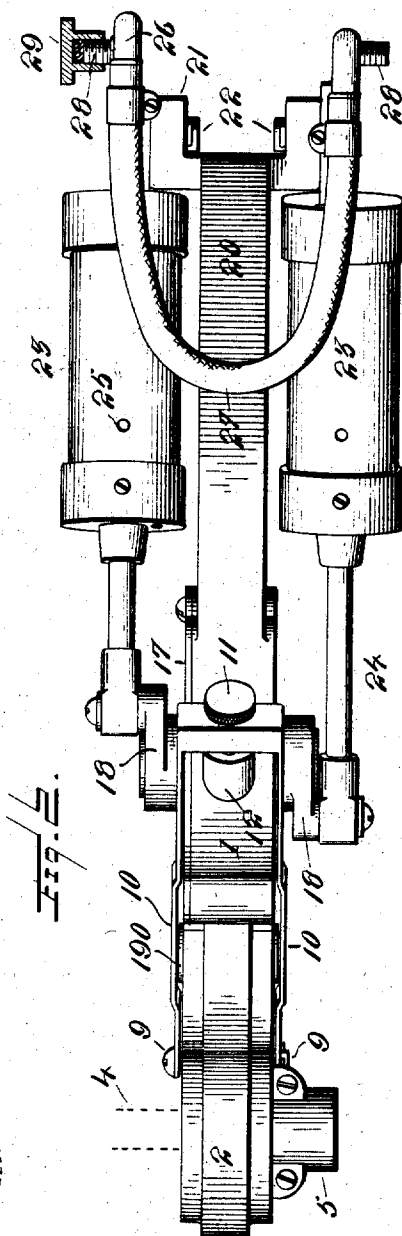
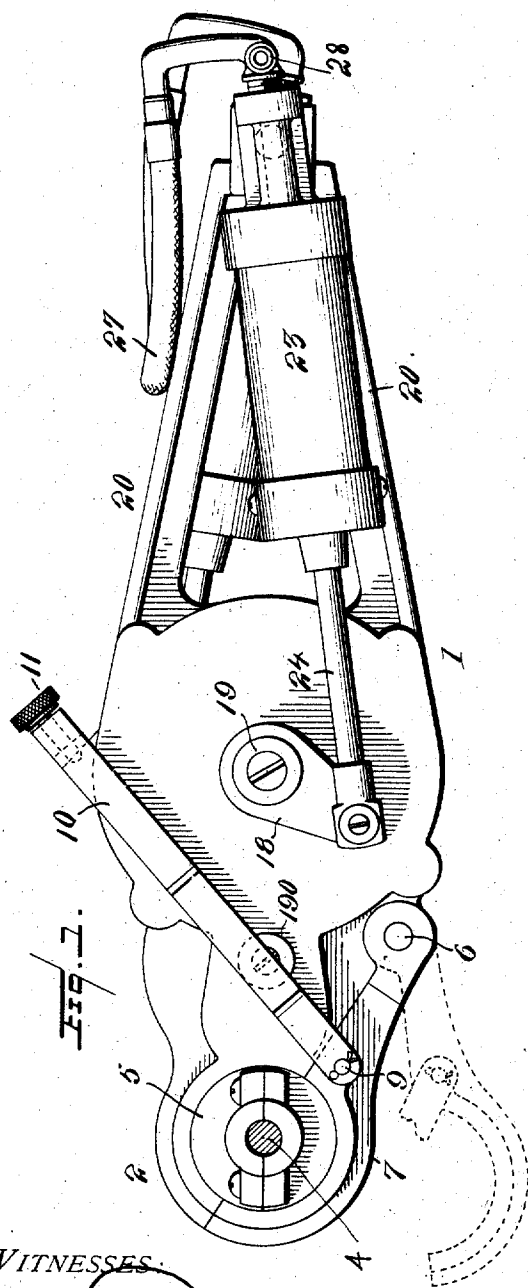


954,864.

G. W. KELLOGG.
DETACHABLE PUMP.
APPLICATION FILED APR. 30, 1909.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

H. F. Roy Co.
C. M. Catlin

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Benj. R. Catlin

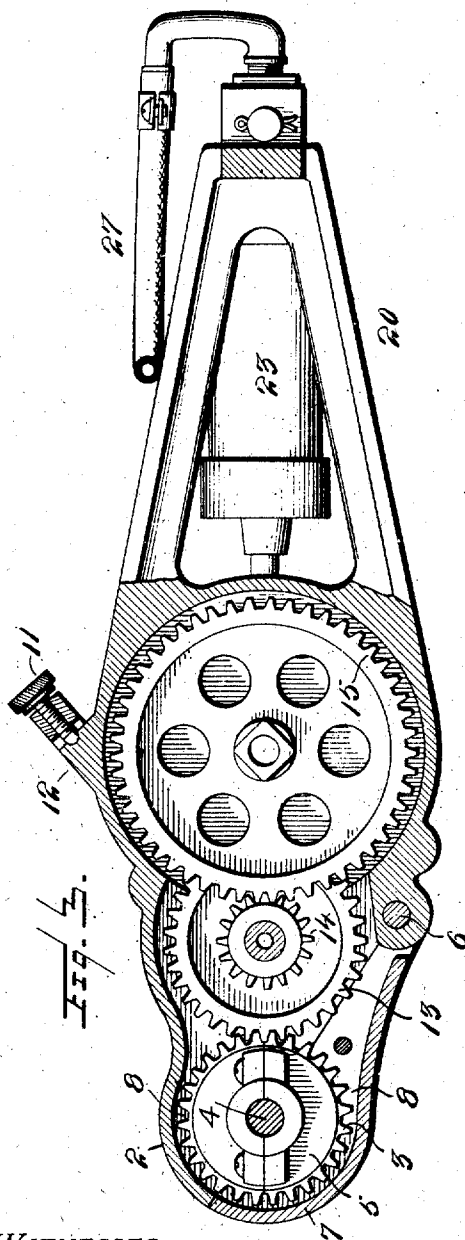
Attorney

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2 SHEETS—SHEET 2.

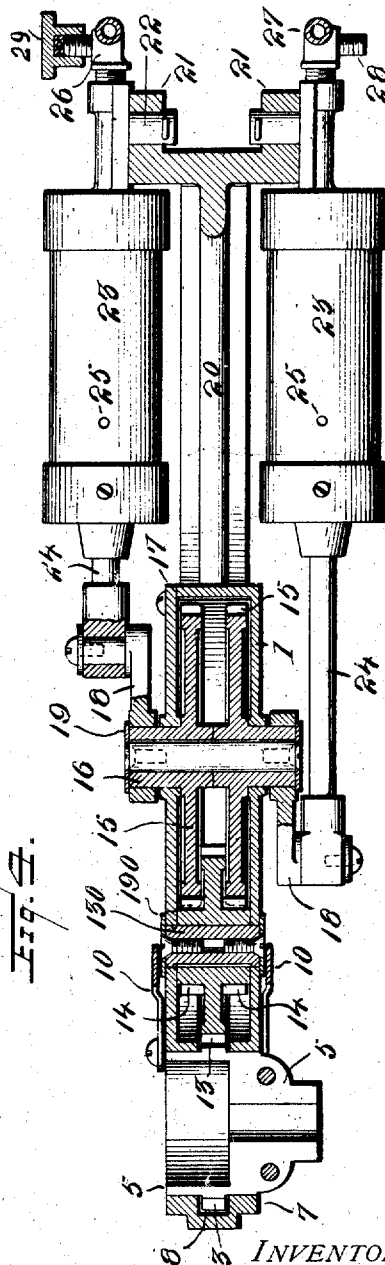
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WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. KELLOGG, OF ROCHESTER, NEW YORK.

DETACHABLE PUMP.

954,864.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed April 30, 1909. Serial No. 493,102.

To all whom it may concern:

Be it known that I, GEORGE W. KELLOGG, a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Detachable Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to power driven pumps, and particularly to pumps designed for inflating pneumatic tires, but adapted also for other uses.

The object of the invention is to provide simple and efficient means whereby a pump with its gearing, and suitable for such use, may be readily secured temporarily and at will to an exterior driving pinion secured to a suitable power driven shaft in convenient situation for connecting the pump thereto and disconnecting it therefrom.

The invention consists in the construction hereinafter described and particularly pointed out.

In the accompanying drawing which illustrates the invention and forms part of the specification,—Figures 1 and 2 are respectively an elevation and an end view of the device; Figs. 3 and 4 are respectively central vertical and horizontal sections of the device.

Numeral 1 denotes the main body of the device. The body casting comprises a hollow central part adapted to contain and house the gear wheels constituting the driving mechanism of the pump, and an extension part 2 adapted to fit over a pinion 3, the latter not forming a permanent part of the pump, but being secured to any suitable driven shaft 4, which may be, for example, an engine or motor driven shaft on an automobile. Pinion 3 is preferably made in two parts, with securing means for easily connecting the pinion to its shaft. The hub 5 of this pinion is large, and projects on both sides of the gear teeth, as shown most clearly in Fig. 4, which shows the lower half of the pinion and hub. Part 2 of the body is adapted to fit over pinion 3, and to partly encircle hub 5 on both sides of the circle of teeth.

Pivoted to body 1 at 6 is a strong movable jaw also adapted to fit over and partly surround the pinion 3 and its hub. Both part 2 and jaw 7 have a groove 8 loosely receiving

the toothed portion of pinion 3, and in which the latter can turn.

Pivotally secured to jaw 7 at 9 on both sides is a U-shape jaw-locking device 10, which carries at its outer end a fastening screw or device 11, which when the jaw is locked, adjustably engages a lug or part 12 of body 1 to hold the locking device 10 in place, and hence to securely lock the jaw, and to hold pinion 3 rotatably between extension 2 and jaw 7. Owing to the size and arrangement of the pinion hub, and to the manner in which the hub and its pinion are encircled by the extension and jaw, the first wheel 13 of the pump gearing and pinion 3 will be effectively held in engaging relation. The hub of wheel 13 on shaft 130, and held in place by screw-held plates 190 on both sides of the wheel, has smaller pinions 14, each of which meshes with a larger wheel 15, the latter having hubs 16 with bearings respectively in body 1, and in a removable cover plate 17 secured to and forming a part of the body. The outer ends of said hubs are angular and to them are secured opposite cranks 18, as by screw-held plates 19.

The body 1 is also provided with a rigid frame extension 20, having bearings 21 each adapted to support the pivot 22 of an oscillating pump cylinder 23, the piston rods 24 of which are connected to the cranks. Air inlets are shown at 25 in position to permit the pistons to pass outside of or beyond them on the back stroke. Each cylinder has an air outlet nipple or device 26, and both are preferably permanently connected by a rubber or other yielding, air tight tube 27. The tube 27 is of considerable length and so arranged that the continued opposite reciprocations of the cylinders, and the parts to which tube 27 is connected will not strain or impair this connection between the cylinder outlets. Each part 26 has a threaded end 28, to either of which a hose may be connected for conducting air from both cylinders to a tire or the like. The hose will be connected to one part 28 or the other according to convenience, for example, it may depend on which side of an automobile the pinion 3 is secured. Obviously the outlet 28 opposite to the one to which the hose is connected should be closed, when only one hose is used, as by a packed cap 29. Obviously a hose might be connected to each part 28, either with or without the connection 27.

The gearing illustrated reduces the speed

between pinion 3 and wheels 15 so as not to operate the pumps with too great rapidity. The construction is such that the gearing of the pump is entirely inclosed whereby it is protected, and is safe for users. Wheel 13 though inclosed extends to the vicinity of an opening in line with grooves 8 of parts 2 and 7, as seen in Fig. 4. The driven pinion 3, that is, the toothed part thereof, is when the pump is attached thereto, also inclosed and hidden.

The pump can be attached to pinion 3, or detached therefrom in a moment, and in such efficient manner that the pinion, and wheel 13 are held in cooperating relation as though they were both (and not wheel 13 only) permanent parts of the pump mechanism.

The invention is not confined to all the details of construction set forth as they may be varied within the principle of the invention.

Having thus described the invention what I claim is,—

1. In a device of the character described, a supporting body, a pump comprising operating gearing carried by said body, said body having an extension, a movable pivoted part cooperating with the extension, said extension and said movable part being adapted to rotatably hold the pump gearing in cooperating relation with an exterior driving pinion.

2. In a device of the character described, a supporting hollow body, a pump comprising operating gearing carried in said hollow body, and means for temporarily attaching an exterior pinion to, and detaching the same from such inclosed pump gearing, said means comprising a movable jaw and an adjustable locking device.

3. In a device of the character described, a body, pump cylinders and pistons, driving gear for the pump carried by said body, the body having an extension with a pinion-receiving groove in line with the first wheel

of the body-carried-gearing, a cooperating part including a pivoted jaw also having a pinion-receiving-groove also in line with said gearing.

4. In a device of the character described, a main body, a pump carried thereby, a pinion engaging part, an adjustable jaw cooperating with said part, and means for locking and unlocking said pivoted jaw at will.

5. A pump with concealed gearing, in combination with means comprising a pivoted jaw, and means for locking and unlocking the same, for connecting such gearing temporarily to an exterior pinion and for readily disconnecting the same at will.

6. In a device of the character described, two wheels therein having bearings in the sides of the body, pump-operating cranks or devices driven thereby and outside of said body, oscillating pumps, driving pinions for said two wheels, a single wheel between said driving pinions and adjacent an opening in the body, and means for securing the device to an exterior pinion and to hold the same in gear with the wheel adjacent said opening.

7. In a device of the character described, a hollow body comprising a part adapted to partially inclose an exterior driving pinion, one side of said body comprising a removable plate, pump gearing in said body and having bearings in the body and in said plate, pumps driven by the gearing, a jaw cooperating with said part of the body to firmly hold the exterior pinion temporarily in mesh with a wheel of the pump gearing, and means for securing said jaw in holding position and for releasing the same.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

GEORGE W. KELLOGG.

Witnesses:

CARL S. PATTEN,

THOS. G. McMAHON.