

(No Model.)

T. S. MILLER.
CONVEYING APPARATUS.

No. 538,455.

Patented Apr. 30, 1895.

Fig. 1.

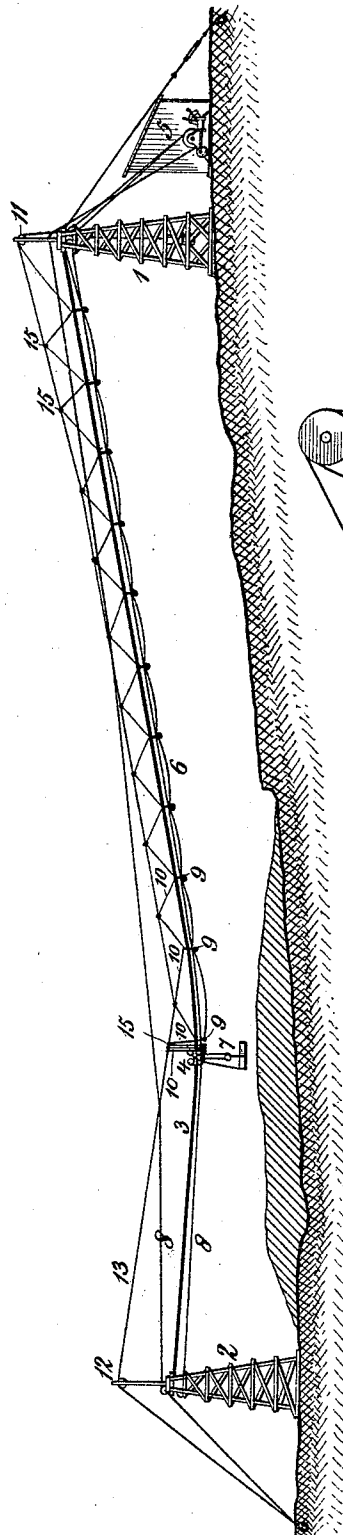
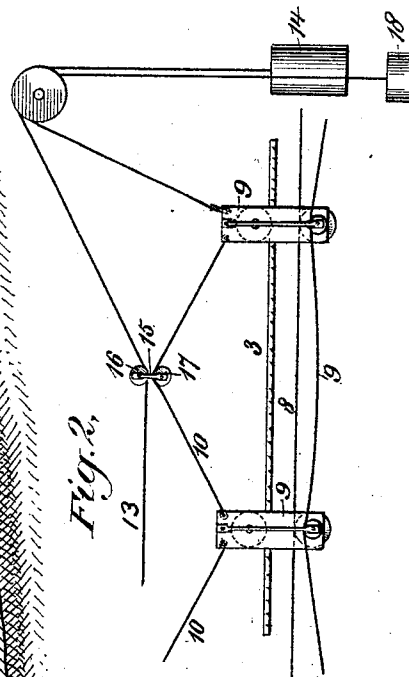


Fig. 2.



Witnesses:-

B. F. Haywood
M. Wilson

Inventor:-

Thomas Spencer Miller
by Gifford & Bull
Attys.

UNITED STATES PATENT OFFICE.

THOMAS SPENCER MILLER, OF SOUTH ORANGE, NEW JERSEY.

CONVEYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 538,455, dated April 30, 1895.

Application filed March 4, 1895. Serial No. 540,420. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SPENCER MILLER, a citizen of the United States, and a resident of South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Conveying Apparatus, of which the following is a specification.

Figure 1 is an elevation of the apparatus.
Fig. 2 is a detail.

In the patent to Locke, No. 295,776, a conveying apparatus is described containing fall-rope-carriers connected with each other and with the load-carriage by ropes or chains which, as the fall-rope is drawn in, hang downward in loops that are very objectionable by reason of their liability to entanglement under the vibrations to which all the parts are subjected.

The object of my present invention is to provide means whereby the slack of such flexible connections between the fall-rope-carriers may be supported so as to obviate the difficulty above referred to.

In the accompanying drawings, 1 is the head tower.

2 is the tail tower.

3 is the cable.

4 is the load-carriage.

5 is the rope-drum-engine.

6 is the fall-rope.

7 is the fall-block.

8 is the traction-rope whereby the load-carriage is hauled in or out.

9, 9, &c., are the fall-rope-carriers and 10, 10, &c., the ropes or chains connecting the fall-rope-carriers with each other and with the load-carriage and whereby the fall-rope-carriers are spaced on the span.

11 and 12 are sheaves mounted, respectively, on masts on top of the head and tail towers.

Over these runs a rope 13 which is made fast at one end and at the other end is held taut by a suspended weight 14.

15, 15, &c., are sheave-blocks, each of which suspends one of the ropes 10 from the rope 13. Each of these sheave-blocks contains a sheave 16 to run on the rope 13 and a sheave 17 over which runs the rope 10.

When, now, the load-carriage is out on the span, the several connecting ropes 10 will pull down the suspension-rope 13 by raising the weight 14, so that the spacing of the fall-rope-carriers 9 will not be interfered with. As, however, the load-carriage returns toward the head of the span as the loops in the connecting ropes 10 are formed, instead of hanging downward they will be raised upward by the straightening of the rope 13 under the strain of the weight 14. The weights 14 and 18 will, in pulling, tend to draw the rope carriers together. Hence, as the load carriage approaches the head tower the carriers will move slowly in the same direction. This will reduce the shock of the carriage against the carrier and also of one carrier against the carrier ahead.

I claim—

In a conveying apparatus, in combination, the load-carriage, the fall-rope, a series of fall-rope-carriers, flexible connections between the same, a suspension rope, means whereby said suspension-rope is connected with the loops of said flexible connections, and means whereby said suspension-rope is straightened as the rope-carriers approach each other, substantially as described.

THOS. SPENCER MILLER.

Witnesses:

M. WILSON,

WILLIAM T. SABINE, Jr.