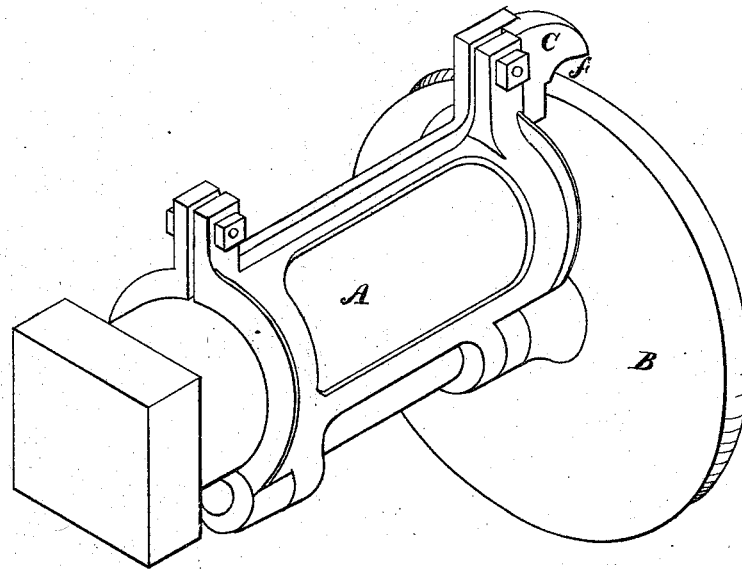


A. S. HALLIDIE.  
Endless Wire-Way.

No. 162,915.

Patented May 4, 1875.



Witnesses  
*Geo. H. Strong*  
*Jno. L. Boone*

Inventor  
*Andrew S. Hallidie*  
*by Dewey & Co*  
*Attys*

# UNITED STATES PATENT OFFICE.

ANDREW S. HALLIDIE, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN ENDLESS WIREWAYS.

Specification forming part of Letters Patent No. **162,915**, dated May 4, 1875; application filed March 8, 1875.

### CASE A.

*To all whom it may concern:*

Be it known that I, ANDREW S. HALLIDIE, of San Francisco city and county, State of California, have invented Improvements in Endless Wire-Rope Ways; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement, without further invention or experiment.

My invention relates to an improved guard or keeper for preventing wire ropes and other ropes which are supported on pulleys from leaving the pulley-groove in which they bear.

Where a great length of rope, such as is necessary in the construction of wire-rope ways, and in the propulsion of vehicles along a track, is supported at intervals on pulleys, some guard or fender is required to prevent the rope from jumping out of the pulley-groove.

Heretofore two pulleys have been used for this purpose, one of which served to support the rope, while the other was placed directly above it, so that the grooves of the pulleys would be opposite each other.

My invention relates to a substitute for this upper pulley, which is fully described in the following specification, in which reference is had to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention.

Let A represent the horizontal beam which supports the rope-supporting pulley B. The journal upon which the pulley B rotates is secured to the under side of the beam A, and

projects out far enough beyond the end of the beam to permit the pulley to rotate in a vertical plane at right angles to the end of the beam, as shown. To the upper side of the beam A I secure a block, C, which is so constructed that it will overhang the upper edge of the pulley, as shown. That portion of the block C which is next to the inside face of the pulley extends down far enough below the edge of the pulley to prevent the rope from jumping out of the groove to the inside of the pulley, while the portion which extends above and projects across the groove or edge of the pulley, will keep the rope down to its place. The space *f*, between the outside end of the block C and edge of the pulley, will serve to admit the rope to the groove, and permit the passage of the saddle-shank, and, being just space enough to admit the rope into the groove there will be no danger of the rope getting to the outside of the pulley.

I thus provide a guard or keeper which will be cheap and equally as effective as the double-pulley arrangement heretofore used.

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

In combination with the rope-supporting pulley B, the fixed block C, arranged to overhang the upper edge of the pulley and extend down below its inside edge, so as to serve as a guard or keeper for the rope, substantially as above specified.

A. S. HALLIDIE.

Witnesses:

GEO. H. WALLIS,  
SAML. HERMANN.