Feb. 14, 1933. S. G. COLEMAN ET AL 1,897,924

HEDGE TRIMMING DEVICE

Filed Oct. 19, 1931

FIG. 1

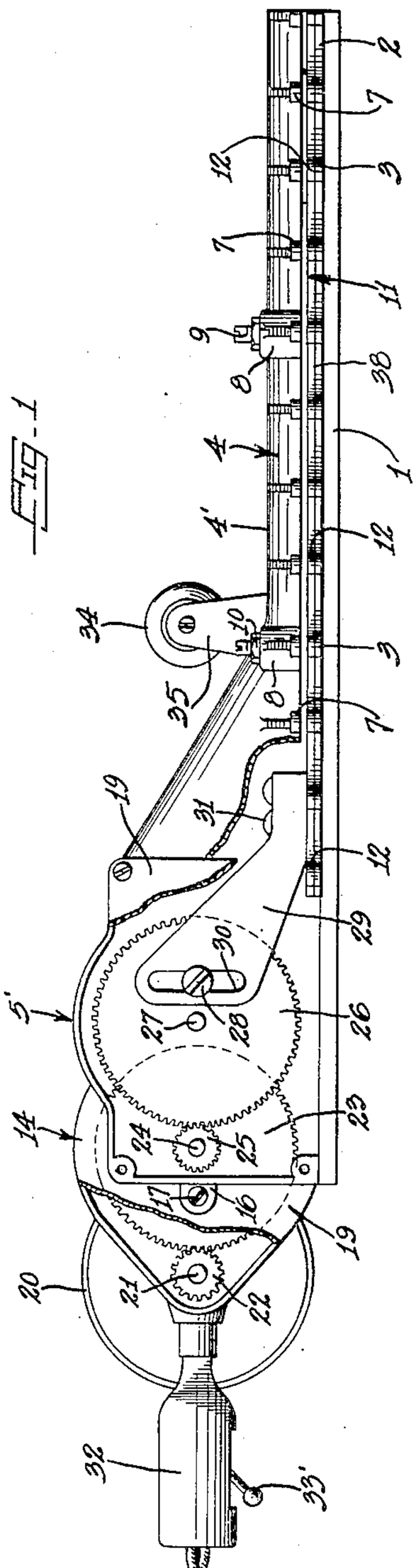


FIG. 2

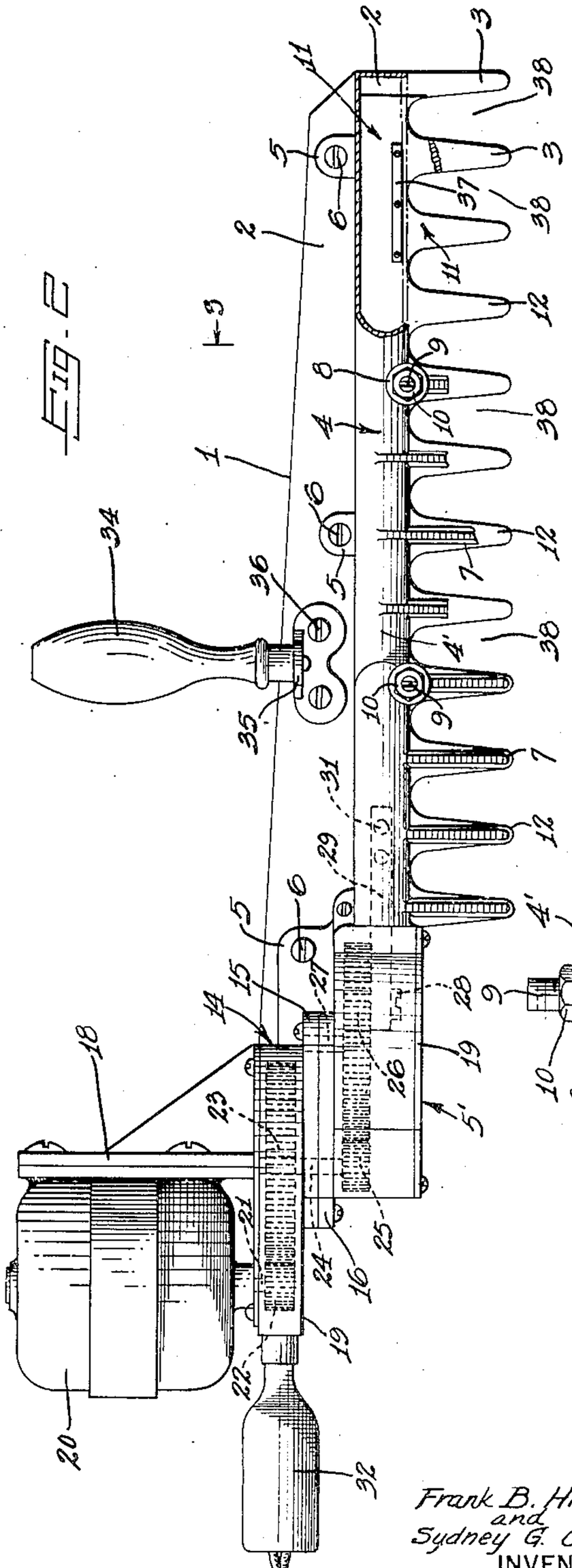
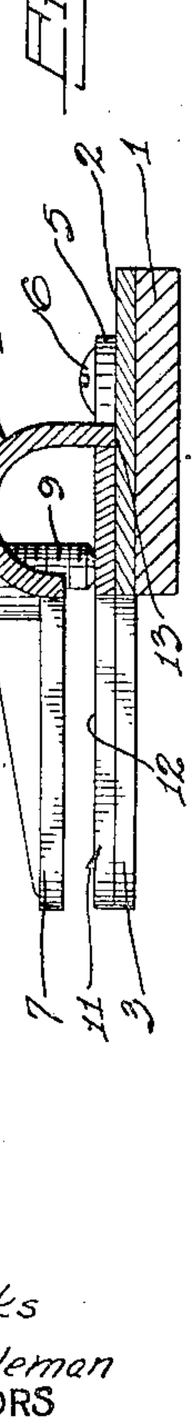


FIG. 3



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UNITED STATES PATENT OFFICE

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HEDGE TRIMMING DEVICE

Application filed October 19, 1931. Serial No. 569,760.

Our invention relates to improvements in hedge trimming devices, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of our invention is to provide a hedge trimming device which is simple in construction and which is light in weight whereby the same may be easily manipulated.

A further object is to provide a hedge trimming device which may be handled with ease.

A further object is to provide a novel hedge trimming device which is strong and durable in construction and which will operate with the necessary speed.

A further object is to provide a hedge trimming device which will operate for cutting a hedge regardless of the position in which it is held.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawing, forming part of this application, in which

Figure 1 is a front elevation of our device having portions thereof cut away,

Figure 2 is a top plan view of our device, portions thereof being shown in section, and

Figure 3 is a section taken along the line 3—3 of Figure 1.

In carrying out our invention we provide a body portion or supporting plate 1 on which is mounted a bearing plate 2 provided with extending toothed portions 3 integral therewith. The bearing plate 2 is fixedly connected with the base plate 1. A cover member or guide member 4 is disposed on the bearing plate 2 and is provided with flange portions 5 which are fixedly connected with the bearing plate 2 and the body portion 1 by any desirable means such as rivets or screws 6. The cover member 4 is provided with an arcuate-shaped portion 4′ which terminates at one end in a gear housing 5′. The cover member 4 is provided with projecting portions or teeth 7 integral therewith and aligned with the teeth 3 of the bearing plate 2. The cover member 4 is provided with bossed portions 8 having threaded openings therethrough for receiving threaded pins 9. Nuts 10 are disposed on the threaded pins 9 and are adapted for locking the threaded pins in position with respect to the cover member 4. A cutting plate 11 is slidably disposed on the bearing plate 2 and is provided with teeth 12 positioned in engagement with the teeth 3. The cutting plate or blade 11 abuts the cover plate 4 as at 13. The threaded pins 9 are adapted for holding the cutting plate 11 in engagement with the bearing plate 2 and are adjustable for permitting cutting plates of various thicknesses to be used. A gear housing 14 is provided with a flange portion 15 adapted for being connected to a flange portion 16 of the housing 5′ by any suitable means such as screws. A bracket member 18 is attached to the gear housing 14 by any suitable means or said bracket may be connected if desired to the body portion 1. The gear housings 5′ and 14 are in communication with each other and are provided with cover plates 19. A power unit or motor 20 is secured to the bracket 18 and is provided with a shaft 21 extending within the housing 14. A pinion gear 22 is fixedly mounted on the shaft 21 and is in mesh with a gear 23 which, in turn, is fixedly mounted on one end of a shaft 24 rotatably disposed in the housings 5′ and 14.

A pinion gear 25 is fixedly mounted on the other end of the shaft 24 and is in mesh with the gear wheel 26 rotatably mounted on a shaft 27 in the housing 5′. The gear wheel 26 is provided with an eccentric pin 28 on one side thereof. An arm 29 is disposed within the housing 5′ and has one end provided with a slot 30 for receiving the eccentric pin 28. The other end is fixedly connected with the cutting plate 11 by any suitable means such as screws or rivets 31. The housing 14 is provided with a handle 32 fixedly connected therewith. The handle 32 is provided with a passageway through which electrical conducting means such as wires 33 extend for conveying electrical current to the motor 20. The handle 32 is provided with a switch 33′ whereby the current may be turned on or off as desired. A han-

dle 34 is mounted on a bracket member 35 which, in turn, is secured to the bearing plate 2 and the body portion 1 by any suitable means such as rivets or screws 36. Thus it will be seen that because of the special design of the gear housing, the arrangement of the gears therein and the positions of the handles, a hedge trimming device is provided having the proper balance.

It will be noted on referring to Figure 2 that the cutting blade 11 is provided with a flange member 37 fixedly connected therewith and abutting the guide member 4 for holding the cutting plate 11 against lateral movement.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

Let us assume that the operator desires to use the device in trimming a hedge. The device is grasped by the handles 32 and 34. The switch is then actuated for energizing the motor whereby the train of gears will be rapidly set in motion. As the gear 26 is rotated the eccentric pin 28 rotates about the shaft 27 thereby rapidly reciprocating the arm 29. The cutting plate 11 will, in turn, be rapidly reciprocated by reason of its being connected with the arm 29. As the cutting plate 11 is reciprocated, the teeth 12 thereof are rapidly reciprocated with respect to the stationary teeth 3 whereby the hedge vegetation which extends through the spaces 38 between the teeth will be sheared. It will be seen that the shearing action is between the stationary teeth 3 and the reciprocating teeth 12. The teeth 7 of the cover member 4 tend to hold the hedge vegetation against movement while being cut and act as a rake whereby the sheared portions of the hedge may be raked from the top of the hedge.

If desired, the device may be operated by other power means such as, for instance, a gasoline engine, in which case the motor 20 may be removed from the bracket 18 and the pinion 22 operatively connected with the engine by means of a flexible shaft.

We claim:

1. In a hedge trimming device, the combination of an elongated body portion provided with a plurality of laterally extending tooth portions, a reciprocable cutting means mounted on the body portion and in shearing engagement with the tooth portions, a gear housing connected with an end of the body portion, gears rotatably mounted in the housing, means operatively connecting the cutting means with the gears whereby said cutting means may be reciprocated when the gears are rotated, a handle connected with the gear housing, power means operatively connected with the gears for rotating the same, said power means and tooth portions being oppositely positioned with respect to the handle for counterbalancing each other, and an auxiliary handle connected with the body portion at an intermediate position with respect thereto and transversely extending with respect to said first-named handle.

2. In a hedge trimming device, the combination of an elongated body portion provided with a plurality of laterally extending tooth portions, a reciprocable cutting means mounted on the body portion and in shearing engagement with the tooth portions, a gear housing connected with an end of the body portion and having gears rotatably mounted therein, means operatively connecting the cutting means with the gears for reciprocating said cutting means when the gears are rotated, a handle connected to an end of the trimming device and extending longitudinally therefrom substantially parallel to the body portion, and means for rotating the gears, said gear rotating means and tooth portions being positioned oppositely with respect to the longitudinal axis of said handle for counterbalancing each other.

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