April 12, 1955 J. H. PONTS 2,705,982

BARK-PEELING TOOL MOUNTED ON PNEUMATIC HAMMER AND RECIPROCATED THEREBY

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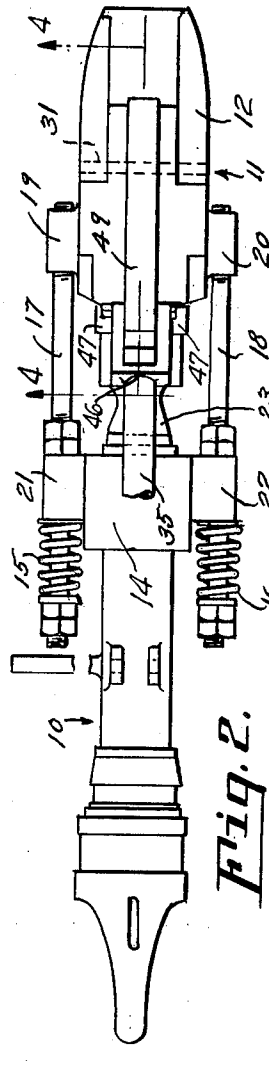

Fig. 2.

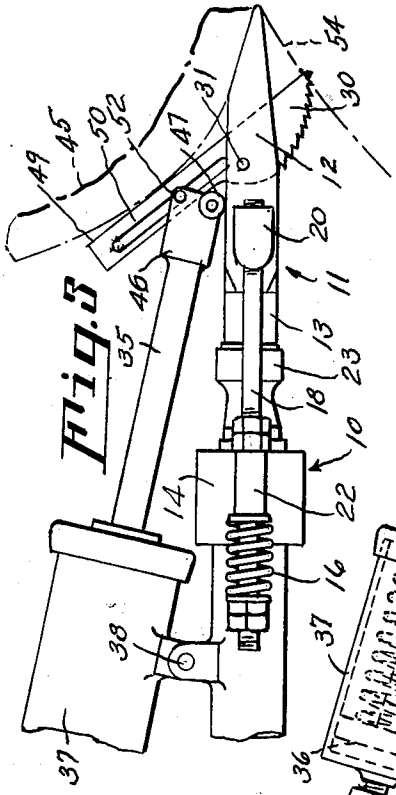

Fig. 3

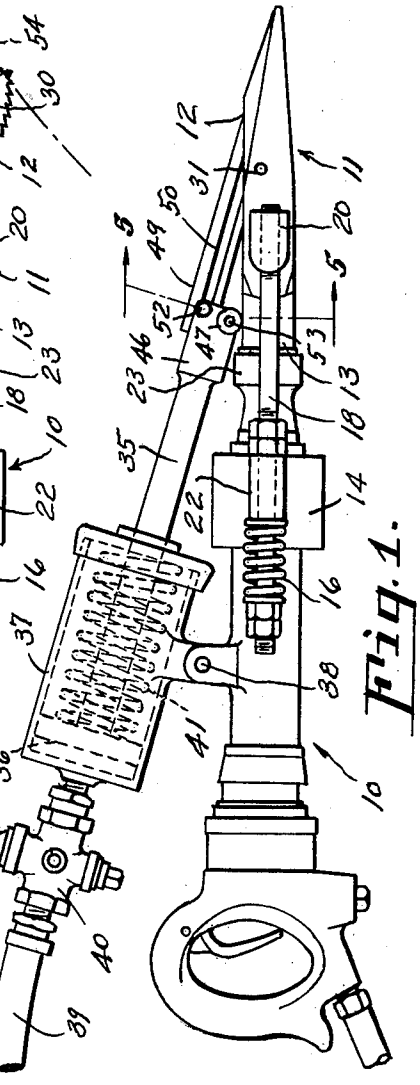

Fig. 1.

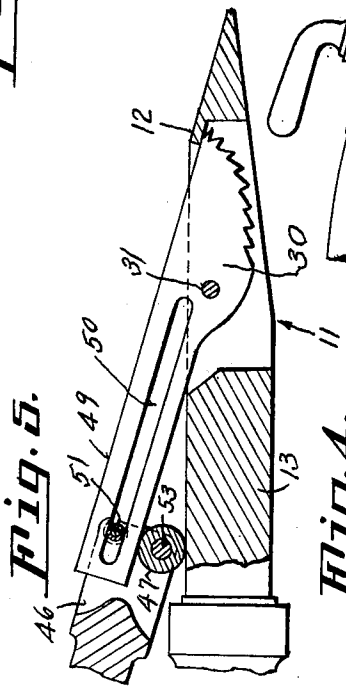

Fig. 4.

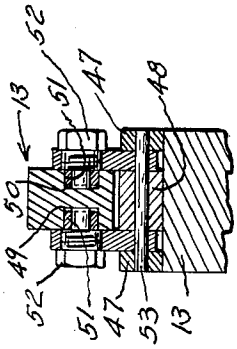

Fig. 5.

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BARK-PEELING TOOL MOUNTED ON PNEUMATIC HAMMER AND RECIPROCATED THEREBY

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4 Claims. (Cl. 144—208)

My present invention relates to bark-peeling equipment and more particularly to a bark-peeling tool operated by a pneumatic hammer.

The present invention is mainly concerned with the tool end of the hammer since the internal construction of the hammer is well known in principle. The pneumatic hammer shown in the drawings is a modified riveter type on which the improved tool is mounted. Other types of pneumatic hammers such as jack hammers may be adapted to receive the bark-removing tool.

The principal object of the invention is to produce an improved bark-peeling tool.

Another object is to produce an improved portable pneumatically operated bark-peeling tool that forces the operating tool between the bark and the wood portion of a log, the bark sliding over the penetrating end of the tool and being then forced upwardly and away from the log in successive operations of the tool, and other objects of the invention will be more apparent as the description of the construction and the operation of the same progresses.

In the drawings illustrating the invention:

Fig. 1 is a side elevation of the device, portions of which are shown in dotted lines other portions being broken off for convenience;

Fig. 2 is a top plan view, portions of which are broken off four convenience;

Fig. 3 is a fragmentary side elevation showing the tool in one of the positions it assumes while removing bark from a log;

Fig. 4 is a fragmentary longitudinal-section of the operating end of the tool and is taken on the line 4—4 of Fig. 2, and

Fig. 5 is a fragmentary cross-section taken on line 5—5 of Fig. 1.

Referring more in detail to the drawings, **10** is a pneumatic hammer and **11** is an improved bark-peeling tool generally indicated.

A penetrating portion **12** of the tool is chisel-shaped and has a shank portion **13** which fits in a ram end **23** of the hammer **10**.

In the hammer **10** shown there are provided side springs **15** and **16** on rods **17** and **18**. The rods **17** and **18** are threaded into brackets **19** and **20** on the tool head **11** and are loosely slidable through brackets **21** and **22** located on a ram cylinder **14** of the hammer **10**. These springs maintain the shank portion **13** in the ram end **23** and retract the chisel portion **12** when the ram end **23** moves backwardly and also causes the ram to move the chisel portion **12** forward with more of a push than a sharp blow. When in operation the chisel portion **12** is driven ahead between the wood **54** and the bark **45**, the hammer **10** being manually shoved forward as the chisel portion progresses.

After the chisel portion **12** has been driven in under the bark **45** the hammer **10** is temperaturely de-energized. At this point the bark **45** is raised as shown in Fig. 3 by means of a bark-lifting lever **30** pivoted at **31** in the chisel portion **12** and having downwardly and rearwardly directed teeth on its lower surface that dig into the wood of the log and prevent the chisel portion **12** from moving rearwardly owing to any action by the pneumatic hammer **10**. The toothed lever **30** is pivoted clockwise (as viewed in Figs. 1, 3 and 4) on the chisel portion **12** by a second ram member **35** the rear end of which is provided with a piston **36** located in a cylinder **37** which is pivoted at **38** on the pneumatic hammer **10**. A compressed air line **39** having a valve **40** communicates with the cylinder **37** and permits compressed air to be applied against the piston **36** to force the ram **35** outwardly. When the valve **40** is shut off and vented, a coil compression spring **41** located between the piston **36** and a forward end of the cylinder **37**, retracts the ram, as shown in Fig. 1. A forward head **46** of the ram **35** is slotted and is provided with three coaxial rollers **47**, **47** and **48** mounted on a pin **53** extending transversely through the slotted head, each of the rollers **47** being located on an outside face of the head, and the roller **48** being located in a lower portion of the slot in the head **46**, so that all rollers make contact with the top surface of the chisel portion **12**. A rear portion **49** of lever **30** is provided on each side with longitudinal grooves or rollways **50** within which operate rollers **51** journalled on bearings located in an upper portion of the slot in the head **46**, said bearings constituting inner ends of bolts **52** which are threaded into each side of the slotted head **46**.

It will thus be seen that when the chisel portion **12** is forced between the bark **45** and the log **54** and compressed air is admitted to the cylinder **37**, the teeth on the lever **30** prevent the tool from backing away from the log **54** when the ram head **46** is pushed forward and rolls on the top face of said chisel member. This action pivots the rear portion **49** of the lever **30** upwardly and forwardly on the pin **31** in the chisel portion **12**, as shown in Fig. 3, thus forcing the bark **45** upwardly and away from the log **54**. This operation is repeated from time to time until the bark has been removed from the log **54**. During movement of the ram **35** in and out of the cylinder **37** the cylinder slightly rocks on the pivot **38**.

No special type of pneumatic hammer is necessary or claimed. Such hammers may differ in detail, since the riveter type shown may be replaced, for example, by the so-called jack hammer on which the springs **15** would not be necessary. I wish to bring out that any pneumatic type of hammer may be used in which there is a ram member engaging the rear end of my special tool and to which may be attached the second ram cylinder **37**.

While I have shown my invention somewhat in detail, yet it is to be understood that I may change the proportions and use equivalent structure coming within the scope of the appended claims.

Having thus described my invention what I claim as new is:

1. An improved bark-removing tool for use in combination with a pneumatic hammer, comprising a chisel-shaped member for penetrating between the wood portion and the bark of a log, said chisel member being mounted on and reciprocated by said hammer to effect said penetration, a toothed member mounted for pivotal movement about a transverse axis through said chisel member and having a rear portion extending above the top face of said chisel member, a compressed air cylinder pivoted on said hammer and having an internal piston returnable by means of an internal compression spring, said piston having an externally extended ram portion, a head on the outer end of said ram, rollers located on said head and contacting the upper face of said chisel member, said head being movably engaged with the rear portion of said toothed member and pivoting said rear portion upwardly when said ram advances from said cylinder, the rear portion of said toothed member engaging the under side of said bark and raising the bark up and away from said wood portion.

2. An improved bark-removing tool for use in combination with a pneumatic hammer as set forth in claim 1, in which the movable engagement between said head and said rear portion of the toothed member comprise internal rolls located on said head and engaging in rollways located in the sides of said rear portion.

3. An improved bark-removing tool for use in combination with a pneumatic hammer, said tool having a head portion mounted on and reciprocated by said hammer, a pneumatic cylinder pivoted on said hammer and having a reciprocable ram member extending outwardly in the direction of said head portion, said head portion being of chisel shape so as to penetrate between

the bark and wood portion of a log when reciprocated by said hammer, a bark-raising member pivoted in said head portion, and means located on the end of said ram member, said means engaging said bark-raising member and pivoting said bark-raising member upwardly and away from said head portion upon an appropriate stroke of said ram member.

4. An improved bark-removing tool for use in combination with a pneumatic hammer as set forth in claim 3, in which said bark-raising member is provided with a lower curved and toothed claw portion on its forward end that swings down to engage said wood portion of

said log when said bark-raising member is pivoted upwardly by means of said ram member.

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