S. HAIGH.

Guide-Rollers for Wire-Rope Tramways, Elevators, &c.

No. 196,085. Patented Oct. 16, 1877.

FIG. 1.

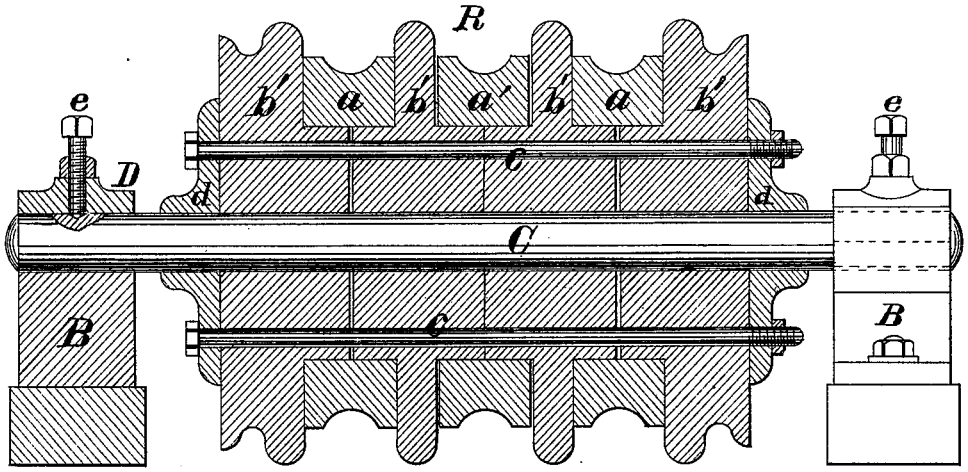
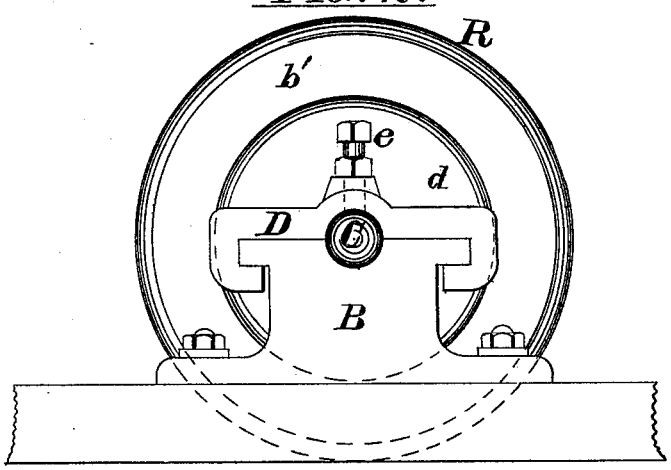


FIG. 2.



Witnesses

Walter Lawson

M. F. Stafford

Saml Haigh

Inventor

By

Attorneys

UNITED STATES PATENT OFFICE.

SAMUEL HAIGH, OF CINCINNATI, OHIO.

IMPROVEMENT IN GUIDE-ROLLERS FOR WIRE-ROPE TRAMWAYS, ELEVATORS, &c.

Specification forming part of Letters Patent No. **196,085**, dated October 16, 1877; application filed June 16, 1877.

To all whom it may concern:

Be it known that I, SAMUEL HAIGH, of Cincinnati, Hamilton county, Ohio, have invented certain Improvements in Guide-Rollers, of which the following is a specification:

Heretofore the guide-rollers employed for wire-rope tramways, elevators, and inclined planes have been constructed in various methods, and of material that has proved destructive to both the guide-roller and the wire-rope, arising from the abrasion of the wire-rope against the surface of the guide-roller, which usage is unavoidable, and can only be remedied by selection of material and method of construction, which is the object of my improvement.

In accomplishing this object, I construct my guide-roller, mainly, with two different forms of sections—the one annular, the other annular and cylindrical—clamped together, to rotate the mass directly or reversely about a fixed axle secured in clamped bearings, and yet permit the annular sections freedom to rotate independently of the mass, accordingly as the friction on their periphery or about their axis is dominant; and in furtherance of this object I select, as material for the intermediate sections, the commercial article known as "vulcanized fiber," whose properties well nigh offer complete resistance to the hurtful effects of atmospheric changes and abrasion.

The accompanying drawings, making part of this specification, wherein like figures refer to like parts, are illustrative of the method of construction and operation.

In Figure 1 a sectional elevation, R, represents the roller built up of the annular and cylindrical sections *b' b' b' b'*, and the annular sections *a a' a* bolted together by bolts *c c*, free to rotate on axle C, which is securely held in the clamped bearings B B.

In Fig. 2 the bearings B B are shown bolted to stringer or cross-tie, and provided with lugs to receive the cap D, through which the set-screw *e* works, to prevent rotary motion of the axle.

When already thus constructed and operatively in place, the cords are laid in the grooves, accordingly as the number employed, and when moving they impart motion to the roller, that guides and supports the cords while in contact with reduced friction and wear of the surfaces thus brought together under the severity of such usage.

When two or more cords are guided over the roller there is, of necessity, a difference of tension, and the slackened cord will retard or reverse, for the time being, the section guiding it.

Having fully described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

1. A guide-roller constructed in alternate sections, *a a' a*, of vulcanized fiber, and *b' b' b' b'*, of metal and wood, or either, arranged as shown, and for the purposes described.

2. The axle-bearing herein described, consisting of the block B, the cap D, and the set-screw *e*, in combination with the fixed axle C and the guide-roller R, all constructed and arranged substantially as specified.

SAML. HAIGH.

Witnesses:
WALTER LAWSON,
M. F. STAFFORD.