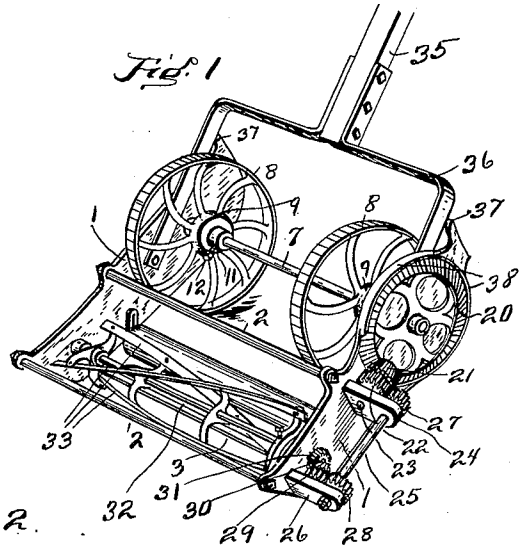
No. 651,422. Patented June 12, 1900.

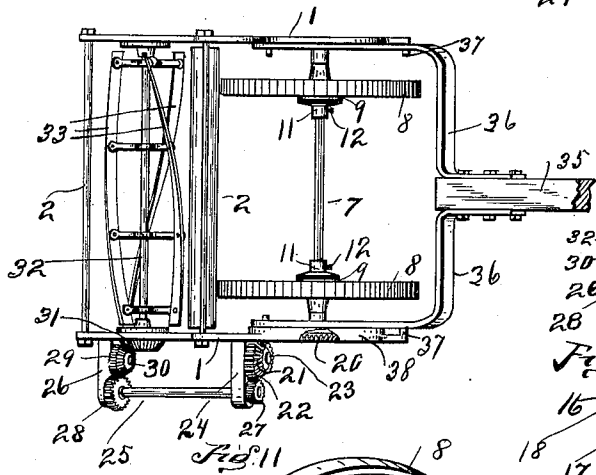
S. P. LERCH.

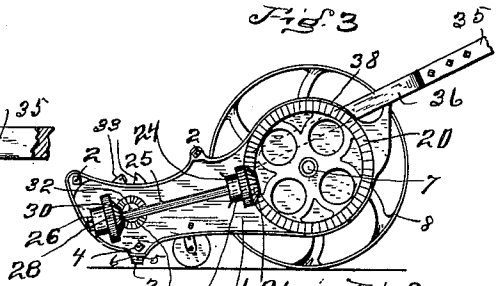
LAWN MOWER.

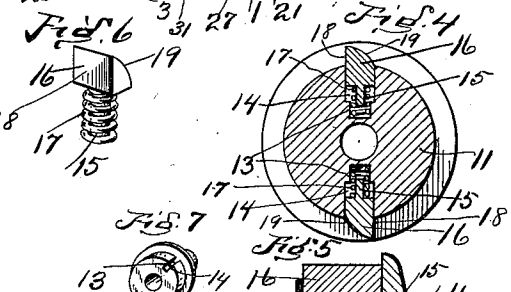
(Application filed Dec. 28, 1899.)

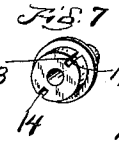
(No Model.)

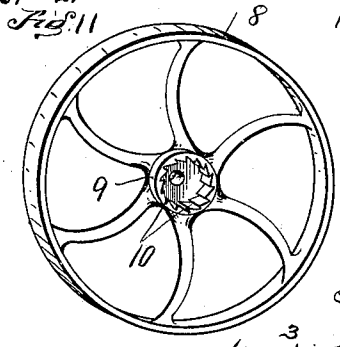


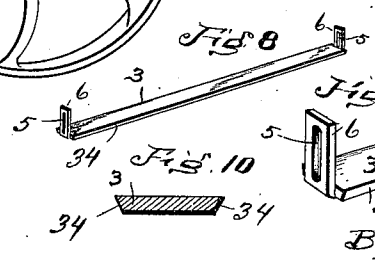












Witnesses.
Chas. J. R. Bond.

Inventor.
Samuel P. Lerch
By F. W. Bond
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL P. LERCH, OF CANTON, OHIO.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 651,422, dated June 12, 1900.

Application filed December 28, 1899. Serial No. 741,871. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. LERCH, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Lawn-Mowers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a perspective view. Fig. 2 is a top view. Fig. 3 is an end view. Fig. 4 is an enlarged transverse section of the inner ratchet-head, showing the catch-dogs properly located. Fig. 5 is a vertical section through Fig. 4. Fig. 6 is a detached view of one of the catch-dogs and its springs. Fig. 7 is a detached view of the inner hub or catch-dog-holding head. Fig. 8 is a detached view of the cutter-bar. Fig. 9 is an enlarged view showing one end of the cutting-bar. Fig. 10 is a transverse section of the cutter-bar. Fig. 11 is a detached view of one of the traveling wheels, showing its internal ratchet.

The present invention has relation to lawn-mowers; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claim.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the side members, which are substantially of the form shown and are held in proper relative position by means of the tie bars or bolts 2 and the cutter-bar 3, said cutter-bar being adjustably connected to the side members 1 by means of the clamp-bolts 4 and the elongated slots 5, said elongated slots being formed in the right-angle portions 6, which right-angle portions are preferably formed integral with the cutter-bar 3.

The shaft 7 is properly journaled to the side members and upon which shaft are loosely mounted the traveling wheels 8. Said traveling wheels are arranged substantially as shown in the drawings. The traveling wheels 8 are provided with the flanges 9, which flanges are provided upon their inner peripheries with the ratchet-teeth 10, said ratchet-teeth being located substantially as illustrated in Fig. 11. The traveling wheels 8, together with their integral flanges 9, are loosely mounted upon the shaft 7 and are so mounted for the purpose hereinafter described.

The flanged hubs 11 are securely connected to the shaft 7 by means of the set-screws 12 or their equivalents, which hubs are provided with the apertures 13 and the notches 14. The apertures 13 are for the purpose of receiving the arms 15, which arms are formed integral with the catch-dogs 16. The recesses 14 are for the purpose of receiving the inner portions of the catch-dogs 16, so as to prevent the catch-dogs from becoming accidentally displaced and at the same time holding them in proper position with the ratchet-teeth 10.

For the purpose of automatically forcing the catch-dogs 16 outward or into engagement with the ratchet-teeth 10 the springs 17 are provided, which springs are mounted around the arms 15 and are located in the apertures 13, as illustrated in Figs. 4 and 5.

The catch-dogs 16 are provided with the straight faces 18 and the beveled faces or backs 19, the straight faces 18 being for the purpose of engaging the straight faces of the ratchet-teeth 10, and thereby causing the shaft 7 to rotate with the traveling wheels 8 when the mower proper is propelled forward, but allowing the shaft 7 to remain at rest when the mower is drawn backward by reason of the beveled backs of the catch-dogs passing over the inclined faces of the ratchet-teeth 10.

To the shaft 7 is securely connected in any convenient and well-known manner the beveled gear-wheel 20, which beveled gear-wheel is for the purpose of imparting rotary motion to the beveled pinion 21 and the straight-faced pinion 22, said pinions being preferably formed integral one with the other and are mounted upon a bar or stud 23, which bar or stud is securely connected to the arm 24, said arm being preferably formed integral with one of the side members 1.

To the arm 24 is journaled one end of the shaft 25, the opposite end of said shaft being journaled to the arm 26, which arm is pref-

erably formed integral with one of the side members 1. The shaft 25 is provided with the pinions 27 and 28, the pinion 27 being driven by the pinion 22, thereby imparting rotary motion to the shaft 25 and also to the pinion 28, the pinion 28 imparting rotary motion to the pinion 29, said pinion 29 being formed integral with or connected to the beveled pinion 30, which beveled pinion meshes with the beveled pinion 31, said beveled pinion 31 being securely connected to the cutter-shaft 32, which cutter-shaft is provided with an ordinary lawn-mower cutter head or knives, such as 33.

Below the cutting head or knives 33 is located the cutter-bar 3, said cutter-bar being so adjusted with reference to the cutting-knives that a shearing cut will be produced as the cutting-knives are rotated. The cutter-bar 3 is provided with the beveled edges 34, said beveled edges being located upon both edges of the cutter-bar and are so located for the purpose of providing for a reversal of the position of said cutter-bar when one of its edges has become worn.

The handle 35 is connected to the bail 36, which bail is connected to the side members 1 in the usual manner, and for the purpose of stopping the downward movement of the bail 36 and the handle 35 stops 37 are formed upon the rear ends of the side members 1.

For the purpose of protecting the beveled wheel 20 a flange, such as 38, is formed upon the outer side of the side member 1 located adjacent said beveled gear-wheel.

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

In a lawn-mower the combination of side members tied together, a shaft journaled to said side members and having loosely mounted thereon traveling wheels, said traveling wheels having flanges provided with ratchet-teeth located upon their inner peripheries, hubs located within the flanges having the ratchet-teeth, and provided with catch-dogs having straight and beveled faces upon their opposite sides, springs located around the arms of the catch-dogs, a beveled gear-wheel fixed to the shaft and meshing with a bevel-pinion, a straight-faced pinion rotating with the bevel-pinion, a pinion meshing with said straight-faced pinion, a shaft journaled to arms located upon the side members and provided with a pinion, and pinions for imparting rotary motion to the cutter-head, and a cutter-bar having beveled edges adjustably connected to the side members, all arranged, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL P. LERCH.

Witnesses:
J. A. JEFFERS,
F. W. BOND.