

[54] CARRYING FRAME FOR POWER SAW

3,409,056 11/1968 Rauh..... 30/381

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[58] Field of Search..... 30/381-389;
173/170; 16/115, 111 R

[57] ABSTRACT

A power saw, e.g. for cutting logs, is mounted on a skid-supported base connected at three points (partly by way of the saw motor) to a three-legged carrying frame. The legs of the frame are telescopically received in respective sockets in which they are independently adjustable with the aid of indexing pins and clamping collars.

[56] References Cited

UNITED STATES PATENTS

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10 Claims, 7 Drawing Figures

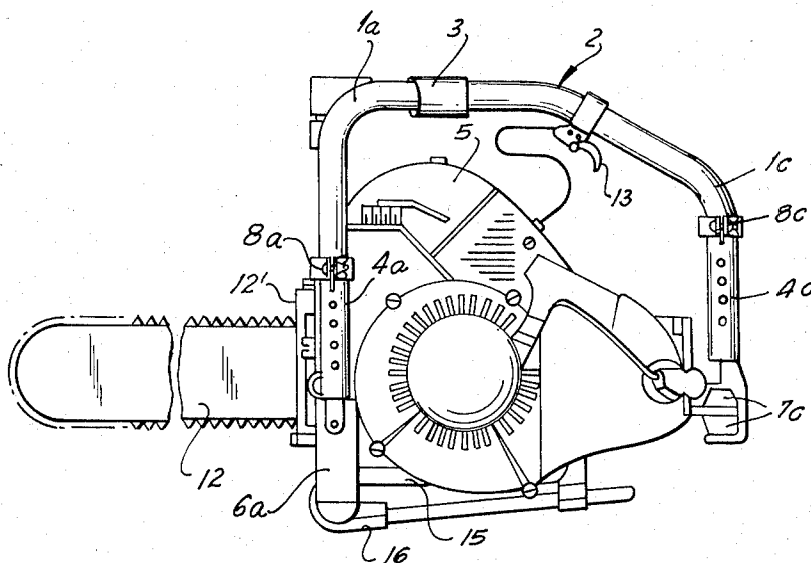


FIG. 1

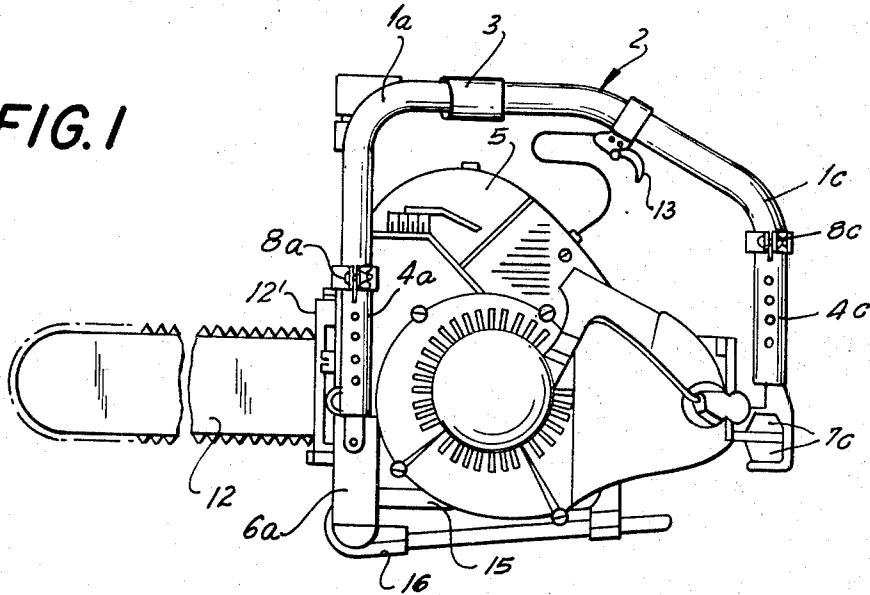
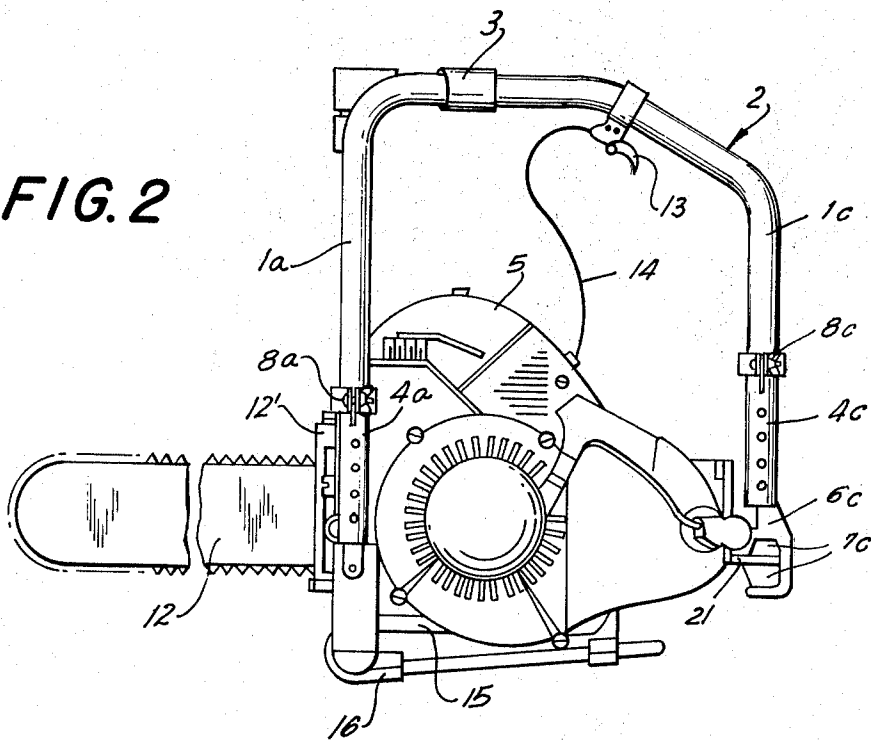


FIG. 2



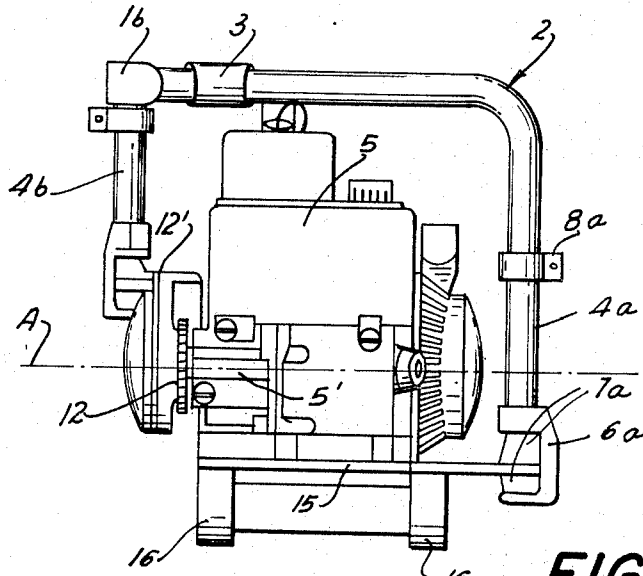


FIG. 3

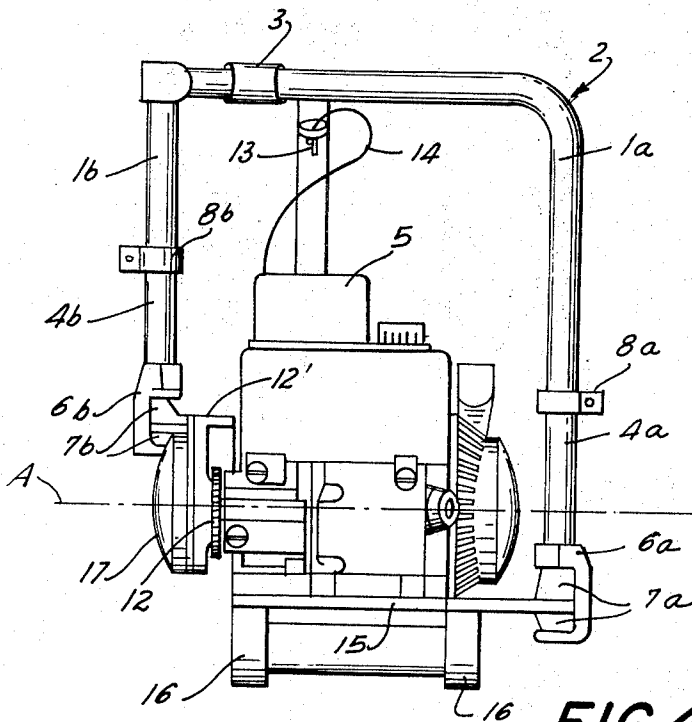


FIG. 4

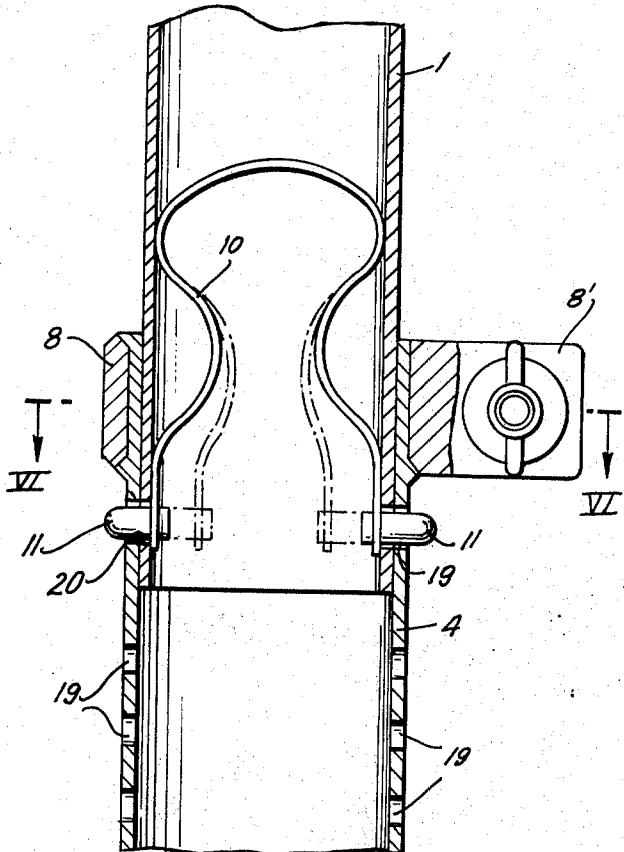


FIG. 5

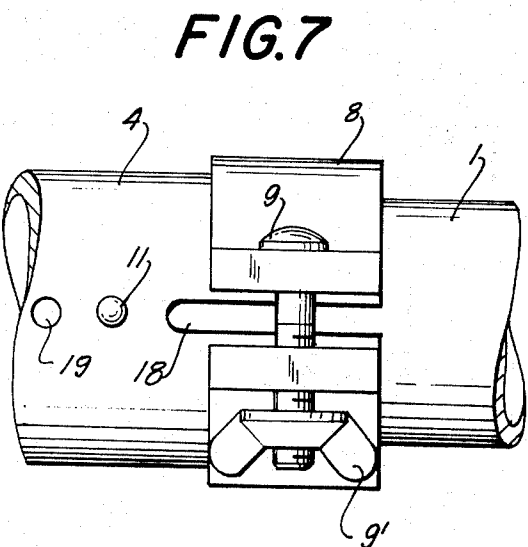


FIG. 7

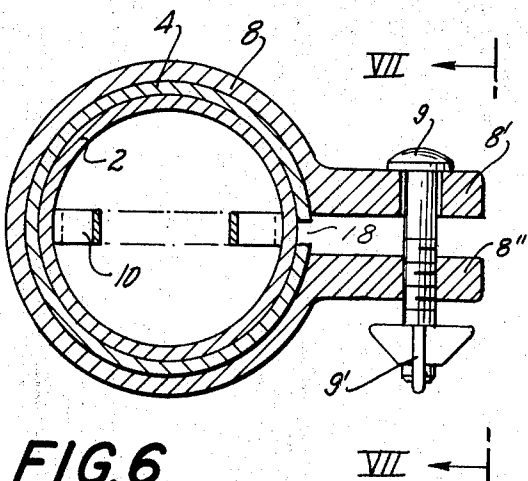


FIG. 6

CARRYING FRAME FOR POWER SAW

FIELD OF THE INVENTION

My present invention relates to a carrying frame for a cutting implement including a power saw, such as a chain saw for cutting logs, projecting forwardly from a supporting base. The base and the body of the saw-driving motor form a rigid unit which is to be positioned on uneven terrain and should therefore be adjustable to a variety of operating conditions depending on such factors as the nature of the ground and the thickness of the workpieces.

BACKGROUND OF THE INVENTION

It is known to use power saws to cut falling timber or the like and to provide their frames with adjustable or interchangeable handles; however, the adjustability of such frames is quite limited and does not always permit the selection of an optimum working position.

OBJECT OF THE INVENTION

It is, therefore, the object of my invention to provide an improved carrying frame for a power saw, especially for one used as a woodcutting implement, which by simple means can be adapted to a wide variety of working surfaces and workpiece shapes while affording full stability in any position of adjustment.

SUMMARY OF THE INVENTION

This object is realized, pursuant to my invention, by the provision of a carrying frame with three legs of independently adjustable length terminating at three points at which the frame is secured, advantageously through a resilient coupling, to the rigid unit consisting of the motor body and its supporting base. Two of the frame legs, according to a more specific feature of my invention, straddle a forward part of the motor body, one of them engaging a laterally projecting portion of the base while the other one is secured to the opposite side of the motor body whose rear part is attached to the free end of the third leg. For ease of assembly, the three legs may be detachably interconnected at a common joint.

BRIEF DESCRIPTION OF THE DRAWING

The above and other features of my present invention will now be described in full detail, reference being made to the accompanying drawing in which:

FIG. 1 is a side-elevational view of a woodcutting implement with a carrying frame embodying my invention, the frame being shown in one position of adjustment;

FIG. 2 is a view similar to FIG. 1, showing the frame in another position of adjustment;

FIG. 3 is a front view of the implement in the position of FIG. 1;

FIG. 4 is a similar front view, showing the implement in the position of FIG. 2;

FIG. 5 is an enlarged axial sectional view of a part of the frame;

FIG. 6 is a cross-sectional view taken on the line VI — VI of FIG. 5; and

FIG. 7 is a fragmentary side view taken on the line VII — VII of FIG. 6.

SPECIFIC DESCRIPTION

The woodcutting implement shown in the drawing comprises a base 15, supported on skids 16, which forms a rigid unit with the body of a drive motor 5 such as, for example, a gasoline engine. Motor 5 has a horizontal shaft 5' driving, via a transmission 17, a chain saw 12 which projects forwardly of base 15 and has a serrated endless band rotating in a vertical plane. Chain saw 12 has a forwardly open housing 12' secured to the body of engine 5.

In accordance with my present invention, a carrying frame 2 is connected at three points with the rigid unit 5, 15. Frame 2 comprises three legs 1a, 1b and 1c; legs 1a and 1b, straddling the motor 5, lie partly in a vertical plane located forwardly of the motor axis A and parallel thereto. Leg 1c, extending rearwardly in a vertical plane roughly bisecting the assembly, is detachably secured by a three-way joint 3 to the legs 1a and 1b to which all three legs may be releasably fastened (e.g. by setscrews). The legs 1a, 1b and 1c are telescopically received in respective sockets 4a, 4b, 4c which in turn are resiliently secured to unit 5, 15 at three widely spaced points via respective shackles 6a, 6b, 6c and interposed elastic pads 7a, 7b, 7c. These pads could consist of rubber or other elastomeric material but could also be designed as spring-loaded shock absorbers.

A control grip 13 for the motor 5, connected therewith via a Bowden cable 14, serves to vary the operating speed of the saw 12 and is carried on the central leg 1c.

Each leg 1a — 1c is joined to its socket 4a — 4c through an adjustable connection including a collar 8a, 8b or 8c, respectively. Details of any of these connections are shown in FIGS. 5 — 7 in which the tubular extremity of a leg received in a socket 4 has been designated 1 and has been shown surrounded by the associated collar 8 which is split and terminates in a pair of clamp jaws 8', 8'' held together by a bolt 9 with wing nut 9'. In the region of collar 8 the socket 4 is formed with an open-ended longitudinal slot 18 facilitating its deformation under the clamping pressure of bolt 9 and nut 9'. Beyond the closed end of slot 18, socket 4 has several holes 19 selectively alignable with a hole 20 in tubular leg 1, the holes 19 and 20 being duplicated at diametrically opposite locations of the leg extremity 1 and its socket 4. A hairpin spring 10, inserted in leg extremity 1, terminates in a pair of pins 11 projecting outwardly through the aligned holes 19 and 20 to index the two tubular elements 1, 4 in a selected relative axial position. To change this position, it is merely necessary to loosen the clamp 8, 9 and to depress the two pins 11 inwardly until they clear the outer holes 19; since the tips of these pins are rounded, they are then cammed inwardly upon a relative sliding of tubes 1 and 4 into another selected indexing position in which the assembly can be reclamped.

Socket 4a resiliently engages the unit 5, 15, via coupling 6a, 7a, at a laterally projecting part of base 15 whereas socket 4b is joined, through coupling 6b, 7b, with the housing 12' of saw 12. Socket 4c is connected, by way of coupling 6c, 7c, with a bracket 21 secured to a rear part of the body of motor 5.

I claim:

1. A cutting implement comprising:
a base;

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drive means on said base provided with a body forming a rigid unit with said base;

a saw operatively coupled to said drive means and projecting forwardly from said base; and

a carrying frame secured to said unit at three points, said frame being provided with three legs of independently adjustable length terminating at said three points. 5

2. A cutting implement as defined in claim 1 wherein two of said legs straddle a forward part of said body and the third leg engages said unit rearwardly of said body. 10

3. A cutting implement as defined in claim 2 wherein one of said legs engages a laterally projecting portion of said base, the other of said legs being secured to a side of said body opposite said projecting portion. 15

4. A cutting implement as defined in claim 2 wherein said drive means is provided with control means mounted on said third leg.

5. A cutting implement as defined in claim 1 wherein said legs are detachably interconnected by a common joint. 20

6. A cutting implement as defined in claim 1 wherein each of said legs terminates in a resilient coupling en-

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gaging said unit.

7. A cutting implement as defined in claim 1 wherein each of said legs is provided with a socket telescopically receiving an extremity thereof, said socket and said extremity being provided with selectively alignable apertures and with indexing means engageable in said apertures.

8. A cutting implement as defined in claim 7 wherein said extremities are tubular and said apertures are duplicated on diametrically opposite locations of said extremities and said sockets, said indexing means comprising a hairpin spring received in the tubular extremity and a pair of pins carried at the ends of said spring.

9. A cutting implement as defined in claim 1 wherein said sockets are deformable and are provided with releasable clamping means for immobilizing same on the respective extremities in selected indexing positions.

10. A cutting implement as defined in claim 9 wherein said clamping means comprises a split collar on each socket provided with manually tightenable screw means.

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