H. E. RICHARDS.

Exhibitor for Cordage.

No. 203,854. Patented May 21, 1878.

Fig 1

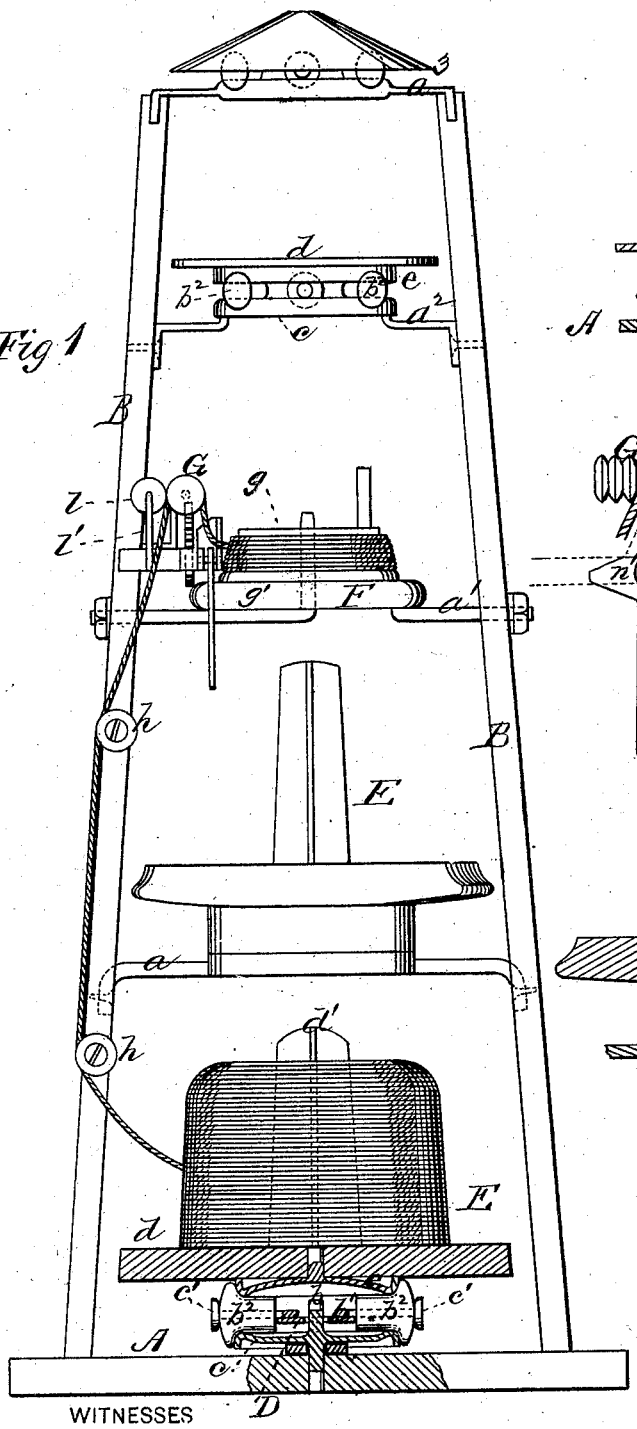


Fig 2

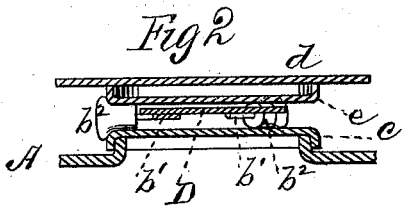


Fig 3

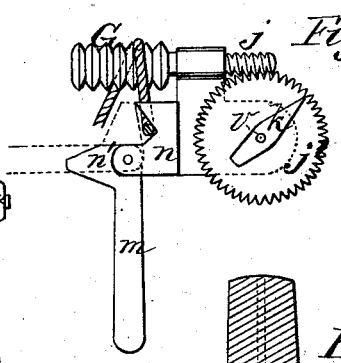
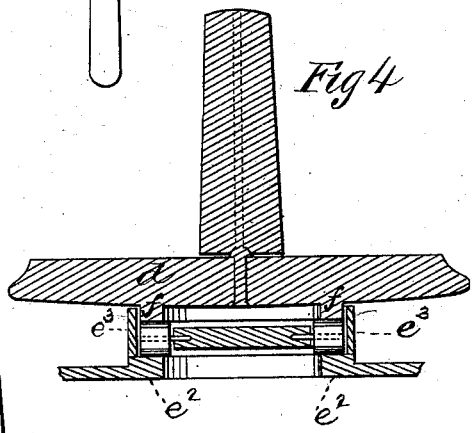


Fig 4



WITNESSES

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HENRY E. RICHARDS, OF OSWEGO, ILLINOIS.

IMPROVEMENT IN EXHIBITORS FOR CORDAGE.

Specification forming part of Letters Patent No. **203,854**, dated May 21, 1878; application filed August 4, 1877.

To all whom it may concern:

Be it known that I, HENRY EUGENE RICHARDS, of Oswego, in the county of Kendall and State of Illinois, have invented a new and valuable Improvement in Reels for Rope, Cordage, and other Merchandise; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved reel, and Figs. 2, 3, and 4 are details.

This invention has relation to improvements in reels for rope, cordage, belting, and other analogous articles, and for exhibiting merchandise.

The nature of the invention will be fully apparent from the following description.

In the annexed drawings, the letter A designates the base of the apparatus, having two or more uprights, B, rising therefrom, and having horizontal braces or platforms a a^1 a^2 a^3, upon which the reels may be mounted. The base is provided with a metallic center-disk, c, of circular form, and provided with a central spur, b, upon which a rotary carriage, D, travels. This is composed of a body, b^1, of square form preferably, having at each angle a projecting spindle, c', and flanged wheels b^2 applied upon said spindle, so that when the spur b is passed into a bearing on the body b^1 the flanges of the wheel are outside of the center-disk, but bear against its perimeter. The carriage rotates freely upon the said disk, and carries the reel E. This is composed of a base, d, having upon its under side a circular plate, e, that is received on the carriage inside the flanges of the wheels, and bears upon the body thereof, and of a central tapering four-flanged reel or winding device, d', rigidly secured thereto in a central position.

The reel may be made of wood or of metal, as may be the base; but where the latter is made of metal the plate e will be cast or swaged out therewith.

The reel rotates freely upon the carriage, and is prevented from running off therefrom by means of the circular plate e, which is, as aforesaid, received inside the flanges of the wheels, and bears upon the body thereof. The reel has no other connection with the carriage, and when it is filled with rope or other like article is detached from the stand by simply raising the base from the carriage. Owing to the tapering form of the reeling device, the coil may be readily detached therefrom when necessary.

In practice, I may sometimes use the following device as a carriage, track, and guard for the carriage, in lieu of that above described, shown in Figs. 2 and 4.

The platform or base will be provided with an annular track, e^2, raised above the same, and having an annular raised guard, e^3, within which will be placed a carriage having cylindrical rollers. The base of the reel is provided with an annular rail, f, that is received inside the guard-flange aforesaid, and bears upon the rollers. This guard-flange controls the carriage and prevents the reel C′ from running off of the same.

Fig. 2 exhibits further modifications of the track, the carriage and reel-base not differing essentially from those above described, but showing the mode of applying a reel to an upright stand without journals or bearings.

F represents a coiling device consisting of a cylindrical drum, g, having a broad base-flange, g', and rotating horizontally upon the platform a^1 around a suitable spindle erected thereon. This coiler is designed to coil the cordage as it is paid off from the storing-reels above and below it, in quantity to suit, and the rope is conducted thereto over suitable pulleys h h. The rope, before reaching the coiler, passes over a grooved shaft, G, arranged horizontally in suitable bearings upon one of the uprights B, and having a worm or endless screw, j, that engages a pinion, j', rotating upon a suitable spindle. This pinion is provided with a set of numbers increasing from 0 to the right, and from the same point to the left, and the spindle is provided with a pointer, k, separated from the face of the pinion by a collar on said spindle. As the rope passes over shaft G it is caused to revolve, thereby rotating the face-pinion, so that the hand k is in line with the first division-mark of the scale, each subsequent rotation of the

shaft having a similar effect. Consequently, the measure of the circumference of the said shaft being known, and the number of its rotations registered on the face-pinion, the length of the rope upon the coiler may be at any time readily determined. The rope is held in contact with the shaft by means of an anti-friction roller, *l*, supported on a spring-arm, *l'*, so that the casual slackening of the rope can at no time create a stoppage of the shaft, nor allow the rope to pass to the coiler without having its length recorded. The desired length having been coiled, the rope is passed between a stationary knife, *n*, having an angular cutting-edge, and a knife, *n'*, actuated by an upward movement of a lever, *m*, and is smoothly divided. The cut end of the rope is then bound up by suitable strings contained in the hollow of the coiler-drum. The index-pinion having a double set of divisions, the length of rope may be registered thereby, whether it be reeled off from the upper storing-reels or the lower ones.

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

1. The combination of the detachable reel E, for storing cordage, belting, and the like, having a track-plate on its under side, with a supporting-carriage and a center-plate affording trackways for said carriage, substantially as specified.

2. The combination, with the storing-reels E and a coiling-drum, F, of a shaft, G, having worm *j*, the face-pinion *j'*, the spindle *v*, having a collar, and hand *k*, and a rope, or its equivalent, passing from a storing-reel over said shaft G to the coiling-drum, all operating substantially as specified.

3. In combination with the coiling-reel F and the measuring device, the stationary knife-blade *n* and swinging knife-blade *n'*, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY EUGENE RICHARDS.

Witnesses:
CHARLES LEHMAN,
CHARLES WHITMAN.