No. 777,006. PATENTED DEC. 6, 1904.

J. E. CONARD.

RIVET EXTRACTOR.

APPLICATION FILED JUNE 7, 1904.

NO MODEL.

Fig. 1.

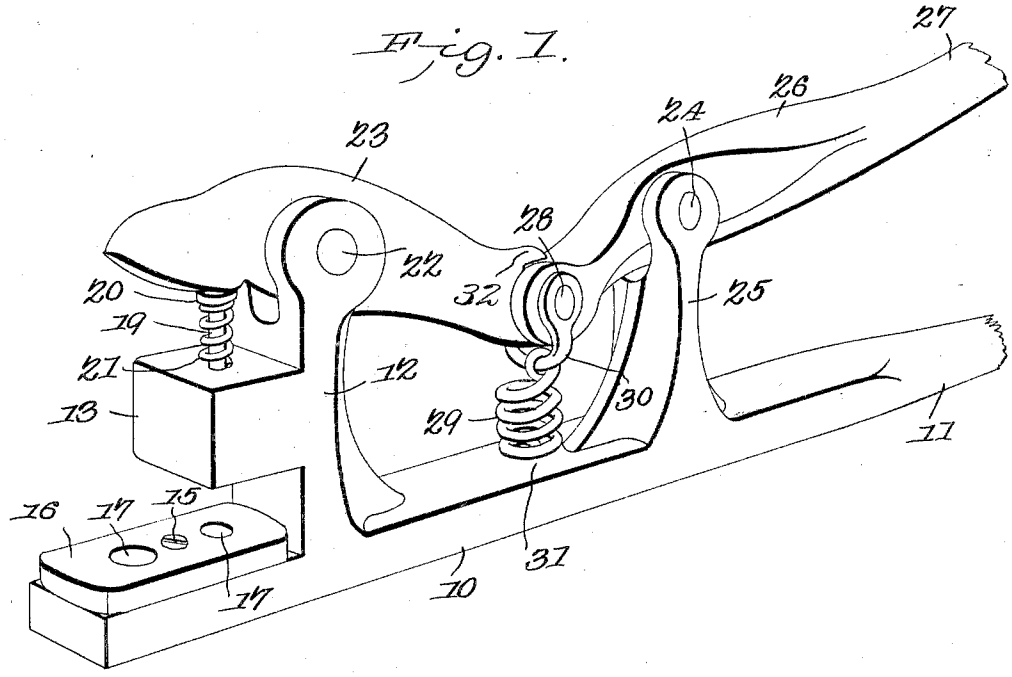
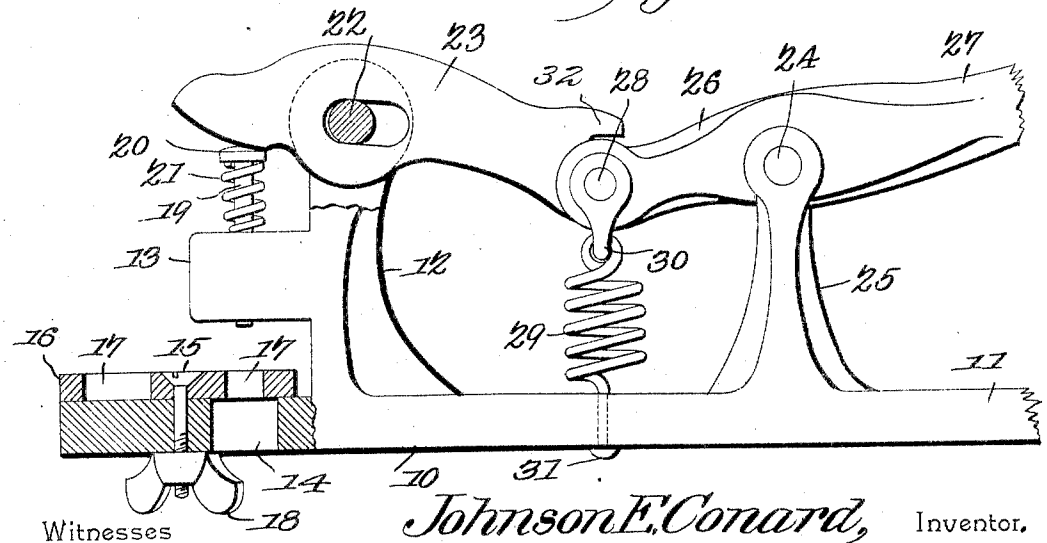



Fig. 2.




Witnesses

E. J. Stewart

C. N. Woodward.

Johnson E. Conard, Inventor.

by C. A. Snow & Co.

Attorneys

No. 777,006. Patented December 6, 1904.

# UNITED STATES PATENT OFFICE.

JOHNSON E. CONARD, OF HEATHSVILLE, ILLINOIS.

## RIVET-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 777,006, dated December 6, 1904.

Application filed June 7, 1904. Serial No. 211,551. (No model.)

*To all whom it may concern:*

Be it known that I, JOHNSON E. CONARD, a citizen of the United States, residing at Heathsville, in the county of Crawford and State of Illinois, have invented a new and useful Rivet-Extractor, of which the following is a specification.

This invention relates to implements employed for extracting rivets and for similar purposes, more particularly for the use of carriage and buggy repairers for extracting the broken or damaged rivets which are rusted into the parts, and has for its object to produce a simply-constructed, powerful, and efficient implement of this character and which may be easily manipulated by one man.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the drawings thus employed, Figure 1 is a perspective view of a rivet-extractor constructed in accordance with the invention; and Fig. 2 is a side elevation, partially in section, of the operative end of the improved device.

The improved implement comprises a base member 10, extended at one end into a handle 11 and provided near the other end with a standard 12, having an intermediate lateral guide-lug 13. Formed through the base member in alinement with the guide-lug is an aperture 14, and mounted for rotation, as by a clamp-bolt 15, is a plate 16, having a plurality of spaced apertures 17 of graduated sizes and adapted to register consecutively with the base-aperture as the plate is rotated. The bolt 15 is provided with a wing-nut 18, operating beneath the base member to facilitate the operation of changing the location of the plate 16.

Mounted for movement through the guide-lug 13 is a plunger 19 of less diameter than the smallest of the apertures 17 and disposed in alinement with the base-aperture 14 and with whichever one of the apertures 17 is disposed for the time being in registration with the same. The upper end of the plunger is provided with an enlarged head 20, against the under side of which bears a compression-spring 21, normally tending to maintain the plunger in elevated position. The upper portion of the standard 12 is bifurcated to form a pair of pivot-ears through which extends a pin 22, and on the pin is mounted a lever 23, said lever being provided with an elongated slot for the passage of the pin and to permit some longitudinal play of the lever during the operation of the device. The outer end of the lever is provided with a cam-face that bears on the enlarged head 20, and when the inner end of the lever is raised this cam-face will ride down on the enlarged head and depress the plunger. The base is further provided with a bifurcated standard 25, carrying a pivot-pin 24, on which is pivotally mounted a lever 26, that is extended rearwardly to form an operating-handle 27. The adjacent ends of the levers 23 and 26 are connected by a pivot-pin 28, that is extended beyond the opposite faces of the lever 26 and receives a yoke 30. To the yoke is connected the upper end of a tension-spring 29, the opposite end of the spring being riveted or otherwise secured, as at 31, to the base. The spring normally tends to maintain the levers in the positions shown in Figs. 1 and 2; but excessive downward movement of the two ends of the levers is prevented by a projecting toe 32, carried by the lever 23 and adapted to engage against the upper face of the lever 26.

In the operation of the device the plate 16 is adjusted to present an opening of the desired size in alinement with the base-opening

14, after which the plate is clamped in position by turning the nut 18. Pressure is then exerted on the outer end of the lever 26, and the connected ends of the levers 23 and 26 are elevated, causing the cam-face of the lever 23 to ride down on the enlarged head 20 and force the plunger downward against the rivet to be extracted, said rivet being forced through the openings 17 and 14. As soon as the pressure is relieved the parts will be restored to initial positions by the springs 21 and 29.

Having thus fully described the invention, what is claimed is—

In an implement of the class described, a base-plate, having independent front and rear standards and provided with an opening adjacent to the front standard, a guiding-lug projecting from the front standard, a plunger extending through an opening in said lug, and being in a position in alinement with the opening in the base, said plunger having an enlarged upper head, a compression-spring surrounding the plunger and tending to maintain the same in elevated position, pivot-pins carried by both standards, a cam-lever having an elongated slot for the reception of the pivot-pin of the front standard, and provided at its forward end with a cam-face for engaging the head of the plunger, and at its rear end with an integral stop-lug, an operating-lever mounted on the pivot-pin of the rear standard, a pivot-pin connecting the adjacent ends of the two levers, and a tension-spring extending between the lever-pivot and a fixed point, and tending normally to maintain the stop-lug of the cam-lever in engagement with the forward end of the operating-lever, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHNSON E. CONARD.

Witnesses:
A. G. CAGINGTON,
GEORGE C. SHAW.