

(No Model.)

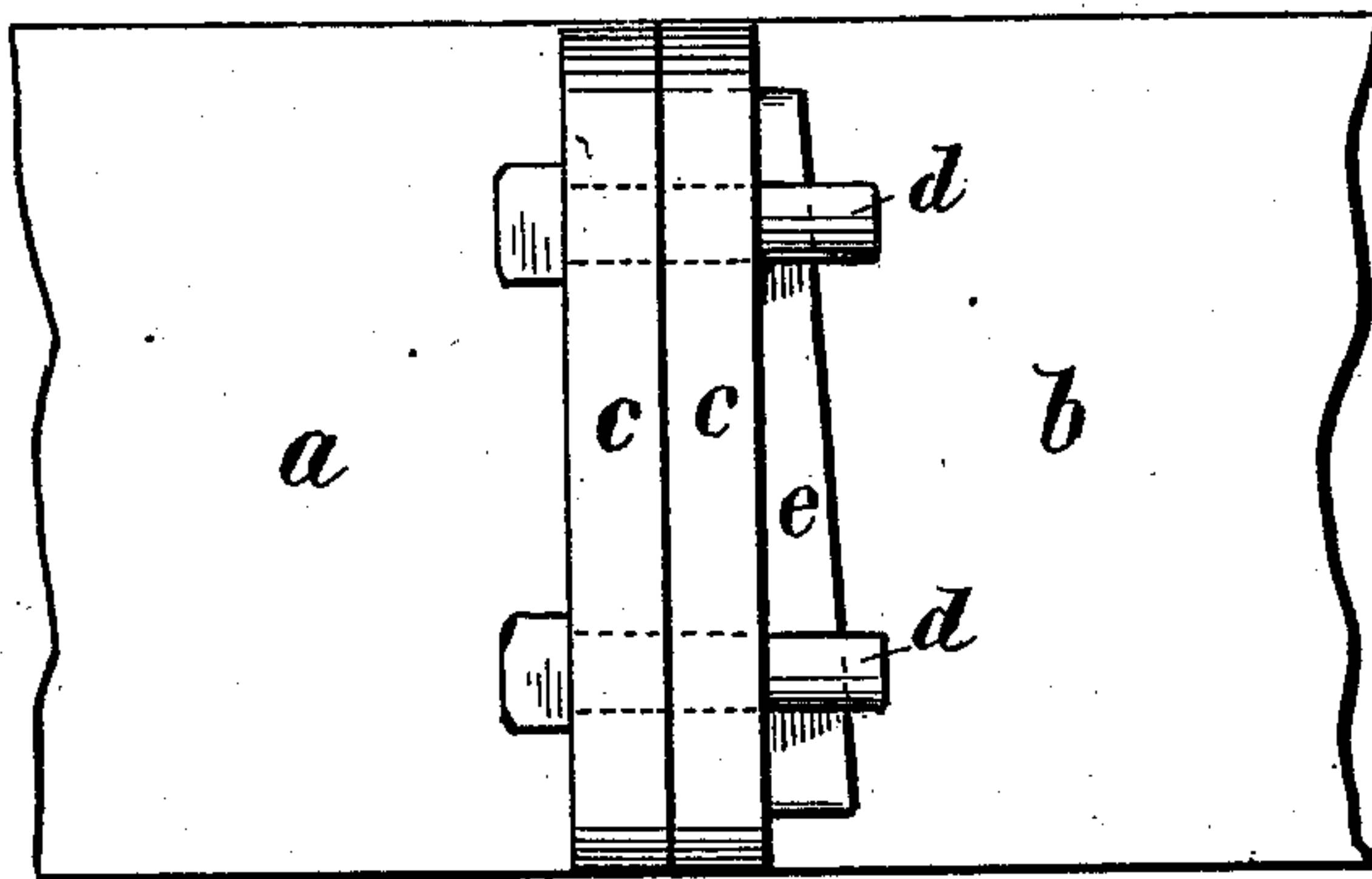
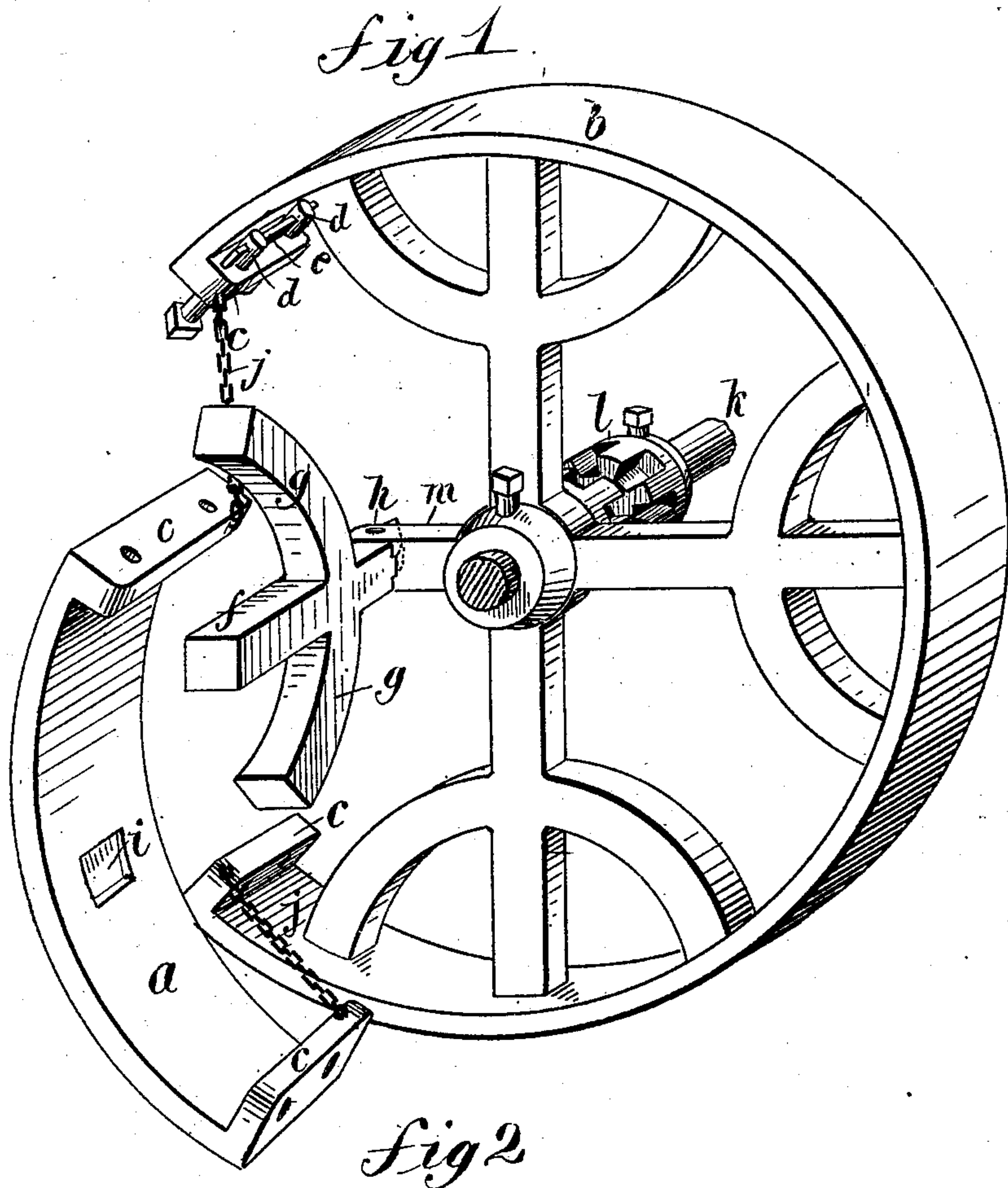
2 Sheets—Sheet 1.

J. J. IRVINE.

PULLEY.

No. 273,544.

Patented Mar. 6, 1883.



WITNESSES:

J. D. Garfield
C. Sedgwick

INVENTOR:

J. J. Irvine
BY *Mum & Co*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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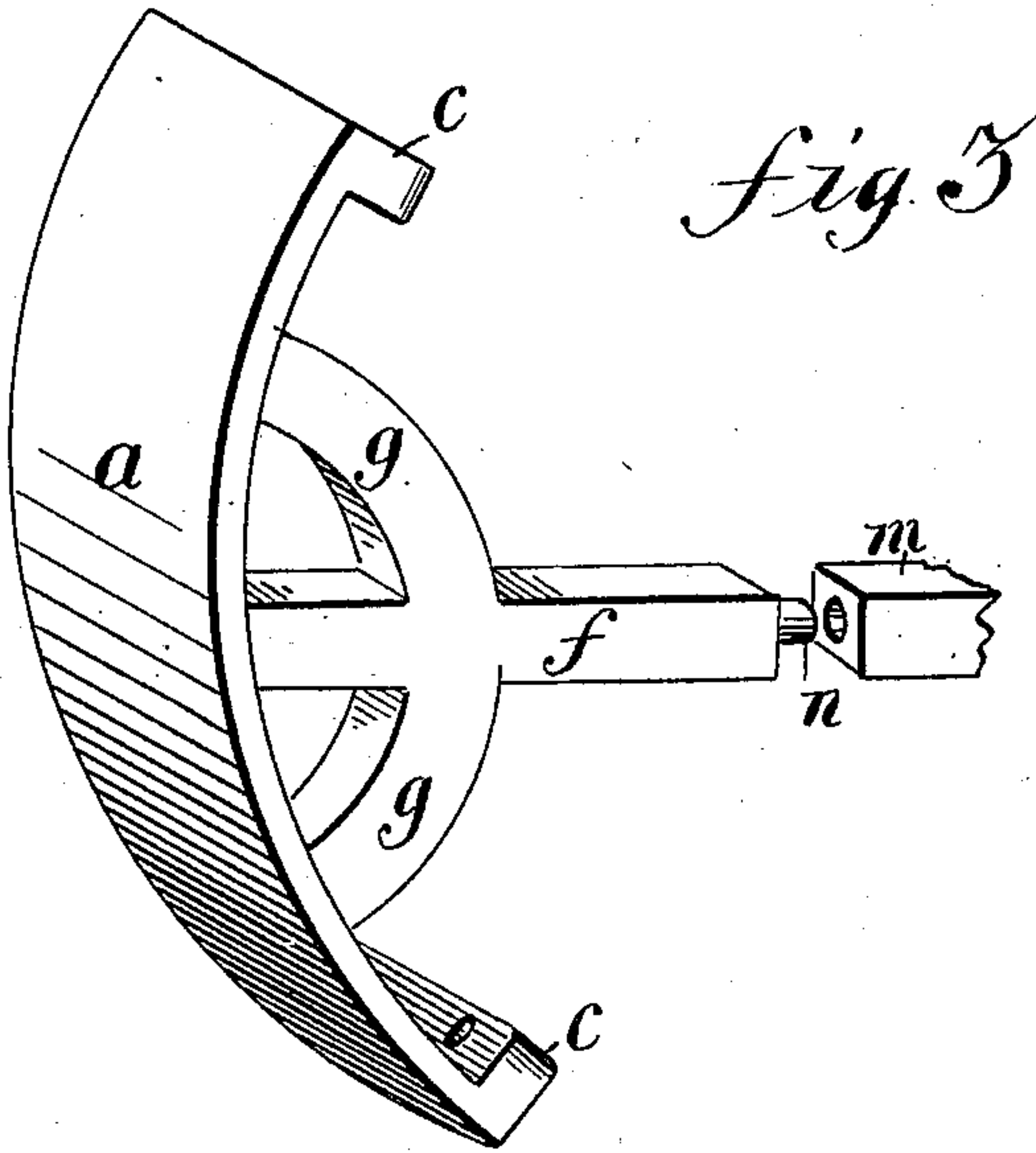


fig 3

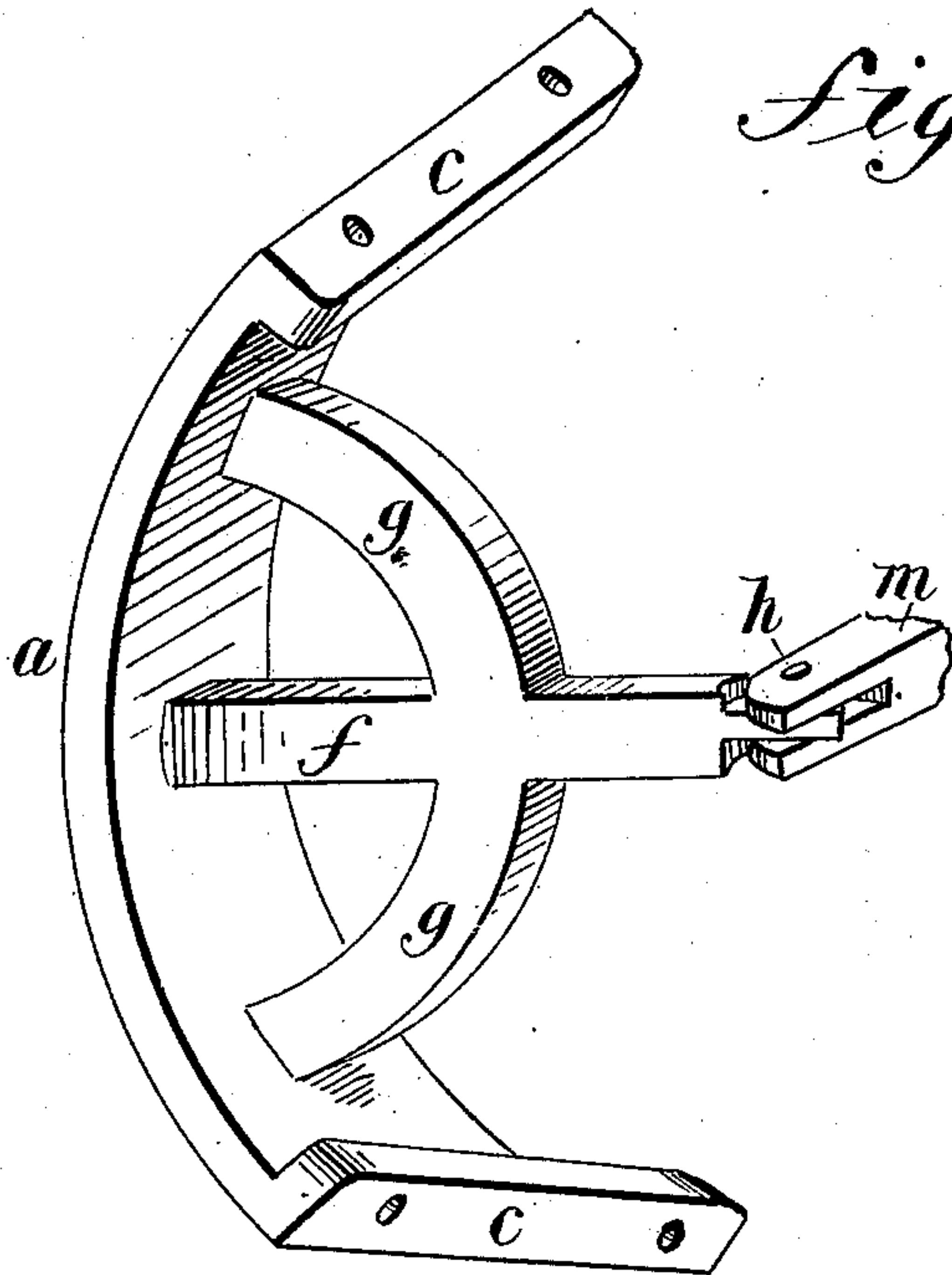


fig 4

WITNESSES:

J. D. Garfield
L. Sedgwick

INVENTOR:

BY

J. J. Irvine
Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN J. IRVINE, OF CHATTANOOGA, TENNESSEE.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 273,544, dated March 6, 1883.

Application filed September 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. IRVINE, of Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and Improved Pulley, of which the following is a full, clear, and exact description.

My invention consists of a pulley for machinery-beltting, provided with a removable section of the rim, which is designed to be taken out at any time for slackening the belt to facilitate the lacing of it when it becomes slack; also, to enable it to be taken off and put on readily when required, as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a pulley constructed with a removable section of the rim according to one arrangement of my invention for pulleys of larger size. Fig. 2 is a detail of the connecting device for the said removable section. Fig. 3 is a perspective view of a removable section of the rim in a modified arrangement for pulleys of smaller size, and Fig. 4 represents another modification.

a represents a segment of the rim *b*, of about a quarter of the circumference, that is made separately from the rest and fitted to be connected by the flanges *c*, bolts *d*, and key *e*; or nuts may be used instead of the keys. In this case the said removable section extends along the arm *f* and its branches *g*, the section *a* and branched arm being constructed separately to facilitate the handling of them, and said arm is jointed at *h* to swing around side-
wise to allow greater slack to the belt, and the arm and section *a* connect by a socket, *i*, when the pulley is connected together for use. In this case, which represents the plan I prefer for large pulleys, the section *a* is connected to rim *b* by chains *j*, so as to be suspended, while detached, in a convenient place for being put back, and to balance the pulley and facilitate the turning of it in adjusting the belt. It will be readily seen that by the slack that will be afforded to the belt by the removal of the section *a* the belt may be read-

ily drawn together for lacing the ends without the use of clamps. The belt can also be put on and taken off without unlacing it, and may be readily slackened at any time for any purpose. The section *a* will be taken out or put in when the pulley stands so that the section *a* is not under the stress of the belt, and the pulley will then be turned till the open section passes under the belt and slackens it. To enable the pulley to be so turned for this purpose without turning the whole line of shafting, I propose to connect the pulley to the shaft *k* by a clutch, *l*, engaging the notched hub of the pulley, and enabling the pulley to be readily disconnected from the clutch for turning it on the shaft whenever it may be required to adjust the belt.

In smaller sizes of pulleys I propose to cast the removable or adjustable portion *f* of the arm and its branches *g*, when used, together with the removable section *a*, and connect it with the fixed part *m* in any approved way, whether by a joint, *h*, or by a tenon and socket, *n*. When made solid and jointed together, as in Fig. 4, the joints of said section *a* with the rim *b* will be made sufficiently oblique, as indicated in said figure, to allow the section to swing out of and into its position on the joint *h*.

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

1. A pulley having the detachable segment *a*, with apertured flanges *c*, connected by bolts *d* with similar flanges on the ends of the main part of the circumference, as shown and described.

2. A pulley having a removable section, *a*, of the rim, and a jointed arm, *f*, substantially as described.

3. A pulley having a removable section, *a*, of the rim, the said section detachably connected to said rim by flanges *c*, bolts *d*, and keys *e*, or equivalent devices, substantially as described.

4. A pulley having a removable section, *a*, of the rim, and a jointed arm, *f*, the said arm and section *a* connected by socket *i* in the said section *a*, substantially as described.

5. A pulley having a removable section, *a*, of the rim, and said section connected to the rim by chains, substantially as described.

6. A pulley having a removable section of the rim, and being connected with the shaft by a clutch, substantially as specified.

7. A pulley having a removable section of the rim connected to the hub by a jointed arm,

the joints of the said section with the rim being oblique and enabling the section to swing on the joint of the arm, substantially as described.

JOHN J. IRVINE.

Witnesses:

JOHN J. MOORE,
P. MILTON.