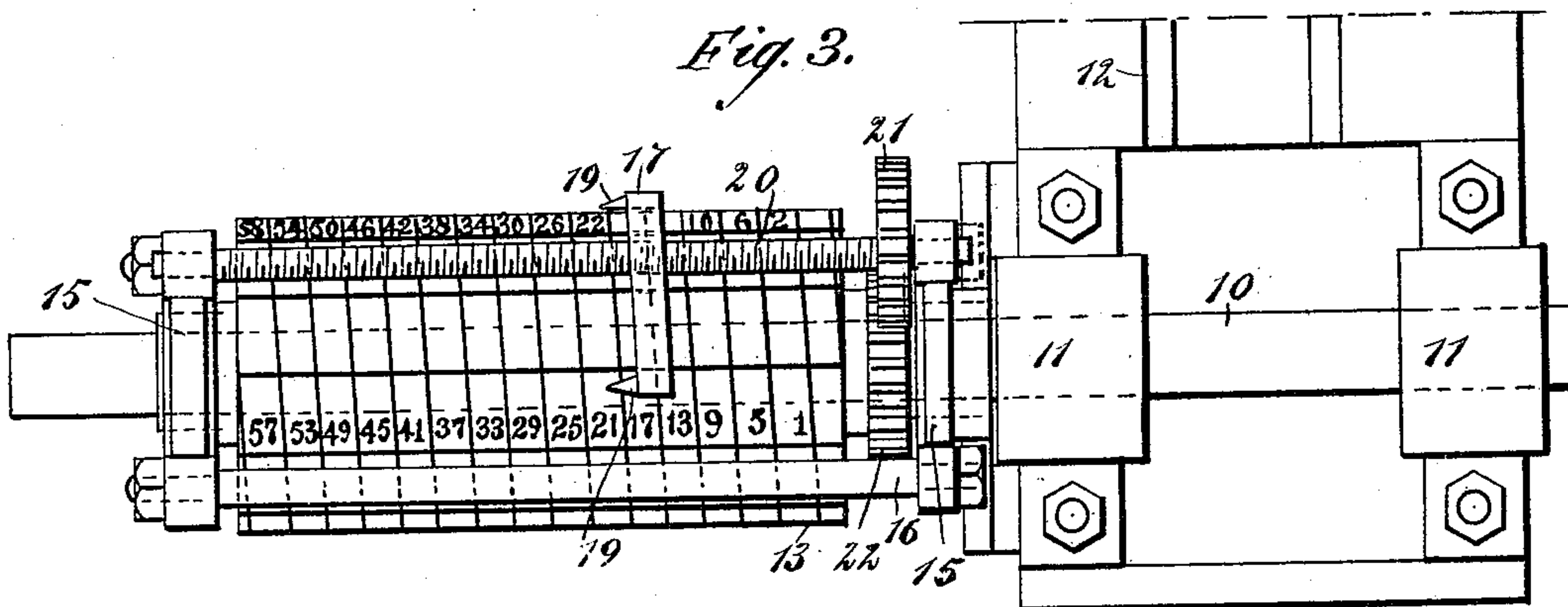
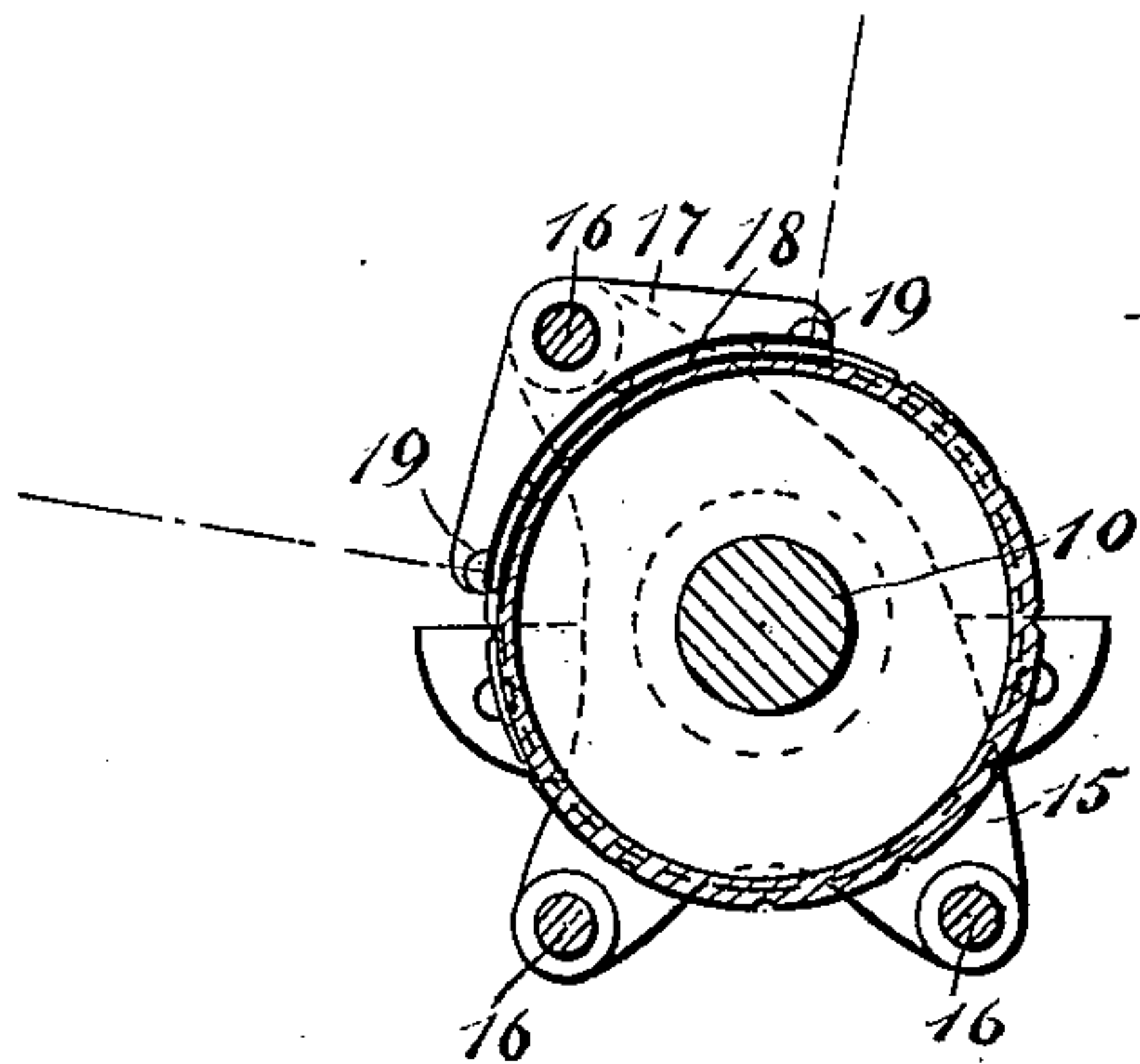
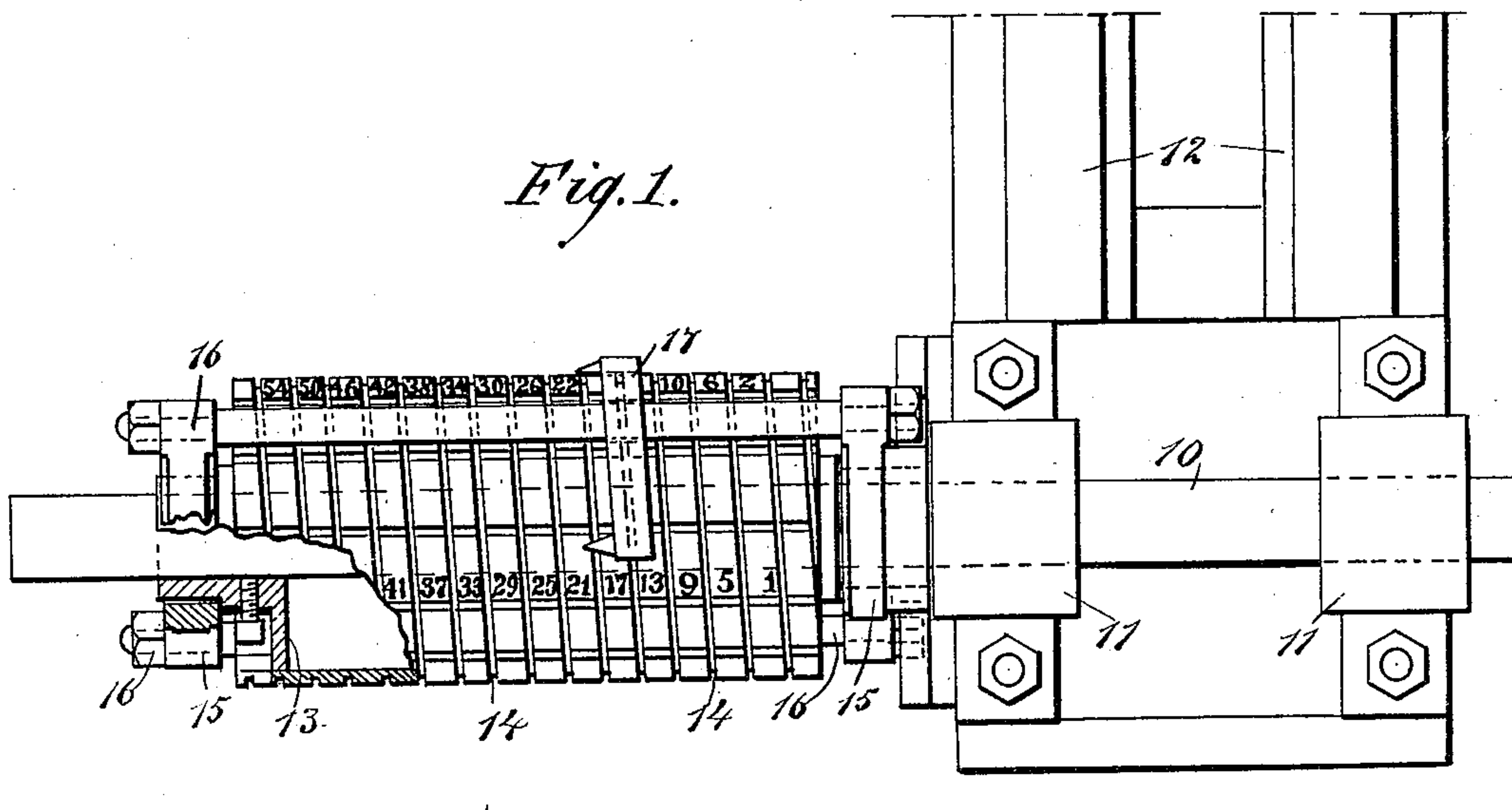


(No Model.)

I. BURLINGAME.
INDICATOR FOR SAWMILL CARRIAGES.

No. 471,943.

Patented Mar. 29, 1892.



WITNESSES:

Donn Twitchell
C. Sedgwick

INVENTOR:

I. Burlingame
BY *Munn & Co*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ISAAC BURLINGAME, OF FREMONT, WASHINGTON.

INDICATOR FOR SAWMILL-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 471,943, dated March 29, 1892.

Application filed May 20, 1891. Serial No. 393,424. (No model.)

To all whom it may concern:

Be it known that I, ISAAC BURLINGAME, of Fremont, in the county of King and State of Washington, have invented a new and Improved Indicator for Sawmill-Carriages, of which the following is a full, clear, and exact description.

My invention relates to improvements in indicators for sawmill-carriages; and the object of my invention is to produce an efficient indicator which may be secured to the set-shaft of a sawmill-carriage, which will clearly indicate the position of the knees of the carriage, and which will magnify any change in the position of the knees, so that said change will be readily discernible to the setter and to the sawyer.

To this end my invention consists in an indicator constructed substantially as hereinafter described and claimed.

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

Figure 1 is a broken plan view, partly in section, showing the indicator attached to the set-shaft. Fig. 2 is a vertical cross-section through the indicator, and Fig. 3 is a broken plan view showing a modification of the device.

The set-shaft 10 is mounted in suitable bearings 11 on the head-blocks 12 of the sawmill-carriage, and is of the usual construction and operates in the ordinary way to adjust the knees of the carriage and bring the log into proper position. A cylinder 13 is secured to the set-shaft at a point where it will be in plain view of the setter and of the sawyer, and extending spirally along the face of the cylinder is a groove 14, and the space between the front of the groove is numbered, as shown in Figs. 1 and 3, the numbers being produced in longitudinal rows and at intervals around the circumference of the cylinder, and the numbers indicate the position of the knees of the carriage.

The set-shafts are usually geared to the knee-operating racks, so that a revolution of the shaft will move the knees a suitable distance, and in this case the cylinder is numbered to correspond with the distance which

the knees will move, and a pointer is used which will clearly indicate this distance. When constructed as shown in the drawings, a quarter-turn of the set-shaft and of the cylinder will move the knees one inch; but it is evident that this scale may be varied according to circumstances. The cylinder revolves in a frame composed of the end pieces 15 and the rods 16, which connect the end pieces, and mounted to slide on the upper of these rods is a block 17, which is shaped on the under side to conform to the shape of the cylinder and which has produced thereon a flange 18, which fits in the groove 14 of the cylinder. It will thus be seen that when the cylinder is revolved the block 17 will be moved back and forth upon the rod 16 by the action of the cylinder groove and according to the direction in which the cylinder is turned.

The ends of the block 17 are arranged upon the sides of the cylinder, so that one end may be clearly seen by the setter and the other by the sawyer, their points of view being indicated by the broken lines in Fig. 2. At each end of the block is a pointer 19, which by its position on the cylinder will indicate the exact position of the carriage-knees. The cylinder is made large enough so that the numbers may be produced in large characters, so that they may be readily discernible, and it will be seen that the least movement of the shaft will move the cylinder sufficiently for the change in position to be indicated on its face. As the numerals are in parallel longitudinal rows one inch apart or a distance representing the same, the two pointers will always indicate a difference of one inch between them, the pointer for the sawyer indicating the exact size, while the setter must allow for an inch more or less than the numeral to which it points, according to the direction in which the set-shaft is turned.

In Fig. 3 I have shown a modified means for moving the block 17, and in this case it is mounted upon a screw-shaft 20, which shaft is held to turn in suitable bearings in the upper portion of the end pieces 15, and the block is threaded to fit the shaft, so that when the shaft is turned the block will be carried along by it. The shaft 20 is provided with a gear-

wheel 21, which meshes with a gear-wheel 22 on the set-shaft 10, and it will be seen that when the set-shaft revolves the block will be moved longitudinally upon the face of the
5 cylinder and will clearly indicate the relative positions of the knees.

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

- 10 1. The combination, with the set-shaft of a sawmill-carriage, of a cylinder secured to the shaft and provided with parallel rows of indicating-numbers upon its face, and a block held to move longitudinally upon the face of

the cylinder, said block having pointers at 15 each end, substantially as described.

2. The combination, with the set-shaft having a cylinder provided with numerals, of a frame inclosing the cylinder and having a screw-threaded rod extending from end to 20 end and geared to the set-shaft, and a pointer having a threaded aperture through which the said rod passes, substantially as set forth.

ISAAC BURLINGAME.

Witnesses:

HENRY A. SWIFT,
C. E. REMSBERG.