

April 21, 1964

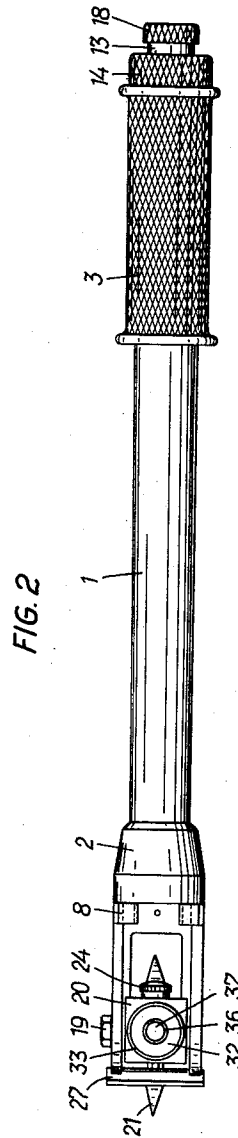
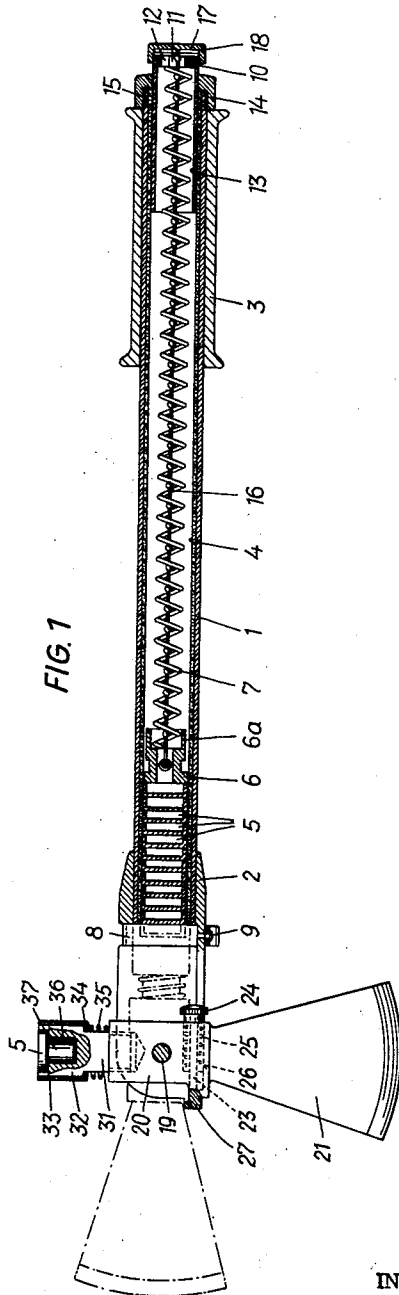
K. LATSCHBACHER

3,129,430

MARKING AND NUMBERING TIMBER

Filed July 29, 1960

3 Sheets-Sheet 1



INVENTOR:
KAJETAN LATSCHBACHER
BY:

Otto John May
Attorney

April 21, 1964

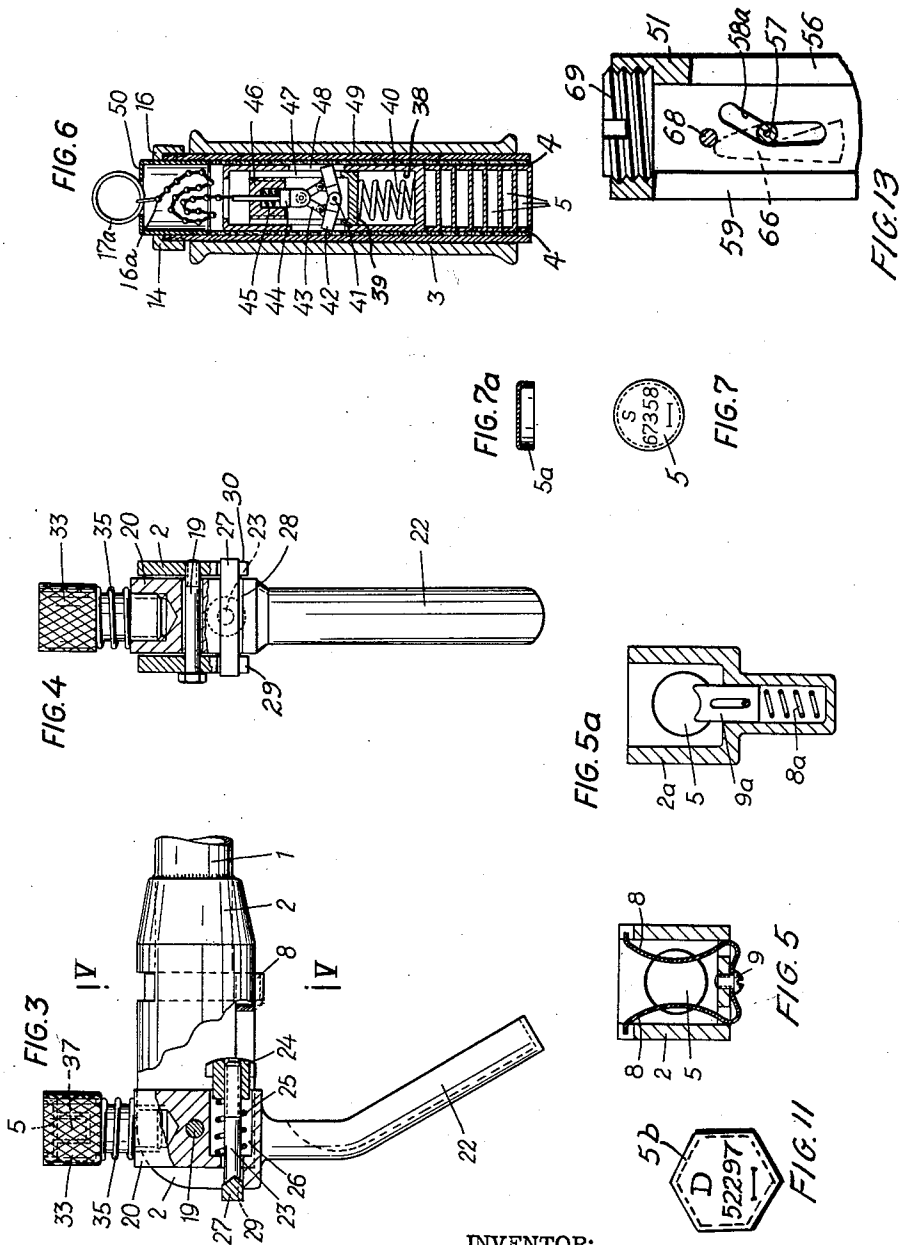
K. LATSCHBACHER

3,129,430

MARKING AND NUMBERING TIMBER

Filed July 29, 1960

3 Sheets-Sheet 2



INVENTOR:
KAJETAN LATSCHBACHER
BY:

Otto John Munn
Attorney

April 21, 1964

K. LATSCHBACHER

3,129,430

MARKING AND NUMBERING TIMBER

Filed July 29, 1960

3 Sheets-Sheet 3

FIG. 9

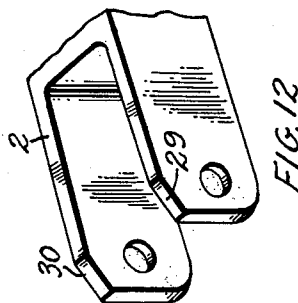
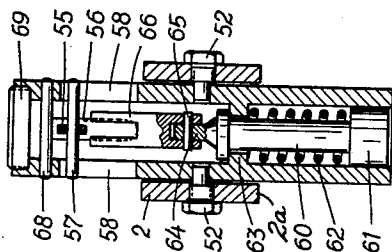


FIG. 12

FIG. 8

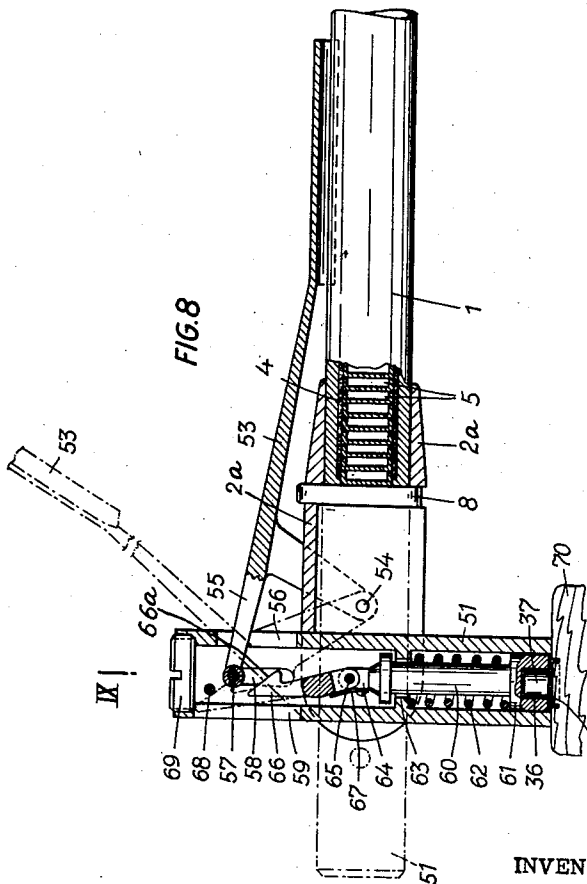
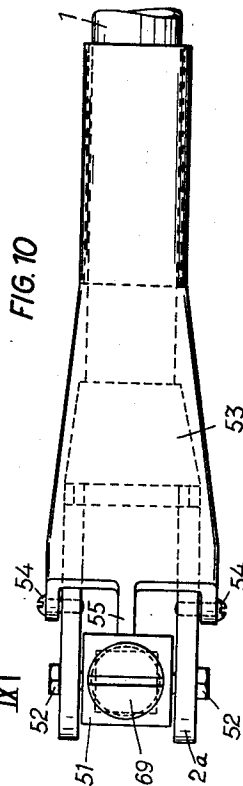


FIG. 10



INVENTOR:
KAJETAN LATSCHBACHER
BY:

Otto John Munn
Attorney

1

3,129,430

MARKING AND NUMBERING TIMBER

Kajetan Latschbacher, 20 Zirerstrasse, Steyr,
Upper Austria, Austria

Filed July 29, 1960, Ser. No. 46,195

Claims priority, application Austria Nov. 14, 1959

7 Claims. (Cl. 1—46)

This invention relates to the permanent marking of timber, wooden posts, poles, and, in general articles made of wood or like material, and which must be individually numbered or labeled for subsequent identification.

While it is known to mark or label timber by means of numbers or symbols painted thereon, or by stamping such numbers or symbols into the wood, such procedure is unsatisfactory because of the impermanent nature of the marking, due to growth of the timber, rapid deterioration of legibility because of weathering, and numerous other factors rendering subsequent identification inaccurate or impossible after only a relatively short time.

The present invention eliminates the aforesaid disadvantages and drawbacks of the prior art by providing a tool by which metallic plates bearing sequential numerals or other symbols are quickly, easily and inexpensively attached to each respective piece of timber or other item or article to be subsequently identified.

It is therefore the main object of this invention to provide an impact tool into which a supply of metallic marking or identification plates may be inserted and which operates automatically to feed these plates in succession into position within a striking or impact head in response to a blow by the head fixing the preceding plate to a piece of timber or other article.

Another object of the invention is to provide a tool of the character stated which enables a supply or stack of the aforesaid plates to be rapidly inserted and employed within the tool, ready for use, after the preceding supply has been exhausted.

Still another object is to provide a combination of tool of the nature stated, with cup-like metallic plates, so disposed and arranged that each plate may be attached, in succession, by driving its out-turned rim or flange into the wood of the article to be marked, by a single blow of the tool.

The foregoing and other objects and advantages are attained by a tool having a hollow helve constructed and arranged to accommodate a stack of the plates to be attached. A striker is mounted on one end of the helve, for pivotal movement about an axis generally transverse thereof, from a first position wherein a recess in the face of the striker is aligned with the helve to receive and hold the leading plate of the stack, to a second position wherein the striking face and the plate held thereby, are pivoted into position such that the held plate may be attached to a tree, for example, by a single blow of the tool. As each plate is transferred to the striker, the remaining plates of the stack are automatically advanced so that the next succeeding plate will be moved and inserted into the striker in response to pivoting thereof to the aforesaid first position.

In the drawing:

FIG. 1 is a side elevation, partly in section, of one form of the invention, showing the striking head with an identification plate therein, ready for attachment and a number of stacked plates in the magazine helve;

FIG. 2 is a plan view corresponding to FIG. 1;

FIG. 3 is a view to scale enlarged over FIG. 1, of the striking head of a form of the invention slightly modified over that of FIG. 1;

FIG. 4 is a view corresponding to FIG. 3 and looking from the left thereof;

FIG. 5 is a cross section taken in a plane identified

2

by the line V—V, FIG. 3 and showing in detail the spring for retaining the stacked plates in the handle;

FIG. 5a is a cross section corresponding to FIG. 5, of a modified form of means for retaining the plates within the handle;

FIG. 6 is a detail axial section to about the same scale as FIGS. 3 and 4, showing the distal end of the helve of a modification providing means for advancing the stacked plates within the handle and operated by and in response to the blow affixing a plate to an object such as a piece of timber;

FIG. 7 is a plan view of one of the numbered plates to be affixed;

FIG. 7a is a diametral section of the plate of FIG. 7;

FIG. 8 is a view partly in section showing the striking head end of a modified form of the invention;

FIG. 9 is a section taken in a plane identified by line IX—IX, FIG. 8;

FIG. 10 is a plan view corresponding to FIG. 9.

FIG. 11 is a plan view of a polygonal form which the numbering plates may have;

FIG. 12 is a broken perspective view to an enlarged scale, of the forked end of head 2, inverted from the position of FIGS. 3 and 4 to better show the wedging surfaces thereof; and

FIG. 13 is a detail broken section showing a construction in all respects identical with that of FIGS. 8, 9 and 10 except for the shape of the upper end of the guide slots in the sleeve.

Referring in detail to the form of the invention shown upon FIGS. 1 to 5, numeral 1 identifies a tubular helve which also forms a magazine for a stack of identification plates 5 to be affixed to trees, posts, or other articles to be identified. A forked head 2 is rigidly attached to helve 1 at the left end thereof as the parts are viewed upon FIGS. 1 and 2. A grip 3 is fixed to the distal or right end of helve 1. A sleeve 4 of sheet metal, cardboard, or plastic is sized to have a smooth fit within helve 1 and to serve as a magazine for a stack of plates 5 to be affixed. From FIGS. 7 and 7a it is noted that each plate is a cup-shaped metal item having an axially-flanged circular rim which penetrates the article under the impact of a blow from the tool, and permanently affixes the plate thereto. As shown upon FIG. 7, each plate may have a number or symbol different from those of the other plates, for identification of each article. While the flanged rims of the plates are shown as continuous, they may be serrated or notched to form prongs or points penetrating the articles to which they are to be attached. Also the plates may be polygonal in form instead of circular, in which event, of course, sleeve 4 will have a corresponding cross-sectional shape. In the form shown, the plates in each stack will be sequentially numbered.

A plunger 6 is sized for a smooth sliding fit within sleeve 4 and a coil spring 7 acts between the closure of the distal end of the helve, subsequently described in detail, and the plunger, to urge the latter and the stack of plates in sleeve 4, axially toward the striking head. Referring particularly to FIG. 5, head 2 at plane V—V, is channel-shaped in cross section and accommodates a V-shaped spring 8 having its bight portion fixed thereto by a machine screw 9. The arms of the spring are bowed inwardly and, in the normal position shown, extend over and conjointly obstruct the contiguous end of helve 1. Thus, when the parts are in the positions shown at FIG. 1, the stack of plates are firmly held and urged by spring 7 against the bowed arms of spring 8.

The distal end of helve 1 has a centrally-apertured cap-like nut 14 threaded thereon. A tubular member 13 passes with a smooth fit through the aperture of the nut and is fixed therewith, as by welding. A ring 10 fits within the outwardly-projecting end of member 13.

3

Plunger 6 has one end of a ball chain 16 secured to it. The chain extends axially along helve 1, through spring 7 and its outer end is attached to a ring 17 inserted between ring 10 and a cap 18 fitting over and closing the extending end of member 13. The aforesaid ring 10 has a central aperture of a size sufficient to pass the balls of chain 16, and a narrower radial slot opening into this aperture. Thus by removing cap 18, ring 17 may be grasped and pulled outwardly so that the chain slides through the aperture of ring 10 to thereby withdraw plunger 6 to the right, FIG. 1, against the urge of spring 7. When the plunger has been sufficiently withdrawn, the link portion of the chain, between balls, is moved into the slot of ring 10 so that the plunger is thus releasably held in such position, as for example, against the inner end of member 13. Then, by unscrewing the nut 14, the entire assembly of parts including the nut, member 13, plunger 6, spring 7, rings 10 and 17 and cap 18 may be removed as a unit from helve 1. Thus, when all plates of a sleeve 4 have been used or affixed, the empty sleeve may be withdrawn and a new one, full of plates may be inserted. Alternatively, of course, the sleeve may be left in place and a new stack of plates inserted into it.

The striking head assembly includes a main member 20 mounted between the tines of forked head 2, for pivotal movement on a bolt 19 passing through aligned holes of the tines and member, about an axis normal to and intersecting the central longitudinal axis of helve 1. Member 20 may be provided with a hatchet-like blade 21 for use in clearing or forming a flat surface on the object to facilitate attachment of a plate thereto.

Member 20 has a bolt 23 mounted in an aperture thereof for sliding in a direction which, in FIG. 1, is parallel to the axis of helve 1. The aperture is counterbored at its right end, to receive a coil spring 25 which acts in a manner obvious from inspection of FIGS. 1 and 3, between member 20 and a button 24 fastened to the end of the bolt, to urge the latter to the right. The left end of this bolt carries a cross arm 27 whose ends extend sufficiently to project into contact with oblique wedging surfaces 29 and 30 formed on the tines of forked head 2. The construction is such that when the parts are in the position shown upon FIG. 1, spring 25 acts to urge the ends of cross arm 27 into wedging engagement with surfaces 29 and 30 to thereby firmly and releasably hold member 20 in its pivotal position shown. However, when the operator presses on button 24, cross arm 27 is thereby moved free of the tines of head 2, so that member 20 is thereby freed for pivotal 90° movement counterclockwise, FIG. 1, to the position indicated by the dot-dash lines. It will be noted from FIG. 3, particularly, that button 24 has a shank portion fitting the counterbore in which spring 25 is received, to thereby guide the bolt in accurate axial translation as previously described.

Member 20 has a recess in its face opposite blade 21. A striker 31 is threaded into this recess. The striker has an enlarged head 32 upon which a sleeve 33 is fitted for limited sliding movement which movement is vertical as the parts are viewed upon FIG. 1. The lower end of sleeve 33 is flanged inwardly at 34 to engage below the shoulder formed by the head of the striker. A coil spring 35 surrounds the striker and acts between member 20 and the flange 34 of member 33 to urge the latter, to its limiting upward position. The head 32 of striker 31 is axially bored and a hollow brass cup 36 has a forced fit therein. A magnet 37 fits within the cup. As clearly shown upon FIG. 1, the upper ends of the head 32, cup 36 and magnet 37 lie in a common plane, normal to the plane of FIG. 1.

FIGURE 1 shows the tool with a plate 5 in sleeve 33, ready for attachment. To attach, using the tool as a hammer, the user strikes the object with striker 31. Sleeve 33 slides back partially and the rim of plate 5 is driven into the material of the object and the plate thereby firmly and permanently attached. The operator now presses on

4

button 24 and thereby releases member 20 for pivotal movement relatively to head 2. The member and parts carried thereby are then swung about bolt 19, clockwise as viewed upon FIG. 1, until the outer end of sleeve 33 enters between and spreads apart the arms of spring 8 and, in a manner clear from inspection of FIG. 5, enables spring 7 to advance the stack of plates in sleeve 4 so that the leading plate is forced into the contiguous end of sleeve 33 and held by magnet 37 in centralized position. Member 20 is then swung counterclockwise about bolt 19 until cross arm, under urge of spring 25, snaps beneath the surfaces 29 and 30 of head 2 and holds the member in the position shown, ready for use. The arms of spring 8 resume the position shown upon FIG. 5 and thus prevent egress of plates from the sleeve.

When the supply of plates in sleeve 4 is exhausted, cap 18 is taken off, ring 17 is pulled out, together with chain 16 and plunger 6. When the plunger is fully retracted, a link of the chain is moved into the radial slot of ring 10, to hold the plunger against the thrust of spring 7. Nut 14 is then unscrewed and the entire assembly connected therewith is removed, as previously described. Empty sleeve 4 may then be removed and a new one, filled with plates, inserted into helve 1, or, alternatively, a new stack of plates may be slipped into the sleeve 4. The assembly is then replaced by sliding plunger 6 into the outer end of the sleeve and screwing nut 14 back onto tubular member 13. The plunger is then released to the urge of spring 7, by sliding the chain out of the radial slot in ring 10 and into the central aperture thereof. Cap 18 is replaced over ring 17 and the tool is again ready for use.

The construction shown upon FIGS. 3 and 4 is identical in all respects with that depicted upon FIGS. 1 and 2, except that in place of the hatchet-like blade 21, there has been substituted an adz-like blade 22 and which is used for the same purpose as blade 21, namely, to form a clear, clean surface upon the object to facilitate the attachment of a plate thereto. For example, where the tool is being used to mark a tree, blade 21 or blade 22 may be used to remove a small area of bark so that the plate will be embedded in the body or wood of the tree.

FIG. 5a shows a modification in which spring 8, FIG. 5, is replaced by a slide 9a guided in a slideway formed in head 2a for movement in a direction normal to the axis of helve 1. The slide is urged vertically to the position shown, by a spring 8a, movement being limited by any suitable means such as a pin fixed with head 2a and extending through a slot in slide 9a. As member 20 is swung to place sleeve 33 in alignment with helve 1, the sleeve engages the end of slide 9a and forces it clear of the end of the helve so that the contiguous plate 5 of the stack may enter into the sleeve 33 and be there held by magnet 37. The basic operation is the same as that previously described for FIGS. 1 and 2.

FIG. 6 shows a modified form of the means for advancing the stack of plates 5 within sleeve 4, as the leading plate is fed into sleeve 33 and subsequently attached to an object. In this form, there is a first piston 38 slidably fitting sleeve 4 which sleeve may be identical with that of FIG. 1. This piston is tubular in form and has its upper end inwardly flanged, as shown. The piston has a pair of diametrically opposite slots in its side wall, one of them being identified at 48. The bottom of this piston engages the final or outer one of the stack of plates 5 in sleeve 4 and, in the manner subsequently explained, urges the stack forwardly toward the head end of the tool.

As second piston 39 slidably fits piston 38 and is held against removal therefrom by the aforesaid flanged end of piston 38. This piston has two diametrically-opposite longitudinal slots 47 in its wall, each slot being in registration with a respective one of slots 48 in piston 38 and forming therewith a pair. A spring 40 is positioned between the two pistons so that if second piston 39 is considered as being fixed, the spring acts to urge piston 38

5

and the stack of plates downwardly as viewed upon FIG. 6. Two detents 42 are pivoted together by a pin 41, at their contiguous ends. Each detent extends through a respective pair of the aforesaid slots in pistons 38 and 39. A pair of links 43 each has one end pivoted to the mid-portion of a respective one of detents 42. The other end of these links are pivoted on a common axis to a slider 44. A plug 46 is threaded into the upper end of piston 39 and has an axial bore, counterbored at its lower end to receive the slider with a smooth guided fit. The slider includes a shank extending upwardly through the bore in plug 46 and a spring 45 in the aforesaid counter-bore acts, in a manner clear from inspection of FIG. 6, to urge the slider downwardly with respect to the plug, to the limiting position shown. The construction and arrangement are such that in this position, under urge of spring 45, the outer ends of detents 42 are urged downwardly, so that they bite into the material of sleeve 4 and effectively but releasably hold piston 39 against movement outwardly, that is, upwardly as viewed in FIG. 6. The free end of the shank of slider 44 has one end of ball chain 16a attached thereto. The other end of the chain passes through a central aperture in a closure 50 and is there connected to a ring 17a so that by pulling outwardly on the ring a corresponding force is applied to slider 44 and acts in an obvious way to pivot detents 42 and move their distal ends, against the urge of spring 45, out of contact with sleeve 4. The two pistons may then be retracted as a unit outwardly within and along the sleeve. The chain is of a length sufficient to enable the pistons to move to the head end of the sleeve. Thus, when uninfluenced by a pull on chain 16a, the assembly comprising the pistons, clevis, links and detents form a one-way clutch which enables them to move freely downwardly, FIG. 6, as a unit, but effectively prevents their movement in the opposite direction, due to engagement of the free ends of detents 42 with the walls of sleeve 4.

Inner piston 39 and its plug 46 possess considerable mass; and each blow of the tool in affixing a plate effects an axial component force thereon tending to move this piston and plug toward the head end of the tool. Thus in a way clear from FIG. 6 and the foregoing description, as plates are affixed and removed from the stack, this piston is moved, step by step, toward the head or striking end of the tool. This operation acts to maintain spring 40 under a certain degree of compression, so that first piston 38 is continuously urged against the final plate 5 of the stack. The plates are thus fed, one by one, into the sleeve 33 as the latter is pivoted into alignment with the open head end of helve 1; and when a new stack of plates is to be inserted, it is merely necessary, by a pull on ring 17a, to draw pistons 38 and 39 as a unit to the limiting upward position substantially shown upon FIG. 6, unscrew nut 14, insert a new stack of plates and replace the nut.

FIGURES 8, 9 and 10 illustrate a second basic form of the invention. In this form, the helve 1, sleeve 4 therein, and the construction at the handle end of the helve, may be identical with that shown upon FIGS. 1 and 2 for feeding the plates toward the head of the tool and replenishing the supply thereof. Alternatively, of course, the feeding means of FIG. 6 may be used in substitution for that shown in FIGS. 1 and 2. In the form being described, the plates are attached by a blow imparted thereto by a compressed spring 62.

A sleeve 51 has an internal flange 63 between its ends. Above this flange, as the parts are viewed upon FIG. 8, the passageway through the sleeve is square in cross section. Below the flange the passageway is circular in cross section. The head 2a may be forked and of the same general construction as in FIGS. 1 and 2. Sleeve 51 is pivoted in and between the tines of head 2a by two aligned screws 52, so that it may pivot from a first or operating position shown in solid lines upon FIGS. 8, 9 and 10, to a second position indicated in dot-dash lines

6

upon FIG. 8. In the first position the longitudinal axis of the sleeve is normal to the axis of helve 1. In the second position the two axes are aligned. A lever 53 has parallel ears depending from opposite side edges of its forward end. The ears embrace head 2a between them and aligned screws 54 pass through apertures in their distal ends, to thereby mount the lever for pivoting about an axis normal to the plane of FIG. 8. Lever 53 has an arm 55 integral therewith. As best shown in FIGS. 8 and 10, this arm extends through a slot 56 in the wall of sleeve 51. Referring more particularly to FIG. 9, each of the two walls of sleeve 51 perpendicular to that containing slot 56, also has a slot 58 therein. The two slots are in alignment transversely of the sleeve and receive with a smooth guided fit, the ends of a pin 57 which also passes through an aperture in the end of arm 55. A guided translation is thus imparted to pin 57, along slots 58, by and in response to pivoting of lever 53 from the position shown in full lines upon FIG. 8 wherein the lever is generally parallel to helve 1, to a position indicated by the dot-dash lines. A slot 59, FIG. 8, extends through the side wall of sleeve 51 opposite slot 56. The upper end of the sleeve is closed by a threaded plug 69.

A bolt or striker comprises an enlarged head 61 integral with the lower end of shank 60. This head is axially bored in the manner previously described for striker 31, to receive with a press fit, a brass cup 36 and a magnet 37. Since cup 36 and magnet may be duplicates of the ones shown upon FIG. 1, they have been given the same reference numerals. A strong, heavy coil spring 62 surrounds shank 60 and bears at its ends against flange 63 and head 61 to urge the latter into its limiting downward position about as shown upon FIG. 8. This position is determined by engagement of the enlarged upper end of shank 60 with flange 63.

The upper end 64 of shank 60 of the striker is pierced to receive a pivot pin 65, FIG. 9. A hook 66 has its lower end formed as a clevis to receive the ends of pin 65. The upper end of this hook is formed with a cam surface 66a which, referring to FIG. 8, extends upwardly and to the left. The upper end of the hook is longitudinally and centrally slotted to accommodate the contiguous end of arm 55. A leaf spring 67, FIG. 8, has one end engaging and urging the hook into clockwise pivotal movement about pivot pin 65.

Starting with the parts in position shown in full lines upon FIG. 8, as handle 53 is raised and pivots about screws 54 toward the dot-dash line position, pin 57 rides downwardly in slots 58 and thus acts to swing sleeve 51 counterclockwise about pivot screws 52. The parts are so constructed and arranged that when lever 53 moves into the position indicated by the dot-dash lines of FIG. 8, pin 57 is at the lower end of slots 58 and sleeve 51 is in alignment with helve 1. As the sleeve moves into this position its end containing striker head 61, moves between and spreads apart the ends of spring 8 which may be a duplicate of that previously described in connection with FIG. 5. This acts to release the contiguous plate 5 of the stack in sleeve 4 so that it is held to head 61 by magnet 37. While pin 57 is moving downwardly along slots 58, it engages the aforesaid cam surface of hook 66 and pivots the hook counterclockwise about the axis of pin 65. As pin 57 rides into its final downward position, hook 66, under urge of spring 67, snaps over the pin.

As handle 53 is returned to its position shown in full lines upon FIG. 8, sleeve 51 is pivoted toward its position there shown in full lines and, simultaneously, the striker head 61 is retracted along sleeve 51 against the increasing tension of spring 62. A pin 68, FIGS. 8 and 9, extends across and has its ends fixed in the upper end of sleeve 51, in parallel relation with pins 57 and 65. Pin 68 is so positioned that as pin 57 approaches the upper end of slots 58 and sleeve 51 approaches the pivotal position shown in full lines upon FIG. 8, it engages the aforesaid cam surface of hook 66 and pivots the latter out of en-

7

gagement with pin 57. Slot 59 is provided to accommodate the upper end of the hook in this position. As the sleeve approaches the position shown, its head end is placed flush against the selected surface of the object to be marked and at the instant lever moves into final position against helve 1, hook 66 is cammed off pin 57, striker 61 is released and driven with great force by compressed spring 62 toward the object to securely affix plate 5 thereto in the manner previously explained.

A slightly modified form of the invention shown upon FIGS. 8, 9, and 10 is contemplated as depicted upon FIG. 13. In this modification, the upper ends of slots 58 are curved or arcuate, as indicated at 58a, about an axis coincident with the axis of screws 54. The arrangement is such that sleeve 51 reaches its final position shown at FIG. 8, that is, with its axis normal to the axis of helve 1, at the instant pin 57 reaches the junction between the straight and arcuate portions of slots 58. However, pin 68 is so located that, at that instant, it has not yet cammed hook 66 off pin 57. The sleeve is now placed against the object to which a plate is to be attached and lever 53 is turned into its final position shown. During this final movement, pin 57 traverses the aforesaid arcuate ends of slots 58 and hence has no effect upon the angular position of sleeve 51. On the other hand, this final movement acts to cause pin 68 to cam hook 66 off pin 57 and thus releases head 61 to the action of spring 62, to drive the plate into the object. Sleeve 51 may also be cylindrical.

I have thus provided a timber-marking tool which fulfills all of the objects previously stated. The flanged rim is completely driven into the end or cross-grain of the timber and thus permanently marks and identifies it. The magazine contains a large number of plates which may be rapidly attached in sequence to the pieces of timber to be marked. Much time and expense are thereby saved. When the supply of plates in sleeve 4 is exhausted, a new magazine or sleeve full of plates is easily and quickly slipped into place so that marking may continue without material loss of time.

Numerous modifications, substitutions of equivalents and changes of size and shape are possible and will readily occur to those skilled in the art, after a study of the foregoing disclosure. Consequently, the disclosure should be taken in an illustrative, rather than a limiting sense; and it is my desire and intention to reserve all changes within the scope of the subjoined claims.

Having now fully disclosed the invention what I claim and desire to secure by Letters Patent is:

1. In a tool for applying plates to articles, a forked head, a tubular helve having a longitudinal first axis and fixed to said forked head, said helve having one end opening between the tines of said forked head, a tubular member having a longitudinal second axis and journaled between the tines of said forked head for pivoting about a third axis normal to said first and second axes, from a first position wherein said first and second axes are aligned, to a second position wherein said first and second axes are mutually normal, a striker reciprocable in said member along said second axis and adapted to receive a plate from said helve when said member is in first position, spring means in said member urging said striker into extended position to emplace a plate held therein, manually operable means connected with said member to pivot the same between said first and second positions, means responsive to operation of said manually operable means to first retract said striker within said member to stress said spring means and subsequently to release said striker as said member moves into second position, and latch means normally preventing egress of plates from said open end of said helve, said latch means being released only by and in response to movement of said member to first position to effect release of a plate into said striker.

2. A tool for applying plates to articles by percussion, comprising, a tubular helve to contain a plurality of plates

8

stacked therein and having a longitudinal first axis and an open end, a tubular member having a longitudinal second axis, a striker reciprocable in said member along said second axis, means mounting said member to said helve for pivoting about a third axis normal to said first and second axes, from a first position wherein said striker is positioned to receive a plate direct from said helve, to a second position wherein said plate may be attached to an article, by impact, a lever connected between said helve and member to pivot the latter between said positions, spring means urging said striker into striking position, and means responsive to actuating of said lever in moving said member from first to second positions, to first stress said spring means and release the same as said member moves into second position.

3. A tool as in claim 2, means in said helve urging said plates therein as a unit through said open end, latch means carried by said helve and normally preventing egress of plates through said open end, movement of said member into first position releasing said latch means to effect movement of a plate into said impact head.

4. In a tool for attaching metallic circular identification plates to objects, each said plate comprising a circular disk having a flanged cylindrical rim, a cylindrical tubular helve having a longitudinal first axis and open at its forward end, said helve forming a magazine to receive a plurality of said plates and to hold the same in stacked relation for guided movement along said first axis, a head fixed to and about said forward end and including integrally connected first and second arms extending in laterally-spaced relation forwardly of said forward end, parallel with said first axis, a striker having a longitudinal second axis and terminating at one end in a planar striking surface normal to said second axis, means mounting said striker between its ends, on and between said arms, for pivoting about a third axis normal to said first and second axes, between first and second positions wherein said first and second axes are coincident, and mutually normal, respectively, a U-shaped spring having its bight portion secured to said head exteriorly thereof, and inwardly bowed arms extending transversely of said first axis through apertures in said head to normally obstruct the forward end of said helve, a sleeve slidably fitting about and enclosing said one end of said striker, means urging said sleeve to a limiting position with one end edge outwardly of said planar striking surface, along said second axis, said sleeve, when said striker is pivoted to said first position, entering between and spreading apart the arms of said U-shaped spring clear of said open end of said helve, a plunger slidably fitting within said helve, spring means within said helve, engaging and urging said plunger toward said open end to urge a stack of plates therein against the bowed arms of said V-shaped spring, said spring means urging the end plate of said stack into said sleeve when said first and second axes are coincident.

5. The tool of claim 4, and a coil spring surrounding said striker and contacting the other end of said sleeve and urging the same into said limiting position.

6. A tool for attaching metallic plates, each said plate comprising a circular disc having an axially-flanged cylindrical rim adapted to be driven into an object to be identified, a cylindrical tubular helve having a first longitudinal axis of symmetry and an open forward end, said helve receiving a plurality of said plates and guiding the same in stacked relation toward said open end, coaxially of and along said first axis, a head fixed to the open end of said helve and including a pair of laterally-spaced arms extending forwardly thereof, parallel with said first axis, a striker having a second longitudinal axis of symmetry and an end formed as a striking surface, a magnet fixed in a recess in said surface, means mounting said striker between its ends, on and between said arms, for pivoting about a third axis normal to said first and second axes, between first and second positions wherein said

9

first and second axes are coincident and mutually normal, respectively, a U-shaped spring having its bight portion secured to said head, and inwardly-bowed arms extending in a plane normal to and across said first axis contiguous the open end of said helve, said bowed arms normally obstructing said open end to prevent egress of plates from said helve, said striker, when pivoted to first position, entering between and spreading apart the arms of said spring to free said open end and permit translation of a plate directly along said first axis, into contact with said striking surface to be held thereagainst by said magnet for rotation with said striker to second position, and means in said helve continuously urging all said plates therein as a unit toward said open end.

7. The tool of claim 6, said last-named means comprising a first piston slidably fitting within said helve, to engage a stack of plates therein, a second piston slidably fitting said first piston for limited reciprocation therein, detent means carried by said second piston and extending through registering longitudinal slots in said pistons to engage the wall of said helve, said detent means normally permitting movement of said pistons as a unit toward the open end of said helve and preventing movement of

10

said pistons in the opposite direction, a spring within said first piston and engaging said second piston to move said first piston into contact with a stack of plates in said helve and thereby urge the same toward the open end thereof, and manually operable means connected with said detent means to release the same from engagement with said helve and move said pistons as a unit in said opposite direction.

References Cited in the file of this patent

UNITED STATES PATENTS

610,405	Lacoste	Sept. 6, 1898
1,001,261	Forth	Aug. 22, 1911
1,139,303	Lynch	May 11, 1915
1,179,172	Frankel	Apr. 11, 1916
2,170,468	Blackman	Aug. 22, 1939
2,632,889	Beecroft	Mar. 31, 1953
2,735,097	Alford	Feb. 21, 1956

FOREIGN PATENTS

608,943	Germany	Feb. 4, 1935
18,697	Great Britain	of 1890