

(No Model.)

C. ELLIS.
Sheave.

No. 238,579.

Patented March 8, 1881.

Fig. 1.

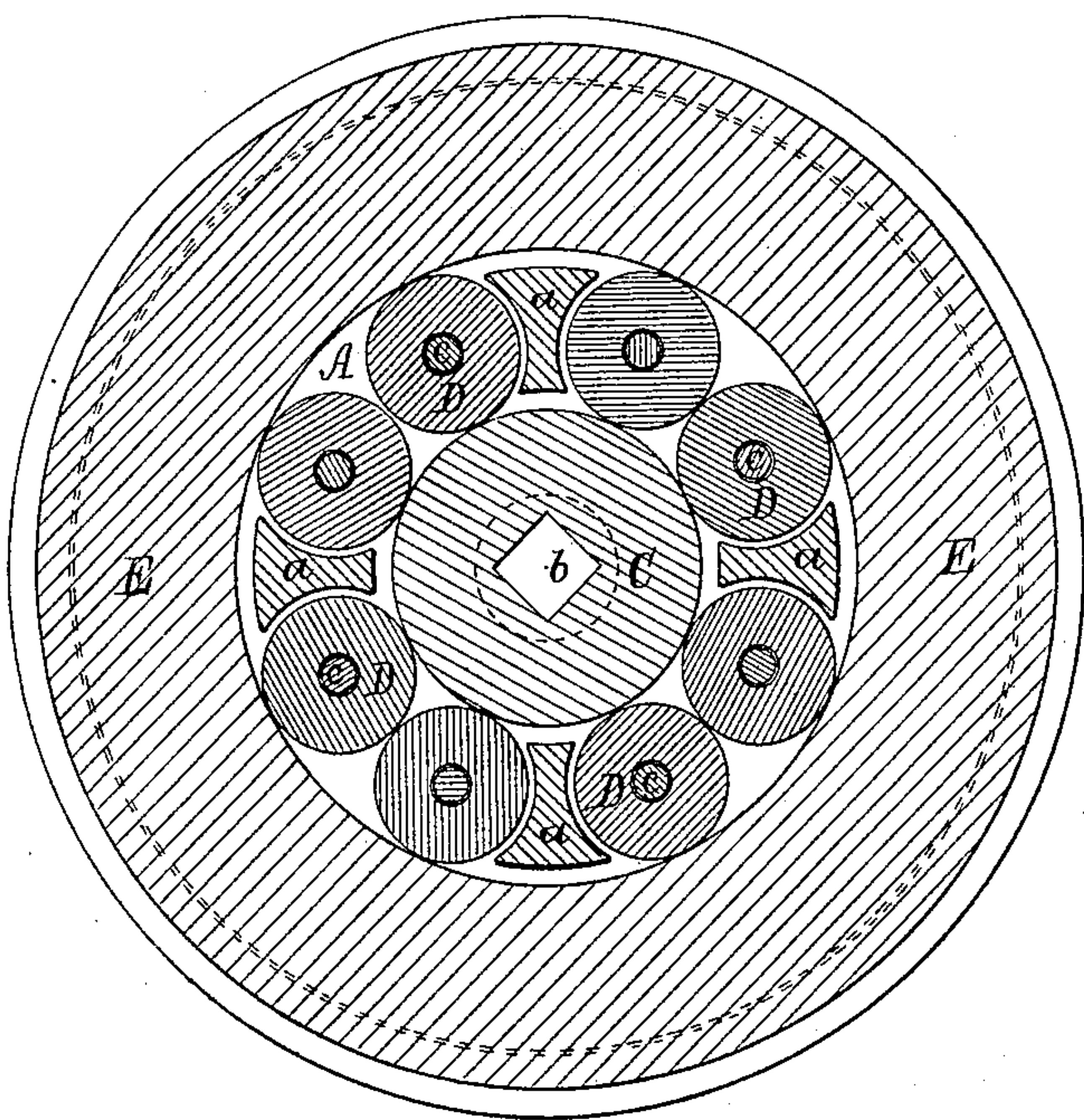
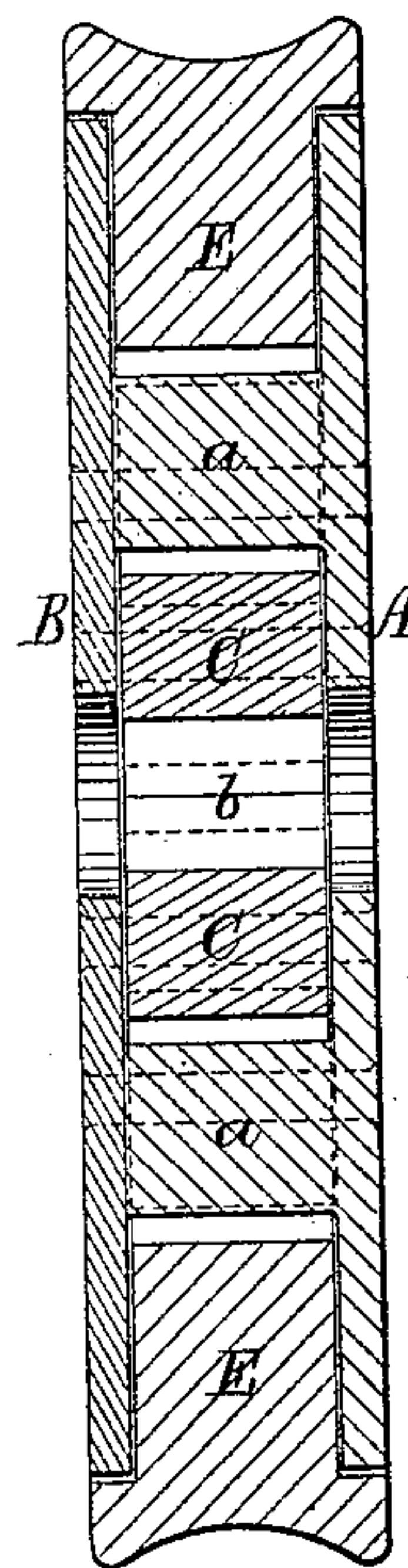


Fig. 2.



Witnesses.

S. N. Piper.
C. D. Smith.

Inventor.

Charles Ellis.
by R. H. [unclear] atty.

UNITED STATES PATENT OFFICE.

CHARLES ELLIS, OF EAST GLOUCESTER, ASSIGNOR TO HIMSELF AND
FREDERICK S. ANDREWS, OF GLOUCESTER, MASSACHUSETTS.

SHEAVE.

SPECIFICATION forming part of Letters Patent No. 238,579, dated March 8, 1881.

Application filed December 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ELLIS, of East Gloucester, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Sheaves; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section, and Fig. 2 a transverse section, of a sheave provided with my invention, the nature of which is defined in the claim hereinafter set forth.

The sides of the said sheave consist of two disks, A B, which are arranged parallel to each other, and have between them a series of intervening cross bars or pieces, *a a*, placed at equal distances apart, and in a circle concentric with the periphery of each disk. A central wheel, C, arranged between the disks, is shown as having a prismatic eye, *b*, to receive a shaft. Extending around the central wheel is a series of other and smaller wheels or friction-rollers, D, they being arranged between the cross-pieces *a a* in manner as shown. Each wheel D is to revolve on a fixed pin, *c*, extending from one disk to the other. The range of friction-wheels D rests and runs on the periphery of the central wheel while the sheave is being revolved. Encompassing the rollers D and the cross-pieces *a* is an annulus, E, which rests on one or more of the rolls D, and is grooved in its periphery, as shown. This annulus is recessed on its opposite sides to receive the two disks.

In the operation of this sheave the central wheel is to be supposed to be stationary, in which case the wheels D are to revolve on such central wheel, the grooved annulus or ring E revolving in turn on the series of wheels D.

I am aware that it is not new to apply to a car-wheel and within a stationary housing a series of friction-rollers, arranged around the hub of the wheel and in a carrying-frame. This,

though somewhat analogous to my invention, differs therefrom materially, as I have no car-wheel, and have an annulus grooved peripherally and recessed in its sides to receive the two disks, which, besides answering to support the friction-wheels, extend beyond them into the recesses of the sides of the grooved annulus, and thus serve with such to support the grooved annulus upon the series of friction-wheels.

I am also aware that a sheave composed of a grooved and recessed annulus, two side disks, a central wheel, and a series of anti-friction wheels is not new, such being shown in the United States Patent No. 223,795. In the said sheave the two disks were fastened to the grooved and recessed annulus and revolved with it; whereas in my sheave the grooved and recessed annulus is not fixed to the disks, but revolves independently of them, while supported by them, they being held together by the cross-pieces *a*, which intervene between them and the friction-rollers. Thus it will be seen that there are important differences between my sheave and that shown in the said patent.

What I claim as my invention is as follows, viz:

The combination of the disks A B and their intervening and supporting cross-pieces *a* with the series of wheels D, the central wheel, C, and the grooved and recessed annulus E, disconnected from and arranged between and supported by the said disks A B, so as to revolve independently of them upon and around the wheels D, while the latter may be revolving on the central wheel, C, all being substantially as set forth.

CHARLES ELLIS.

Witnesses:

JOHN C. PIERCE,
WILLIAM W. FRENCH.