

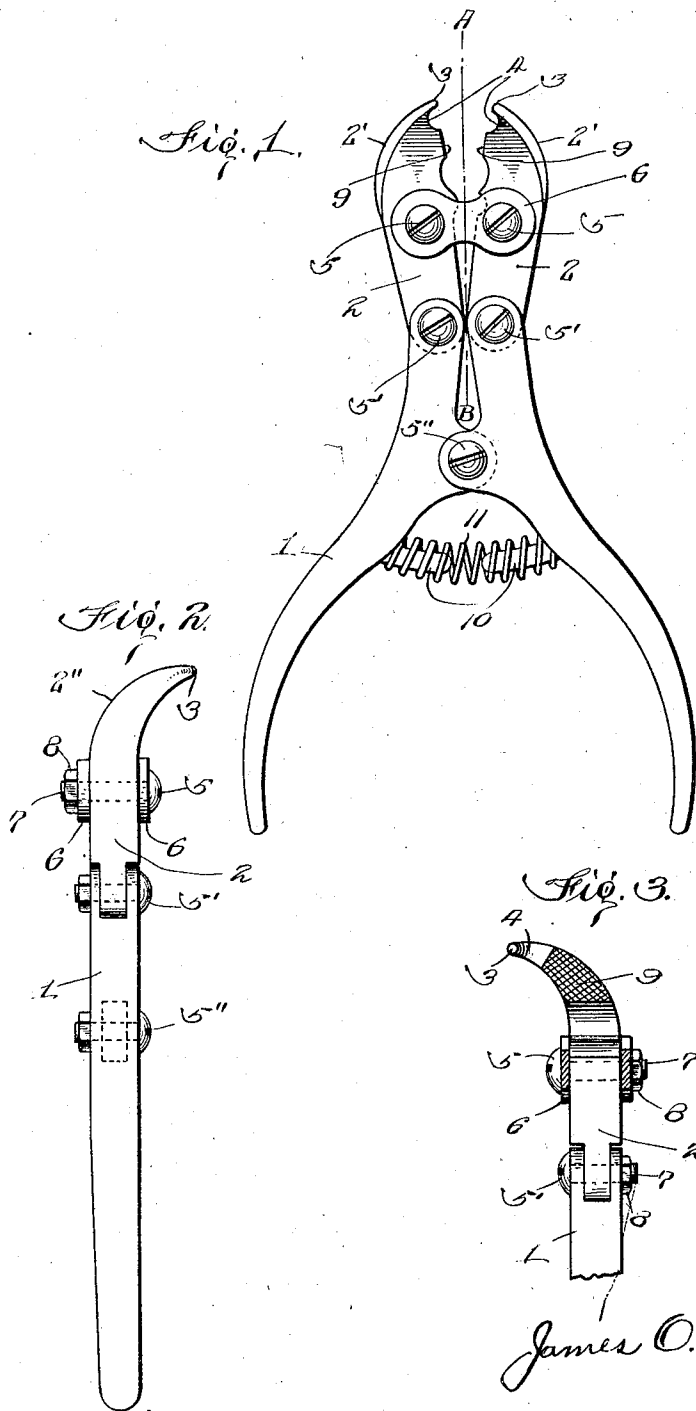
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J. O. WRIGHT

COTTER PIN EXTRACTING PLIERS

Filed Aug. 23, 1921



Inventor

James O. Wright.

UNITED STATES PATENT OFFICE.

JAMES OLBERT WRIGHT, OF ATLANTIC CITY, NEW JERSEY.

COTTER-PIN-EXTRACTING PLIERS.

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To all whom it may concern:

Be it known that I, JAMES OLBERT WRIGHT, a citizen of the United States, residing at Atlantic City, in the county of Atlantic and State of New Jersey, have invented a new and useful Improvement in Cotter-Pin-Extracting Pliers, of which the following description, with the accompanying drawing, is a specification.

This invention relates to improvements on cotter pin extracting pliers having specially shaped jaws for extracting cotter pins more especially as applied to automobile and kindred machinery.

The objects of my invention being first, to provide more suitably shaped gripping jaws; second, to provide a greater amount of leverage for operating the jaws; third, to provide means for straightening the pins and extracting fragments of pins.

With these and other objects in view as will more fully hereinafter appear, the invention consists of certain novel features of construction and arrangement of parts hereinafter fully described, shown in the accompanying drawing, and particularly pointed out in the appended claims.

In the accompanying drawing, Figure 1 is a top view of my device as it would appear lying on a horizontal plane with its specially formed gripping jaws bending upward on an angle with the plane of the pivotal movement of the jaws. Figure 2 is a side elevation of Figure 1, showing bend in the gripping jaws. Figure 3 is a detail view of one of the jaws as it would appear from the intersecting line A—B of Figure 1.

Similar numerals of reference are used to indicate corresponding parts throughout the several figures of the drawing.

In the drawing 1 and 1 are two co-acting handles or levers pivoted parallel with each other in such a manner at 5'' that the other ends recede from each other when the handles are pressed together, said ends being pivotally connected to the members or jaws 2 and 2 pivoted on the plates 6 and 6. The adjacent faces of the outer or gripping ends of said jaws lie against each other when the handles of 1 and 1 are pressed together. I do not limit myself to the exact location of the pivots as shown, as by the well known principle of levers; by shifting the fulcrum, the power may be increased or diminished without departing from the scope of my in-

vention. This arrangement forms a compound leverage creating more power for the gripping points.

As cotter pins vary in size, and a tool adapted for gripping small pins will not be strong enough to remove the large sized pins when they are stuck fast, I provide a special shape to the jaws 2 and 2. In the inside adjacent faces at the gripping ends are cut out or recessed portions 4 and 4, creating the pointed ends 3 and 3 which may enter the eye of the smaller sized pins from both sides. The recessed portions 4 and 4 are made small enough to embrace the rounded sides of the eye of the larger sized pins, taking the strain from the points 3 and 3.

The jaws 2 and 2 as shown in the drawing, are curved at an angle to their pivotal movement, to provide a rolling surface 2'' upon which they may be rocked as a fulcrum for pulling out the pins after they have been gripped. The curvature of the jaws extends right up to the points so that a fulcrum may be had at any point on the curve 2''. The fulcrum is close to the points at starting and may be shifted as the pin is being pulled out.

As it is necessary in removing a cotter pin, to straighten the points before pulling the eye, the points 3 and 3 are flattened slightly to adapt them to be used for straightening the points of the smaller pins; while the flat surfaces 9 and 9 may be used for a similar purpose for the larger pins. These flat surfaces, 9 and 9 which may be knurled, are also adapted for extracting broken fragments of pins or where the eye does not project beyond its seat sufficiently to use the gripping points. The surfaces 9 and 9 together with the points 3 and 3, and the recessed portions 4 and 4, are all situated within the curved portion of the jaws 2 and 2, and may be rocked on the curved surface 2'' of the said jaws as before stated.

In cases where insufficient working space prevents the use of the device in the manner described, I have so formed the two outside faces 2' and 2' of the jaws 2 and 2 so that the device may be rocked sideways, using one of the points 3 as a hook.

The spring 11 mounted on the lugs 10 and 10 of the handles 1 and 1 keep the handles normally spread apart; and by reason of their connection with the jaws 2 and 2 performs a similar function for the jaws.

Having thus fully described my invention, what I desire to secure by Letters Patent is:

1. In a device for extracting cotter pins, handles pivoted parallel with each other, co-acting jaws pivotally connected intermediate their ends and to the handles at their adjacent ends, said jaws being curved similarly for a portion of their length at an angle to their pivotal movement, said jaws having on their confronting sides, pointed extremities, recessed portions adjacent the points for gripping rounded surfaces, and flat gripping surfaces adjacent the recessed portions.
2. In a device for extracting cotter pins, handles pivoted parallel with each other, co-acting jaws pivotally connected intermediate their ends and to the handles at their adjacent ends, said jaws being curved similarly for a portion of their length at an angle to their pivotal movement, said jaws having on their confronting sides, pointed extremities flattened slightly at the points,

recessed portions adjacent the points for gripping rounded surfaces, flat gripping surfaces adjacent the recessed portions, the outside edges of said jaws being also curved to provide a rolling surface or fulcrum sideways for the device.

3. In a device for extracting cotter pins, handles pivoted parallel with each other, co-acting jaws pivotally connected intermediate their ends and to the handles at their adjacent ends, said jaws being curved similarly for a portion of their length at an angle to their pivotal movement, said jaws having specially formed confronting faces for straightening and extracting cotter pins, and means for respectively keeping said jaws and said handles normally spread apart.

Signed at Atlantic City, in the county of Atlantic and State of New Jersey.

JAMES OLBERT WRIGHT.

In the presence of—

WALTER WEISS,
ROBERT B. McARDLE.