

(No Model.)

J. E. SANDERS.

PULLEY.

No. 305,965.

Patented Sept. 30, 1884.

Fig. 1.

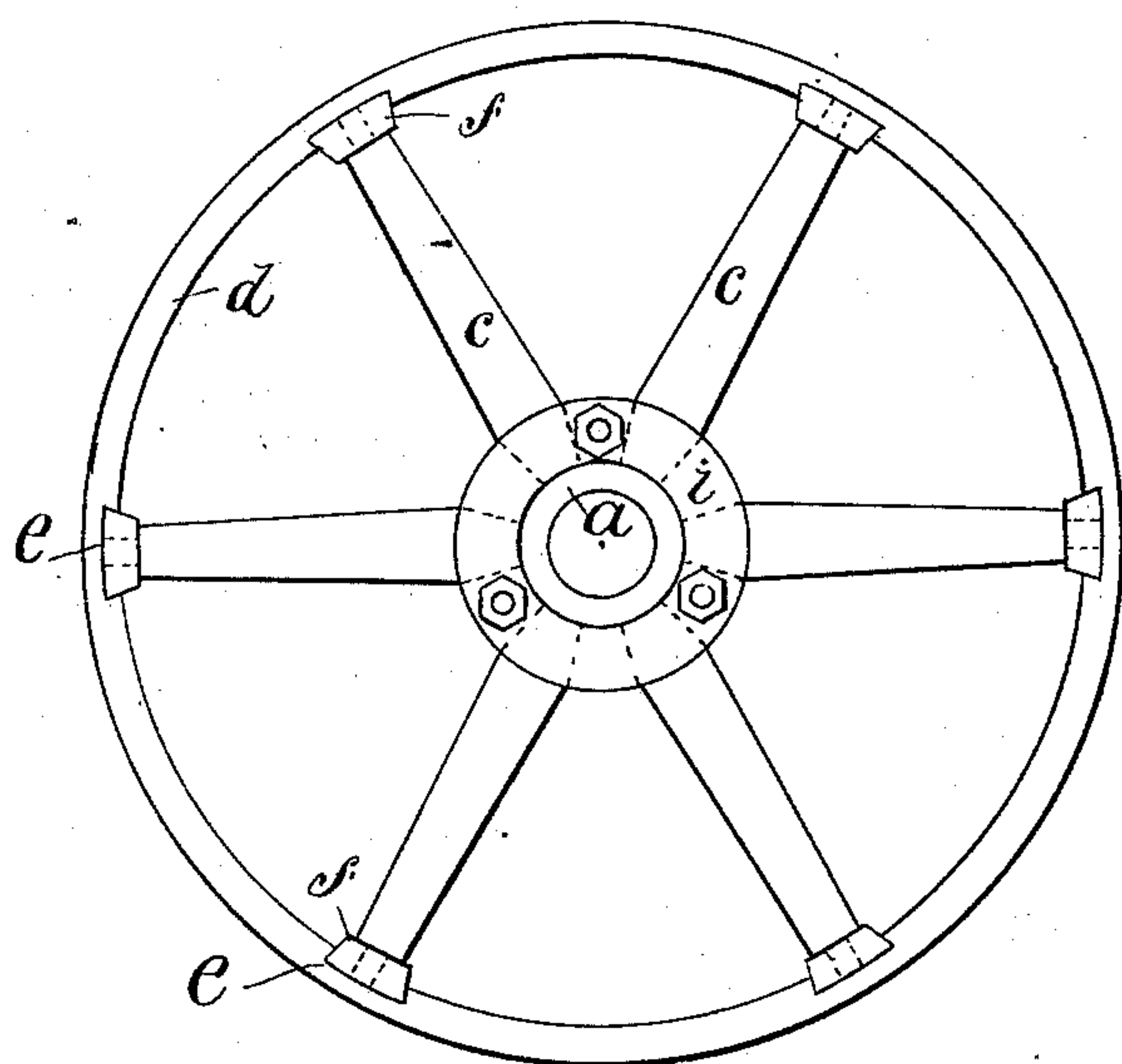
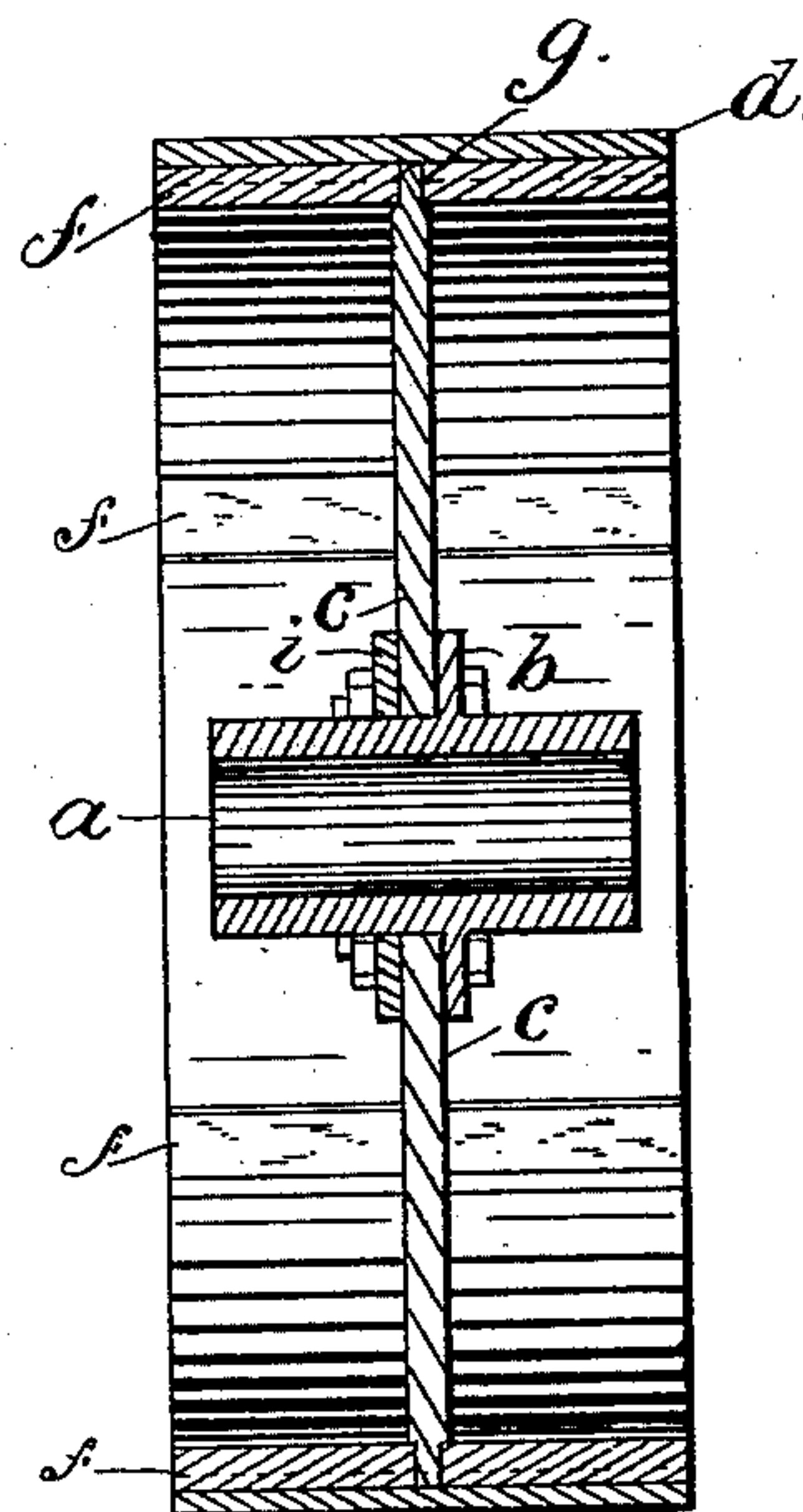


Fig. 2.



WITNESSES:

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JOHN E. SANDERS, OF INDIANAPOLIS, INDIANA.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 305,965, dated September 30, 1884.

Application filed August 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. SANDERS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improved Pulley, of which the following is a specification.

My invention relates to an improvement in the construction of pulleys for transmitting power.

The objects of my improvement are lightness, cheapness of manufacture, and a strong friction-surface.

To attain these objects I form the rim of my improved pulley of a thin strip or strips of wood, steamed, bent in cylindrical form, and kiln-dried, the grain running around the cylinder, the ends suitably secured together, and the cylinder secured to transverse bars fastened to the ends of the spokes, as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation; Fig. 2, a section.

The hub *a* is designed to be of cast-iron bored out to receive a shaft in the usual manner, and having a lateral flange, *b*, with recesses therein to receive the inner ends of the spokes *c c*. Said spokes are made preferably of wood. The rim *d* is formed of a thin strip of wood of a length and width corresponding, respectively, to the circumference and face of the pulley. In said rim are formed a series of transverse grooves, *e e*, corresponding in number to the number of spokes. Into each of said grooves is fitted a bar, *f*, having a central mortise, *g*, into which the outer end of the spoke is fitted. Said bar is preferably of wood, the grain running across the grain of the rim. For the purpose of more perfectly securing bars *f* in the grooves of rim *d* they are in section of a dovetail form, as shown.

In forming the pulley, rim *d* is first steamed until soft and pliable. Bars *f* are then inserted in grooves *e*, being secured therein by nails or screws. Rim *d* is now bent over a suitable mold into cylindrical form, the bars *f* being inside, and the ends of the rim are fastened together by a pair of clamping-pieces, *h h*, also of wood, or in any other suitable manner. As rim *d* is bent, the sides of the grooves *e*, which were before at right angles to the plane of the rim, are inclined toward each other, thus embracing and fitting the dovetailed form of the bars *f*. The rim is now thoroughly dried, after which the spokes are driven from the center outward into the mortises *g* in bars *f*. The hub is then put in place, and an annular plate, *i*, corresponding in size to flange *b*, is slipped over the hub, and the spokes firmly clamped by bolts passing through said flange and washer. A pulley is thus formed which is very light and strong, and to which a belt will adhere more closely than to the ordinary iron rim. In forming pulleys of very wide face two or more widths of wood may be used side by side to form the rim.

I claim as my invention—

1. A pulley consisting of the following elements, namely: a central hub, a series of spokes radially secured to said hub, short bars secured to the outer ends of said spokes, and a bent wood rim secured to said bars, all substantially as specified.

2. In a pulley, the spokes, the bars secured to the outer ends of said spokes, and the bent wood rim having transverse grooves, all combined substantially as specified.

JOHN E. SANDERS.

Witnesses:

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