

(No Model.)

4 Sheets—Sheet 1.

H. F. PARKER & M. G. GILLETTE.

POWER APPLYING MECHANISM.

No. 529,875.

Patented Nov. 27, 1894.

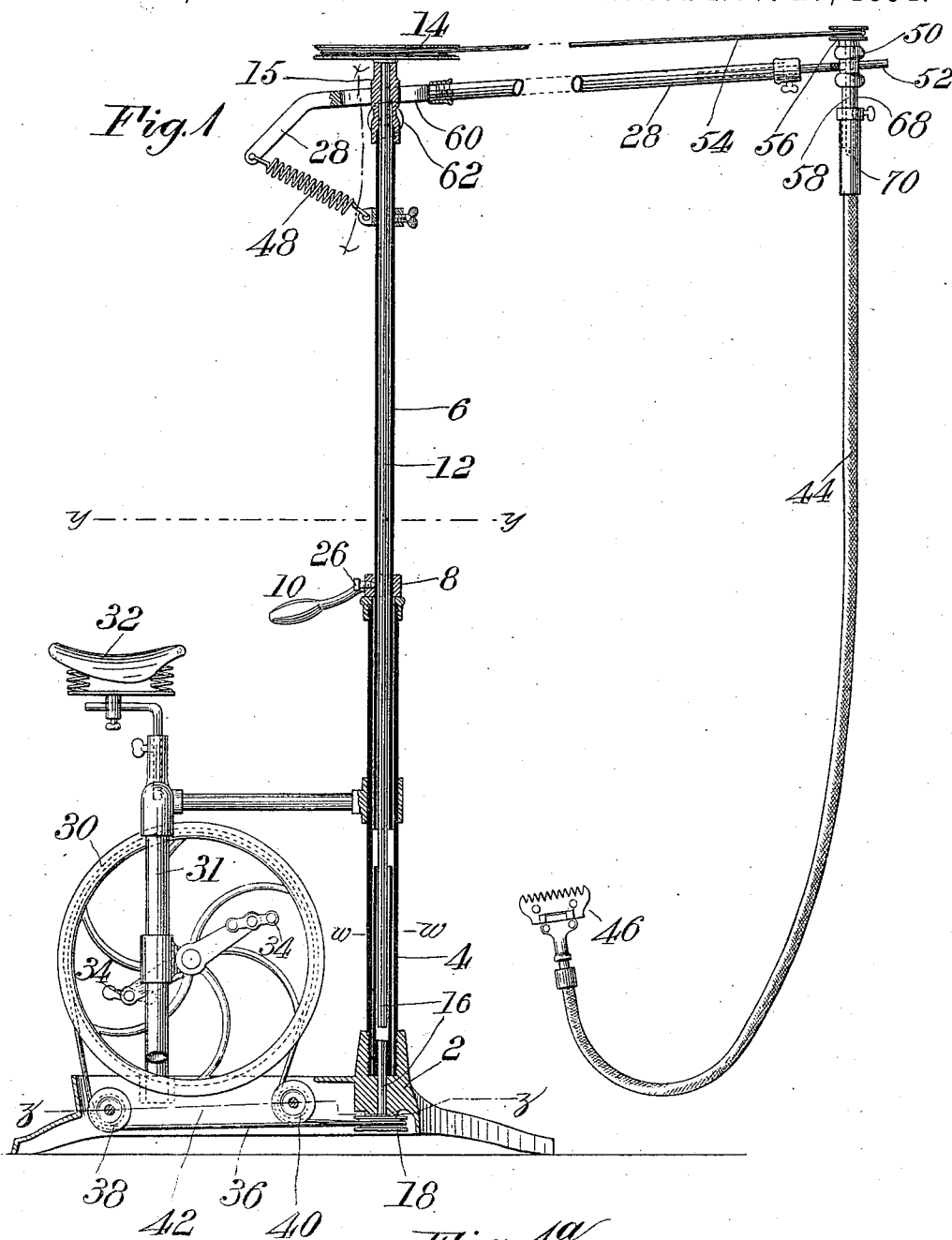
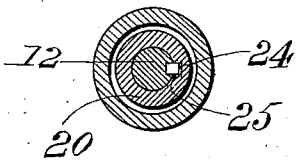


Fig. 1^a

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Matt. G. Gillette

(No Model.)

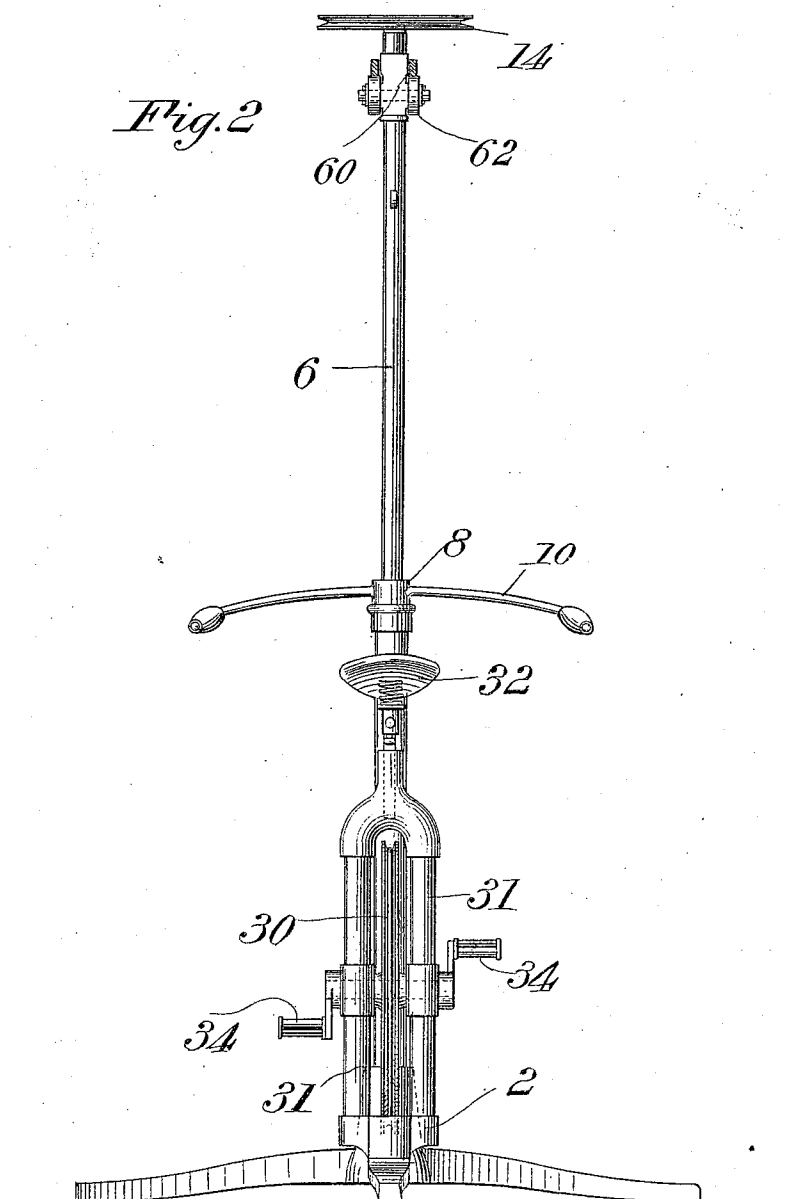
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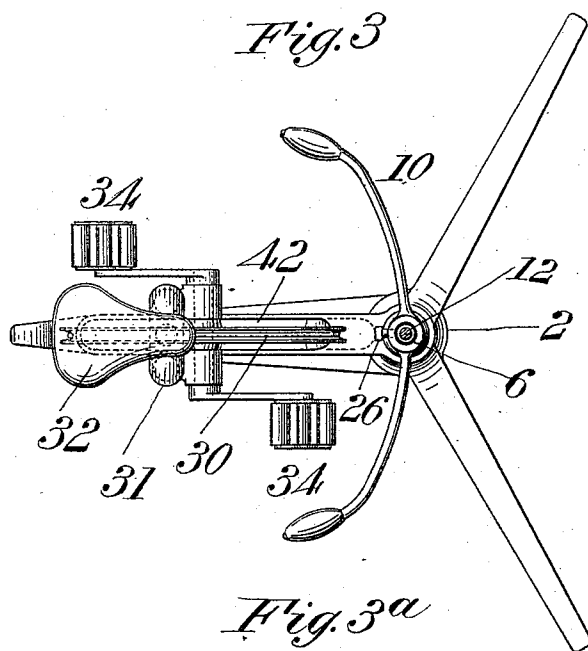
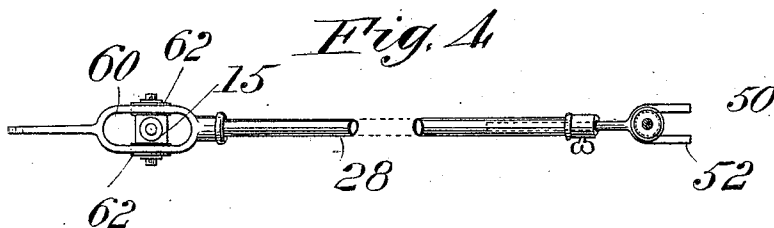
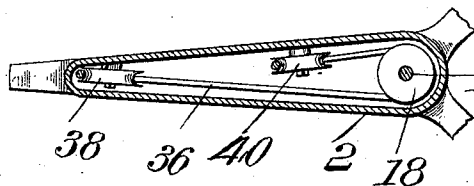


Fig. 3a



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Fig. 6

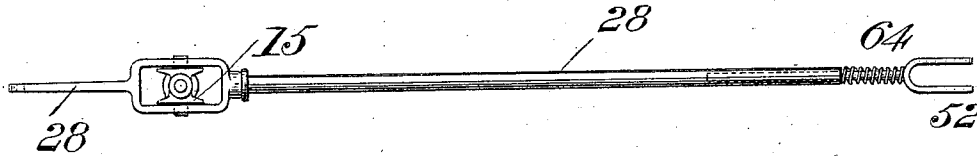


Fig. 5

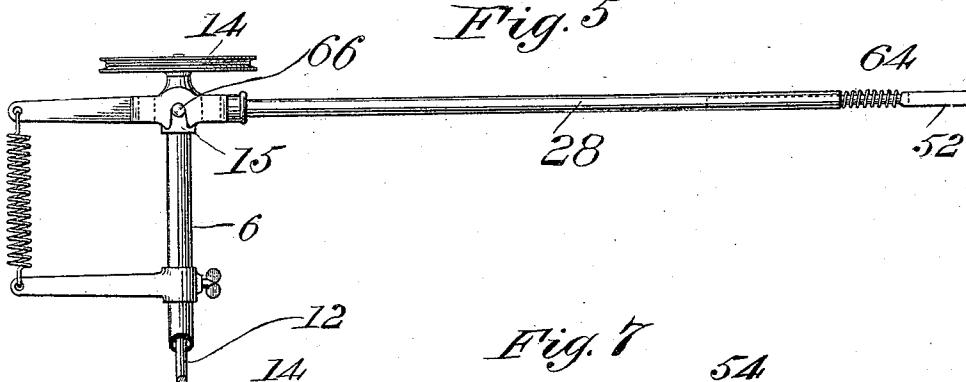


Fig. 7

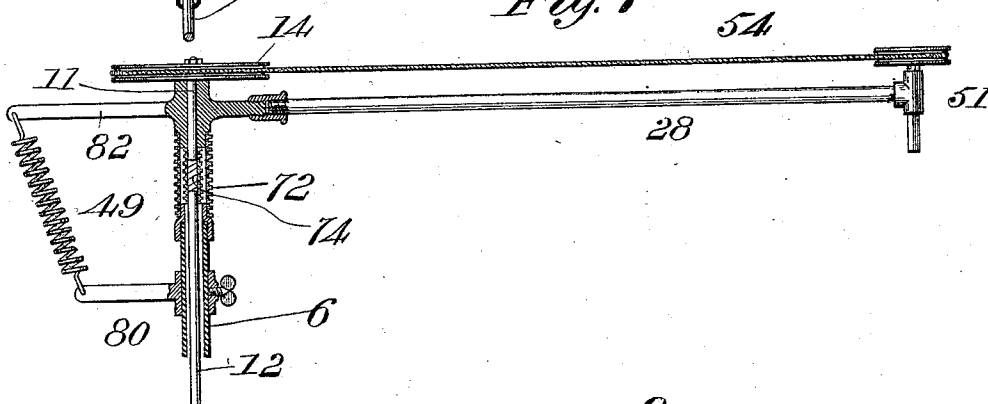
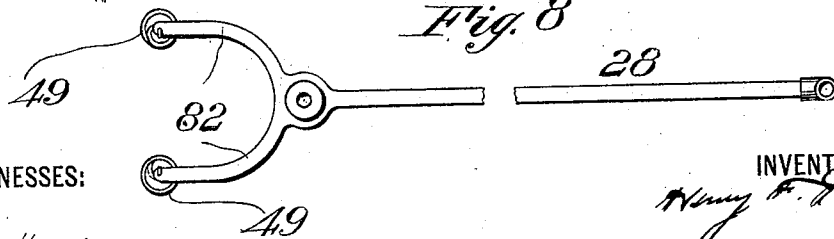


Fig. 8



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UNITED STATES PATENT OFFICE.

HENRY F. PARKER AND MOTT G. GILLETTE, OF NEW YORK, N. Y.

POWER-APPLYING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 529,875, dated November 27, 1894.

Application filed September 10, 1894. Serial No. 522,546. (No model.)

To all whom it may concern:

Be it known that we, HENRY F. PARKER and MOTT G. GILLETTE, citizens of the United States, residing at the city, county, and State of New York, have invented certain new and useful Improvements in Power - Applying Mechanism, of which the following is a specification.

This invention relates to foot power applying mechanism for operating rotary or other hand tools intended to be used in various positions and moved about different parts of the work.

The invention is herein shown and described as embodied in a horse clipping machine, although applicable to other purposes, as for example, drilling, burnishing, or cleaning various stationary objects.

The invention consists in an improved foot power mechanism of the said character, as hereinafter described and claimed.

Referring to the accompanying drawings in which similar characters of reference indicate corresponding parts, Figure 1, is a side elevation of the machine, partly in section illustrating the invention; Fig. 1^a, a detail view, showing on an enlarged scale a cross-section at *w-w*, Fig. 1. Fig. 2, is a rear end elevation of Fig. 1, partly in section at *x-x*, Fig. 1. Fig. 3, is a plan view partly in horizontal section on the line *x-x*, Fig. 1. Fig. 3^a, is a horizontal section at *z-z*, Fig. 1. Fig. 4, is a plan view of the supporting staff, partly broken away and adjacent parts removed. Fig. 5, is a partial side view showing certain modifications in the supporting staff. Fig. 6, is a plan view of Fig. 5. Fig. 7, is a detail view showing in sectional elevation certain modifications in the flexible connection of the supporting staff to the standard; and Fig. 8, a plan view of the staff yoke in Fig. 7.

The machine is mounted upon a tripod or other base 2, in the central part of which the stationary tubular standard 4, is fixed. A rotary tubular standard 6, is movably mounted in the standard 4, resting thereon by means of the collar 8, of the handle bar 10, which is used to direct the rotative position of the standard 6, and parts thereon. Within the telescoping tubes 4, and 6, there extends a rotary shaft 12, suitably journaled,

and bearing at its upper extremity a belt pulley 14. The shaft 12, is preferably composed of two sections adapted for longitudinal extension, and the lower section 16, is journaled in the base 2, and bears a belt pulley 18 under the base. The lower section 16 is partly composed of a tube 20, and receives the end of the upper shaft section 12 rotative therein by but longitudinally movable therein by means of the feather 24 (Fig. 1^a) on the shaft 12, and groove 25 in the sleeve 20, or other equivalent connection. The rotative section 6 of the standard may thus be vertically adjusted in the stationary one 4, simply by loosening and re-setting the clamping screw 26 in the collar of the handle bar, and the telescoping connection of the shaft 12, is designed to accommodate the length of the latter to the adjustment of the telescoping standard, and the distance of the pulley 14, and supporting staff 28, may be conveniently changed as circumstances require.

Removed at a suitable distance from the standard 4, there is a driving belt wheel 30, mounted in the bifurcated standard 31, supported on the base 2, and the wheel 30, thus located, admits of the saddle 32 being placed vertically above the double treadle 34, or as nearly so as desirable in order that the operator thereon may exert his power to greatest advantage with comparative ease.

The relative positions of the seat, handle bar, and treadle correspond to those usual in a bicycle, and any other well known form of treadle than that illustrated may be substituted, and provision is made for adjusting the saddle 32, as indicated. Head room is also afforded for the operator in the saddle to lean forward in the most advantageous position for exerting power.

Motion is transmitted from the driving wheel 30, to the pulley 18, by means of the belt 36, suitably directed upon idle pulleys 38, 40, as shown in Figs. 1 and 3^a located within the mortise 42 in one leg of the tripod base. The movable parts in the lower portion of the machine are thus principally concealed and various characters of mechanism may be employed for transmitting motion from the driving wheel 30 to the shaft 16, other than that shown; such for instance as sprocket chains, gear wheels, &c.

The staff 28, for supporting the flexible shafting 44, or other mechanism to be driven, is movably mounted in the rotative standard 6, so as to swing vertically and owing to the horizontal rotatability of the standard 6, the extremity of the staff 28, affords a universally movable support for the shafting 44.

The machine is adapted for operating any character of hand implement such as a horse-clipper 46, to be held in the hand of a second operator, and moved about as required. The staff 28, is counterbalanced by one or more suitable springs 48, and the staff being swung horizontally when the handle bar 10, is moved, the operator in the saddle may assist the operator at the tool to reach relatively distant points in the work.

The spindle box 50, Figs. 1 and 4, is circumferentially recessed, and rests movably in a fork 52 adjustable in the staff to suit the length of the belt 54, which transmits motion from the pulley 14, to the pulley 56 irrespective of the limited angular variations of the staff; the spindle 58, of the pulley 56 remaining vertical owing to the weight of the flexible shaft 44, and the universal oscillation of the box 50, in its fork. The weight of the shaft 44, keeps the belt 54 taut by maintaining the spindle 58, vertically, or nearly so, and this function is assisted in Figs. 1 and 4, by the spring 48, which being inclined draws the staff outward longitudinally as well as counterbalancing it. The yoke 60 of the staff rides on rollers 62 on the journal box 64, which is squared to carry the staff laterally when the standard 6 is rotated, and by means of said rollers the staff is free to move endwise and draw the belt taut by the contraction of the spring 48.

Another construction appears in Figs. 5 and 6 wherein the belt may be held taut therein by an independent spring 64, and the fork 52, is movable; the yoke 60 being on a fixed pivot 66.

We have illustrated herewith a depending shank 68 carrying the spindle 58, and a removable sleeve 70 of the flexible shaft adjustable thereon for facilitating the attachment or detachment of the interior rotary part of the flexible shafting 44, to the spindle 58, as more fully described in the patent application of Mott G. Gillette, Serial No. 453,919, filed December 3, 1892.

A further modification which may be employed if preferred, consists in mounting the journal box 15, on a flexible wrist 72, as in Fig. 7, connecting the shaft 12, with a separate section 11 thereof bearing the pulley 14, by a flexible section 74 of any suitable character, and securing or making integral the staff 28, with said box 15. The staff is in this instance counterbalanced by two springs 49, 49 connected from a yoke 80 to the yoke 82, on the staff; which springs in co-operation with the extremity of the staff, balance the latter at three points about the flexible supporting center 72, preventing its displace-

ment. The pulley 56, and spindle 58, are journaled in a box 51 fixed to the staff 28 in Figs. 7 and 8.

Having now fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a power applying mechanism, the combination of a suitable base, a stationary standard upon the base, a rotary standard mounted on the stationary standard, a handle bar for guiding the rotary standard, a driving shaft extending through the stationary and rotary standards connected to the mechanism to be driven, a driving wheel removed from the standard, and a suitable support therefor mounted on the said base, a treadle for operating the driving wheel, a seat above the treadle, and mechanism for transmitting motion from said driving wheel to said driving shaft.

2. In a power applying mechanism, the combination of a stationary standard, a rotary standard, a movable staff mounted thereon supporting the mechanism to be driven, a guiding handle bar on said rotary standard for controlling the horizontal sweep of the staff, a driving wheel removed from the standard, a treadle, a saddle above the treadle opposite the handle bar, a driving shaft in the standard connected to the mechanism to be driven, and means for transmitting motion from the driving wheel to the said driving shaft.

3. In a power-applying mechanism, the combination with the stationary standard, the rotary standard mounted thereon, the driving shaft extending through said stationary and rotary standards, and means for actuating the said shaft, of a movable supporting staff, projected in a normally horizontal direction from said rotary standard, and means for counter-balancing it, and at the extremity of said staff a flexible shafting depending therefrom connected with the mechanism to be driven, a universally movable journal-box and spindle therein for rotating the said flexible depending shaft, mounted in a fork at the extremity of the staff, and a belt pulley upon the said driving shaft, a belt pulley upon the said driven shaft, a belt pulley upon said spindle, and a belt connecting said pulleys, and means for extending the said staff longitudinally to hold said belt taut.

4. The combination with the standard the driving shaft therein and the pulley on said shaft, of the herein-described supporting staff 28, provided with a fork 52, at its extremity, a spring for pushing the fork outward, and the supporting journal-box 50, circumferentially recessed to fit said fork and admit of universal oscillation, and a pulley journaled in said box 50, and a belt connecting said pulleys.

5. In a power-applying mechanism, the combination of a standard for supporting the mechanism to be driven, a driving shaft in the standard and means for rotating it, a normally horizontal movable supporting staff mounted

on the extremity of the standard, a flexible joint connecting the staff to the standard, means for counterbalancing said staff, a belt pulley journaled on the staff upon a separate
5 section of said driving shaft connected to the main section by a flexible shafting, and at the extremity of said shaft another belt pulley journaled therein adapted to operate the mechanism to be driven, and a belt connect-
10 ing said pulleys, substantially as described.
6. In a power-applying mechanism, the combination of a stationary standard, a rotary standard mounted therein, a driving shaft extending through the said stationary and rotary standards connected to the mechanism to
15 be driven, and means for revolving said shaft; said standard and shaft being longitudinally extensible as set forth.

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