

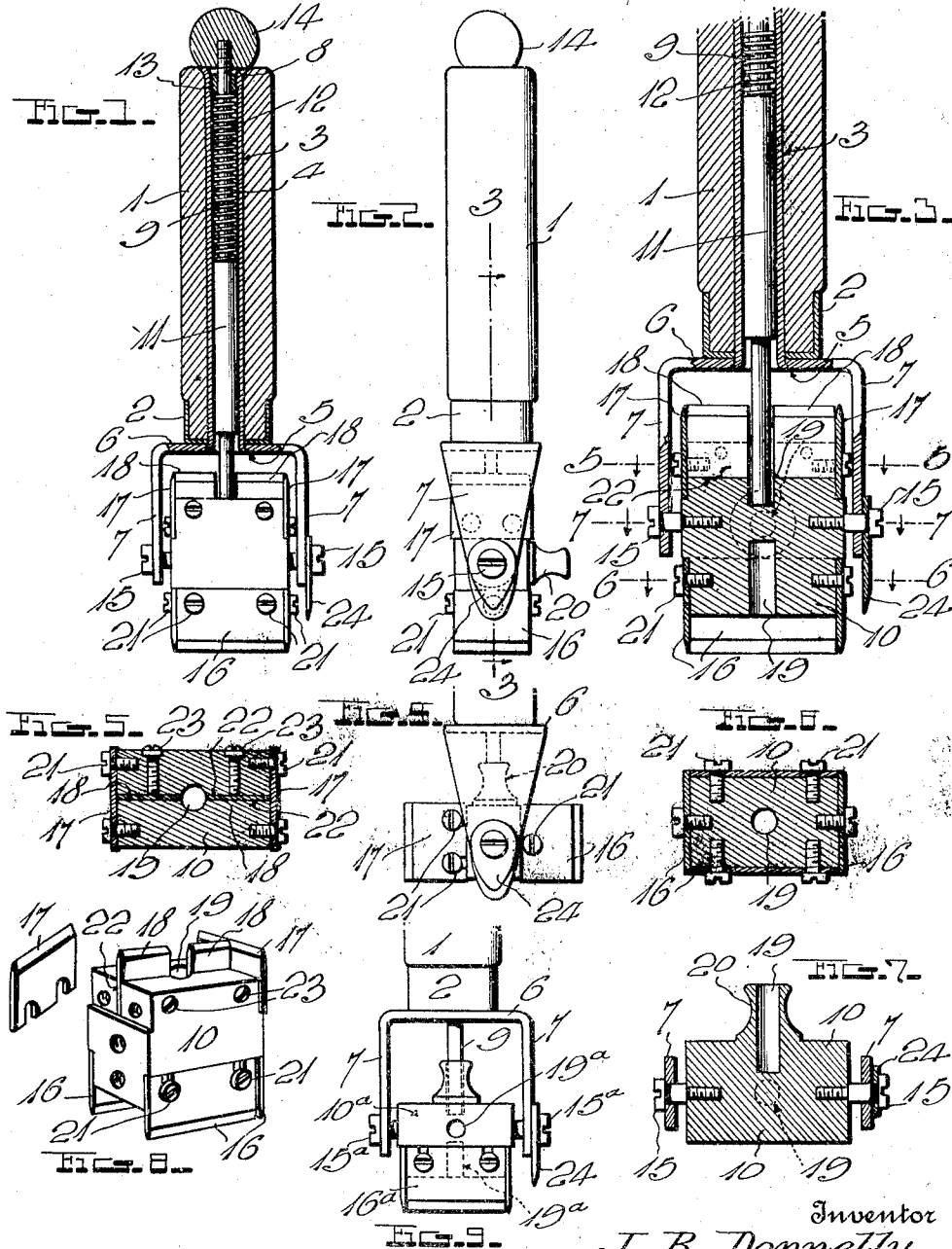
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BUDDING TOOL

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## UNITED STATES PATENT OFFICE.

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## BUDDING TOOL.

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*To all whom it may concern:*

Be it known that I, JOHN R. DONNELLY, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Budding Tools; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in devices for budding trees, shrubbery or the like, and it aims to provide a rather simple and inexpensive, yet a highly efficient and desirable tool which may be manufactured to perform either the ordinary patch budding, or the well known H budding.

In the preferred form of construction, a block or head carrying bark cutting blades, is pivotally mounted on a carrying handle for movement to different positions, and further objects are to provide novel constructions for mounting the block or head upon the handle and for holding said block or head in any of its positions.

A still further object is to provide the tool with an advantageously located blade which may be used for loosening the bark from the wood, after said bark has been cut by the head-carried blades.

With the foregoing in view, the invention resides in the novel subject matter herein-after described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is a vertical sectional view partly in elevation, showing a tool which is designed primarily for H budding, but can also be used for ordinary patch budding.

Figure 2 is an edge view of the tool shown in Fig. 1.

Figure 3 is an enlarged vertical sectional view as indicated by line 3—3 of Fig. 2.

Figure 4 is a fragmentary view similar to the lower portion of Fig. 2, but illustrating the blade carrying head swung to a different position.

Figures 5, 6 and 7 are detail horizontal sectional views on lines 5—5, 6—6 and 7—7 of Fig. 3.

Figure 8 is a perspective view of the blade carrying block or head and a number of the blades therefor.

Figure 9 is an elevation of the lower portion of the tool designed only for patch budding.

In the drawings above briefly described, the numeral 1 designates an elongated handle which is preferably formed of wood, and if desired the front end of said handle may be provided with a ferrule 2. The handle is formed with a longitudinal bore 3, from one end to the other, said bore receiving a metal tube 4 whose front end is suitably secured in a central opening 5 in a metal plate 6 which contacts with the front end of the handle, the ends of said plate 6 being bent forwardly to provide a pair of arms 7. The rear end of the tube 4 is expanded as indicated at 8 to hold it in the bore of the handle, in a rigid manner. This tube, in addition to attaching the arm-carrying plate 6 to the handle 1, has the function of containing a locking bolt 9 for a blade-carrying block 10 which is pivotally mounted between the arms 7. A sleeve 11 is secured around the bolt 9 or said bolt is otherwise provided with an enlargement against which the front end of a coiled compression spring 12 bears, said spring being confined within the tube 4 and having its rear end in engagement with a suitable shoulder in said tube, preferably formed by the inner end of a ring nut 13. The front end of the bolt 9 is co-operable with the block 10 and the rear end of said bolt is accessible at the rear end of the handle so that the bolt may be retracted, said rear end of said bolt being by preference provided with a knob 14 which may be easily gripped by the operator.

The block 10 which is shown in all figures of the drawing, except Fig. 9, is preferably rectangular, and it may well be pivoted to the arms 7 by a pair of shouldered screws 15. At one side, the block 10 is provided with a set of cutters 16 which are arranged to cut a continuous slit through the bark of the cion wood, which slit defines a patch of bark containing a bud. Another side of the block 10, preferably the side opposite the blades 16, is provided with transverse and longitudinal cutters 17 and 18 respectively, these cutters being relatively positioned to form an H slit in the bark of the stock to be budded. It will thus be seen that by using the set of cutters or blades 16 and the blades 17 and 18, successively, the patch of bark

and bud may be cut from the cion wood and the stock prepared to receive said patch and bud, for carrying out the usual H method of budding.

5 In order that the bolt 11 may hold the block 10 in any desired position, said block is formed with a plurality of sockets 19 which are spaced around its circumference, and as the dimension of the block 10 is 10 preferably greater in one direction than in a direction at right angles thereto, one side of said block is by preference formed with a lug 20 through which a portion of one of the sockets 19 extends. When the block is posi- 15 tioned so that the socket of this lug engages the bolt 11, one set of the bark cutting blades projects laterally in one direction from the tool and the other set projects laterally in the opposite direction, as clearly 20 shown in Fig. 4. By engaging the bolt 11 with one or the other of the other sockets, however, either the blades 16 may be held in a forwardly projecting position for use, or the blades 17 and 18 may be held in such 25 a position.

All of the blades 16 and 17 are preferably notched to receive attaching screws 21 which clamp them against the outer sides of the block 10, but the blades 18 are set 30 in slots 22 in said block and are clamped in place by screws 23. To remove any of the blades, it is only necessary to loosen the screws thereof, instead of entirely removing said screws.

35 In addition to the blades above described, another blade 24 is preferably provided for loosening the bark from the wood, after such bark has been slit with the previously described blades. The blade 24 may be located 40 at any desired point, but it is preferably clamped against one of the arms 7 by one of the pivot screws 15, so that it may be swung outwardly to an operative position, or may be swung inwardly out of the way.

45 In Fig. 9, a smaller block 10<sup>a</sup> has been shown mounted between the arms 7 on the pivot screws 15<sup>a</sup>, said block carrying only a set of cutters 16<sup>a</sup> for ordinary patch budding. The block 10<sup>a</sup> is formed with a suit- 50 able number of sockets 19<sup>a</sup> cooperable with

the bolt 11 for holding said block in any desired position.

It will be seen from the foregoing that I have provided a comparatively simple and inexpensive tool for budding purposes, yet 55 that such tool will be highly efficient and in every way desirable. Excellent results have been obtained from the details disclosed and they are therefore by preference fol- 60 lowed, but regardless of the fact that the preceding description is specific to the details in question, it is to be understood that within the scope of the invention as claimed, numerous modifications may be made.

I claim:—

05 1. A budding tool comprising an elongated handle provided with a pair of laterally spaced forwardly projecting arms, a block between said arms, axially aligned pivots connecting said block with said arms, 70 bark cutting blades carried by said block, and a spring-projected manually retractable bolt carried by said handle and projecting forwardly therefrom, said block hav- 75 ing sockets spaced around its pivotal axis to receive the front end of the bolt for holding the block in different positions.

2. A budding tool comprising an elongated handle having a bore from end to end, an elongated metal plate extending across the 80 front end of said handle and having an opening aligned with said bore, a metal tube secured in said opening and extending through said bore, the rear end of said tube being expanded to secure it in the bore; the 85 ends of the aforesaid plate being bent forwardly to provide a pair of arms, a block pivotally mounted between said arms and equipped with bark cutting blades, said 90 block having sockets spaced around its pivotal axis, a bolt passing slidably through the aforesaid tube, and a spring confined in said tube for projecting the bolt into any of said sockets, the rear end of said bolt being accessible at the rear end of the han- 95 dle to permit manual retraction of said bolt.

In testimony whereof I have hereunto affixed my signature.

JOHN R. DONNELLY.