

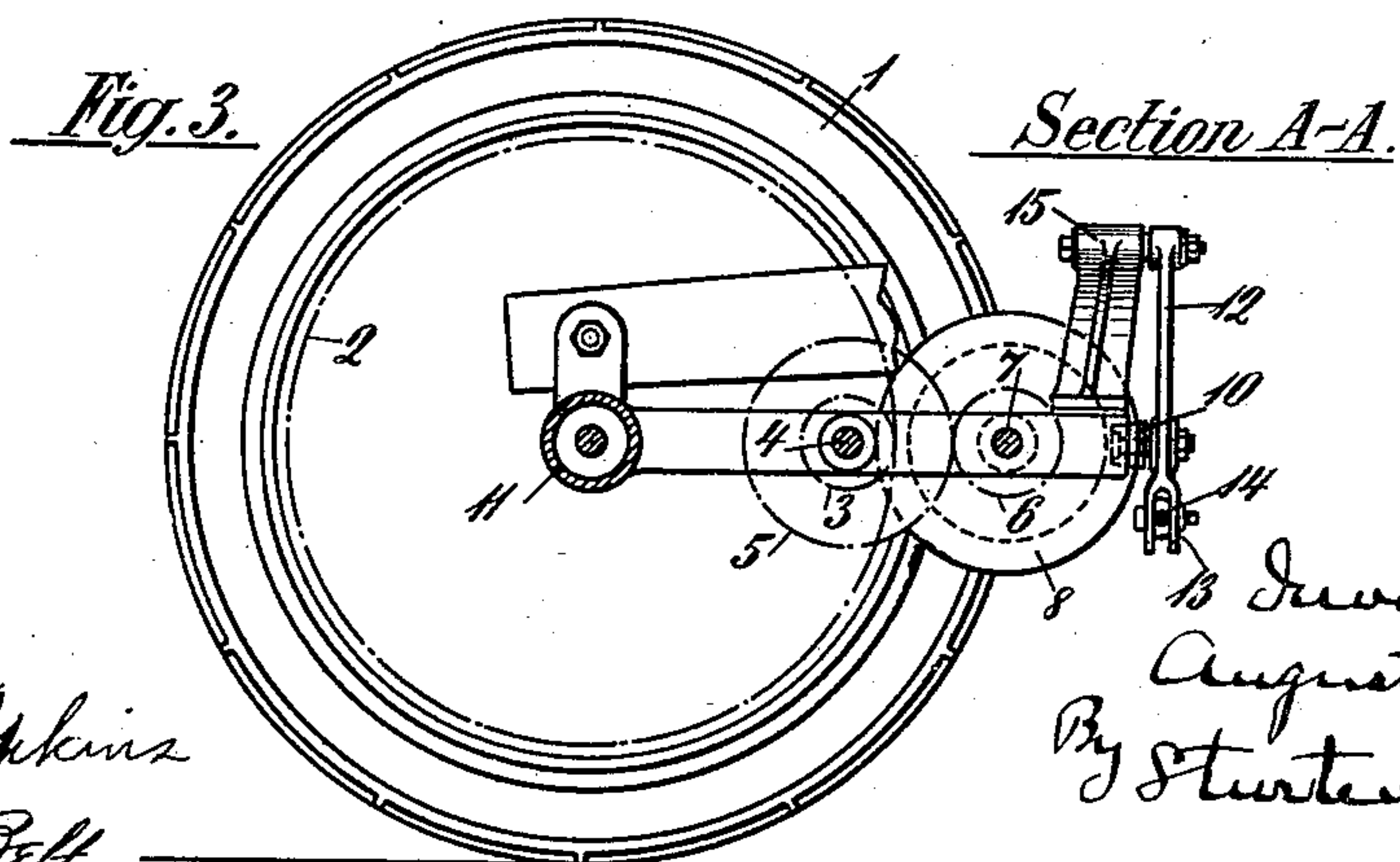
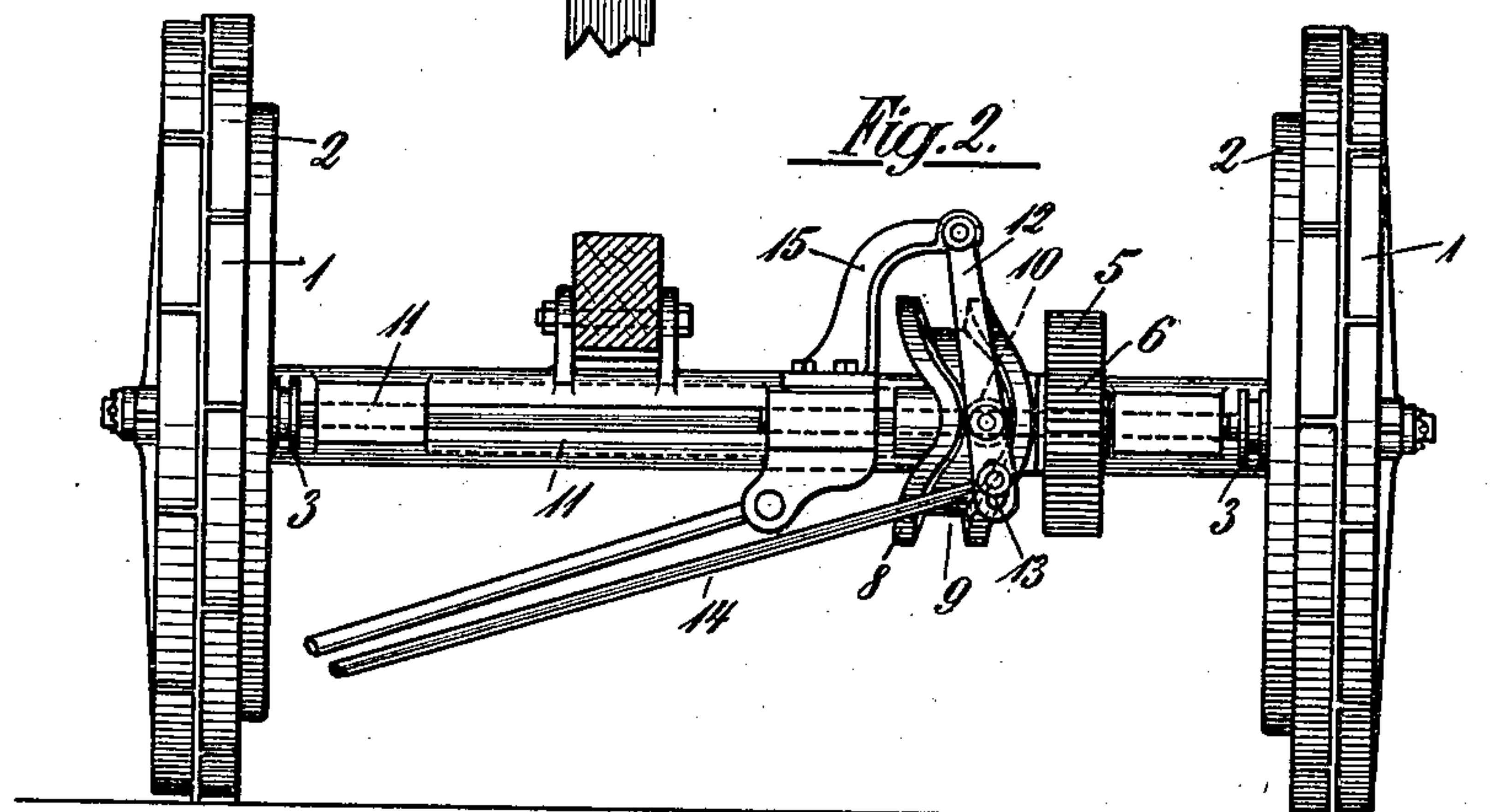
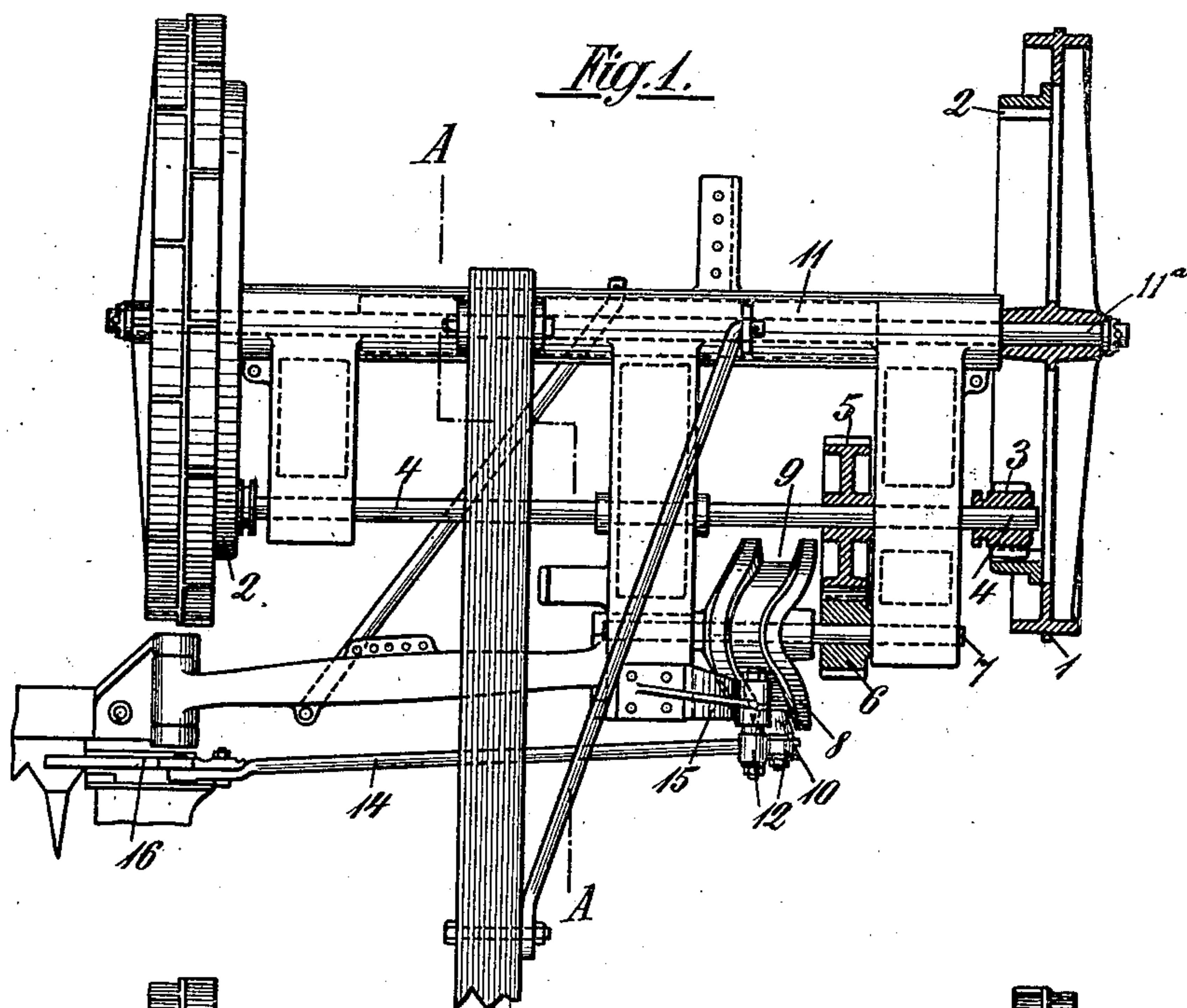
No. 710,289.

Patented Sept. 30, 1902.

A. MAYER.
MOWER.

(Application filed Jan. 2, 1902.)

(No Model.)



Witness
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UNITED STATES PATENT OFFICE.

AUGUST MAYER, OF STUTTGART, GERMANY.

MOWER.

SPECIFICATION forming part of Letters Patent No. 710,289, dated September 30, 1902.

Application filed January 2, 1902. Serial No. 88,204. (No model.)

To all whom it may concern:

Be it known that I, AUGUST MAYER, a citizen of the German Empire, residing at Stuttgart, in the Kingdom of Württemberg, Empire of Germany, have invented certain new and useful Improvements in Mowers, of which the following is a description, reference being had to the accompanying drawings and to the figures of reference marked thereon.

10 The invention relates to mowing-machines, and particularly to the driving mechanism.

The objects of the invention are to provide a driving mechanism which is simple, durable, and not liable to get out of order, and also to provide such a mechanism which will impart a rapid movement of the reciprocating knife as it begins its movement in either direction, to provide a driving mechanism in which only parallel horizontal shafting is employed, all supported in a single horizontal frame. These objects I accomplish by the mechanism illustrated in the accompanying drawings, in which—

25 Figure 1 is a plan view of a mower provided with my improved driving mechanism. Fig. 2 is a front elevation, and Fig. 3 is a sectional side elevation, on line A-A, Fig. 1.

30 The forward shaft 7, carrying the disk 8, having the cam-groove 9, is rotated primarily from the internally-toothed gear-wheels 2, secured to or formed on the ground-wheels 1. These ground-wheels 1 are mounted on the axle 11^a, which in turn is mounted in the frame 11. The gear-wheels 2 mesh into the smaller gears 3 on the ends of a middle shaft 4. Upon the shaft 4 is arranged a gear-wheel 5, engaging into the smaller gear-wheel 6, fixed upon the shaft 7. The groove 9 of the disk 8 in the example illustrated is of such form that at each rotation of the disk 8 the roller 10, guided within the said groove, is moved twice forward and backward. This movement is transmitted to the knife 16 by means of a lever 12, to which the roller is pivoted, said lever 12 being pivoted at its upper end to a bearing-arm 15, extending up from the frame 11 and pivoted at its lower end to the driving-rod 14, which connects it with the knife 16. In order to vary the rapidity of this movement, a slot 13 is arranged within

the lever 12, in which slot the extremity of the driving-rod 14 may be adjustably fixed, and thereby the rapidity of movement of the knives can be changed.

Evidently the groove 9 of the disk 8 can be of such a form that with one rotation of the disk the knife-bar is moved forward and backward three times, or even more.

As can be learned from the drawings, the wheel-axle and driving-shafts for the machines are arranged parallel to one another, so that their bearings can be bored easily upon a lathe, drill-borer, or the like machine without special tools being necessary.

As only spur-wheels are employed for the described actuating mechanism, the work of construction is facilitated. Besides this, a small number of revolutions of the disk-shaft and of the driving-shaft is necessary, the knives with one revolution of the grooved disk, according to the form of the groove, effecting two or more forward and backward movements.

Owing to the small number of revolutions of the shaft the wear of the gearing is reduced to a minimum.

By my construction the machine-frame is so simplified that the machine can be built not only in special workshops, but in ordinary factories, and, furthermore, owing to its simplicity, damages to the machine are not likely to occur.

Having now particularly described and ascertained my invention, I declare that what I claim is—

85 A mowing-machine comprising the horizontal frame 11, the main axle mounted in said frame and provided with the ground-wheels 1, 1, having internally-toothed gears 2, 2, on their inner sides, the shaft 4 mounted in bearings in the frame in front of the axle and provided at its ends with pinions 3, 3, meshing with the gears 2, 2, a short shaft 7, mounted in the frame in front of the shaft 4, gears 5, 6, connecting the shafts 4, 7, the bearings for all three shafts being formed by longitudinal bores through the frame, a disk on shaft 7 having a peripheral cam-groove, an arm 15 extending up from the frame, a laterally-vibrating lever pivoted at its upper end to the 100

arm and having an antifriction-wheel between
its ends working in the said cam-groove, and
a connecting-rod pivotally connected at one
end to the lower end of the vibrating lever
5 and adapted at its opposite end for connection with a knife-bar; substantially as described.

In testimony whereof I affix my signature
in presence of two witnesses.

AUGUST MAYER.

Witnesses:

AUGUST DRAUTZ,
WALTER SCHWAEBSCH.