(No Model.)

E. D. HAVEN.

CABLE POWER WHEEL.

No. 258,645 Patented May 30, 1882.

FIG. I.

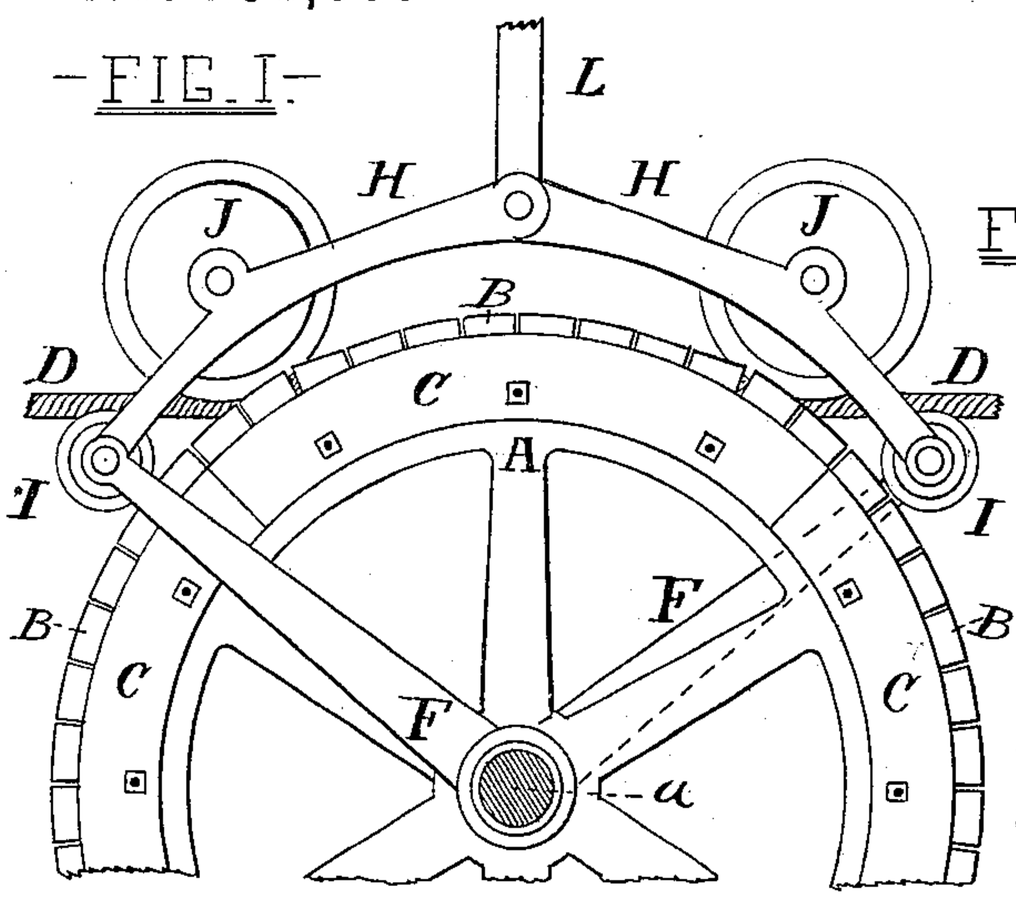


FIG. II.

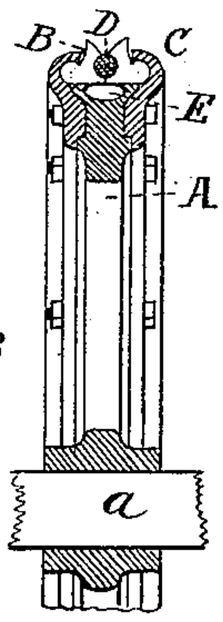


FIG. III.

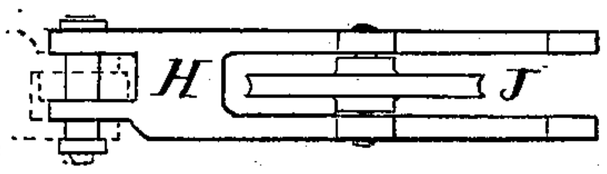


FIG. IV.

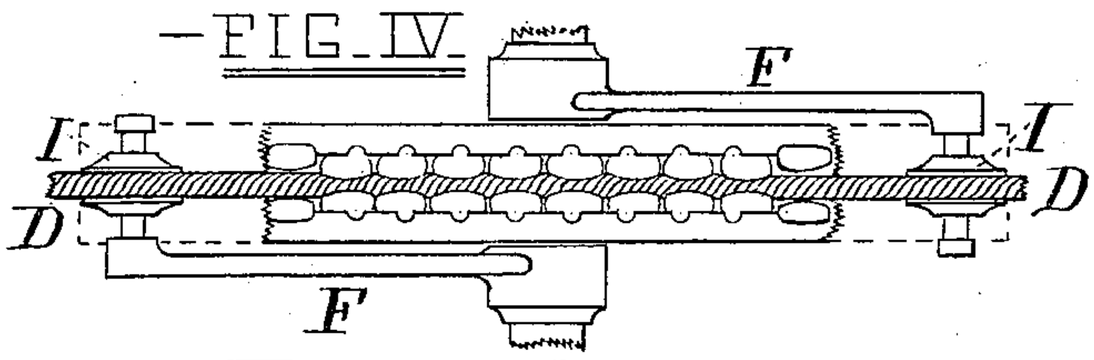


FIG. V.

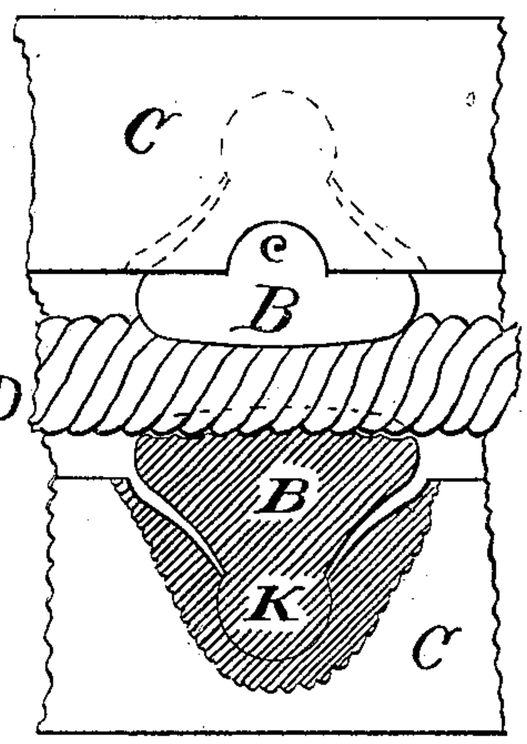
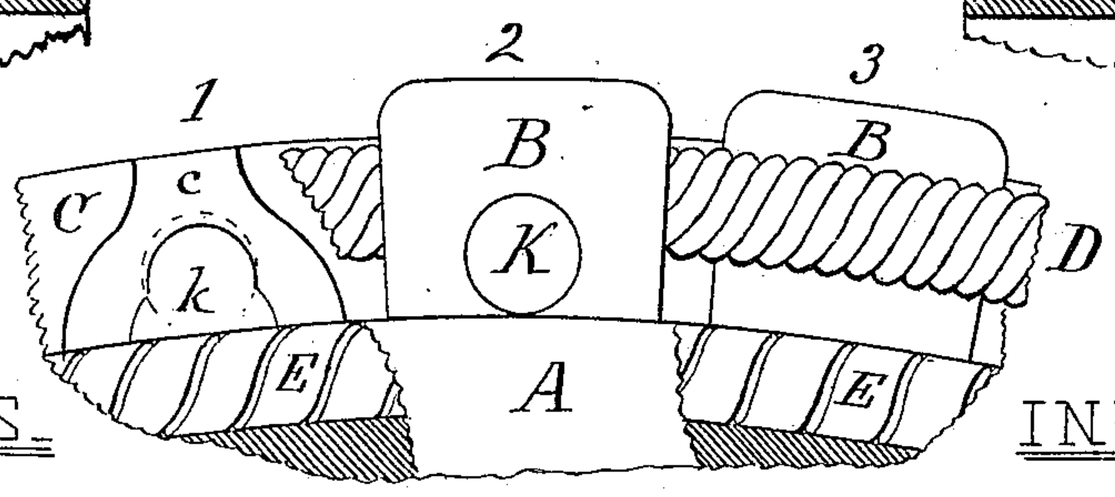


FIG. VI.

FIG. VII.

FIG. VIII.



WITNESSES.

Henry A. Hewitt

Duncan B. Monteith

INVENTOR.

Egbert Dewey Haven

UNITED STATES PATENT OFFICE.

EGBERT D. HAVEN, OF ALBANY, OREGON.

CABLE-POWER WHEEL.

SPECIFICATION forming part of Letters Patent No. 258,645, dated May 30, 1882.

Application filed March 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, EGBERT DEWEY HAVEN, a citizen of the United States, residing at Albany, in the county of Linn and State of Oregon, have invented certain Improvements in Cable-Power Wheels, of which the following is a specification.

This invention relates to a cable-power wheel in which the cable, instead of passing around one side and returning on the opposite side of the same wheel, communicates its power by simply passing over the top of one wheel and then continuing to another and communicating its power in the same manner. The cable can also at any time be connected or disconnected with the wheel without interfering with its action upon other similar wheels.

In the further description of my invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure I is a side view of the improvement with the lower part of the wheel left off to save room. Fig. II is a cross-section of Fig. I, cut through the center of the wheel, omitting the lever attachment. Fig. III is a plan of the lever H, carrying the sheave J. Fig. IV is a top view of Fig. I after removing the lever H, showing so many of the grips as are in contact with the cable. Fig. V is a top view, (same as Fig. IV,) on an enlarged scale, of one pair of the grips, the cap and grip on one side being partially cut away to show the ball-and-socket joint and the surface of the grip coming in contact with the cable. Fig. VI is a cross-section on an enlarged scale, showing one pair of grips closed around the cable. Fig. VII is a cross-section, showing one pair of grips open. Fig. VIII is a side view on an enlarged scale, with the cap-segment and a little of the wheel on one side removed, showing, first, one of the recesses, *c*, and sockets *k*, in which the grips fit and turn; second, a grip and ball on the near side of the cable; and, third, a part of the cable and a grip beyond; also showing a part of the endless spiral spring on which the inner ends of all the grips rest.

Similar letters of reference indicate similar parts in all the views.

In the said drawings, A is the body of the wheel, having holes through its rim parallel with its axis. Bolts with nuts and screws pass through these holes and hold the cap-segments C C in place. Around the entire circumference of said wheel A is a channel or groove, in which is placed an endless spiral spring, E, hereinafter described.

B B are eccentric grips, placed in pairs facing each other around the circumference of the wheel A. They terminate at their outer end in ball-and-socket joints K K, on which they (B B) turn slightly backward, forward, and outward from the wheel. The inner surfaces of said grips B B, where they come in contact with the cable D, are slightly curved, and conform to the corrugated surface of said cable, Fig. V. Said grips B B are so formed in connection with the ball-and-socket joints K K that any tension or drawing of the cable D in a line tangent to the wheel A will draw them (B B) with it and tighten their hold, (see Fig. V;) but any drawing on said cable away from a tangent line will throw the grips B B open. (See Fig. VII.)

C C are cap-segments, fitted and secured by said bolts and nuts to the wheel A. On the inner sides of said segments C C, facing each other on opposite sides of the cable, and extending at suitable intervals entirely around the wheel, are sockets *k* and recesses *c*, Figs. V and VIII. Said sockets *k* are adapted to the ball end of the grips B B, and together they form the ball-and-socket joints aforesaid. Said recesses *c* allow of sufficient play to the grips B B to enable them to adapt themselves to the cable D, both when approaching and leaving the wheel A.

The drawings (Fig. VI and VII) represent a space between the segments C C and the wheel A. This space is filled with any suitable packing that will yield a little when the bolts are tightened, thus drawing the segments C C, and with them the grips B B, closer together when necessary to secure a tighter hold on the cable.

E is an endless spiral spring, resting in the groove or channel hereinbefore described, and extending entirely around the wheel A, Figs. VI, VII, and VIII. It supports the cable end of all the grips B B, and is strong enough to throw them open when freed from the pressure

of the cable D, (see Fig. VII,) but is compressed as soon as the cable D bears upon the grips B B. (See Figs. VI and VIII.)

F F are arms adapted at one end to turn freely upon the shaft *a*, one on each side of the wheel, Figs. I and II. On the other end of said arms, far enough out to clear the wheel A, are sheaves I I, which lift the cable D from the wheel A when the power is not needed. On the same end of said arms F F are also pivoted by the same pins which carry said sheaves I I the levers H H. The other ends of said levers H H are pivoted by a common pin to the lifting-rod L. By dropping or raising this rod L, Fig. I, the cable D is connected or disconnected with the wheel A.

J J are sheaves, Figs. I and III, set in the levers H H, directly over the cable D, and serve as auxiliaries to the weight of the cable in bearing down upon the grips B B. By extending the arms F F below the shaft *a* and hanging sheaves under the returning cable it also may be brought to bear upon the bottom of the wheel A simultaneously with the cable D at the top.

By reference to Figs. I and IV it will be seen that while one pair of the grips B B is letting go its hold on the side where the cable D is leaving the wheel another pair is taking a new hold on the side where the cable is approaching the wheel, and at the same time all the intervening grips retain their hold and compel the wheel A to revolve with the motion of the cable.

What I claim, and desire to secure by Letters Patent, is—

1. In a cable-power wheel, the combination of a series of eccentric grips, B B, adapted to the cable D, with the ball-and-socket joints K K, substantially as described.

2. In a cable-power wheel, the endless spiral spring E, resting in a groove adapted to said spring, and extending entirely around said wheel, substantially as described, for the purpose specified.

3. The cap-segments C C, having the sockets *kk* and the recesses *cc*, and being secured to the wheel A, substantially as shown, for the purpose specified.

4. In connection with a cable-power wheel, the combination of the arms F F with the levers H H, carrying the sheaves I I and J J, adapted to said cable D, all substantially as set forth, for the purpose specified.

EGBERT DEWEY HAVEN.

Witnesses:

HENRY H. HEWITT,

DUNCAN B. MONTEITH.