Nov. 2, 1965 R. F. KROLL 3,215,378

SUPPORT BRACKET FOR CHAIN SAW

Filed March 16, 1964 2 Sheets-Sheet 1

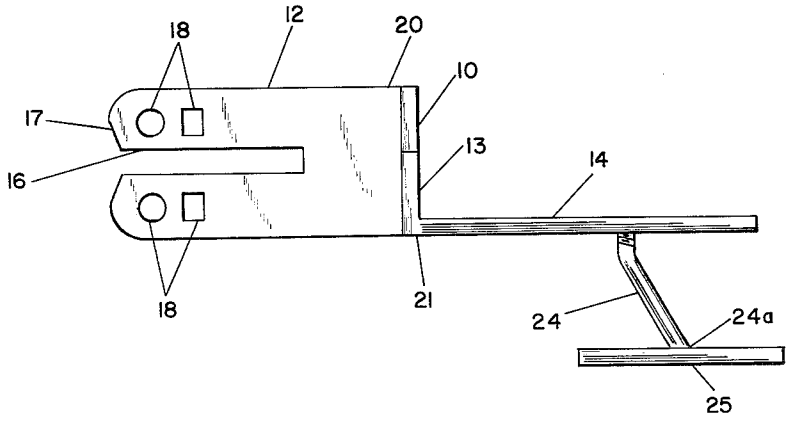


Fig. 1

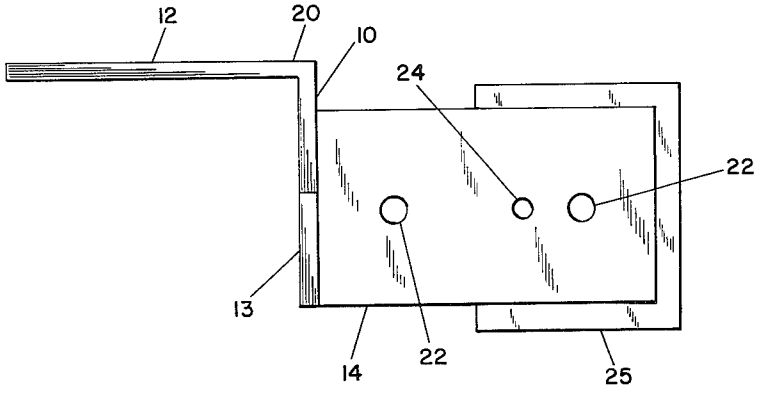


Fig. 2

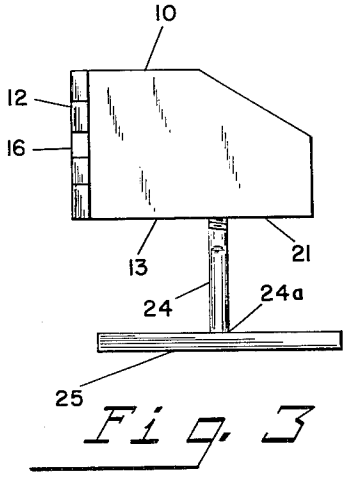


Fig. 3

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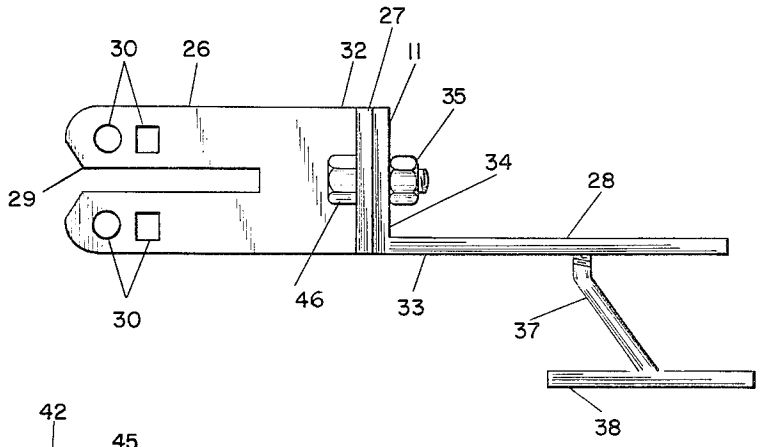


Fig. 4

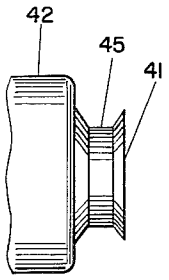


Fig. 6

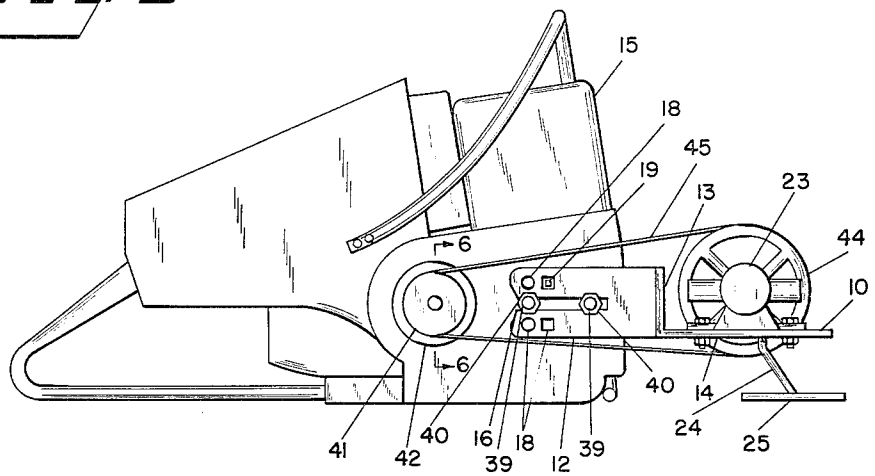


Fig. 5

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SUPPORT BRACKET FOR CHAIN SAW

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3 Claims. (Cl. 248—14)

My invention relates to power driven chain saws, and more particularly, to an improved bracket for attachment to the power unit of a chain saw to support a variety of rotatable mechanisms on said power unit in driven relation.

The conventional power saw has, as a basic element, a compact but powerful power unit, usually comprising a gasoline engine. The power unit must be compact enough to be easily carried and maneuvered by the operator, and sufficiently powerful to drive the chain saw through trees and limbs of varying thickness, density and hardness. Often, however, a chain saw may be used infrequently or only at certain times of the year by its owner, with the result that for substantial periods of time the chain saw and its power unit will be idle. Frequently also, the owner of the chain saw will have a variety of uses for a portable power unit during such periods of idleness.

Therefore, it is a primary object of my invention to provide a means for quickly and easily converting the chain saw power unit into a portable source capable of a variety of uses.

It is a further object of my invention to provide a support bracket which may be attached to a chain saw power unit and which is adapted to support a variety of driven mechanisms in positions where they may be driven by the power unit.

It is a still further object of my invention to provide a compact power source, including a chain saw power unit and such a bracket, which is adapted to support and power a variety of driven mechanisms in either portable or stationary relation.

Other objects and advantages of my invention will be apparent from the following detailed description taken in conjunction with the accompanying drawings, wherein preferred embodiments of the principles of the invention have been selected for exemplification.

In the drawings:

FIG. 1 is a side view of one embodiment of my novel bracket.

FIG. 2 is a top view of the bracket of FIG. 1.

FIG. 3 is a rear end view of the bracket of FIG. 1.

FIG. 4 is a side view of a second embodiment of my bracket.

FIG. 5 is a side view of the bracket of FIG. 1 attached to chain saw power unit.

FIG. 6 is a partial section view taken along line 6—6 in FIG. 5.

The bracket **10** illustrated in FIGS. 1–3 and 5 includes three substantially flat, rigid plates: a face plate **12**; a transverse plate **13**; and a base plate **14**. The face plate **12** is used to attach the bracket **10** to any conventional chain saw power unit **15**, as shown in FIG. 5. The face plate **12** preferably has a centrally located slot **16** extending from its rear end **17** a substantial distance toward the transverse plate **13**. Adjacent each side of the slot **16** are a plurality of corresponding openings **18**. The slot **16** is adapted to receive the conventional fastening means, such as fastening bolts **39**, which extend from the power unit **15** and normally support the guide bar (not shown) of the chain saw. The openings **18** preferably have different shapes to adapt them to receive the locking lugs **19** of various conventional chain saw power units **15**.

The transverse plate **13** extends transversely from approximately the forward end **20** of the face plate **12**. The transverse plate **13** is preferably substantially perpendicular to the face plate **12** and, when the bracket **10** is attached to a chain saw power unit, it extends outwardly therefrom and is substantially vertical. The transverse plate **13** may be integral with the face plate **12**, or it may consist of a separate plate attached to the face plate in rigid relation.

The base plate **14** projects forwardly from the transverse plate **13** in rigid relation. The base plate **14** is preferably substantially perpendicular to the transverse plate **13** and substantially horizontal when the bracket **10** is attached to a chain saw power unit **15**. The base plate **14** has one or more openings **22** which adapt it to individually support a wide variety of driven mechanisms. The rotary pump **23** shown in FIG. 5 is one example of the type of mechanism which may be supported by the bracket **10** and driven by the power unit **15**.

A support leg **24** preferably extends downwardly from the base plate **14** to cooperate with the power unit support means and help support the bracket **10** and any driven mechanism mounted thereon when they are employed in a stationary position. If desired, the support leg **24** may carry a broad foot **25** or pad at its lower end **24***a* to distribute the weight of the bracket **10** and connected structure, and provide a more stable support. However, when the power unit **15**, bracket **10**, and supported driven mechanism are to be used as a hand tool, the support leg **24** and foot **25** may be eliminated.

The bracket **11** illustrated in FIG. 4 is generally similar to the bracket **10**, described above. Like the bracket **10** it has a face plate **26**, transverse plate **27** and a base plate **28**. The only essential difference between the brackets **10** and **11** is that the base plate **14** of the bracket **10** rigidly projects from the transverse plate **13**, while the base plate **28** of the bracket **11** swivelably projects from the transverse plate **27**.

The face plate **26** of the bracket **11** has a slot **29** and openings **30** corresponding to the slot **16** and the openings **18**, respectively, of the face plate **12** of the bracket **10**. The face plate **26** is substantially vertical when attached to a chain saw power unit.

The transverse plate **27** of the bracket **11** projects transversely from approximately the forward end **32** of the face plate **26**, and is preferably perpendicular to the face plate **26**. When the bracket **11** is attached to a chain saw power unit, the transverse plate **27** is preferably substantially vertical.

A flange **34** projects preferably perpendicular from the rear end **33** of the base plate **28** of bracket **11**. The flange **34** and the transverse plate **27** have corresponding openings through which is inserted a bolt **46**. A nut **35** holds the bolt **46** in position. The bolt **46** and the nut **35** secure the transverse plate **27** and the base plate **28** together in swivelable relation. By loosening the nut **35**, the base plate **28** may be swiveled to any position, whether substantially horizontal or inclined to the horizontal. The flange **34** and base plate are held in the desired position by tightening the nut **35**. Any other suitable means may be substituted for the bolt **46** and nut **35** to provide the swivelable connection between the transverse plate **27** and the flange **34**. Like the base plate **14** of the bracket **10**, the base plate **28** is adapted to support any suitable driven element.

A support leg **37** carrying a foot **38** at its lower end **37***a* preferably projects downwardly from the base plate **28** when the base plate **28** is positioned horizontally. The support leg **37** and foot **38** will usually be removed when the base plate **28** is positioned vertically.

FIG. 5 shows how the bracket **10** is attached to a chain saw power unit **15**. The typical chain saw power unit **15** has two fastening bolts **39** which support the chain saw guide bar (not shown). Those bolts **39** also support my bracket **10**. Before the bracket **10** may be attached, therefore, the chain saw guide bar must be removed

from the studs **39**. Once the guide bar is removed, the face plate **12** is placed against the power unit **15** with the bolts **39** projecting through the slot **16**, and the power unit locking lug **19** engaging a matching plate opening **18**. The face plate **12** is then secured to the studs **39** by nuts **40** or other suitable means. The support foot **25** is designed to rest on the surface which supports the power unit **15** when the face plate **12** is so secured to the bolts **39**. Preferably the support leg **24** threadedly engages the base plate **14** to permit vertical adjustment of the leg **24** and foot **25**.

The mechanism to be driven by the power unit **15** may be secured to the base plate **14**, either before or after the bracket **10** is secured to the power unit. FIG. 5 illustrates the manner in which a fluid pump **23** may be supported by my bracket **10** and driven by a chain saw power unit **15**.

Any suitable means may be used to adapt the drive means of a particular chain saw power unit **15** for driving the driven mechanism. For example, the illustrated chain saw **15** has a drum clutch assembly **42**, which is driven by a centrifugal clutch (not shown) which is keyed to the crankshaft (not shown) of the power unit **15**. All direct drive and some gear drive chain saws have such a drum clutch assembly. In normal use, a chain drive sprocket (not shown) is secured to the clutch drum assembly **42**. When the power unit **14** is to be used with my bracket **10**, the sprocket is preferably removed from the assembly **42**, and a V-pulley **41** is secured to the clutch drum assembly **42** in any suitable manner, as shown in FIG. 6. Alternatively, a split V-pulley may be mounted on the drum clutch assembly **42** without removing the sprocket. A V-belt **45** is then mounted on pulley **41** and pulley **44** carried by the pump **23** or other driven element. The V-belt **45** transmits driving power from the clutch drum assembly **42** and attached pulley **41** to the pulley **44** and the pump **23**.

Attachment of the bracket **11** to a chain saw is similar to the above described attachment of the bracket **10** with the exception that the base plate **28** can be swivelled to a horizontal, vertical or intermediate position, as desired.

My novel brackets **10** and **11** make any conventional chain saw a more versatile tool. The brackets **10** and **11** may mount a variety of suitable driven mechanisms for operation by the power unit **15** of the chain saw. The power unit and supported driven element may be employed, where suitable, either as a hand tool by using the conventional handles on the power unit, or as a stationary tool by using the supporting feet **25** or **38**. The swivelable mounting of the base plate **28** further adds to the versatility of any power unit to which my bracket **11** is attached. My brackets **10** and **11** allow the chain saw owner to utilize the power unit of his chain saw for a multitude of purposes, and allow him to quickly convert his power unit from one use to another as well as back to chain sawing, with a minimum of lost time. As a result, my bracket effectively converts the power unit of a conventional chain saw from a single-use unit to a portable power unit having a wide variety of applications.

It is understood that my invention is not confined to the particular construction and arrangement of parts illustrated and described, but embraces all such modified forms thereof as come within the scope of the following claims.

I claim:

1. A bracket for supporting a driven mechanism on a chain saw power unit, said bracket comprising:

(a) a face plate having a front end and a rear end,

(b) a slot extending through said face plate between said front end and said rear end and adapted to receive a plurality of guide bar fastening bolts extending from said power unit,

(c) at least one opening extending through said face plate near said slot and adapted to receive a locking lug extending from said power unit,

(d) a transverse plate rigidly secured to said face plate near said front end and extending transversely therefrom, and

(e) a base plate extending forwardly from said transverse plate, said base plate having a plurality of openings extending therethrough and being adapted to support a mechanism driven by said power unit thereon.

2. The invention described in claim **1** including means for securing said base plate to said transverse plate in swivelable relation, whereby said base plate can be swiveled to support a mechanism in any desired position.

3. The invention described in claim **1** wherein a support leg extends downwardly from said base plate when said base plate is in a horibontal position, and wherein a pad is attached to the lower end of said support leg to provide an increased bearing surface for support of said bracket and mechanism.

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