

Jan. 10, 1939.

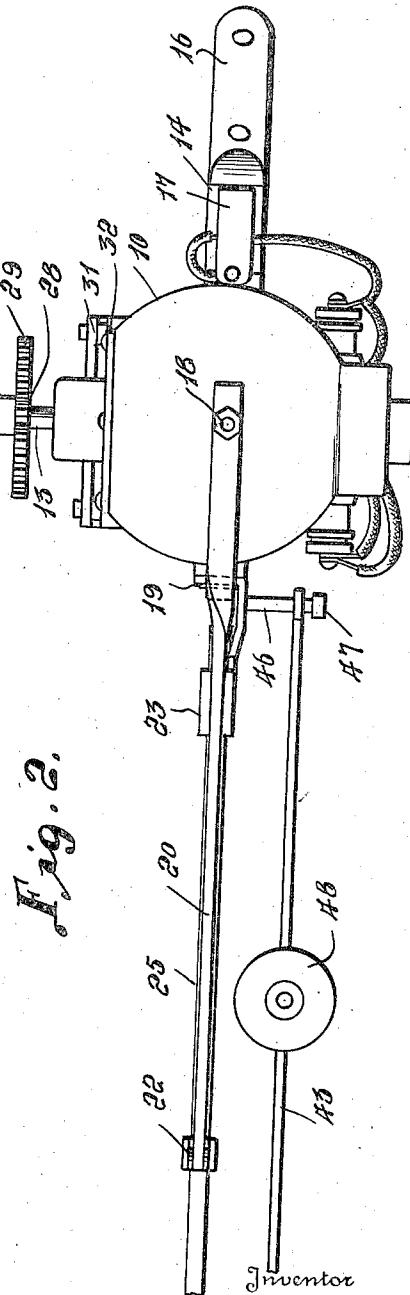
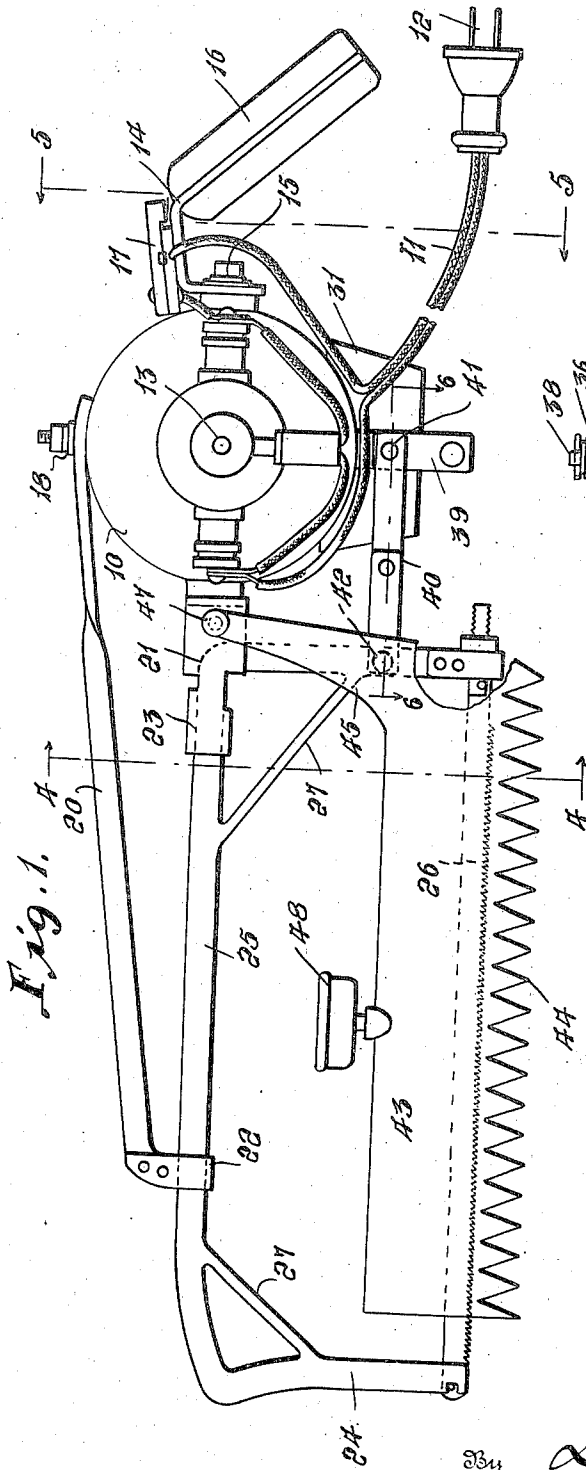
J. M. BRAZEALE

2,143,757

HAND SAW

Filed July 29, 1937

2 Sheets-Sheet 1



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Fig. 3.

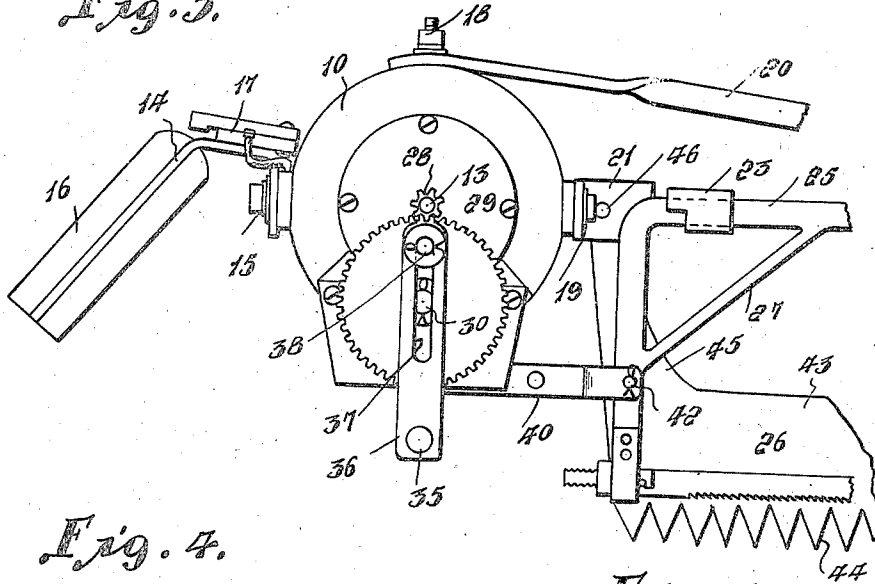


Fig. 4.

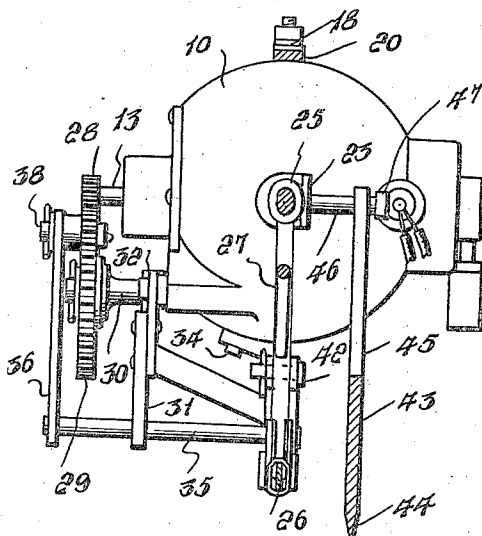


Fig. 5.

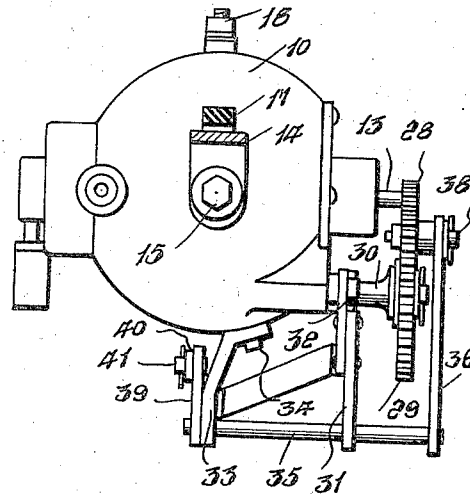
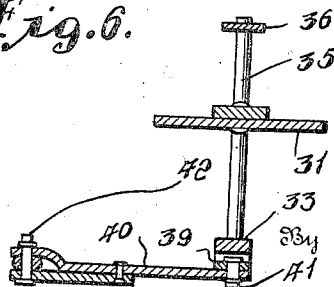


Fig. 6.



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UNITED STATES PATENT OFFICE

2,143,757

HAND SAW

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Application July 29, 1937, Serial No. 156,401

1 Claim. (Cl. 143—68)

This invention relates to a hand saw primarily adapted for use as a meat saw, although capable of use in cutting other material such as wood.

It is particularly aimed to provide a novel construction wherein the parts are supported from the casing of an electric motor, suitably guided, and operated by such motor.

It is particularly aimed to provide a structure having a coarse-toothed blade or the equivalent, operable to engage the bone being cut, adjacent to the zone of cutting, to hold the bone as far as practical against vibration and to thereby facilitate the sawing thereof.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a view in side elevation showing the improved saw;

Figure 2 is a plan view of the saw;

Figure 3 is a fragmentary side elevation taken from the opposite side to that of Figure 1;

Figure 4 is a cross section taken on the line 4—4 of Figure 1;

Figure 5 is a cross section taken on the line 5—5 of Figure 1; and

Figure 6 is a horizontal section taken on the line 6—6 of Figure 1.

Referring specifically to the drawings wherein like reference characters designate like or similar parts, 10 designates the casing of an electric or other motor and it is preferably spherical. The same may be of any conventional construction and it encloses the electric motor, current to which is supplied through wires or conductors 11 attached to a plug 12, to engage any receptacle in a suitable source of energy. The electric motor is contained within the casing 10 and has a driven shaft at 13.

A suitable bracket 14 is detachably fastened at 15 to the casing 10 and is equipped with a diagonally disposed handle 16. On the bracket 14, a switch 17 is provided, of any conventional form, which is operatively connected in the conductors 11 and in a position to be controlled by the same hand which grasps the handle 16.

Suitably attached to the casing 10, preferably removably bolted as at 18 and 19, are guide members 20 and 21, respectively, the former being longer than the latter. Guide arm or member 20 has a loop 22 and the guide arm or member 21 has a loop 23.

A generally U-shape saw frame is provided at

24 having a back strip 25, which is slidably mounted in the loops 22 and 23. In parallelism to the back 25, but at the opposite side of the frame is a saw blade 26 of conventional form, removably fastened in place on the frame 24, in any desired or conventional manner. Said frame is preferably braced as at 27.

The frame 24 is adapted to be reciprocated through the rotation of the electric motor and to this end, shaft 13 has a pinion 28 keyed thereto and enmeshed with a gear wheel 29 journaled on a stub shaft 30, preferably removably mounted, and which stub shaft extends from a plate or bracket means 31 detachably bolted as at 32 to the casing 10. Another bracket bearing 33 is detachably bolted at 34 to the casing 10 and a rockshaft 35 is journaled in said brackets or bearings 31 and 33. At one end of rockshaft 35 it has a crank 36 rigid therewith which is provided with an elongated slot at 37 in which an eccentric or wrist pin 38 on the gear wheel 29, extends and moves. On the other end of said rockshaft 35, a relatively short crank 39 is rigidly connected and it has a pitman 40 pivoted thereto at 41 and also pivoted at 42 to the frame 24.

As a result of the construction described, the saw is held in the hand by grasping handle 16 and the current to the motor is controlled by the switch 17. The rotation of the shaft 13 through the gearing at 28 and 29, wrist pin 38, crank 36, rockshaft 35, crank 39 and pitman 40, reciprocates the frame 24 and accordingly the saw 26, such frame being guided in the loops 22 and 23.

The present invention preferably also provides means for engaging the bone so as to hold it substantially rigid and without vibration, relatively close to the saw blade, during the process of sawing. To this end, a hold down blade 43 is provided with relatively coarse teeth at 44 which are adapted to engage the bone. Such blade has a neck 45 extending from the rear end thereof and it is slidably and pivotally mounted on a stud 46 extending rigidly from the bracket 21. Stud 46 preferably has a head 47 preventing accidental detachment of the blade 43. It will be noted that the blade 43 has a knob or finger rest 48 thereon. The knob 48 enables the blade to be adjusted laterally as close as practical to the saw blade and also enables the fingers of one hand of the operator to apply pressure on the blade 43 to hold the bone against undue vibration.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:

5 A saw structure of the class described comprising a casing, a motor within the casing having a drive shaft projecting beyond the latter, guide means on the casing, a saw frame slidably mounted by said guide means, bearing means connected to the casing, a rockshaft journaled in said bearing means, gearing from said shaft operable to operate the rockshaft, a crank and pitman connection from the rockshaft to the saw carrying frame, electric conductor means leading to

the motor, a bracket member extending from the casing, a handle connected to the bracket member, a control switch connected to the bracket member and disposed in the circuit of said conductor means, gearing from the motor shaft to the rockshaft including a crank on the latter shaft, a rotatable gear, said crank having an elongated slot, and said gear having a wrist pin engaged in said slot. 5

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