

C. E. LOGAN & A. R. BARNETT.
 AUTOMATIC DEVICE FOR ATTACHING AND RELEASING PLOW POINTS.
 APPLICATION FILED AUG. 6, 1909.

941,933.

Patented Nov. 30, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

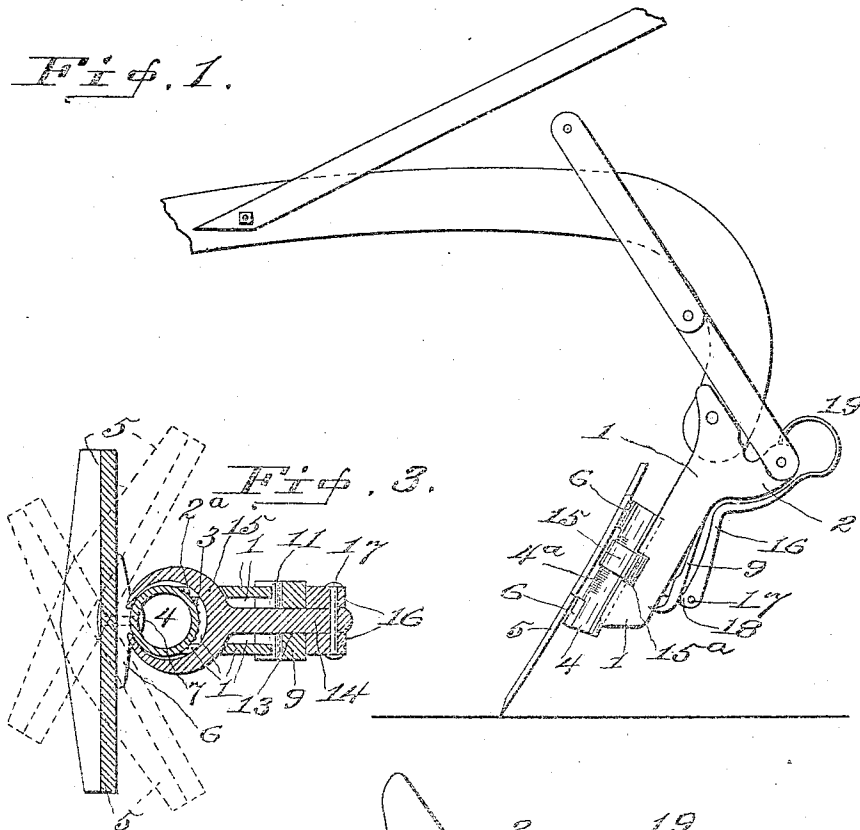


Fig. 3.

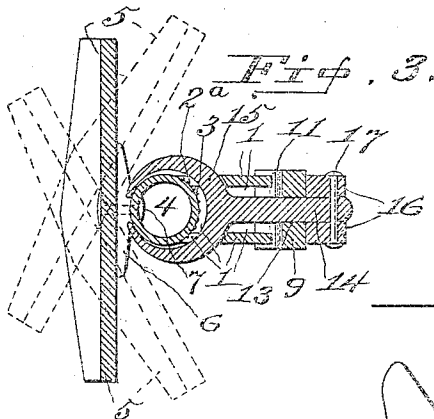
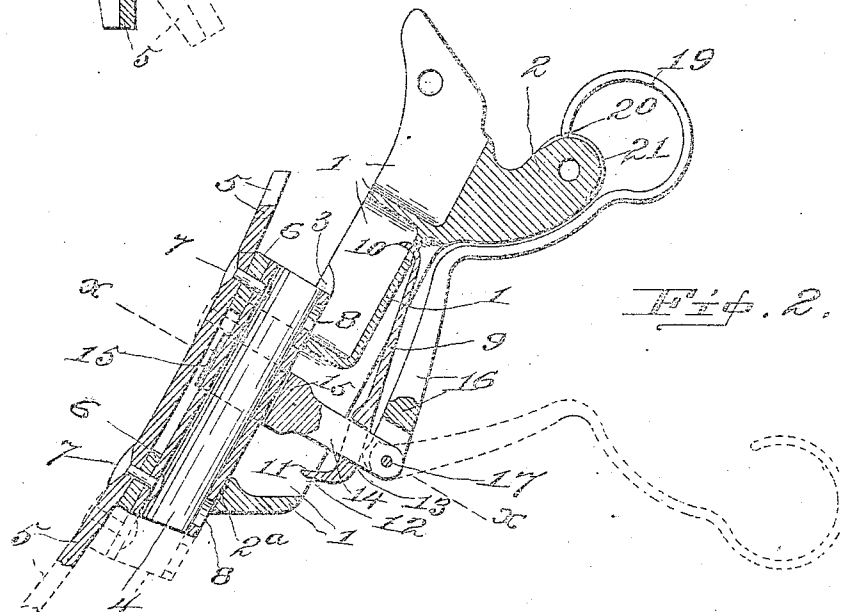


Fig. 2.



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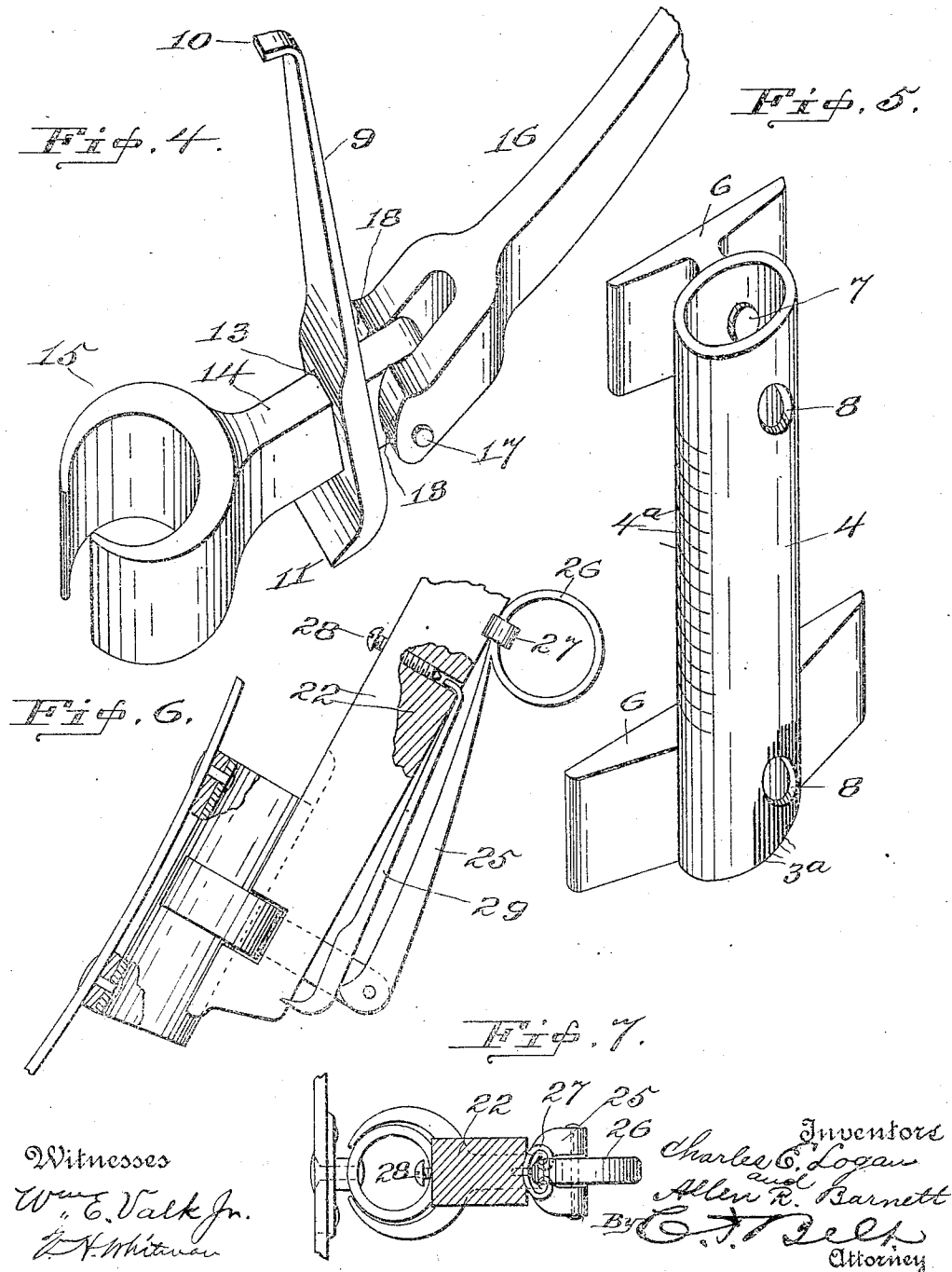
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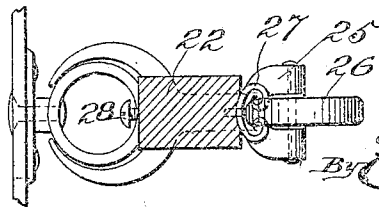
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Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES E. LOGAN AND ALLEN R. BARNETT, OF MILL GROVE, MISSOURI.

AUTOMATIC DEVICE FOR ATTACHING AND RELEASING PLOW-POINTS.

941,933.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed August 6, 1909. Serial No. 511,573.

To all whom it may concern:

Be it known that we, CHARLES E. LOGAN and ALLEN R. BARNETT, citizens of the United States, residing at Mill Grove, in the county of Mercer and State of Missouri, have invented certain new and useful Improvements in Automatic Devices for Attaching and Releasing Plow-Points, of which the following is a specification.

This invention relates to plows, and pertains especially to a device for attaching plow-points or shovels to plows.

The object of the invention is to provide certain novel and peculiar features in means for attaching plow-points in working position.

A further object of the invention is to provide an automatic device for attaching plow-points to plows adapted to be operated to hold such point at various angles and at various heights.

A still further object of the invention is to provide an automatic hand operated device adapted to be attached to the stock or gang of any ordinary plow for connecting and disconnecting points with the plow.

We are aware that various devices have been provided for clamping points to plows instead of using the ordinary bolts and nuts, but as far as we know such devices employ connecting bolts, or set-bolts of special character, and require plow-points of special construction, and such devices are incapable of making vertical and lateral adjustment of the plow-points, shovels or mold-boards.

It is therefore the purpose of this invention to overcome and obviate the objections found in such devices and to furnish a simple and inexpensive device of such novel and peculiar construction and arrangement of parts that it may be operated to permit the plow-point to be quickly removed and replaced, to be expeditiously swung laterally, and to be adjusted vertically without the use of any tools or implements, and without employing any bolts, nuts or set-screws in accomplishing the same, or in attaching the device to the plow, or the point to the plow.

In the accompanying drawings forming part of this application: Figure 1 is a side elevation of a plow showing the application of the invention. Fig. 2 is a vertical sectional view, the dotted lines showing the movable position of the parts. Fig. 3 is a cross section on the plane indicated by the

dotted line $x-x$, Fig. 2, the dotted lines showing the lateral movement of the plow-point. Fig. 4 is a perspective view of the attaching device with its hand lever partly broken away. Fig. 5 is a perspective view of the tubular section. Fig. 6 is a side elevation partly broken away showing a modification. Fig. 7 is a top view of this modification.

The same reference numerals denote the same parts throughout the several views of the drawings.

The device is shown first applied to a hollow metal foot stock or plow gang 1, having the usual rear projection or lug 2, and a grooved or semicircular front portion 3, the lower portion of which is serrated lengthwise at 2^a for the purpose of engaging like serrations 3^a in the lower end of a tubular section 4 attached to the back of an ordinary plow-point 5. The tubular section 4 is attached to the point by means of lugs 6, and rivets 7 inserted through holes 8 of the said section from the back thereof, through the lugs 6, and through the plow-point, where they are riveted flush with the face of said point. The said section having curved serrations 4^a, the purpose of which will hereinafter appear. This arrangement and connection elevates the said section out of engagement or contact with the plow-point so that the attaching device, now to be described, will not interfere or contact with the plow-point.

The device for attaching and releasing the plow-point comprises a plate spring 9 having an inturned top point 10 fitting within the stock 1, an inturned bottom edge 11 fitting a slit 12 in the back of the stock, and provided with a slot 13 adjacent the said edge, in which slot a stem 14 of an open ring or stirrup 15 is worked by means of a hand lever 16. The stirrup or ring fits into a cut-out 15^a of the plow stock, so that the back of the section 4 engages the stock groove and not this portion of the stirrup in a clamping operation. The edges of the stirrup at the ring opening are made thinner than the body of the ring so that such edges may work between the back face of the plow-point and the section 4 in placing, releasing and adjusting or clamping the plow-point. The hand lever has a forked lower end pivoted at 17 to the stem 14, and is provided with cam faces 18 which engage the spring 9 when the lever is raised, which movement of the

lever draws the stem backward and pulls the stirrup into engagement with the serrations 4^a of the tubular section. The hand lever 16 has a bowed end 19 provided with a point 20, for engaging a groove 21 in the top of the lug 2, whereby the point is sprung over the said lug for the purpose of locking the handle in raised position, as more clearly shown in Fig. 2 of the drawings.

10 Referring to the modification shown in Figs. 6 and 7 of the drawings, the stock 22 is solid and without the lug or projection hereinbefore described; the hand lever 23 has a top hand-ring 26 which may be locked to the stock by means of a catch spring 27; and a set screw 28 may be operated through the stock and against the point of the plate spring 29, for adjusting and controlling the tension of the spring 29.

20 It is obvious that the plow-point may be adjusted vertically and turned laterally, when the hand lever is lowered, without removing the point from the stock or gang.

It is to be understood that the device may be applied to plow gangs other than those herein shown; that the point section may be varied as desired; and that the size and shape of the parts, and the material of which they are made may be changed as desired or as occasion may demand in the practical application of the device, without departing from the spirit of the invention.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:

1. In a hand device for automatically attaching and releasing plow-points, a stirrup in which such point is adjustable vertically and laterally, a hand lever having cams and pivoted to the stirrup, and a spring against which the cams work for operating the stirrup.

2. In an automatic device for attaching

and releasing plow-points, a stirrup for adjustably clamping such points, a spring through which a portion of the stirrup extends, and a hand lever having cams engaging the spring and pivoted to the stirrup portion.

3. In a device of the character described, a stirrup for adjustably clamping a plow-point in operative position, a hand lever having cams and pivoted to an extension of the stirrup, and a plate spring having said extension extending therethrough and engaged by the cams for operating the stirrup.

4. In a device of the character described, a stirrup for adjustably clamping a plow-point in operative position, a hand lever having cams and pivoted to an extension of the stirrup, a plate spring having said extension extending therethrough and engaged by the cams for operating the stirrup, and means for locking the said lever.

5. In a device of the character described, a stirrup comprising an open ring and a stem projecting from the ring, a plate spring through which the stem projects, and a cam lever pivoted to the projecting end of the stem and cooperating with the spring for operating the stirrup.

6. In a device of the character described, a stirrup comprising an open ring and a stem projecting from the ring, a plate spring having an inturned edge and a slot adjacent thereto for said stem, and a cam lever pivoted to the projecting end of the stem and cooperating with the spring for operating the stirrup.

In witness whereof we hereunto set our hands in the presence of two witnesses.

CHAS. E. LOGAN.
ALLEN R. BARNETT.

Witnesses:

OMA E. MOFFITT,
P. S. MOFFITT.