

No. 619,767.

Patented Feb. 21, 1899.

O. H. LEWIS.
HEDGE PULLER AND STUMP EXTRACTOR.

(Application filed Sept. 29, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

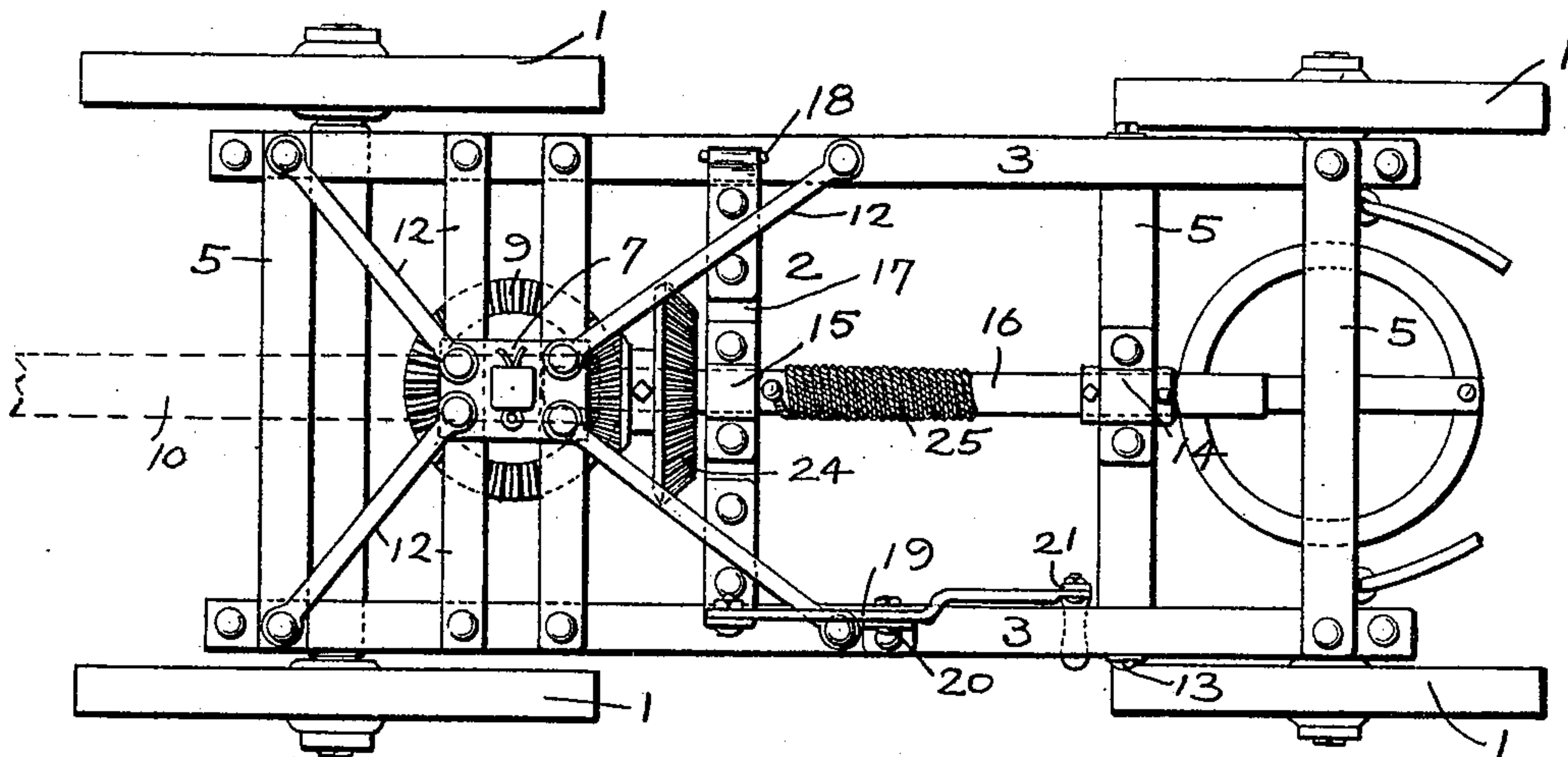
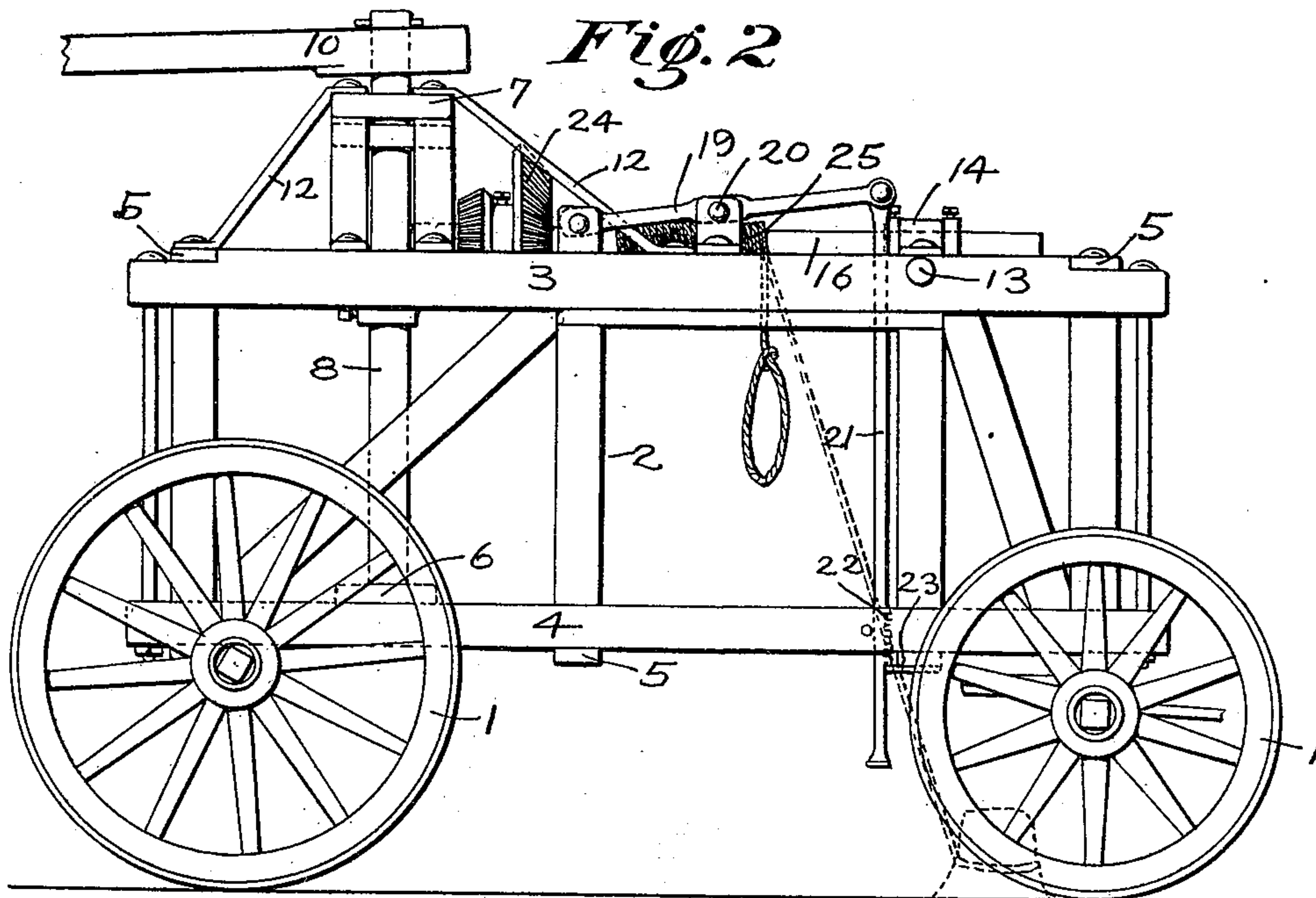


Fig. 2



Witnesses:-

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Inventor:-

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By his Atty. Eugene W. Johnson.

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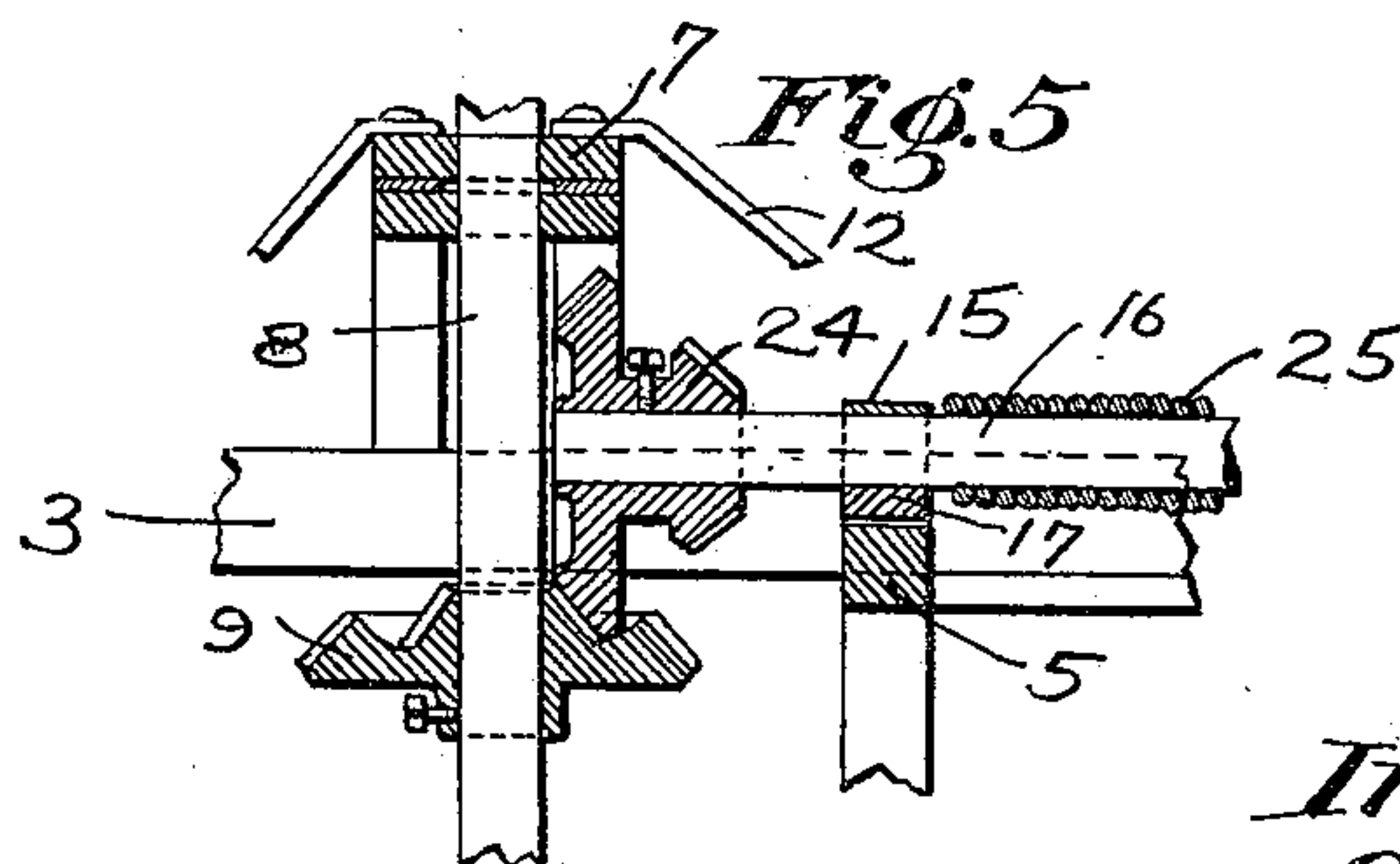
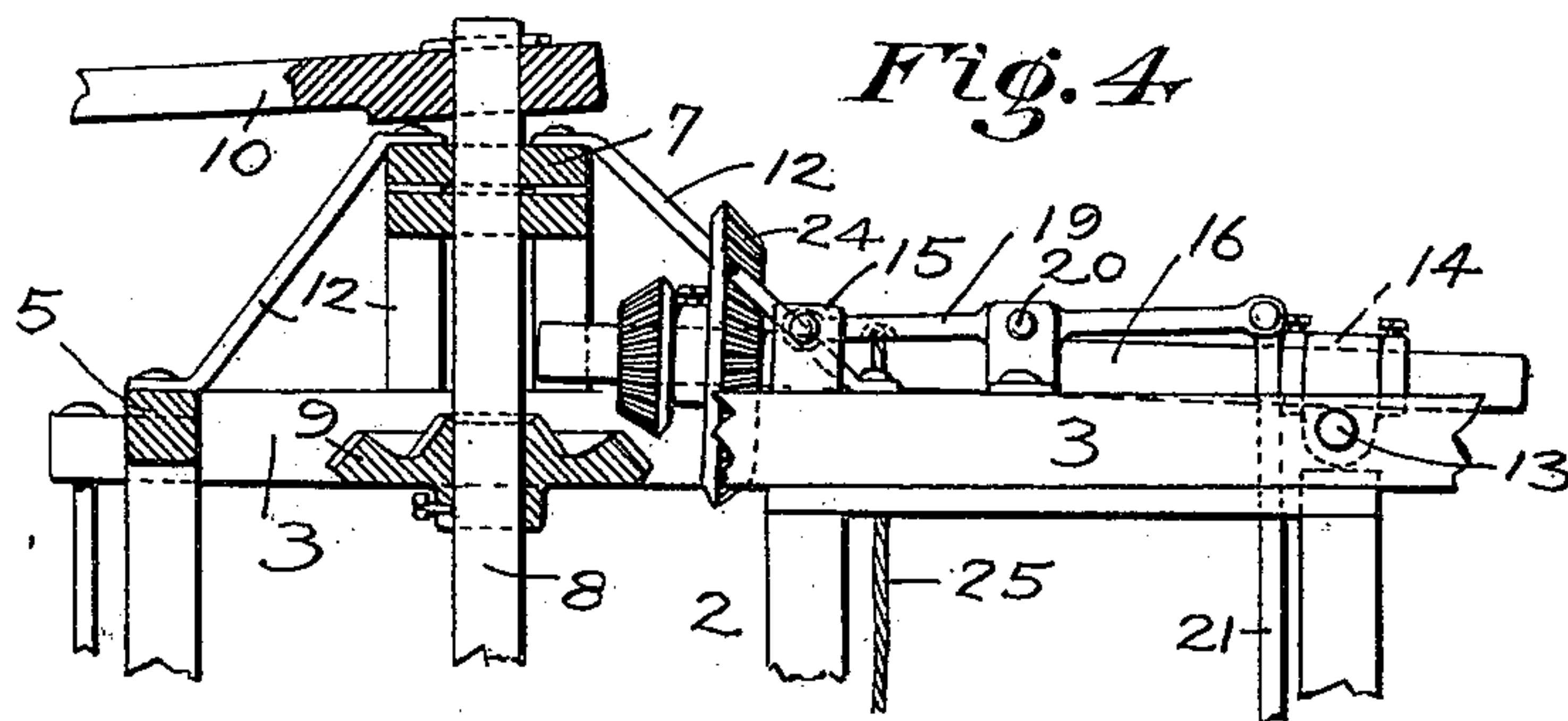
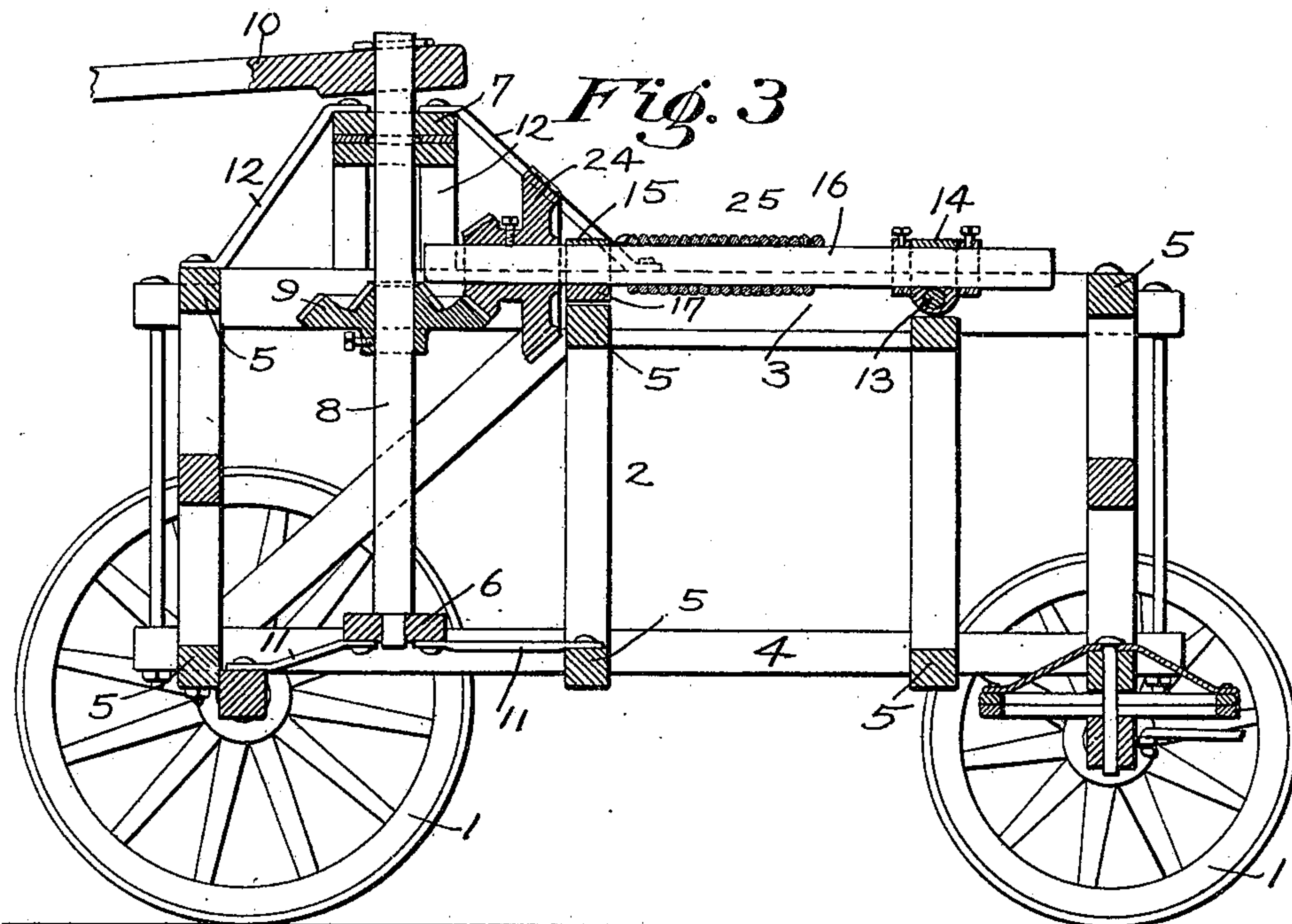
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UNITED STATES PATENT OFFICE.

OVESTON H. LEWIS, OF RICHARDS, MISSOURI.

HEDGE-PULLER OR STUMP-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 619,767, dated February 21, 1899.

Application filed September 29, 1898. Serial No. 692,223. (No model.)

To all whom it may concern:

Be it known that I, OVESTON H. LEWIS, a citizen of the United States, residing at Richards, in the county of Vernon and State of Missouri, have invented new and useful Improvements in Hedge-Pullers or Stump-Extractors, of which the following as a specification.

This invention relates to hedge-pullers of that class comprising a frame mounted upon supporting-wheels to render the machine portable; and the object of the invention is to simplify machines of this character whereby the operation of extracting hedges can be performed in a minimum time and with a minimum power.

The invention further consists in the parts shown in the drawings, described in the specification, and more particularly pointed out in the claims.

In the drawings, Figure 1 illustrates a plan view of a hedge-puller constructed and arranged in accordance with my invention. Fig. 2 is a side view of the same. Fig. 3 is a longitudinal vertical sectional view of the same. Fig. 4 is a detailed view, partly in side elevation and partly in section, illustrating the parts of the machine when in an operative position. Fig. 5 is a sectional detailed view in further illustration of the invention.

In carrying out my invention I mount upon suitable supporting-wheels 1 a frame 2, which frame comprises upper and lower longitudinal side sills 3 and 4, respectively, and cross-braces 5, which forms a frame the upper part of which is elevated to some height above the axles of the machine.

Journalled in bearings 6 and 7, carried by the frame, is an upright shaft 8, upon which is secured a double bevel gear-wheel 9 and which carries at its upper end an arm 10, which extends to some length beyond the shaft 8, to which draft-animals are secured, by which means shaft 8 is revolved. The bearings 6 and 7 are carried and supported by suitable brace-rods 11 and 12, respectively, carried by the frame. The object of these brace-rods is to prevent movement of the bearings, and consequently of the shaft 8, due to the pressure exerted thereon by the arm 10 when the machine is in operation.

Extending across the frame and secured in

the upper side sills is a rod 13, upon which is pivotally secured at a point midway its length a bearing 14, and in said bearing and in a bearing 15 is journaled a shaft 16. Bearing 15 is carried by a rod 17, pivotally secured to one side of the upper sill of the frame 18, the opposite end being carried by the rear end of a lever 19, pivotally secured to the frame at 20. The opposite end of the lever 19 carries a rod 21, having engaging devices 22, adapted to engage with a projection 23, carried by the frame, to adjust the arm 19, and consequently the bearing 15 and the rear end of the shaft 16, in any desired position vertically.

Carried by the rear end of the shaft 16 is a double beveled gear-wheel 24, which is removably secured to said shaft and adapted to engage with the bevel gear-wheel 9, carried by the shaft 8, whereby the revolution of the shaft 8 is transmitted to the shaft 16.

Secured at one end and wound around the shaft 16 is a rope or cable 25, which is adapted to be secured at its free end to the hedge or stump and as the shaft 16 is revolved to be wound around said shaft, and consequently to pull and extract the hedge or stump.

By means of the arrangement of the gear-wheels the speed, and consequently the degree of power transmitted to the shaft 16, can be varied—as, for instance, when the gear-wheels are arranged as shown in Fig. 3 I provide for a maximum degree of speed of revolution of the shaft 16 and a minimum degree of power transmitted thereto; but when the gear-wheels are arranged as shown in Fig. 5 I provide for a minimum degree of speed and a maximum degree of power transmitted to the shaft 16.

By the manipulation of the rod 21 the teeth of the gear-wheels are brought into engagement when desired or out of engagement, when the shaft 16 may be revolved by a pull upon the free end of the rope or cable, which is necessary in adjusting the same after the operation of extracting a portion of the hedge or stump and to adjust the rope or cable to the adjacent portion of the hedge or stump.

The drum or shaft upon which the rope or cable is wound being located at some height above the ground provides a means whereby the machine may be drawn forward, and it is only necessary after a stump or stumps have

been extracted to engage the rope or cable around the adjacent stump or stumps, the rope or cable being inclined, as shown by the dotted lines, Fig. 2, when a pull exerted upon the rope or cable will automatically draw the machine forward until the rope or cable assumes a vertical position.

It will thus be seen that I have provided a machine for the purpose specified which is of few parts, and consequently is of great strength, in which the machine may be regulated to suit the different kinds of soil in which the hedge may be located and upon which the machine is to be operated, and which, due to the arrangement of shafts, gear-wheels, and arm 10, only requires a minimum amount of exertion and movement upon the part of the team to extract a stump or stumps, as by the arrangement shown in Fig. 1 a one-half revolution of the shaft 8 will extract or raise a stump or several stumps a distance of three feet.

What I claim is—

1. A hedge-puller comprising a frame mounted upon supporting-wheels, a vertically-arranged shaft journaled in bearings carried by the frame, a horizontal shaft arranged at right angles thereto, a duplex gear-

wheel secured upon each shaft, the gear-wheels on each shaft being of different sizes, an arm secured upon the vertical shaft, and a rope or cable secured to and wound around the horizontal shaft, substantially as described.

2. A hedge-puller comprising a frame mounted upon supporting-wheels, a vertically-arranged shaft journaled in bearings carried by the frame, a horizontal shaft arranged at right angles thereto, a duplex gear-wheel secured upon each shaft, the gear-wheels on each shaft being of different sizes, an arm secured upon the vertical shaft, a rope or cable secured to and wound around the horizontal shaft, and means for adjusting one end of the horizontal shaft vertically to engage or disengage the teeth of the gear-wheels with or from each other, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OVESTON II. LEWIS.

Witnesses:

M. A. RINEHART,
O. L. FOUTS.