

Feb. 7, 1939.

L. D. DAVENPORT

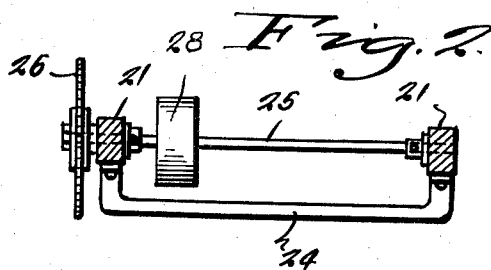
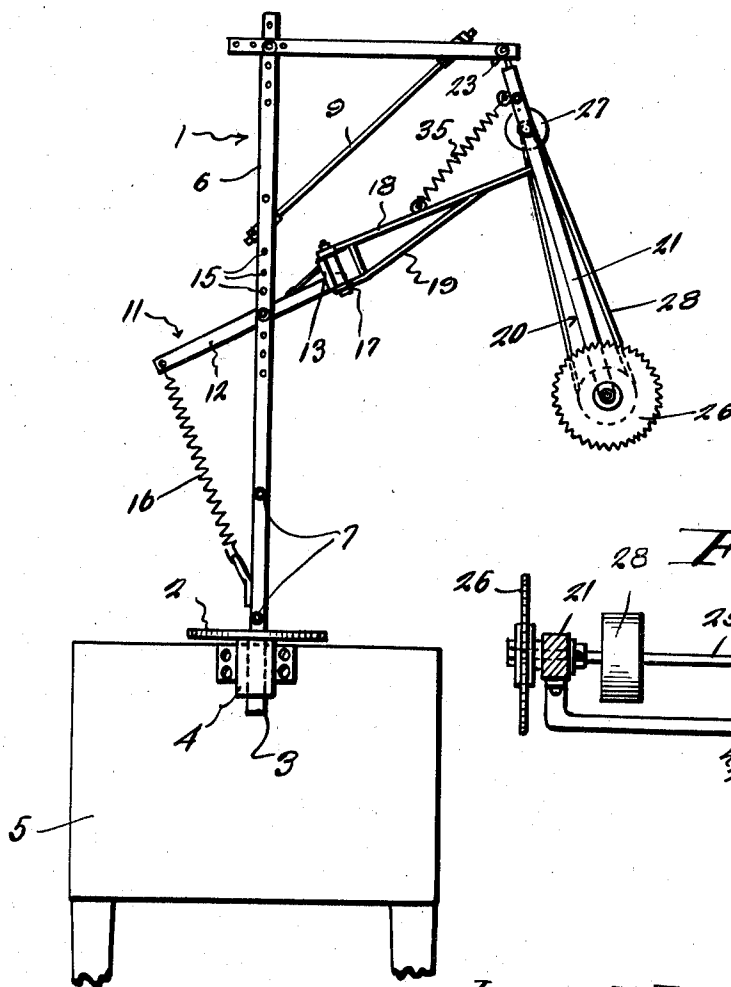
2,146,202

BONE SAW

Filed March 14, 1938

2 Sheets-Sheet 1

Fig. 1.



Louis H. Davenport Inventor

By *Clarence W. Brien*
Hyman Berman
Attorneys

Feb. 7, 1939.

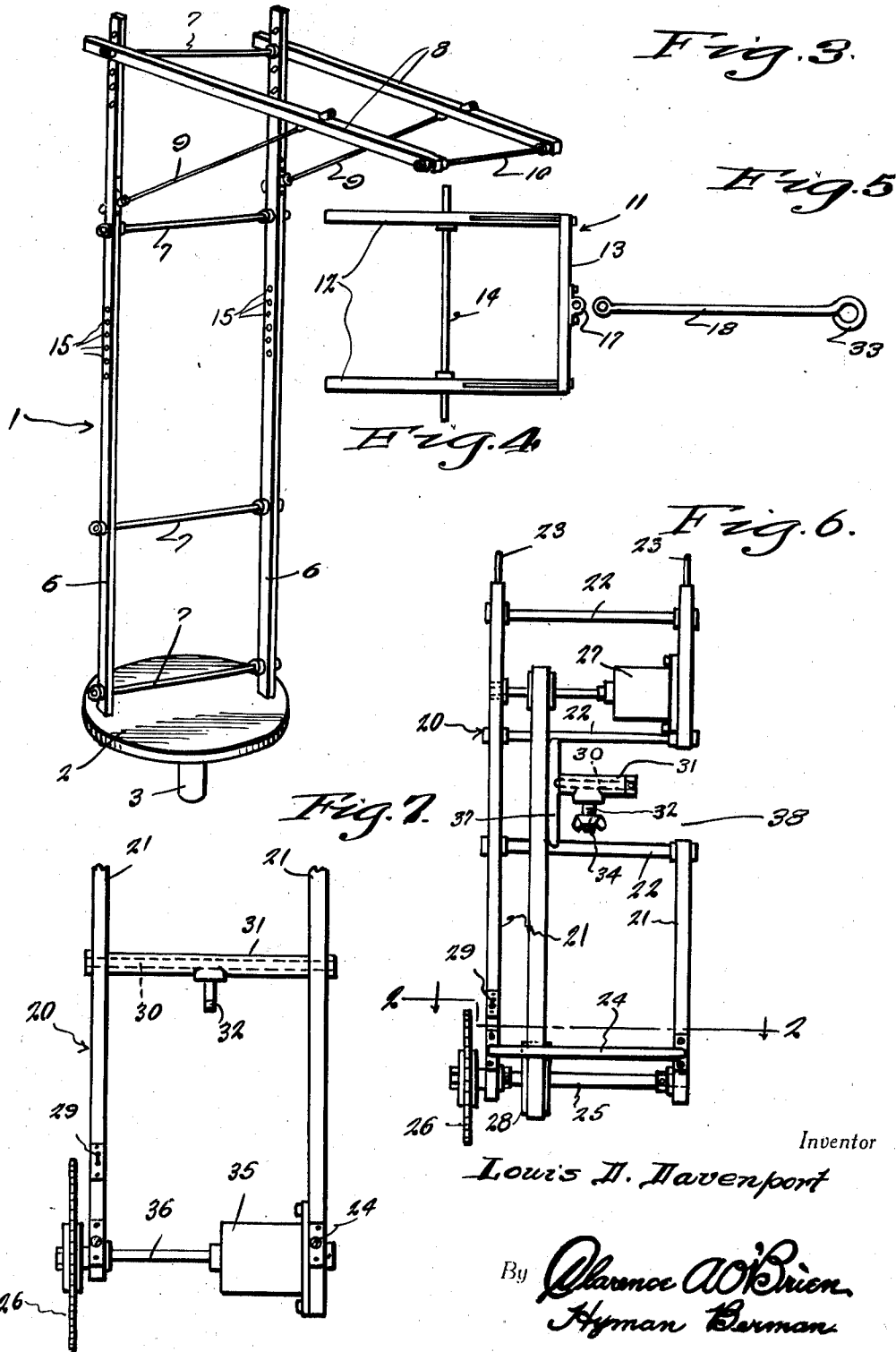
L. D. DAVENPORT

2,146,202

BONE SAW

Filed March 14, 1938

2 Sheets-Sheet 2



Inventor

Louis D. Davenport

By

Clarence A. O'Brien
Hyman Berman

Attorneys

UNITED STATES PATENT OFFICE

2,146,202

BONE SAW

Louis D. Davenport, Ava, Mo., assignor of one-half to Oscar Sanders, Ava, Mo.

Application March 14, 1938, Serial No. 195,911

2 Claims. (Cl. 143—46)

The present invention relates to new and useful improvements in bone saws for use particularly by meat cutters and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character which is mounted in position for convenient use at all times and which is power driven, thereby doing away with the usual hand saw.

Another very important object of the invention is to provide a power driven machine of the aforementioned character wherein the rotary saw is mounted for movement in all directions, thus facilitating proper engagement of said saw with the bone regardless of the position of the piece of meat on the block.

Still another important object of the invention is to provide a power driven machine of the character described wherein the rotary saw will be supported in an out-of-the-way position when not in use.

Other objects of the invention are to provide a bone saw of the character set forth which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of an embodiment of the invention.

Figure 2 is a view in horizontal section, taken substantially on the line 2—2 of Fig. 6.

Figure 3 is a perspective view of what may be referred to as the mast structure.

Figure 4 is a plan view of the vertically swinging frame which is mounted on the mast structure.

Figure 5 is a detail view in plan of the arm which swings on the frame shown in Fig. 4.

Figure 6 is a view in front elevation of the saw and motor unit.

Figure 7 is a view in front elevation of the lower portion of a slightly modified form of saw and motor unit, the handle being shown in section.

Referring now to the drawings in detail, it will be seen that the reference numeral 1 designates generally a mast structure comprising a turntable 2 having depending therefrom a shank 3 which is journaled in a vertical bearing 4 fixed

on one side of a conventional meat block 5. Rising from the turntable 2 is a pair of spaced uprights 6 between which braces 7 extend. Adjustably mounted on the upper end portions of the uprights 6 and extending horizontally therefrom is a pair of arms 8. Braces 9 are provided for the arms 8. Extending between the free end portions of the arms 8 is a rod 10.

Pivotally and adjustably mounted at an intermediate point on the uprights 6 for swinging movement in a vertical plane is a substantially U-shaped frame which is designated generally by the reference numeral 11. The frame 11 comprises a pair of spaced side bars 12 between the forward end portions of which a cross member 13 extends. Mounted on the side bars 12 is a transverse shaft 14 having its end portions journaled in the uprights 6 for mounting the frame 11 thereon. The end portions of the shaft 14 are engageable selectively in openings 15 which are provided therefor in the uprights 6, thus permitting vertical adjustment of the frame 11 on the mast structure 1.

Counterbalance springs 16 for the frame 11 have one end connected to the lower portions of the uprights 6 and their other ends connected to the rear end portions of the side bars 12. Mounted vertically on the cross member 13 of the frame 11 is a bearing 17. Journalled on the bearing 17 for swinging movement in a horizontal plane, when the frame 11 is in a horizontal position, is an arm 18. A brace 19 is provided for the arm 18.

Mounted for vertical and horizontal swinging movement on the free end of the arm 18 is a saw frame which is designated generally by the reference numeral 20. The frame 20 comprises side bars 21 of suitable material between which braces 22 extend. On the upper ends of the side members 21 hooks 23 are provided which are engageable over the rod 10 for supporting the saw in raised position when not in use, as shown in Fig. 1 of the drawings. Extending between the lower end portions of the members 21 is a handle 24. The reference numeral 25 designates a transverse shaft which is journaled in the lower end portions of the members 21. Mounted on one end of the shaft 25 is a circular saw 26. If desired, a suitable guard or shield may be provided for the saw 26. Mounted in the upper portion of the frame 20 is an electric motor 27. The motor 27 drives the shaft 25 through a belt and pulley connection 28. A switch 29 on one of the members 21 adjacent the handle 24 controls the electric motor 27.

The frame 20 is mounted on the arm 18 by means including a shaft 30 which projects horizontally from a rod 37 between certain of the braces 22. Journalled on the rod 30 is a sleeve or tube 31 having fixed thereon a depending, threaded shank 32. The shank 32 is engageable in an eye or loop 33 on the free end of the arm 18 and is retained therein by a wing nut 34. Springs 35 extend between the arm 18 and the frame 20.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. When it is desired to use the saw 26, the hooks 23 are disengaged from the supporting rod 10 for permitting said saw to be swung downwardly to the meat on the block 5. One of the side bars 21 is cut out at an intermediate point in a manner to provide an opening 38 for permitting the frame 20 to be rotated nearly a complete revolution on the arm 18. The construction and arrangement is such that, through the medium of the handle 24, the rotary saw 26 may be moved to any desired position for engagement with the bone to be cut. Of course, the electric motor 27 may be connected with any suitable source of current supply.

In the modification shown in Fig. 7 of the drawings, an electric motor 35 is mounted in the lower portion of the frame 20 and a shaft 36, which carries the circular saw 26, is connected directly to said motor.

It is believed that the many advantages of a bone sawing machine constructed in accordance with the present invention will be readily understood and although preferred embodiments of the device are as illustrated and described, it is to be understood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A sawing machine of the class described comprising a mast including a turntable, spaced uprights rising from said turntable, arms extending horizontally from the upper portions of said uprights, a member extending between the free end portions of said arms, a frame mounted for swinging movement in a vertical plane on the uprights at an intermediate point, an arm mounted for swinging movement on said frame, a second frame mounted for substantially universal swinging movement on the free end portion of the second named arm, a power driven saw rotatably mounted on the second named frame, and means on said second named frame engageable with the member for releasably securing the saw in raised position when not in use.
2. A machine of the class described comprising a mast including a turntable, spaced uprights rising from said turntable, arms extending horizontally from the upper portions of said uprights, a rod extending between the free end portions of said arms, a substantially U-shaped frame mounted for swinging movement in a vertical plane on the uprights at an intermediate point, said frame including spaced side members and a cross member extending between one end of said side members, a rod mounted in the side members at an intermediate point and journalled in the uprights, counterbalance springs connected to the other ends of the side members and to the uprights, a second frame structure mounted for universal swinging movement on the cross member, a saw rotatably mounted on the second frame, and hooks on the second named frame engageable with the rod for supporting the saw in raised position when not in use.

LOUIS D. DAVENPORT.