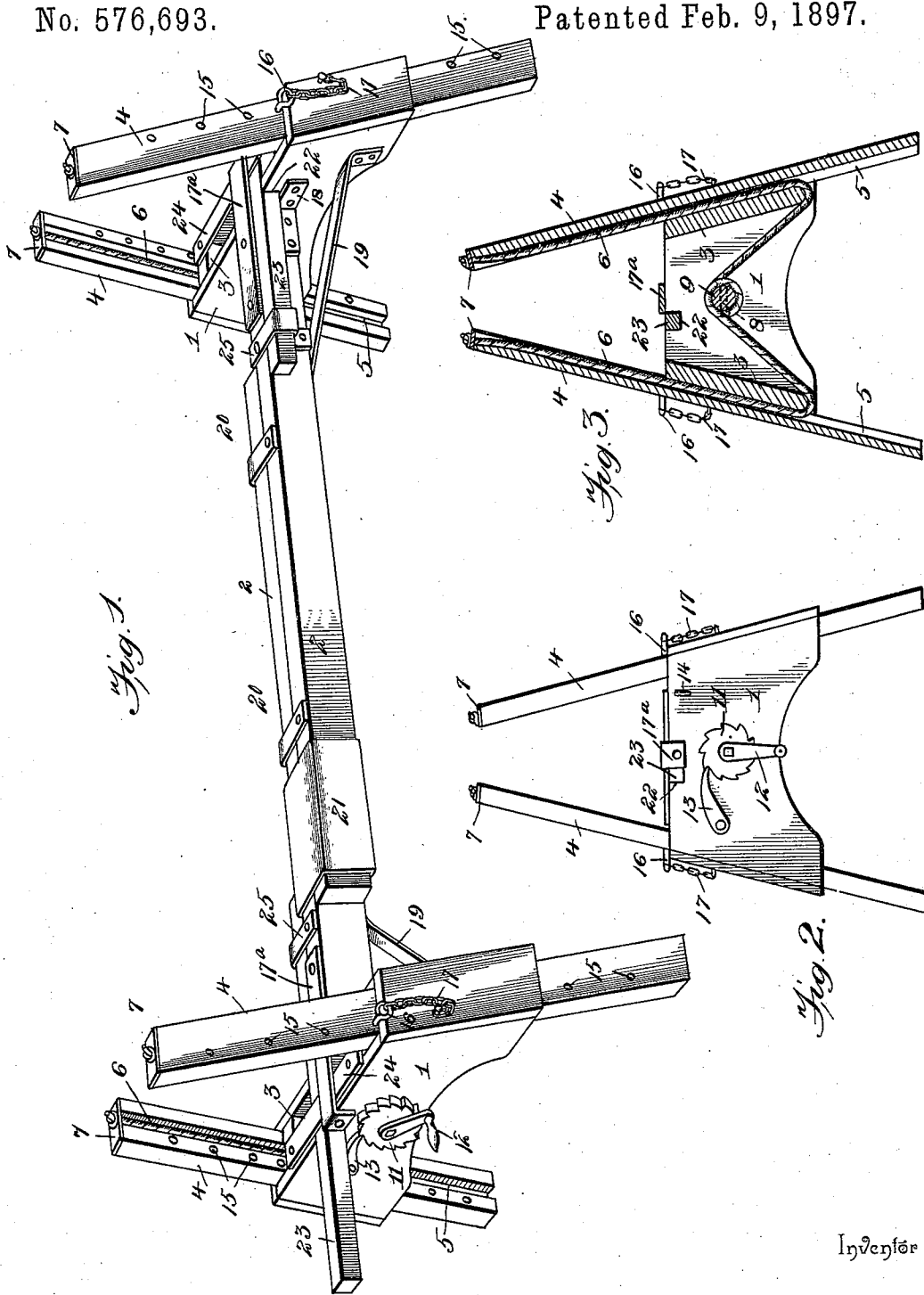
(No Model.)

2 Sheets—Sheet 1.

J. RATLEDGE.  
SUSPENSION TREESTLE.

No. 576,693.

Patented Feb. 9, 1897.



Witnesses

*John C. Shaw.*  
*Witness.*

By *W. S. Attorneys.*

*James Ratledge,*

*C. A. Snow & Co.*

Inventor

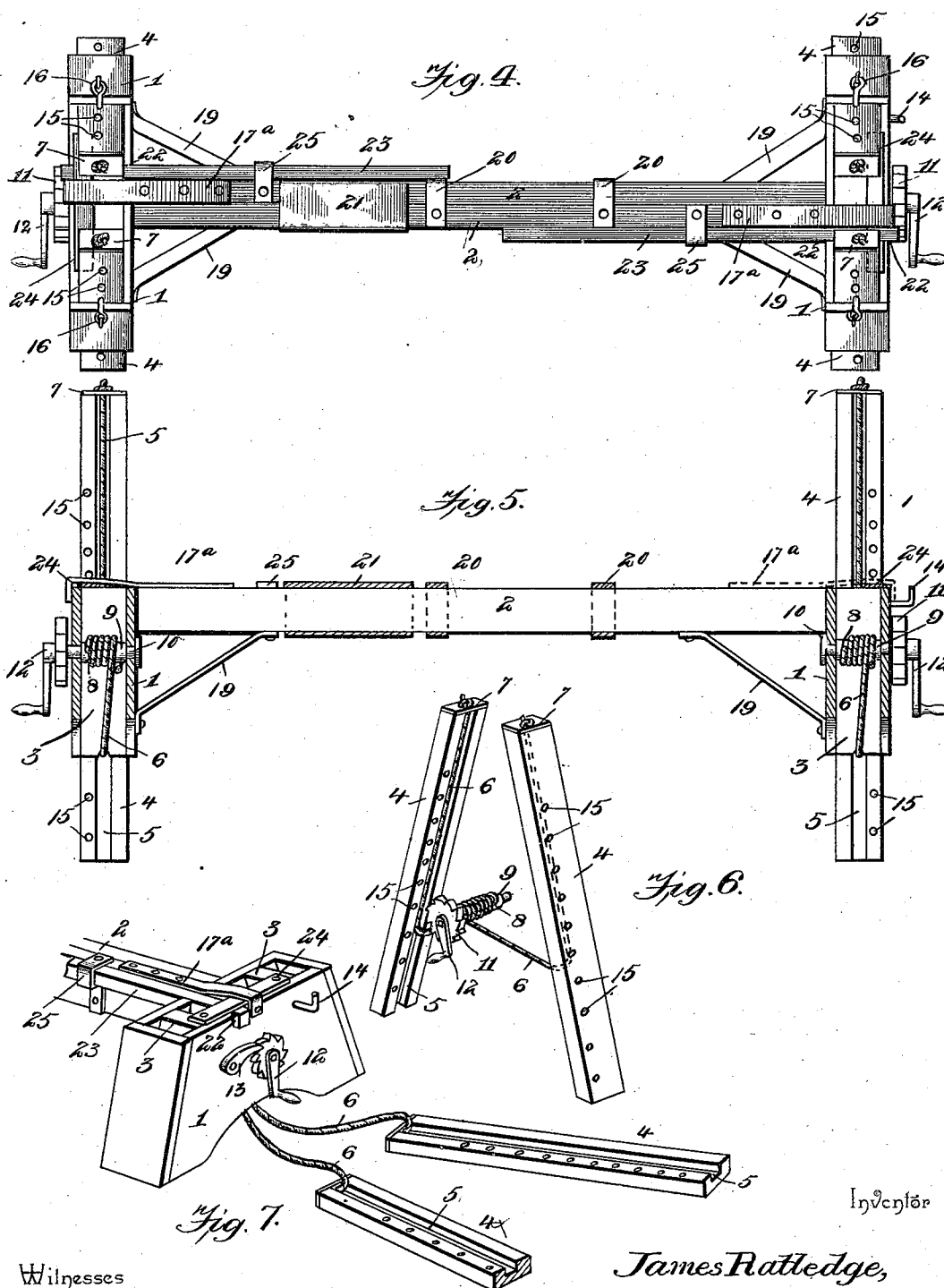
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*J. R. Edwards*

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# UNITED STATES PATENT OFFICE.

JAMES RATLEDGE, OF FAIRMONT, MINNESOTA, ASSIGNOR OF ONE-HALF TO  
WILLIAM D. BROCKMAN, OF SAME PLACE.

## SUSPENSION-TRESTLE.

SPECIFICATION forming part of Letters Patent No. 576,693, dated February 9, 1897.

Application filed February 14, 1896. Serial No. 579,311. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES RATLEDGE, a citizen of the United States, residing at Fairmont, in the county of Martin and State of Minnesota, have invented a new and useful Suspension-Trestle, of which the following is a specification.

My invention relates to those trestles which are made adjustable, so that they may assume various sizes and relations, according to the will of the person using them and to the conditions under which they are used; and the principal points of the invention lie in certain improvements in the construction of the trestle, whereby it is made susceptible of easier and more varied adjustment than those heretofore known.

In the accompanying drawings, Figure 1 represents a perspective view of a trestle constructed after the manner of my invention and in operative position; Fig. 2, an end elevation; Fig. 3, a cross-section taken transversely through one of the heads; Fig. 4, a plan view; Fig. 5, a vertical longitudinal section; Fig. 6, a perspective view showing the legs of one head detached therefrom and provided with a rope and winding-drum, and Fig. 7 a reduced view showing the device ready for moving.

The trestle is formed of two principal sections, each comprising the heads 1 and the main reaches or beams 2. The heads 1 are shaped approximately trapezoidal and are formed with hollow interiors and with an open top and bottom. Located in each end of the heads 1 and extending parallel with their respective head ends, and consequently diagonally, are the walls or partitions 3, which operate to form diagonally-disposed passages or ways in each end of the heads 1, and in which the legs 4 are respectively arranged. Legs 4 are four in number, two for each head, and are of such a size in cross-section that they will fit snugly within the passages of the heads and be capable of an unrestrained longitudinal movement therein.

Formed on the inner sides of the legs 4 and extending longitudinally their entire length are the grooves 5, which are one for each leg and which are adapted for the reception of

the cords or ropes 6. The ropes 6 are one for each head, and have their ends secured to the upper extremities of their respective legs 4 by means of the metallic plates 7, which are notched to permit the passage of the ropes and secured to the legs by bolting or otherwise. Midway the ropes 6 they are passed through a transverse opening 8 in the drums 9, and secured therein by any preferred means, and by which the ropes are rigidly connected to their respective drums. Drums 9 are, as will be readily understood, one for each of the ropes 6 and are revolubly mounted in the side walls of the heads 1, the inner ends being extended beyond the heads and there provided with the washers 10, whereby they are prevented from outward movement. The outer ends of drums are also extended beyond the heads and reduced and shaped square in cross-section, whereby the ratchet-disks 11 may be easily secured thereto, and whereby the crank 12 will be capable of removable connection therewith. The ratchet-disks 11 are one for each drum and are adapted to cooperate with the pawls 13, which are pivoted to the outer sides of each of the heads 1 and arranged to engage with the periphery of their respective disks, while the crank is adapted for use in connection with both drums. To attain this end, the crank is made interchangeable and removable and when not in use may be hung from the hook 14, which is secured to the outer side of one of the heads 1.

Formed in each of the legs 4 and extending throughout their length are the holes 15, which pass transversely through the legs and are adapted for the reception of the pins 16. These pins are one for each leg and are secured to the heads by means of the cords or chains 17, whereby they will not become lost when removed from the legs. The pins 16 are adapted to pass into the openings in the legs just above the heads 1 and to bind against the upper edges thereof and prevent the legs from dropping down when the trestle is raised. Thus it will be seen that the heads 1 may each be raised on their respective legs by operating the drums 9 to wind up the ropes 6, and that by this the height of the trestle may be

regulated. Pins 16 are used to prevent the displacement of the legs when the trestle is being transported, for without them the legs will fall out of their openings when the trestle is raised.

The reaches or beams 2 are, as before described, two in number and are secured to the middle of the upper edge of their respective heads and project inwardly therefrom. The connection is effected by means of the plates 17<sup>a</sup>, which are one for each beam and which are rigidly secured to their upper sides and project inwardly from the beams and across the top of the heads 1, to which they are also rigidly secured. In addition to the plates 17<sup>a</sup> I provide the braces 18 and 19, the former of which are secured to one side of the inner end of each beam and bends at right angles thereto, at which bend they are rigidly secured to the inner sides of the heads 1, while the braces 19 are two for each beam and are secured to the under side thereof and extend outwardly and downwardly to the heads. Here they are rigidly secured by bolting or otherwise. By this means the beams 2 are connected to the heads in a manner as rigid as could be desired. The beams 2 are connected to each other by means of the keepers 20 and thimble 21. The keepers 20 are two in number and are secured to the left-hand beam at approximately its middle and project to the right thereof, so as to snugly receive the companion or right-hand beam, while the thimble 21 consists of a square metal sleeve of a size capable of snugly holding the two beams. Thimble 21 is not permanently attached to either of the beams, but may be moved longitudinally thereon, so that it may be always placed as near the end of the left-hand section as possible.

Formed in the upper edge of the heads 1 and on different sides of the beams in each head are the longitudinally-alined notches 22, in which the extensible rods 23 are arranged. These rods are one for each head and are held in their respective notches by means of the transverse plate 24, secured to the upper edge of the heads and on the upper side of the rods, and by the keepers 25, which are in turn secured to the beams 2 on the sides thereof against which the rods bear. By means of these rods the longitudinal extent of the trestle may be extended even farther than by extending the beams 2, and when the arrangement is to be folded these rods may be moved in, so as to lie inside the heads.

To use my appliance, the drums 9 are operated to raise the heads 1 and their attached parts to the requisite height, whereupon the pawls 13 are made to engage their respective disks and the pins 16 secured to the legs 4 at the proper point, thereby making the legs incapable of movement in either direction. The beams 2 may then be moved out longitudinally until the desired length is given the

trestle, whereupon its adjustment will be complete. Should it be desired to move the trestle through a space which will not admit the legs 4 in an upright position, they may be allowed to drop out of their passages and assume the position shown in Fig. 7. The space occupied by the appliance can be still further reduced by entirely disengaging the beams 2, whereupon the two sections may be placed side by side or in other position, thus greatly reducing the size of the appliance.

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

1. A trestle having a reach or longitudinally-extending main beam, a head connected rigidly to each end thereof, each head having therein two approximately vertical passages, a supporting-leg arranged in each of said passages and having a longitudinal movement therein, a winding-drum mounted in each head, and a rope or ropes connected to the drums and to the legs, whereby upon operating the drum the trestle may be raised or lowered at will, substantially as described.

2. A trestle having a reach or longitudinal main beam, a head connected rigidly to each end thereof, each head having two approximately vertical passages therein, a supporting-leg arranged in each passage and capable of vertical movement therein, a winding-drum mounted in each head, a rope or ropes for each head and connected to the upper ends of the legs of their respective heads and to the drums, whereby upon winding the ropes on the drum the legs will be drawn downwardly and the trestle consequently raised, and means operating with the legs, whereby they are prevented from dropping down when the trestle is raised, substantially as specified.

3. A trestle having a reach or longitudinal main beam, a head secured rigidly to each end thereof, two approximately vertical legs for each head and having a longitudinal movement on their heads, a winding-drum mounted in each head, and a rope or ropes connected to the legs and to the drum, whereby the former may be moved on the heads, and the height of the trestle adjusted, substantially as described.

4. A trestle comprising a reach, heads connected by the reach and provided with substantially vertical passages or ways, legs arranged within the passages or ways of the heads, the latter being capable of upward and downward movement on the legs, and mechanism connecting the heads with the legs, whereby the trestle is raised and lowered, substantially as described.

5. A trestle comprising a reach, heads connected with the reach and provided with substantially vertical passages or ways, legs provided at intervals with perforations and arranged in the passages or ways of the heads, the latter being capable of upward and downward movement on the legs, winding-drums

mounted in the heads, ropes connected with the drums and with the upper ends of the legs, and pins arranged in perforations of the legs and located at the upper edges of the  
5 heads, substantially as and for the purpose described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

JAMES RATLEDGE.

Witnesses:

M. E. L. SHANKS,  
C. H. J. ROONEY.