

No. 658,305.

Patented Sept. 18, 1900.

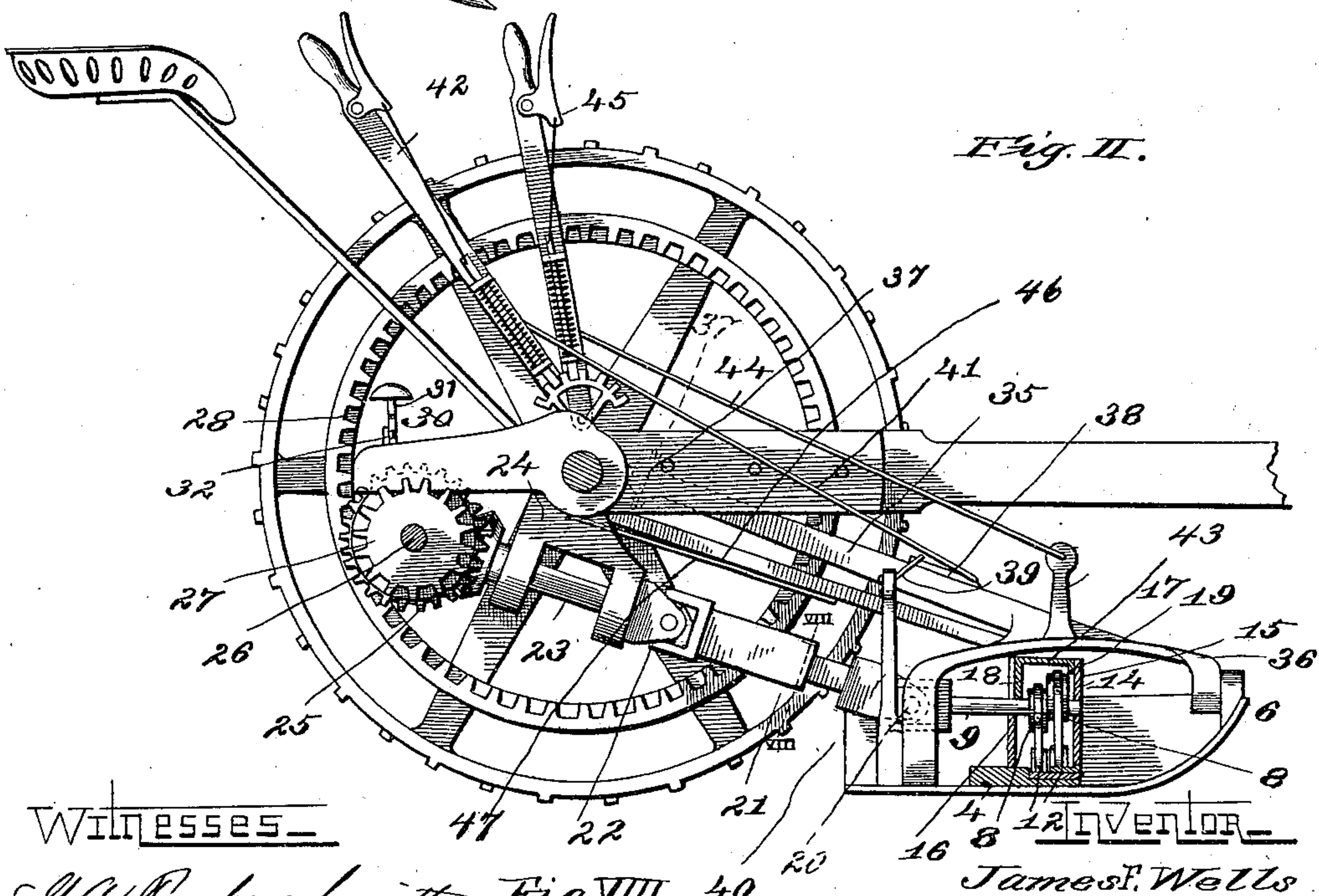
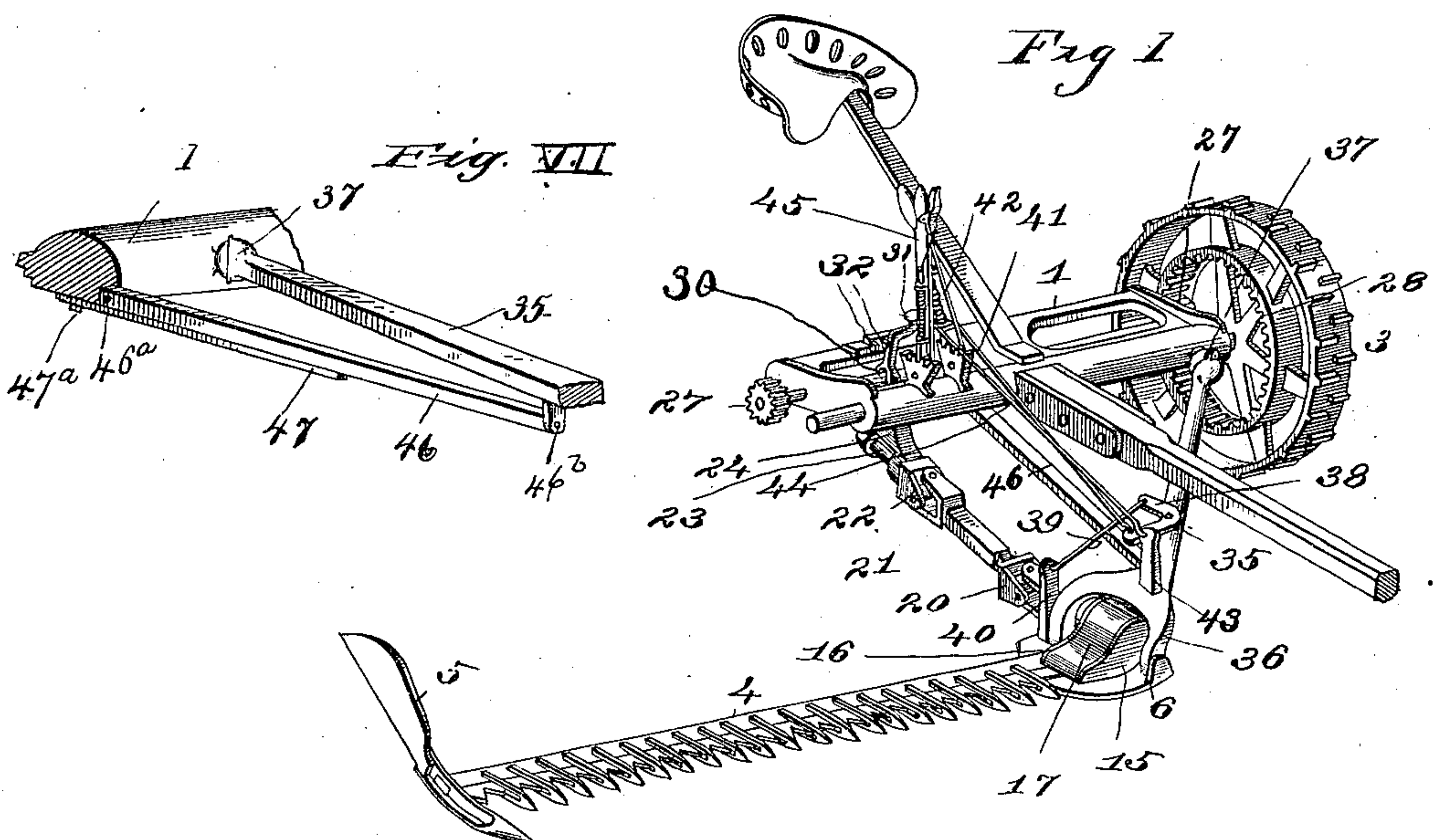
J. F. WELLS.

MOWER.

(Application filed Feb. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES—

J. A. Pauerschmitt, Fig. VIII
E. S. Knight

INVENTOR—
James F. Wells
By *Knight Bros*
Attorneys

No. 658,305.

Patented Sept. 18, 1900.

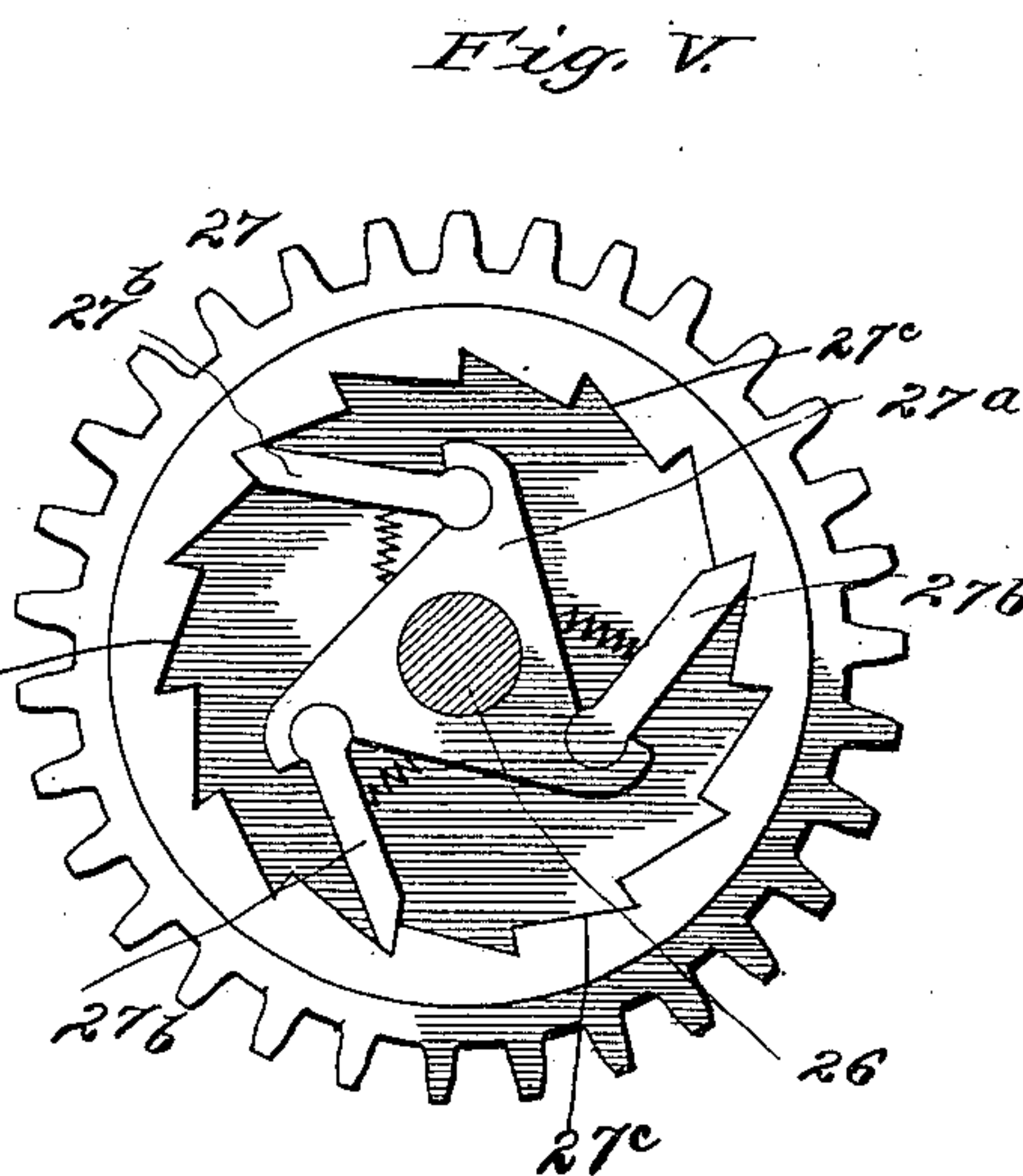
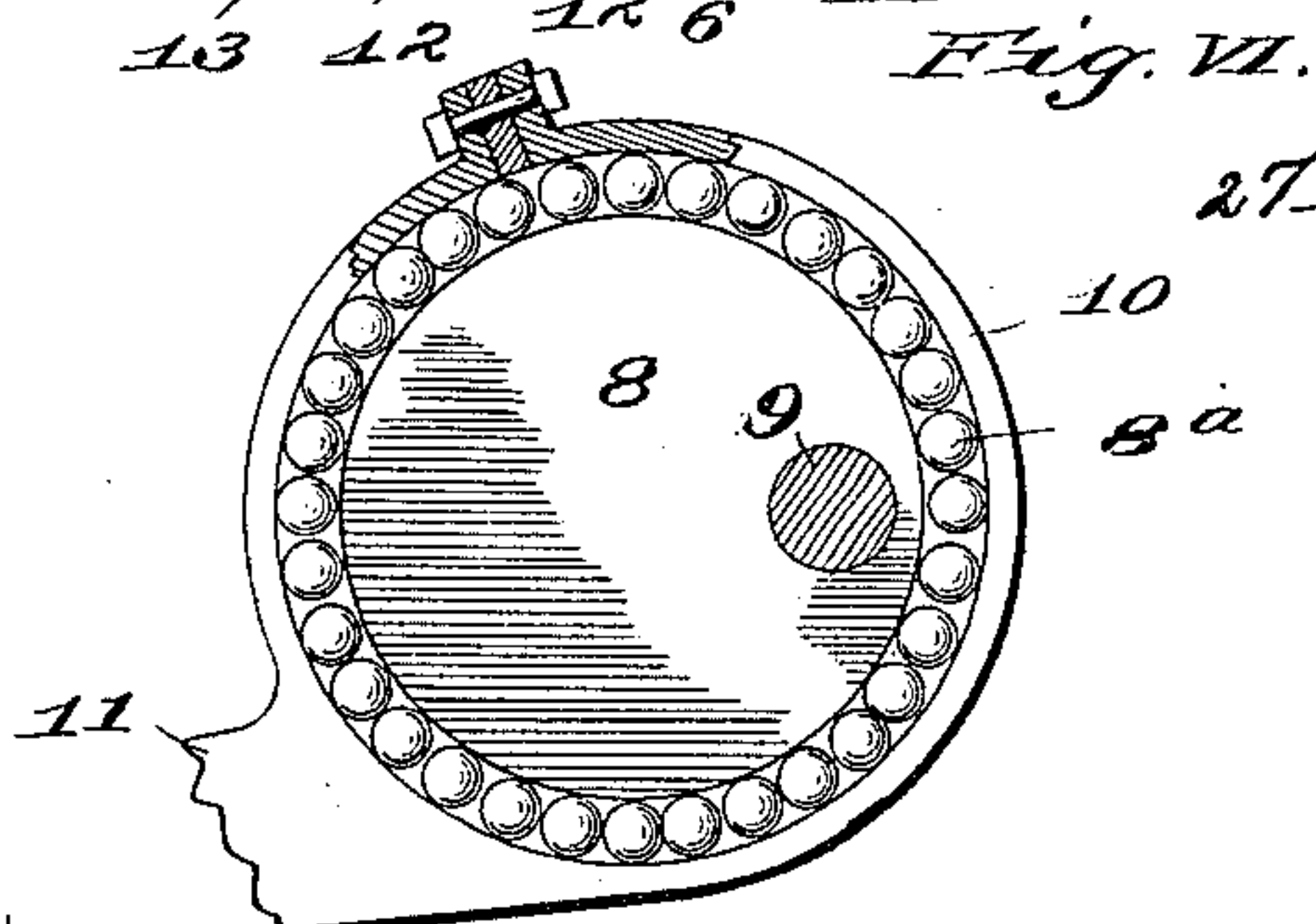
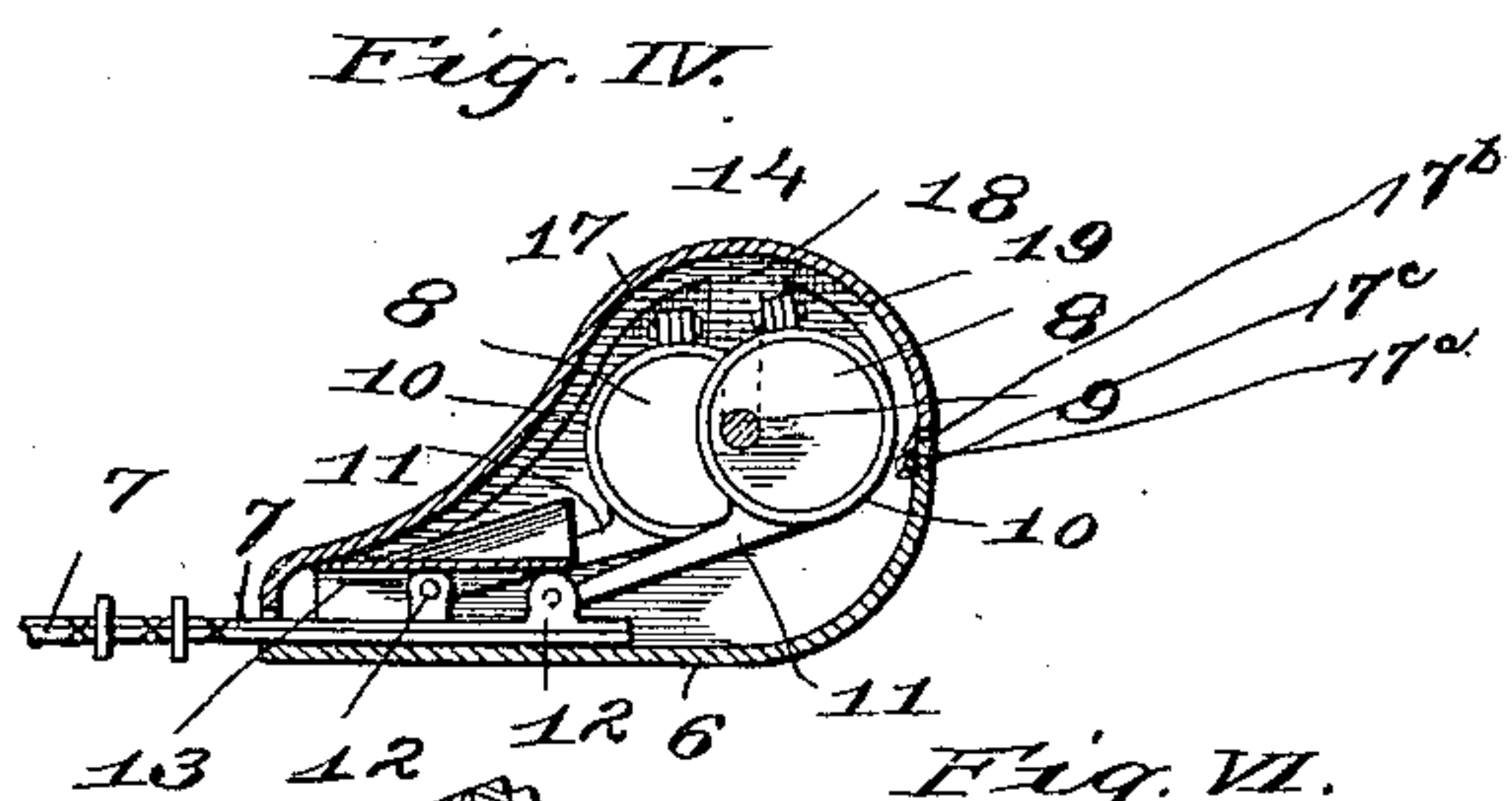
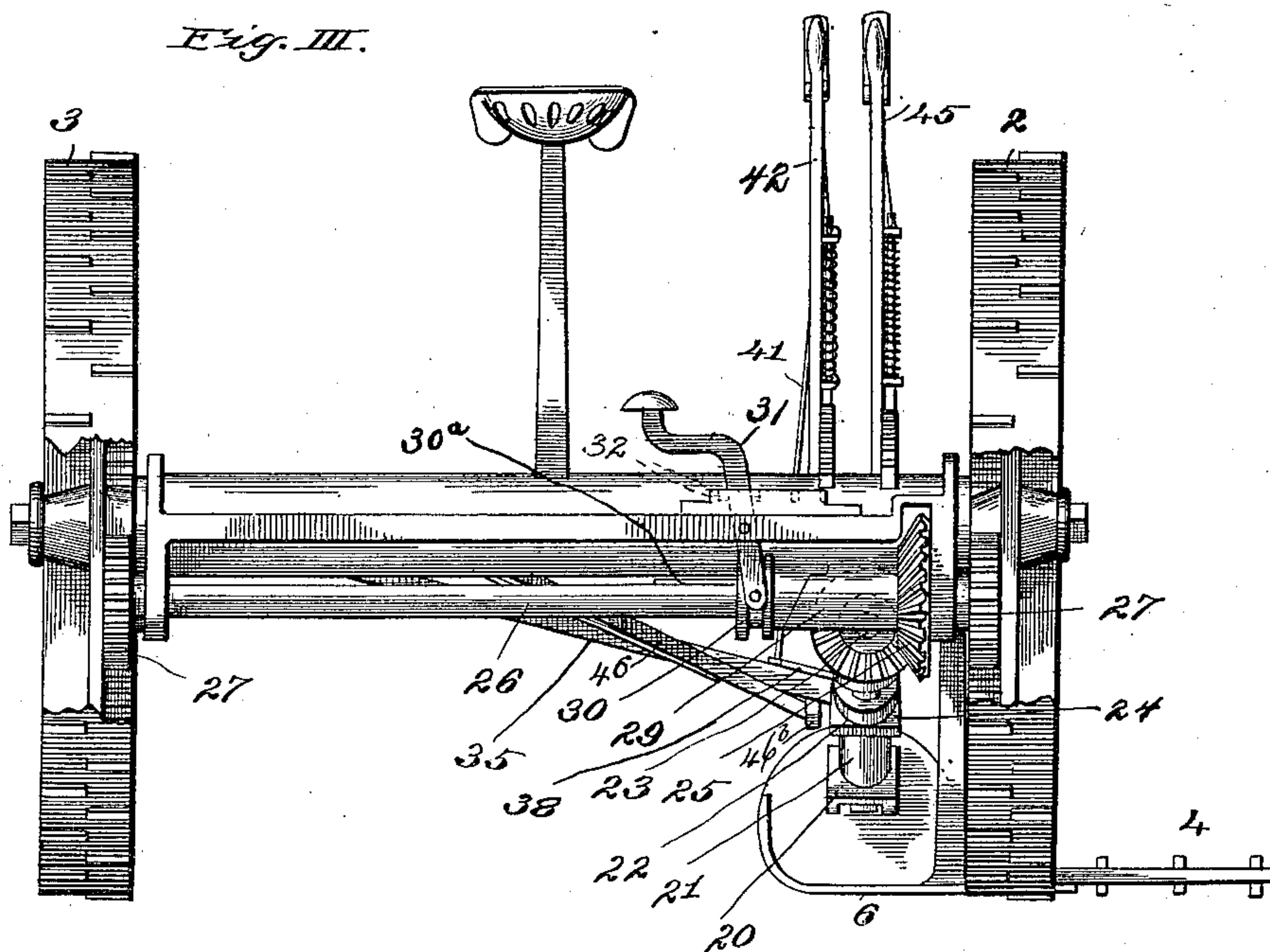
J. F. WELLS.

MOWER.

(Application filed Feb. 24, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses_

G. A. Pauberschnitt,
E. Krivitz

INVENTOR

James F. Wezzs

By Wright Bro

Attorneys

UNITED STATES PATENT OFFICE.

JAMES F. WELLS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO FRANK WELLS,
OF SAME PLACE.

MOWER.

SPECIFICATION forming part of Letters Patent No. 658,805, dated September 18, 1900.

Application filed February 24, 1899. Serial No. 706,750. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. WELLS, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Mowers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in mowing-machines; and it consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a perspective view of my improved machine with one of the ground-wheels removed. Fig. II is a view part in elevation and part in vertical section. Fig. III is a rear elevation. Fig. IV is an enlarged vertical section showing the knife-driving mechanism. Fig. V is a side view of the driving-pinion. Fig. VI is an inside view of one of the knife-driving eccentrics. Fig. VII is a detail view of a brace bar and arm. Fig. VIII is a transverse section of the telescoping shaft.

Referring to the drawings, 1 represents the main frame of the machine, and 2 3 the drive-wheels.

4 is the finger-bar, provided with a divider 5, as usual, at its outer end and a shoe 6 at its inner end. The finger-bar is provided with two knives 7, driven by eccentrics 8 on a shaft 9, the eccentrics being connected to their respective knives by means of straps 10, provided with arms 11, pivoted at 12 to the knives. I prefer to locate antifriction-balls 8^a between the eccentrics and their straps, as shown in Fig. VI. The inner ends of the knives are held down on the shoe 6 by means of a guard 13, secured to the shoe. To protect the driving-eccentrics, the shoe is provided with a hood 14, (see Figs. II and IV,) in which the outer end of the shaft 9 is journaled. The hood consists of side plates 15 and 16 and a removable top piece 17, having an offset 17^a, providing a shoulder 17^b and a lip 17^c. The side 16 is slotted to receive the shaft 9, and the top piece 17 has a projection 18, closing the slot above the shaft. The top piece has vertical flanges 19, fitting within the sides of the hood.

The inner end of the shaft 9 has a knuckle connection 20 with a shaft 21, formed in two parts, one of which telescopes the other. The inner part of the shaft is square or non-circular in cross-section, as well as the socket in the outer part. The other end of the shaft 21 has a knuckle connection 22 with a shaft 23, journaled in a casting or box 24, depending from the frame of the machine. The other end of the shaft 23 has a bevel-gear connection 25 with a shaft 26, supported by the frame of the machine and the ends of which are provided with pinions 27, meshing with internal gears 28, carried by the wheels 2. The pinions 27 are connected to their shaft 26 by means of a head 27^a and spring dogs or pawls 27^b, that engage notches 27^c in the pinions, as shown in Fig. V. The bevel gear-wheel 25 on the shaft 26 is provided with a notched hub 29, loose on the shaft and adapted to be engaged by a sliding clutch 30, as shown in Fig. III, the clutch having a spline connection 30^a with the shaft, so as to be turned therewith, while free to move thereon. The clutch may be moved into and out of engagement with the hub 29, to throw the machine into and out of gear, by means of a foot-lever 31, pivoted to the frame of the machine and which is held in either position to which it is moved by means of projections 32 on the frame and between which the lever is adapted to fit. The lever has sufficient spring to permit of its being forced out of engagement with the projections 32 when it is to be moved.

35 represents an arm or bar having a bifurcated head 36, pivoted to the shoe 6, the other end of the bar having a ball-and-socket connection 37 with the frame 1 of the machine on the far side of the machine from the finger-bar.

38 represents a bell-crank lever pivoted to the bar 35 and one end of which is connected by a rod 39 to a projection 40 on the shoe 6. The other end of the bell-crank lever is connected by a rod 41 to a hand-lever 42, so that by manipulating the hand-lever the outer end of the finger-bar can be raised and lowered. On the head 36 of the bar is a projection 43, connected by a rod 44 to a lever 45, so that by manipulating the lever the cutter-bar can

be rocked to raise or lower the points of the knife-guards.

46 is a bar pivoted by a pin 46^a to the frame 1 of the machine and pivoted to the outer end 5 of the arm 35 by a pin 46^b.

47 is a spring secured by a bolt 47^a to the frame 1 of the machine and bearing upwardly against the bar 46 and acts to hold the shoe of the finger-bar up off the ground.

10 By locating the driving mechanism, that forms the connection between the driving-wheels and the knives, on the finger-bar side of the machine and by employing the knuckle connections 20 and 22 the outer end of the 15 finger-bar can be raised to any elevation without interfering with the driving mechanism or the operation of the knives, while the shoe remains upon the ground. By making the 20 shaft 21 in two parts, one of which telescopes the other, it can be shortened as the shoe is raised and lowered, and by employing the ball-and-socket joint 37 the bar 35 retains its

function as a brace without interfering with the raising and lowering of the shoe 6.

I claim as my invention—

25 A mower comprising drive-wheels, a frame, a driving-shaft journaled in the frame, and with which the drive-wheels are geared, a finger-bar having knives, a shoe at the inner end of the finger-bar, the arm having ball-and- 30 socket connection with the frame and a bifurcated head pivoted to the shoe, a bar pivoted to the outer end of the arm and also pivoted to the frame, a spring secured to the frame, and bearing upwardly against the bar 35 to hold the shoe of the finger-bar off the ground, and the telescoping shaft having knuckle connections and geared with the driving-shaft and with the knives.

JAS. F. WELLS.

In presence of—

E. S. KNIGHT,

G. A. TAUBERSCHMIDT.