

J. F. THOMAS.
RATCHET-WHEEL.

No. 170,917.

Patented Dec. 7, 1875.

Fig. 1.

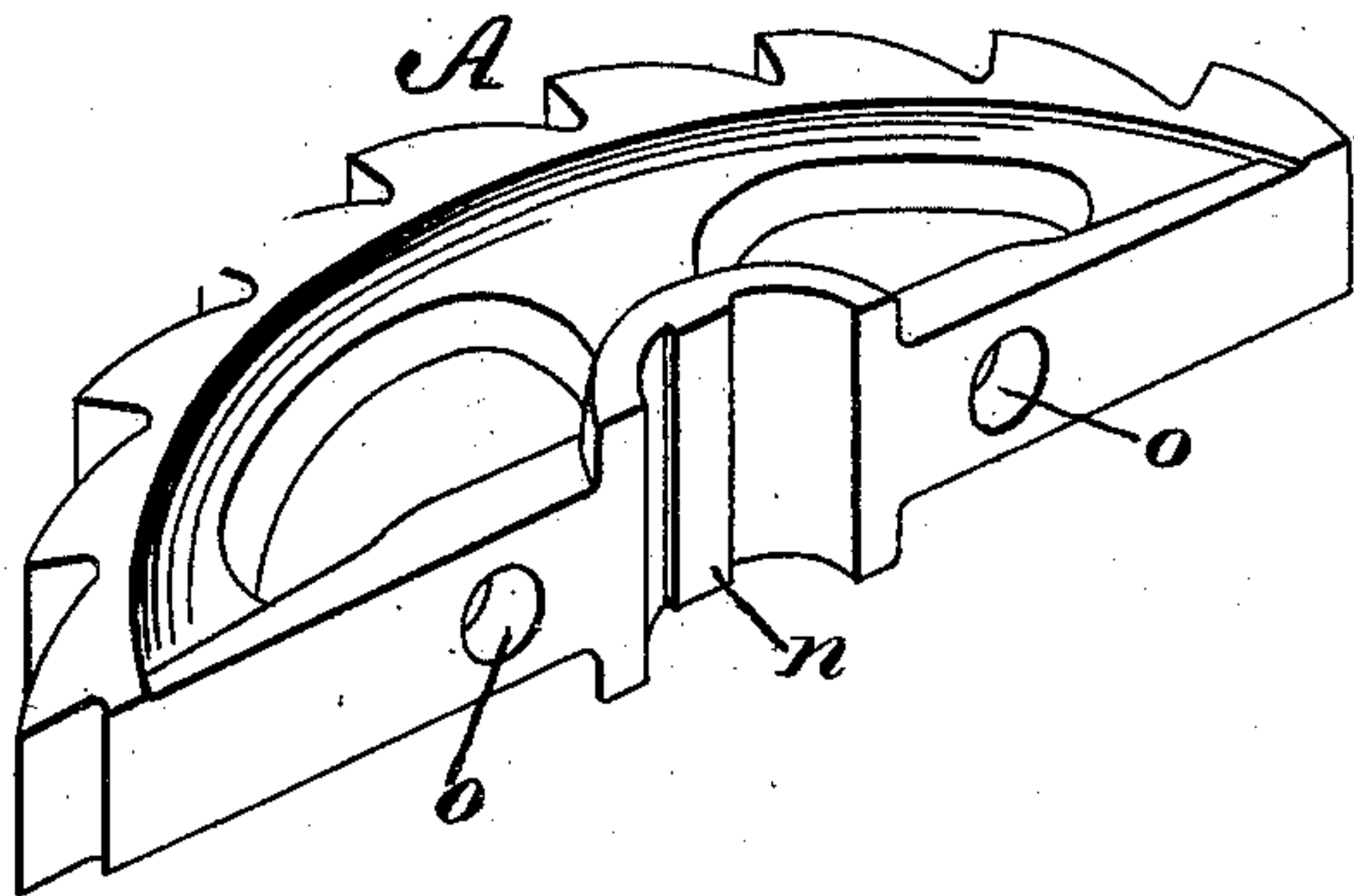
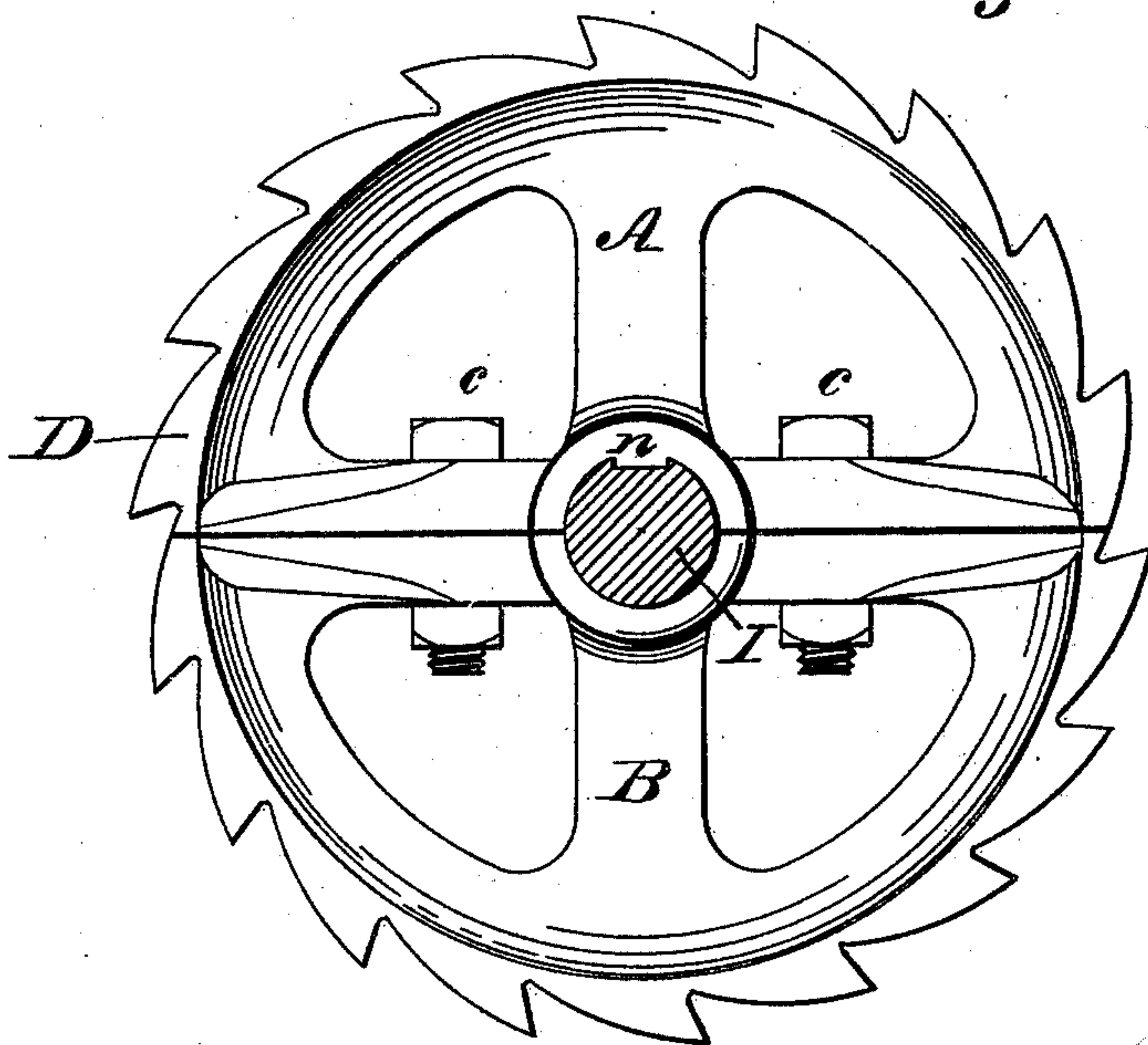
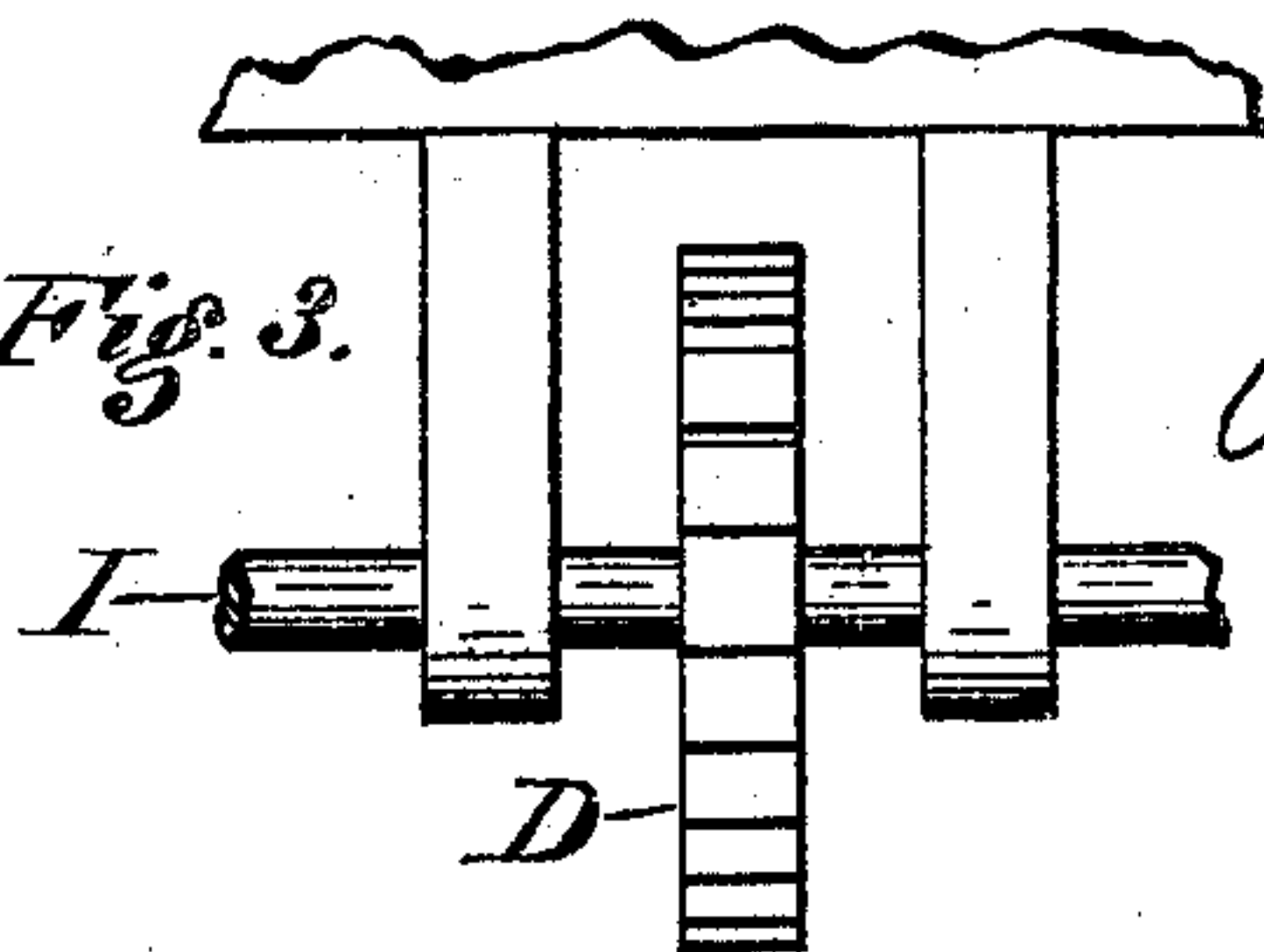


Fig. 2.



Witnesses:
Donn Twitchell.
Hill H. Dodge.

Fig. 3.



Inventor:
J. F. Thomas
by his attys
Dodge & Son.

UNITED STATES PATENT OFFICE.

JOHN F. THOMAS, OF ILION, NEW YORK.

IMPROVEMENT IN RATCHET-WHEELS.

Specification forming part of Letters Patent No. **170,917**, dated December 7, 1875; application filed November 1, 1875.

To all whom it may concern:

Be it known that I, JOHN F. THOMAS, of Ilion, in the county of Herkimer and State of New York, have invented certain Improvements in Ratchet-Wheels, of which the following is a specification:

My invention consists in certain improvements in clutch or ratchet wheels, and is designed more especially for use on horse hay-rakes, in which, owing to the sudden strain which is brought upon them, many of the wheels are broken, thereby rendering the machine useless until a new wheel can be put in place.

As the wheel is used for raising the rake-teeth after a certain amount of hay is collected, it will readily be seen that it comes into operation only at times, and that a sudden strain is brought upon the wheel every time it is brought into operation.

As commonly made, these wheels are cast solid, in one piece, and keyed in place upon the shaft, other attachments being placed on each side of said wheel. The wheels, as above stated, being usually made solid, it is, of course, necessary to strip the shaft of all attachments between the end and the point at which the wheel is to be located, before a new one can be placed in position, thereby consuming much valuable time, and requiring considerable mechanical skill.

The object of my present invention is to produce a wheel which may be placed in position without removing the other attachments of the rake, and one which may readily be secured in place by any ordinary farm-hand.

In order to accomplish this result, I make the wheel in two or more sections, which are bolted or otherwise secured together, as hereafter more fully explained.

In the drawings, Figure 1 is a perspective view of one of the sections of a wheel composed of two parts. Fig. 2 is a side view of a wheel in place on its shaft; and Fig. 3 is an edge view of a wheel mounted between two rigid arms, showing how the wheel may be placed in position without interfering with other attachments.

In making my improved wheel, I provide two semicircular sections, A and B, as shown in Fig. 2, which, after being placed in posi-

tion on the shaft, are bolted or otherwise securely fastened together, as shown, the sections being provided with holes *o*, to allow the bolts C to pass through.

It will be observed that in Figs. 1 and 2 I have represented a key, *n*, as being cast solidly upon the section A.

By this arrangement I am enabled to dispense with cutting a key-seat in the wheel, and to dispense entirely with the removable key.

In addition to this saving in cost and labor, I accomplish two other important results, namely: the avoidance of any end movement, and the ready and accurate adjustment of the wheel in place.

The wheels being cast, the keys *n* will, of course, be of uniform size, and consequently the key-seat having been once cut in the proper place, and of the exact size required, all that is necessary is to move the section A along on the shaft until the key *n* drops into its seat, and then place the section B exactly opposite, and bolt them together. This can be very speedily performed, and when finished must of necessity be accurately located.

It will be readily seen that this forms a very simple, cheap, and efficient device, and one which may be quickly and correctly mounted by a person of ordinary skill.

While I prefer to use a wheel having the key *n* cast therein, I do not wish to be understood as limiting myself thereto, as the loose key may be used with as much facility in this as in the solid wheel.

I am aware that band-wheels or pulleys have been made in sections in a variety of ways, and also that wheels have been made with a slit or opening through one side, and therefore I do not claim the broad idea of a wheel made in sections; but I am not aware that a ratchet-wheel of any kind has ever before been constructed in this manner; and therefore

What I claim is—

A ratchet-wheel made in sections, with a lug or key, *n*, cast thereon, substantially as shown and described.

JOHN F. THOMAS.

Witnesses:

ALBERT M. ROSS,
MARSHALL LEWIS.