

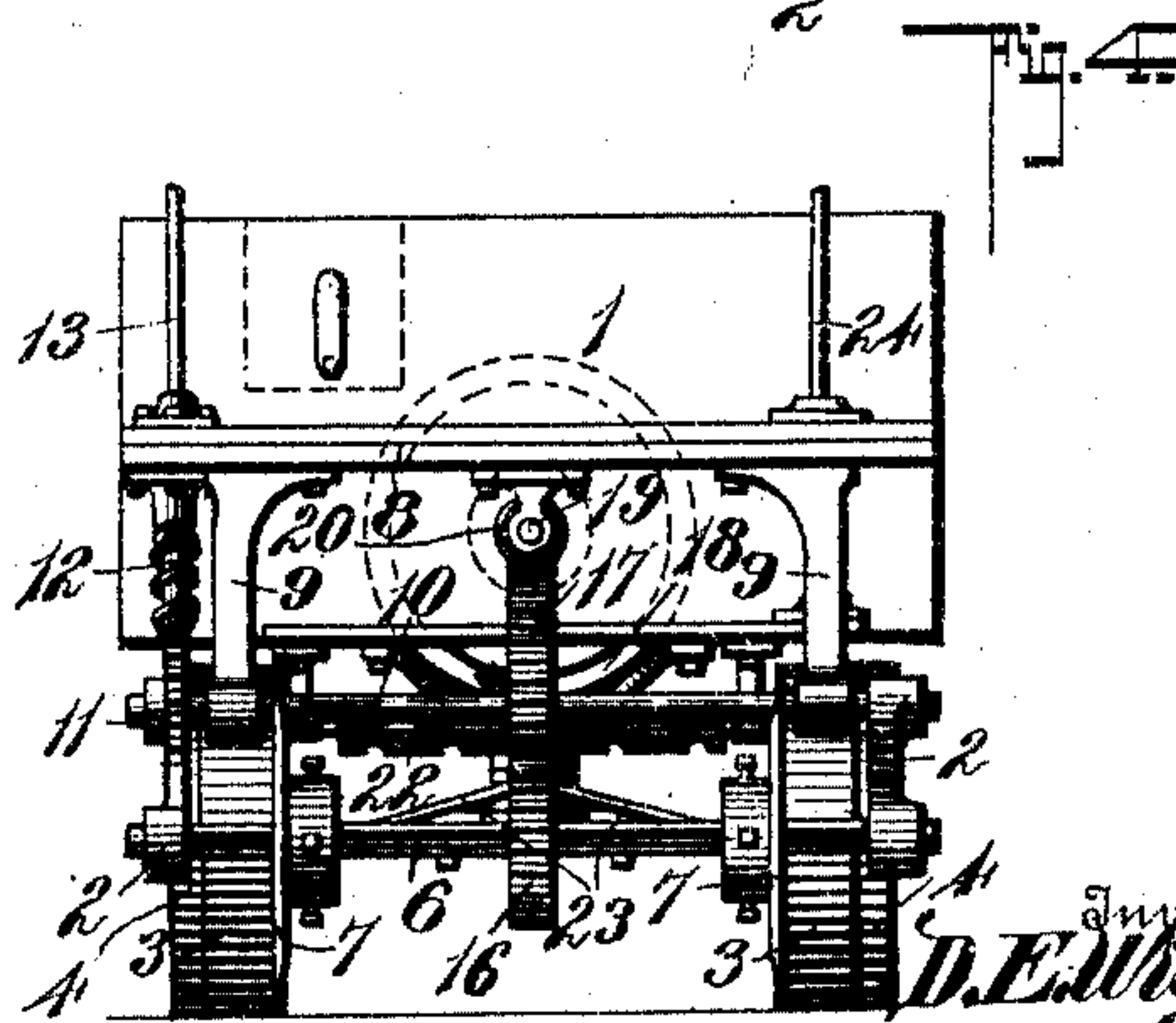
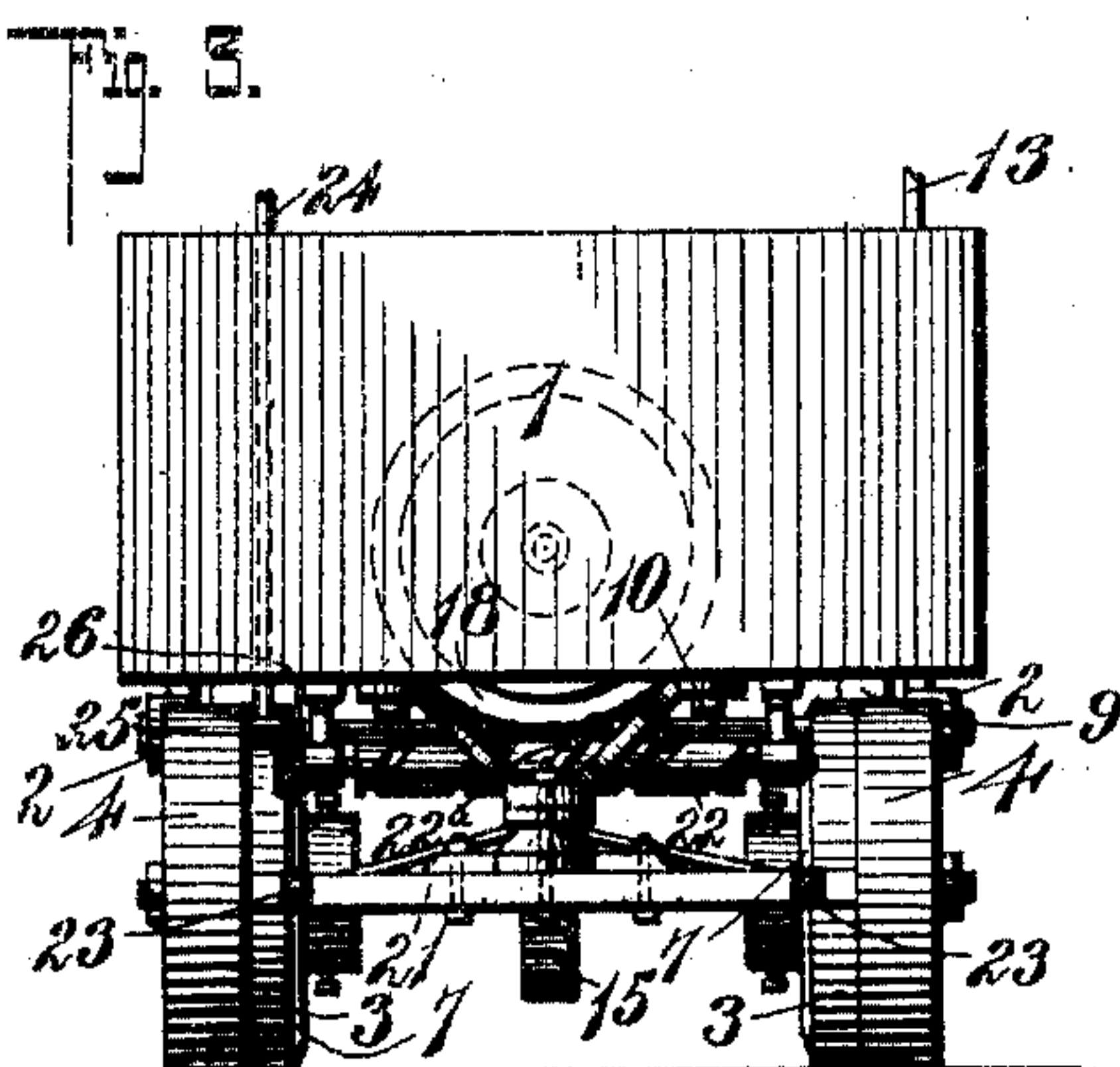
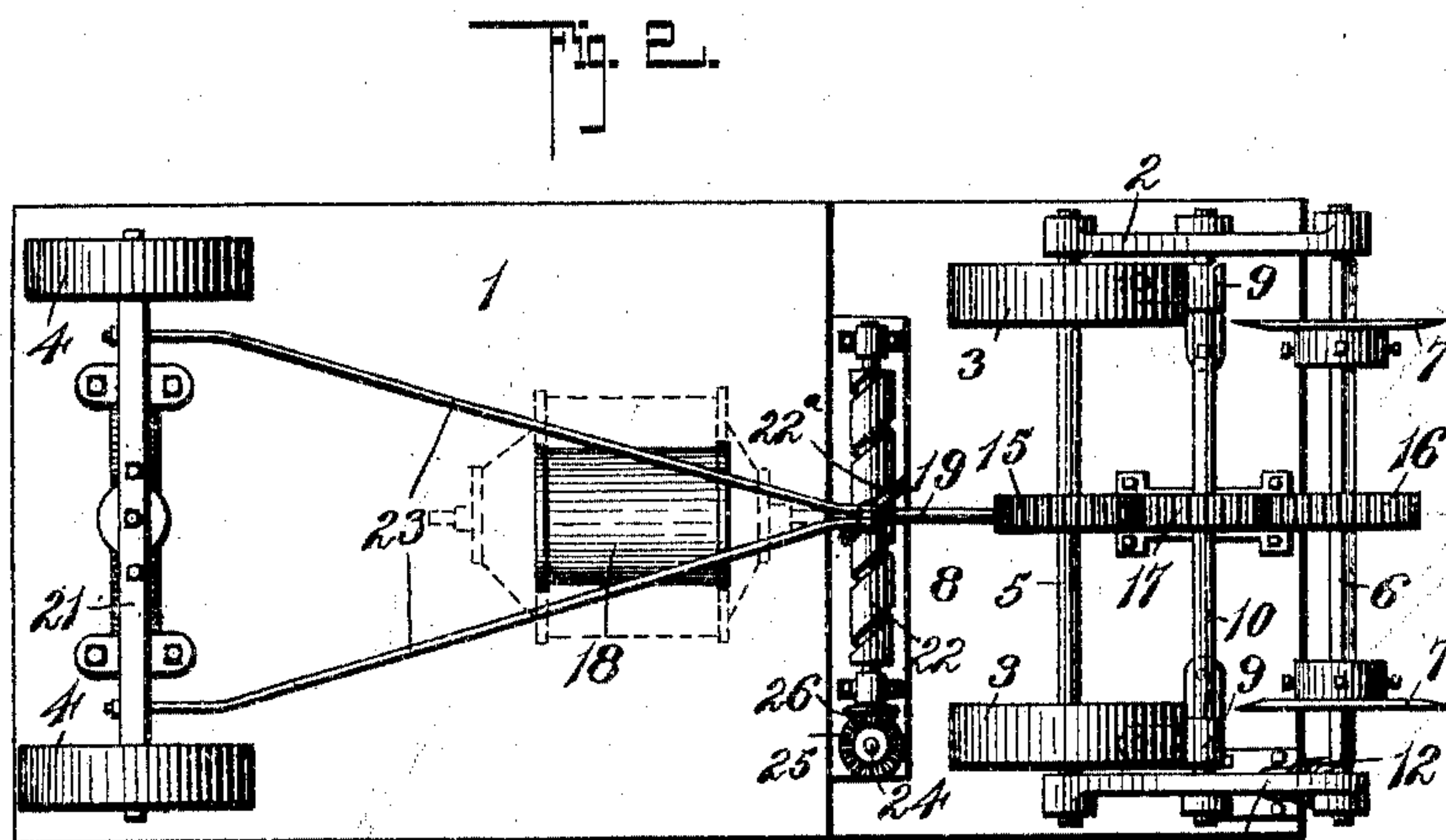
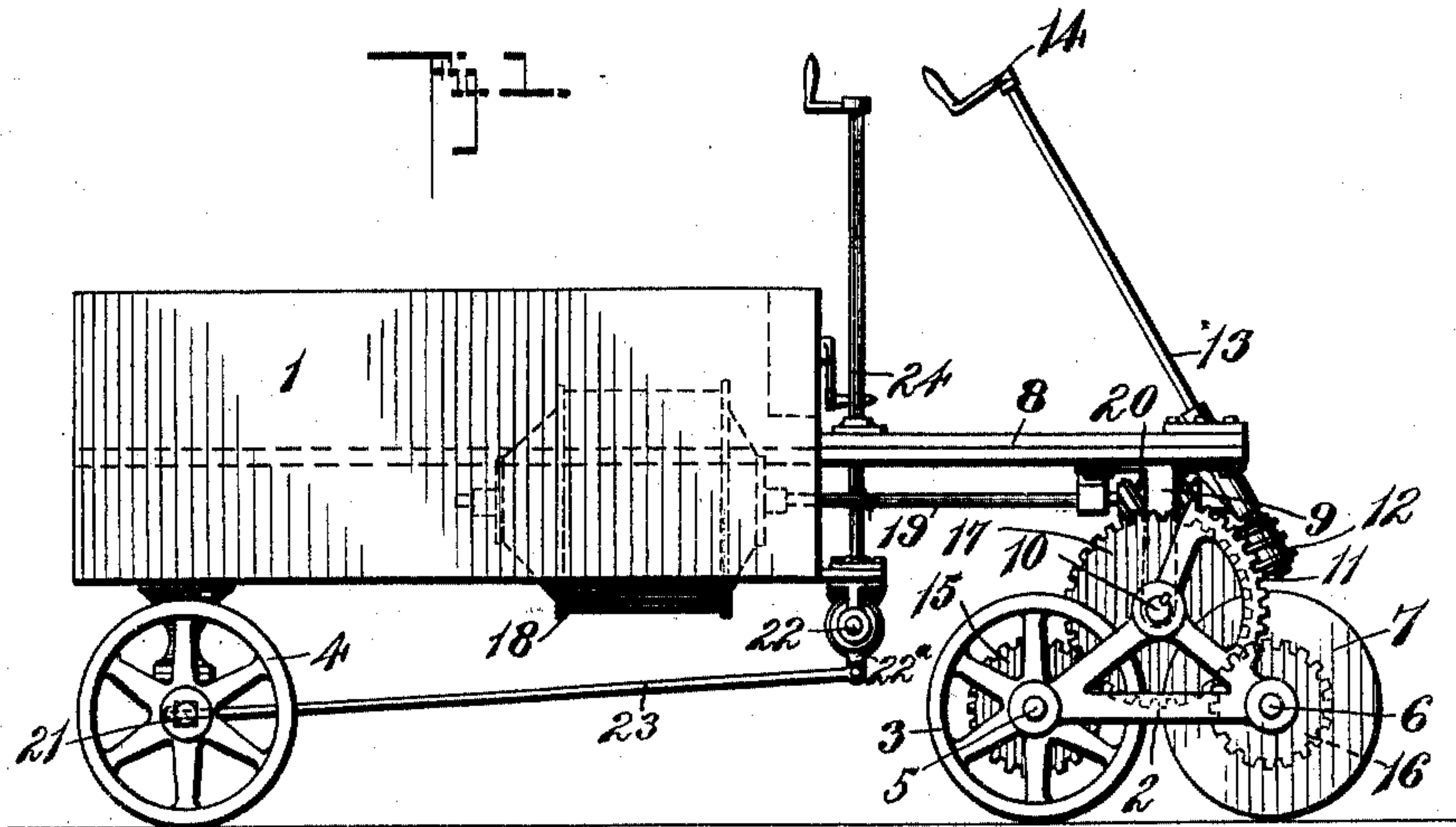
D. E. WISEMAN & F. F. HEDDEN.

PAVEMENT CUTTER.

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928,488.

Patented July 20, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL E. WISEMAN, OF SAN FRANCISCO, CALIFORNIA, AND FRED F. HEDDEN, OF CHICAGO, ILLINOIS.

PAVEMENT-CUTTER.

No. 928,488.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed September 1, 1908. Serial No. 451,239.

To all whom it may concern:

Be it known that we, DANIEL E. WISEMAN, and FRED F. HEDDEN, citizens of the United States, and residents, respectively, of San Francisco, in the county of San Francisco and State of California, and of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pavement-Cutters, of which the following is a specification.

Our invention relates to improvements in pavement cutting mechanisms, in which revolving steel disks driven by suitable power engage the street pavement and cut through the asphalt or bitumen layer in the same manner as steel disks are employed to cut metal tubing.

The object of our invention is to provide a power device, other than manual power, for cutting through the upper layer of street pavements, and preferably to provide a device which is self-propelled, and in which the pressure on the cutting disks and the rate of cutting can be increased or decreased.

A further object of the invention is a device of this kind in which either a forward or rearward movement can be had regardless of the relative position of the drive wheels and cutting disks.

A still further object of the invention is to increase the efficiency of the device by having the cutting disks adjustable with respect to each other, and in imparting to said disks a greater speed than is given the drive wheels.

In the drawings forming a part of this specification:—Figure 1 is a side elevation. Fig. 2 is an inverted plan view. Fig. 3 is a rear end view. Fig. 4 is a front elevation.

The apparatus consists of a body portion 1 mounted on a pilot truck 2 having supporting wheels 3 and rear wheels 4. The wheels 3 are mounted on a shaft 5 and the truck 2 has a shaft 6 on which are mounted slidable cutting disks 7, adjustable along the shaft, and the shaft 6 is in the horizontal plane of shaft 5, normally, and the disks 7 are of the same diameter as the wheels 3.

A platform 8 extends in advance of the body 1 and has depending bearings 9 in which is journaled a rock shaft 10 on which the truck 2 is pivotally mounted. A gear segment 11 is integral with one side member of the truck and meshes with a worm gear

12 carried by the lower end of a shaft 13, the upper end of which carries an operating handle 14. By this means the truck 2 may be tilted so as to lift the supporting wheels 3 and depress the cutting disk, said tilting movement regulating the depth of the cut.

When the parts are in the position shown, the device can be run to or from point of use without cutting into the pavement.

On the shafts 5 and 6 are fixed gear wheels 15 and 16, respectively and on the shaft 10 is mounted a gear wheel 17 which meshes with both gear wheels 15 and 16. The gear wheel 15 is provided with one or more teeth than the gear wheel 16 and the latter, which drives the cutters, rotates faster than the supporting drive wheels 3 and the cutters therefore having a drawing or sliding motion which increases their efficiency as cutters. To drive this mechanism we mount in or on the body portion 1 a suitable motor 18, of any desired type, and a power shaft 19 carries a worm gear 20 which meshes with the gear 17. These gears maintain their relative positions during tilting movement of the truck.

The device is steered by pivoting the rear axle 21, on which the rear wheels 4 are mounted and operatively connecting the axle to a spirally grooved shaft 22, on which a collar 22^a is mounted and connecting the collar to the shaft by arms 23. The shaft 22 is rotated by a steering rod 24 which carries a bevel gear 25 which meshes with a bevel gear 26 carried by the shaft 22. The collar 22^a engages the spiral groove and is moved along the shaft through rotation of the shaft.

What we claim is:—

1. In a pavement cutter, a pivoted truck, means for rocking said truck, supporting wheels journaled in the truck, a shaft carried by the truck, cutting disks on said shaft, and means for rotating the disks at a speed greater than that of the supporting wheels.

2. In a pavement cutter, a platform, a shaft carried thereby, a truck pivotally mounted on the shaft, shafts carried by the truck, supporting wheels on one of the truck shafts, disks on the other shaft, means for rotating said shafts, a gear segment carried by the truck, and a worm gear meshing with said segment.

3. In a pavement cutter, a pivoted wheel-supported cutter carrying truck, a gear seg-

ment carried by the truck, and a worm gear meshing with said segment for tilting said truck.

4. In a pavement cutter, a tiltable truck, 5 supporting wheels for said truck, rotary cutters carried by the truck in advance of the wheels, means for tilting the truck and means for driving the supporting wheels, and the cutters.

10 5. A pavement cutter comprising a platform, a shaft carried below said platform, a truck pivotally suspended from said shaft, shafts carried by said truck, said shafts being below and upon opposite sides of the 15 first mentioned shaft, supporting drive wheels mounted on one of the truck shafts, cutting disks carried by the other shaft, gear wheels fixed to said shafts, the gear wheel on the shaft carrying the supporting wheels 20 being slightly larger than the other gear wheel, a gear wheel on the first mentioned shaft meshing with both of the gear wheels on the truck shafts, a suitable motor, a power shaft driven from said motor, a worm on 25 said motor shaft engaging the last mentioned gear wheel, and means for rocking the truck upon the first mentioned shaft.

6. In a pavement cutter, a body portion,

a pivoted rear axle supporting wheels thereon, a front truck pivotally mounted to swing 30 in a vertical plane, supporting wheels carried by said truck, cutting disks carried by said truck, means for driving said supporting wheels and said cutting disks, means for swinging said truck, a spirally grooved 35 shaft, hand operated means for rotating said shaft, a collar engaging the groove of said shaft, and rods connecting said collar and the rear axle, as and for the purpose set forth. 40

7. A pavement cutter comprising rotatable disks, a pivoted truck supporting said disks, the truck being pivoted to swing vertically, supporting wheels carried by said truck and in the rear of the cutters, common 45 means for driving the disks and the supporting wheels, and means for rocking the said truck upon its pivotal point for the purpose of raising or depressing the cutting disks.

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Witnesses:

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