

(No Model.)

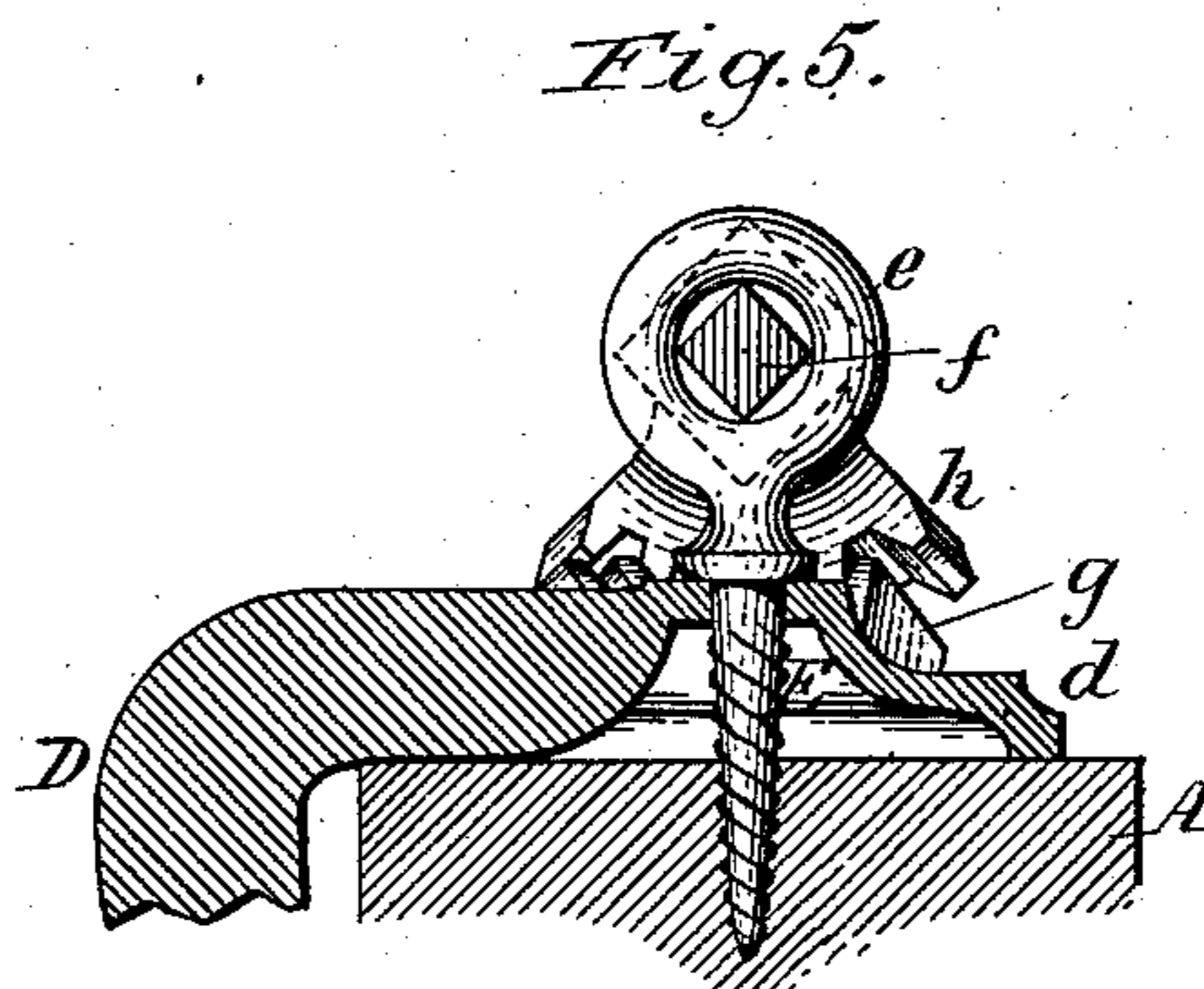
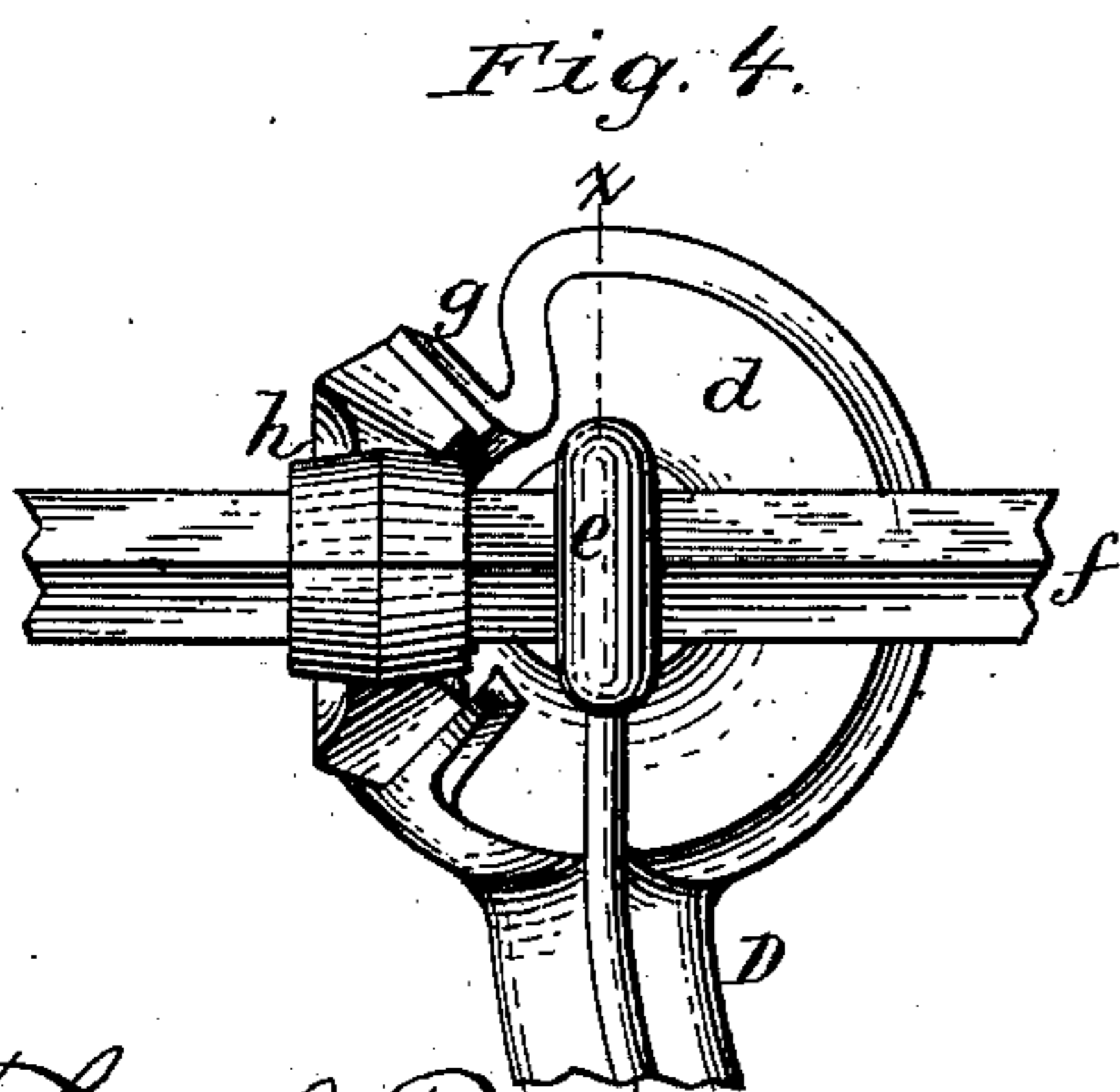
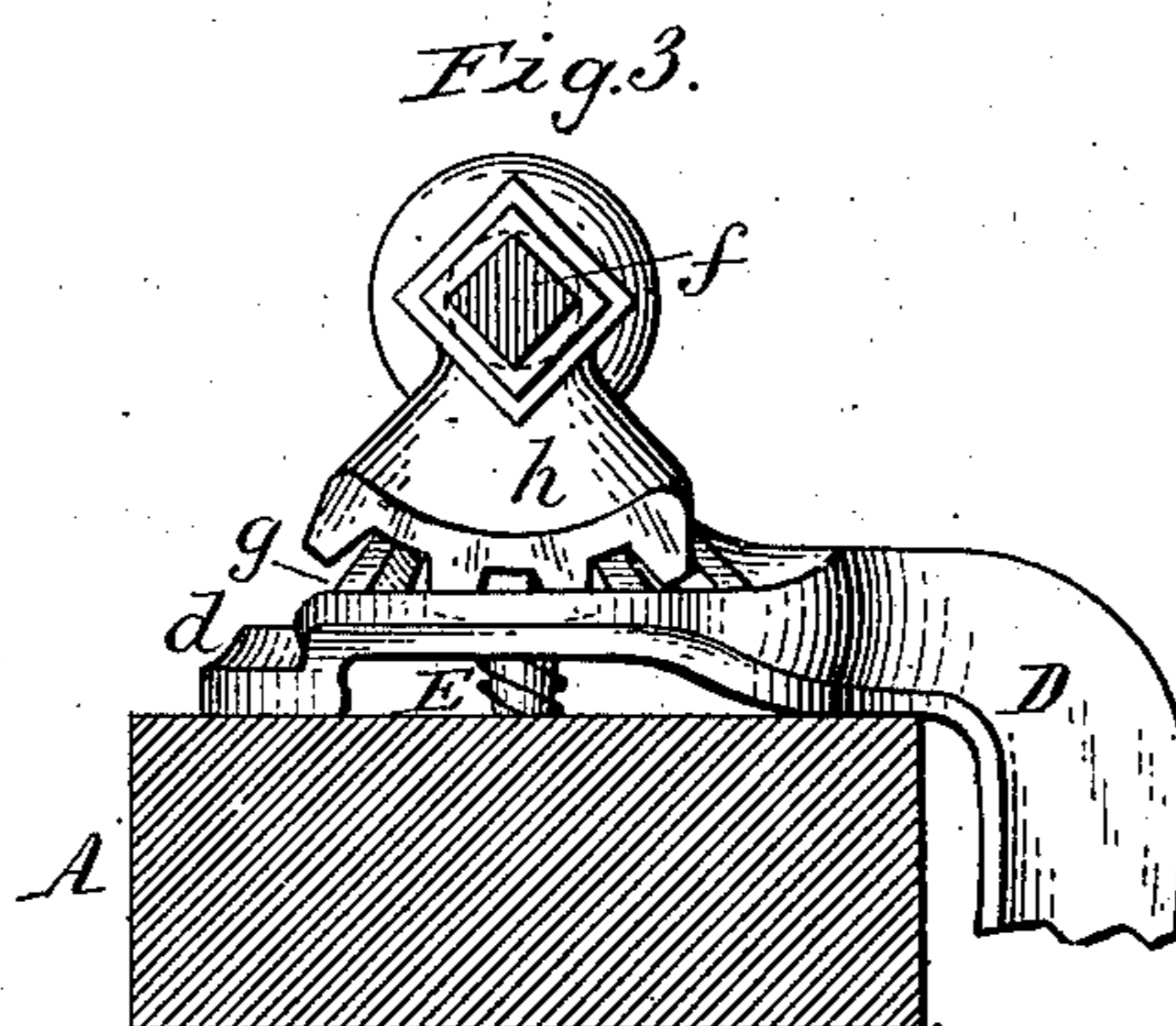
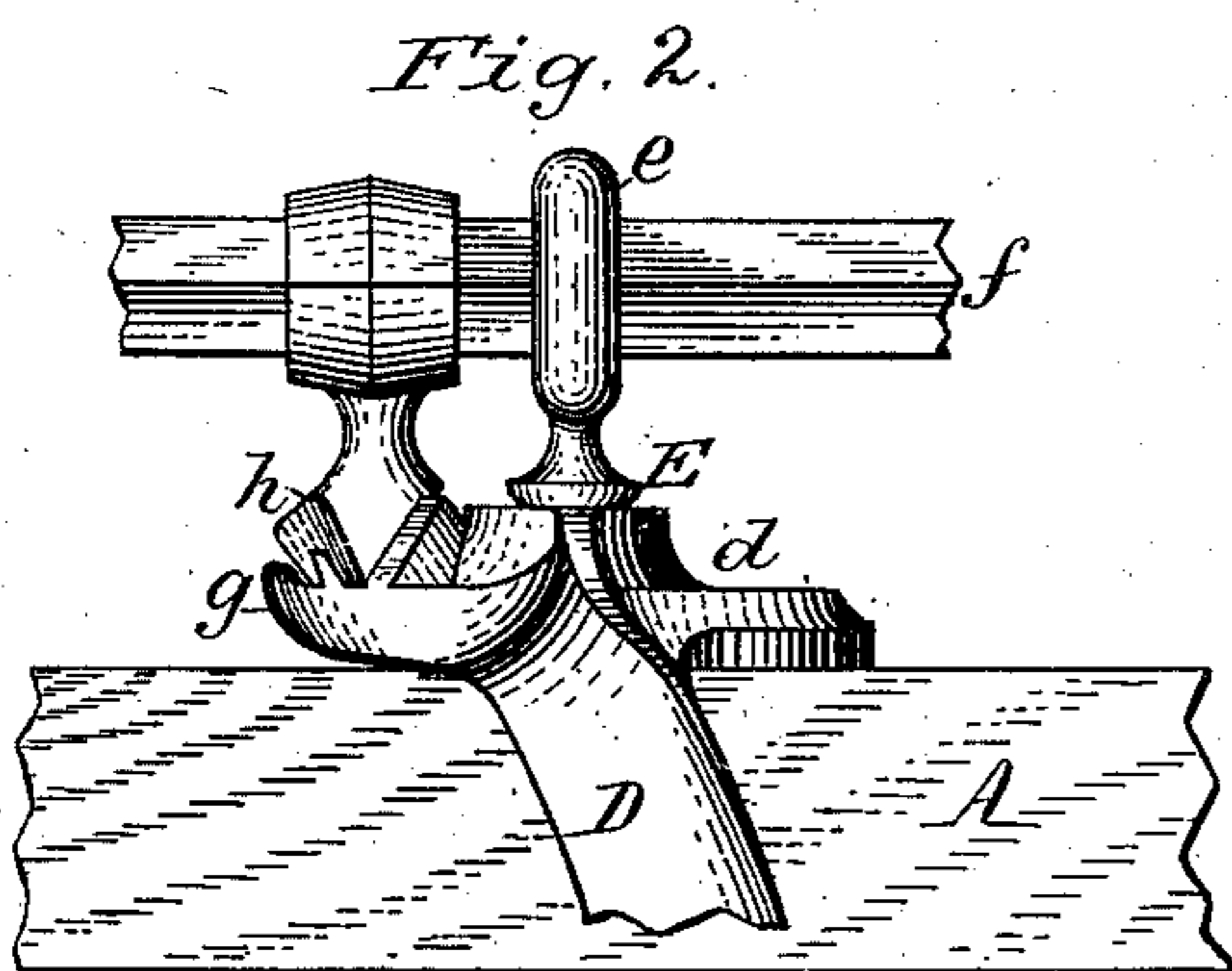
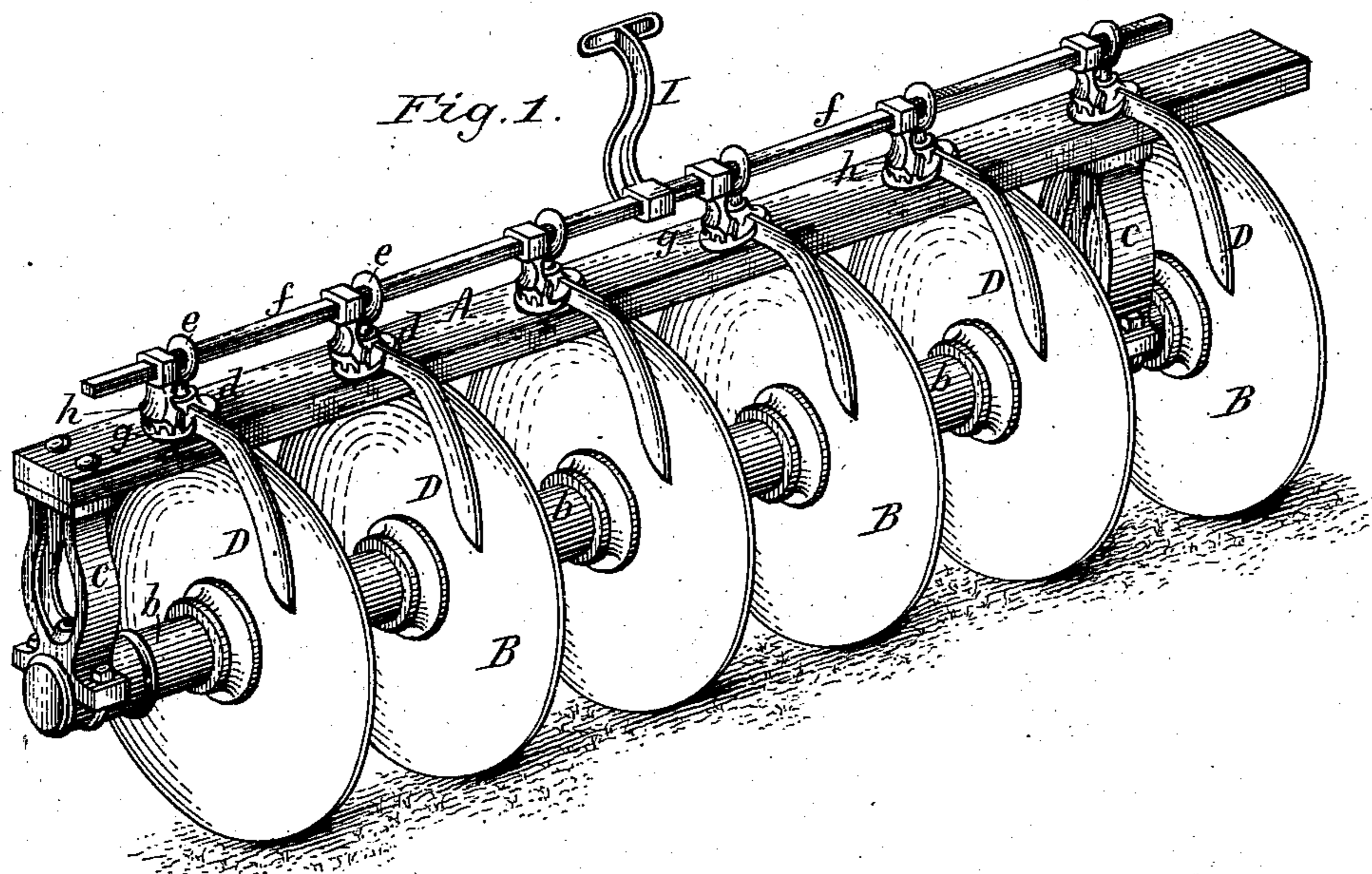
2 Sheets—Sheet 1.

M. G. ELLIOTT.

DISK HARROW.

No. 373,278.

Patented Nov. 15, 1887.



Theo. L. Popp
Chas. J. Buchheit } Witnesses.

M. G. Elliott Inventor.
By Wilhelm Honner
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

M. G. ELLIOTT.

DISK HARROW.

No. 373,278.

Patented Nov. 15, 1887.

Fig. 6.

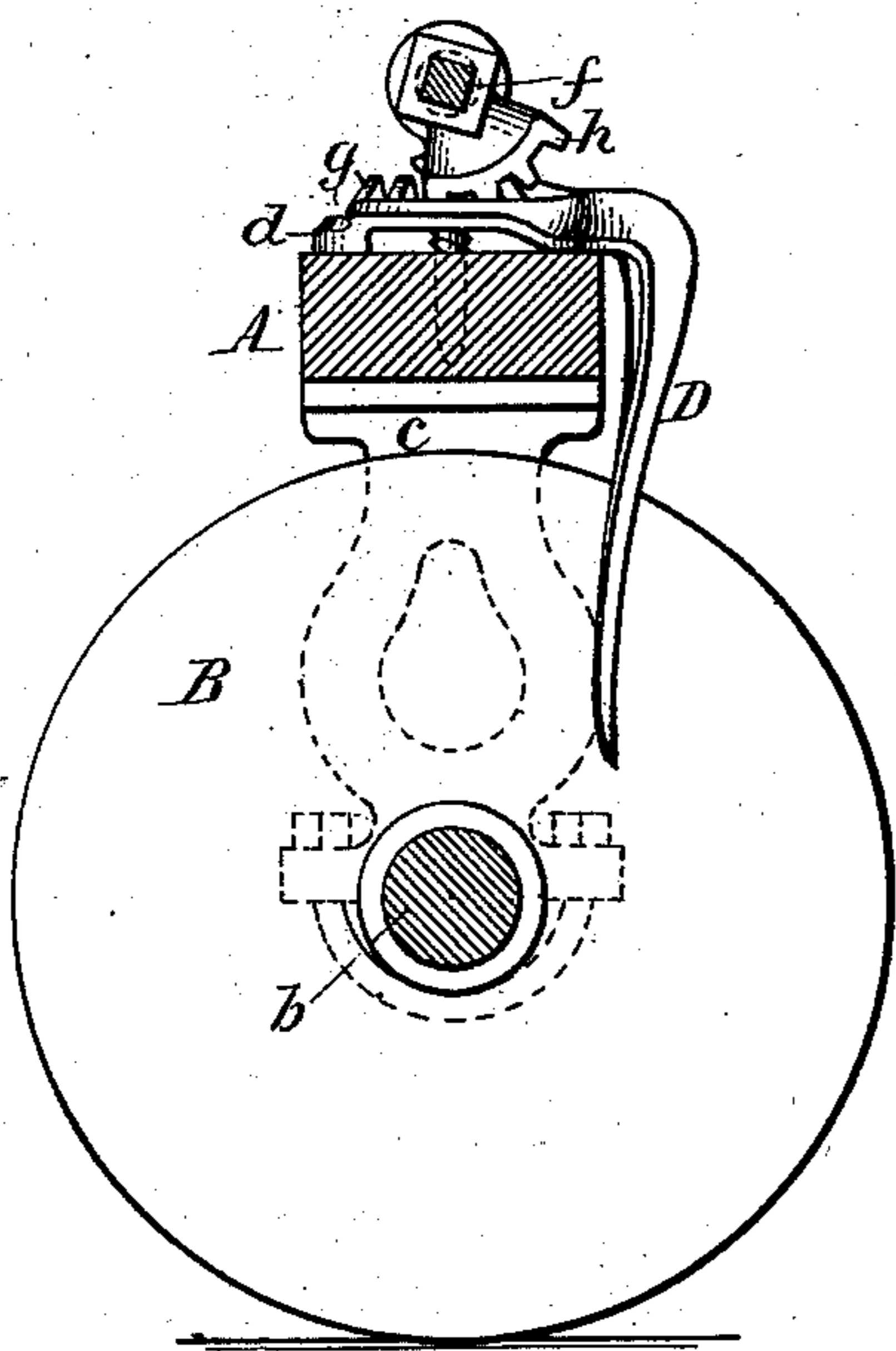


Fig. 7.

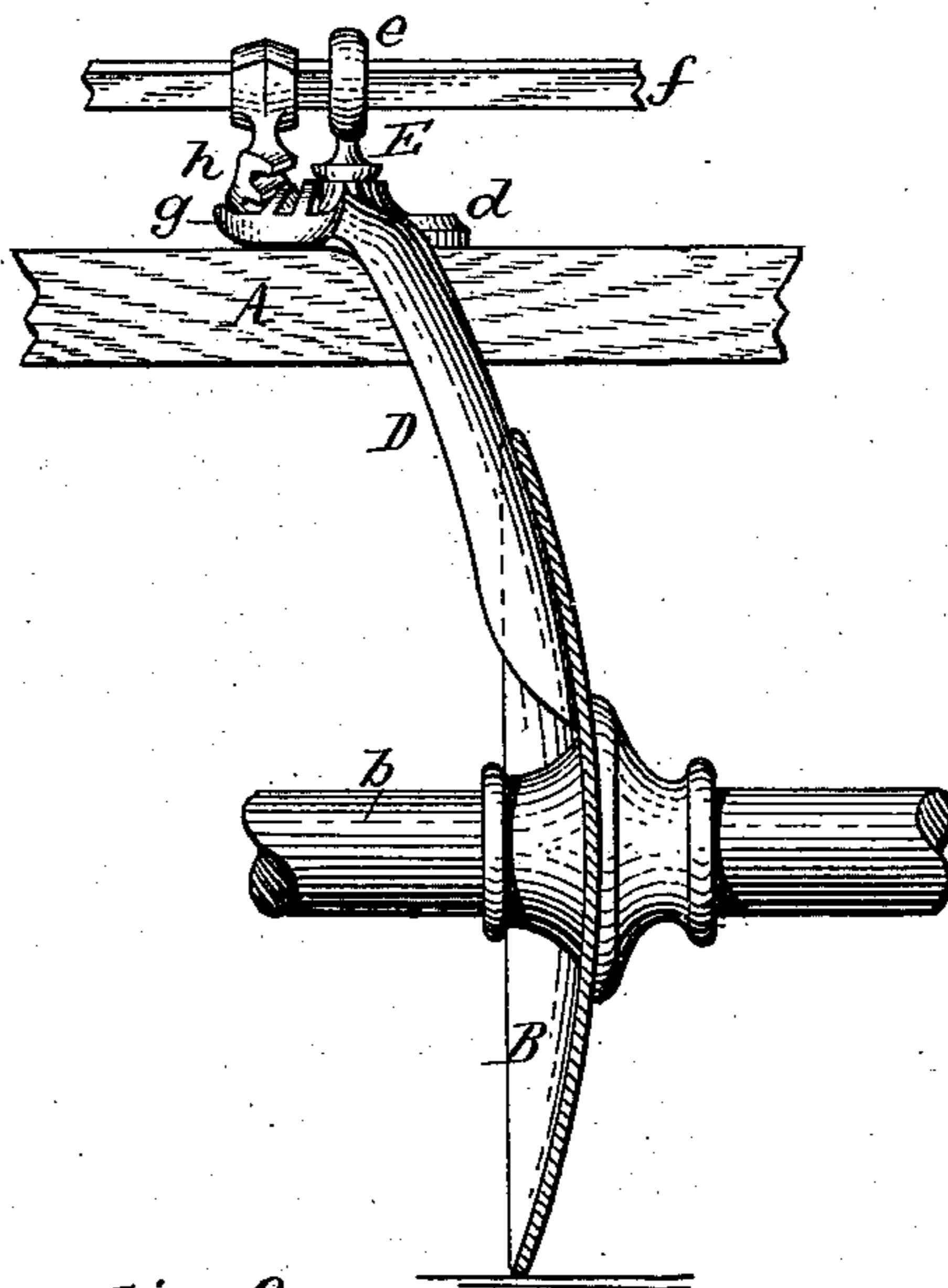


Fig. 8.

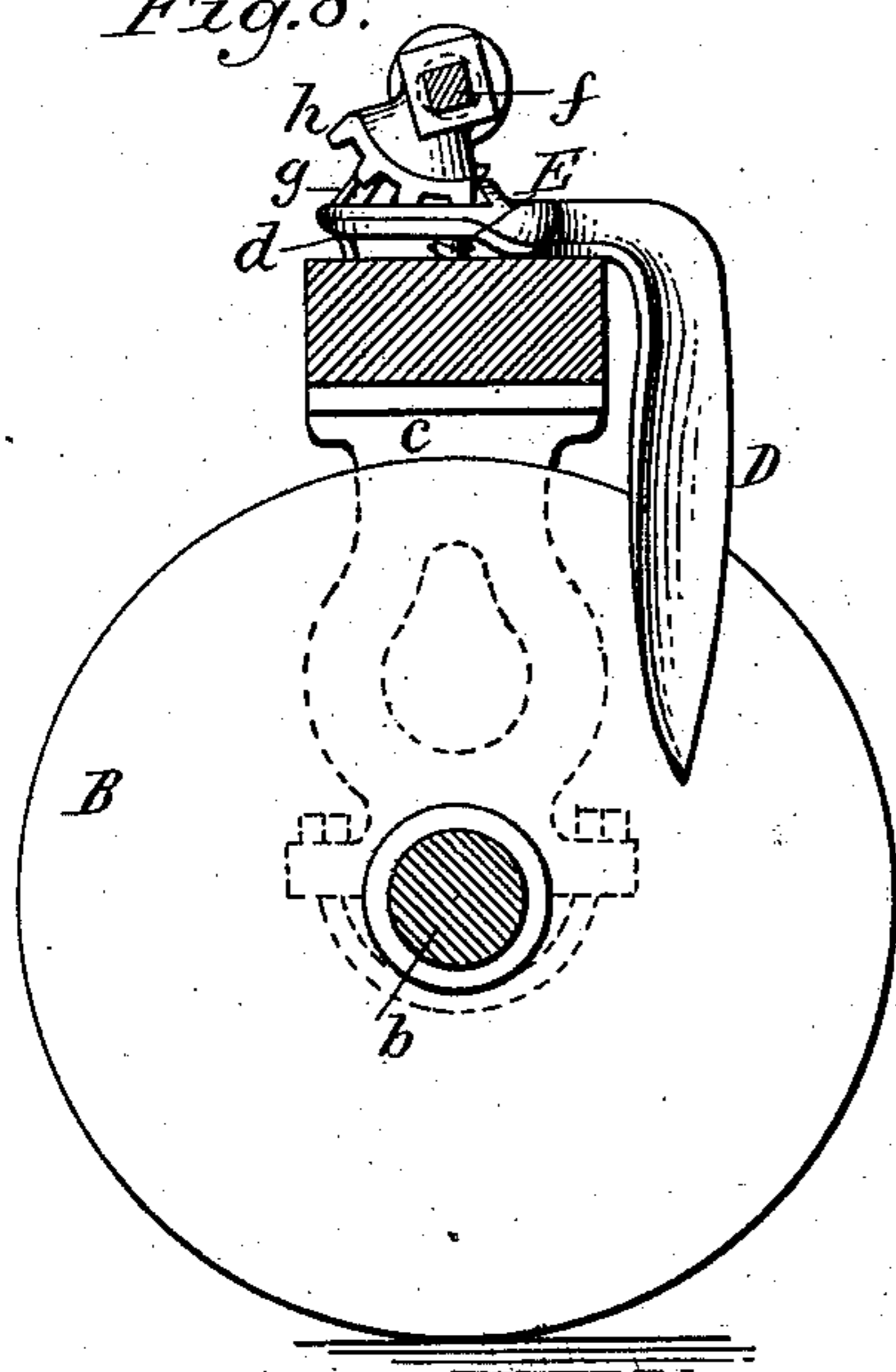
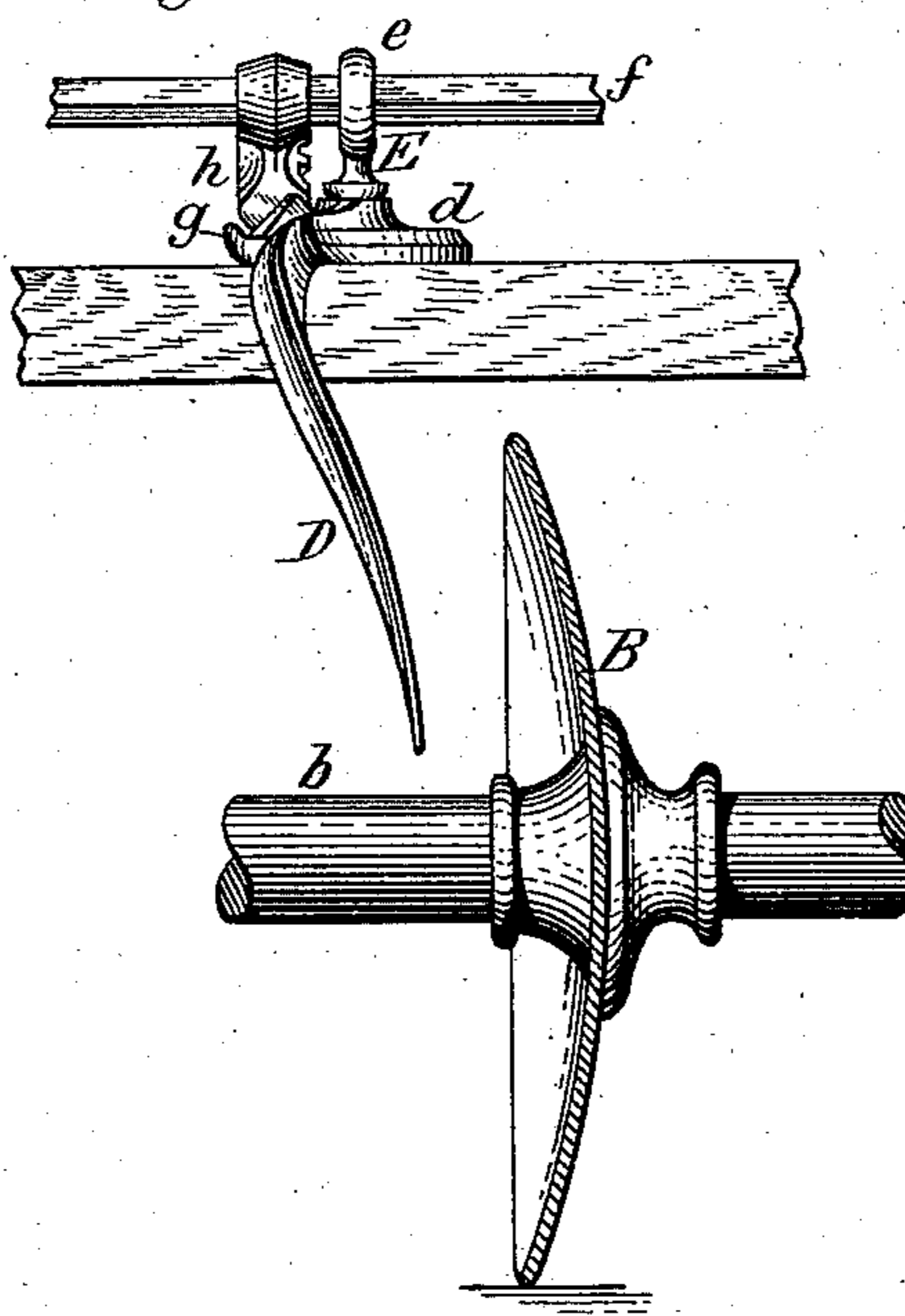


Fig. 9.



Theodore L. Poppe } Witnesses.
 Chas. J. Buchheit }

M. G. Elliott Inventor.
By Wilhelm Rönner.
Attorneys.

UNITED STATES PATENT OFFICE.

MATHEW G. ELLIOTT, OF LITTLE FALLS, NEW YORK, ASSIGNOR TO THE
WARRIOR MOWER COMPANY, OF SAME PLACE.

DISK-HARROW.

SPECIFICATION forming part of Letters Patent No. 373,278, dated November 15, 1887.

Application filed September 1, 1885. Serial No. 175,942. (No model.)

To all whom it may concern:

Be it known that I, MATHEW G. ELLIOTT, of Little Falls, in the county of Herkimer and State of New York, have invented a new and useful Improvement in Disk-Harrows, of which the following is a specification.

This invention relates to an improvement in the construction of the scrapers which are mounted on the gang-planks of disk-harrows and provided with mechanism whereby the scrapers can be moved against the disks, at desire, for clearing the same from adhering lumps of earth, grass, weeds, &c.

The object of my invention is to improve the construction of the mechanism whereby the scrapers are moved toward and from the disks, and to prevent the scrapers from seriously obstructing the spaces between the disks.

My invention consists, to these ends, of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, consisting of two sheets, Figure 1 is a perspective view of a disk-gang provided with my improvements. Fig. 2 is a rear elevation of the upper portion of one of the scrapers and connecting parts on an enlarged scale. Fig. 3 is a side elevation thereof. Fig. 4 is a top plan view of the same. Fig. 5 is a vertical section in line *x x*, Fig. 4. Fig. 6 is a side elevation of one of the disks and scrapers, showing the scraper moved against the disk. Fig. 7 is a rear elevation of the same. Fig. 8 is a similar side elevation showing the scraper swung away from the disk. Fig. 9 is a rear elevation of the same.

Like letters of reference refer to like parts in the several figures.

A represents the gang-plank or frame, and B a series of harrow-disks arranged underneath the same and mounted upon a shaft, *b*, which is journaled in bearings *c*, attached to the gang-plank in any suitable manner.

D represents the scrapers, which are mounted upon the gang-plank and depend on the rear side thereof, and are made movable toward and from the harrow-disks. The upper end of each scraper is provided with a hub, *d*, which rests upon the upper side of the gang-

plank and turns upon a vertical pivot, E, which latter is screwed into the gang-plank. Each pivot E is provided at its upper end with a vertical eye, *e*, in which is supported a horizontal rock-shaft, *f*. The latter is arranged parallel with the upper side of the gang-plank and rests in the several eyes of the pivots E. Each hub *d* is provided with a bevel gear-segment, *g*, arranged on the upper side of the hub, concentric with the same, and the shaft *f* is provided above each hub with a similar bevel gear-segment, *h*, which meshes with the gear-segment *g* of the adjacent hub. By giving the rock-shaft *f* a partial turn in one or the other direction the scrapers are simultaneously turned on their pivots, so as to move the blades of the scrapers against the disks or away therefrom, as may be desired.

The blades of the scrapers are made flat and stand parallel with the disks, or nearly so, when the scrapers are swung away from the disks, as represented in Figs. 8 and 9, so that in this position of the scrapers the latter least obstruct the spaces between the disks, thereby permitting lumps of earth, grass, weeds, &c., to pass through the spaces between the disk with comparative freedom. Upon turning the rock-shaft *f* in such manner as to move the scrapers against the disks, the scrapers are turned on the pivots E, so as to present their edges toward the disks as represented in Figs. 6 and 7, whereby the proper scraping action is obtained.

The rock-shaft *f* is provided with a suitable arm or lever, *i*, by which it is operated.

I claim as my invention—

1. The combination, with the gang-plank or frame and the series of disks attached thereto, of a series of scrapers pivoted to said gang-plank and provided each with a gear-segment and a rock-shaft arranged lengthwise on the gang-plank or frame and provided with a series of gear-segments meshing with the gear-segments of the scrapers, substantially as set forth.

2. The combination, with the gang-plank or frame and the series of disks attached thereto and arranged underneath the same, of a series of scrapers attached to the gang-

plank by vertical pivots, and constructed with depending blades having their flat sides arranged parallel with the disks when removed therefrom, and mechanism whereby the scrapers are simultaneously turned on their pivots with their edges against the disks, substantially as set forth.

Witness my hand this 22d day of August, 1885.

M. G. ELLIOTT.

Witnesses:

J. W. FITZGERALD,

WATTS T. LOOMIS.