A. T. ROWE.

KEY EXTRACTING DEVICE.

APPLICATION FILED APR. 28, 1909.

**953,923.** Patented Apr. 5, 1910.

Fig. 1.

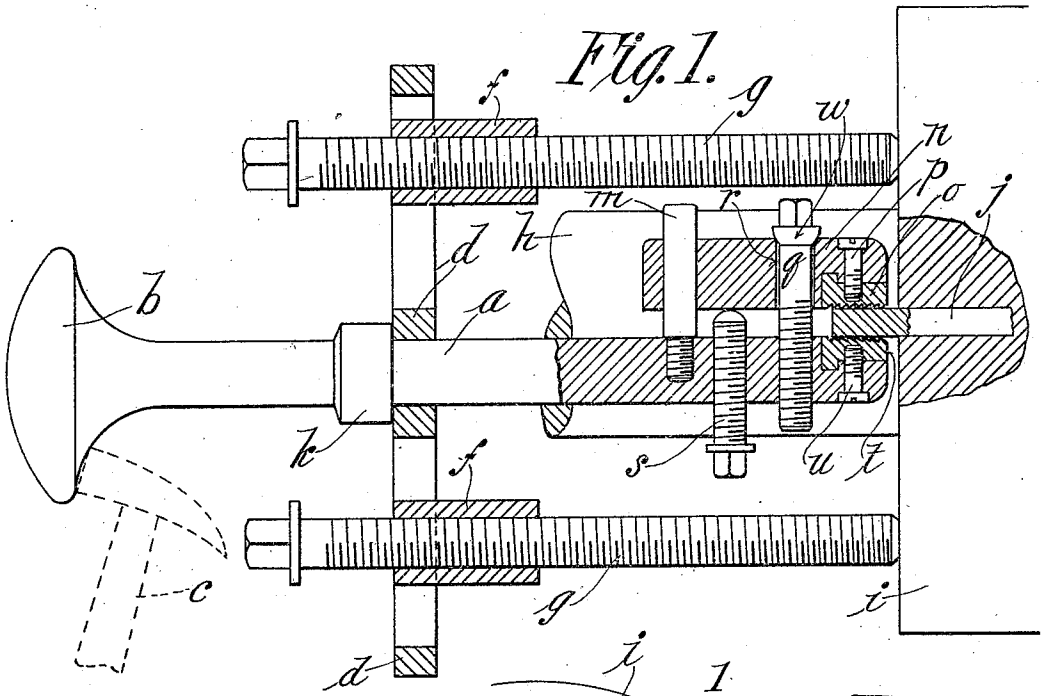



Fig. 2.

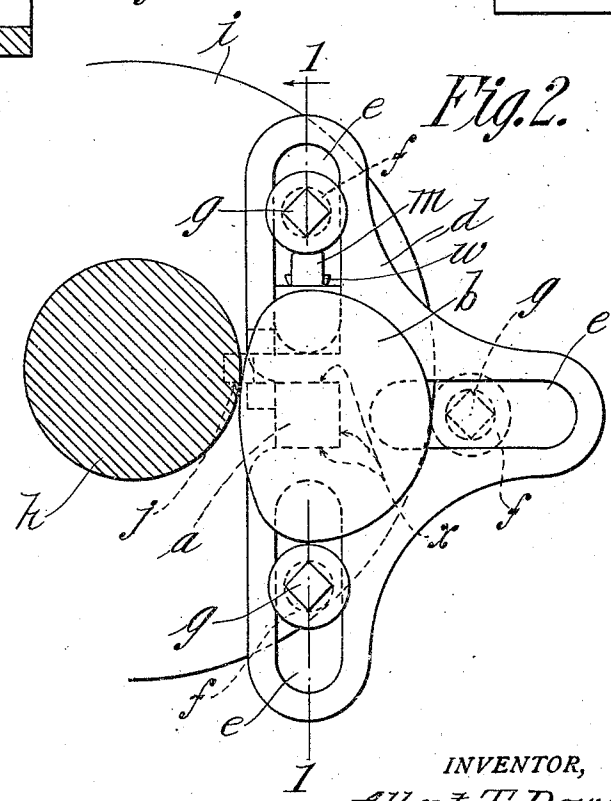
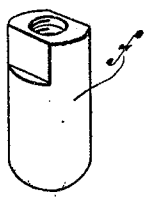



Fig. 3.




WITNESSES:

H. L. Sprague.

Harry W. Bowen.

INVENTOR,

Albert T. Rowe.

BY Chapin & Co.

ATTORNEY.

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

ALBERT T. ROWE, OF WETHERSFIELD, CONNECTICUT.

## KEY-EXTRACTING DEVICE.

953,923. Specification of Letters Patent. Patented Apr. 5, 1910.

Application filed April 28, 1909. Serial No. 492,745.

*To all whom it may concern:*

Be it known that I, ALBERT T. ROWE, a citizen of the United States of America, residing at Wethersfield, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Key-Extracting Devices, of which the following is a specification.

My invention relates to improvements in key removing devices in which gripping jaws are employed for grasping the key to be removed, and a head member is attached to the jaws whereby a hammer or other tool may be employed to effect the complete removal of the key.

The object of my invention is to extract or withdraw keys as used in keying parts of machinery together, as for example, pulleys on shafts, etc. I attain this object by means of the device or tool illustrated in the accompanying drawings, in which,—

Figure 1 is a detail sectional view on the broken line 1—1 of Fig. 2 showing the various elements in the position which they occupy when gripping a key about to be extracted or withdrawn, as used for securing a pulley to a line of shafting. Fig. 2 is a detail end elevation of the tool shown in Fig. 1, the shaft being shown in section, and the pulley in outline. Fig. 3 is a detail view of a threaded sleeve through which the jack-screws pass.

Referring to the drawings in detail, (in which similar reference characters refer to the same parts throughout) *a* designates a main bar that is provided with an enlarged head portion *b* and which is adapted to be struck with a hammer, or other tool, as shown at *c* in dotted lines.

*d* designates a plate or cross-head which is provided with slots, as shown at *e*, in which are loosely fitted the nuts *f* for receiving the jack-screws *g*, the purpose of which will be referred to later. A section of shaft is shown at *h*, and the hub of a pulley at *i*, which is secured to said shaft by means of the key *j* in the usual manner.

The main-bar *a* is provided with a shoulder *k* against which the plate *d* bears, as shown in Fig. 1. The inner end of the bar *a* is provided with a pin or post *m* which carries a clamping jaw *n* that is provided with a hardened serrated plate *o* that is secured to the jaw *n* by means of the screw *p*.

*q* designates a clamping screw which passes through an enlarged opening in the jaw *n*, as shown at *r*.

*s* designates an adjusting screw for the jaw *n* that is threaded through the bar *a*. The bar *a* at its inner end is also provided with a serrated gripping plate *t* which is secured to the bar by means of the screw *u*.

Referring now to the manner in which my improved key-extracting device or tool is used: The movable clamping jaw *n* is adjusted by means of the screw *s* and the tightening screw *q* is then operated, whereby the serrated edges of the plates *o* and *t* are tightly gripped onto the key *j* which is to be withdrawn. The screw *q* is provided with a spherical surface, as shown at *w*, and fits into an enlarged depression in the opening *r*, whereby the enlarged opening *r* permits the jaw *n* to have considerable movement and all strain to be taken by the pin or post *m* without placing any pressure on the screw *q* when the key is withdrawn. The plate *d* is next placed on the bar *a* against the shoulder *k*, as shown in Fig. 2. The nuts *f* are adjusted in the slots *e* until the jack-screws are properly placed against the hub portion of the wheel, as shown in Fig. 1. These screws are then tightened against the hub of the wheel which, of course, exerts a pull or jacking effect in an outward direction on the bar *a*. The operator may, if desired, strike the head *b* of the bar with a hammer *c*, as shown in Fig. 1, in order to start the key or slightly loosen the same, after which the screws *g* are operated to fully remove the key from its seating in the hub and shaft; or the head *b* may be struck at the same time that the jack-screws *g* are operated.

It will be observed that by means of this construction all strain on the jaw *n* is taken by the pin or post *m*, which is secured to the bar *a*, and none by the screw *q* during the withdrawing process. It will also be noticed that the bar *a* is rectangular in cross section and that the plate *d* is provided with a recess portion to receive the bar, as shown at *x* in Fig. 2.

What I claim, is:—

1. In a key-extracting device, the combination with a bar element, a shoulder thereon, an adjustable jaw secured thereto, said bar and said jaw having oppositely disposed gripping surfaces, means for operating the jaw, a slotted plate engaging the bar and its shoulder, nuts mounted in said slots, jack-

screws threaded through the nuts and adapted to engage the hub, or other part from which a key is to be extracted, substantially as described.

2. In a key-extracting device, the combination with a bar element, a shoulder thereon, an adjustable jaw secured thereto, said bar and said jaw having oppositely disposed gripping surfaces, means for operating the jaw, a slotted plate engaging the bar and its shoulder, nuts mounted in said slots, jack-screws threaded through the nuts and adapted to engage the hub or other part from which a key is to be extracted, the bar element having an enlarged end portion adapted to receive an outwardly directed blow substantially parallel with the axis of said bar for extracting the key, substantially as described.

ALBERT T. ROWE.

Witnesses:
J. EDWIN ROWE,
ERNEST F. ROBBINS.