No. 693,612. Patented Feb. 18, 1902.

# A. KRAH.

## SEAL PRESS.

(Application filed Jan. 13, 1902.)

(No Model.)

Fig: 1.

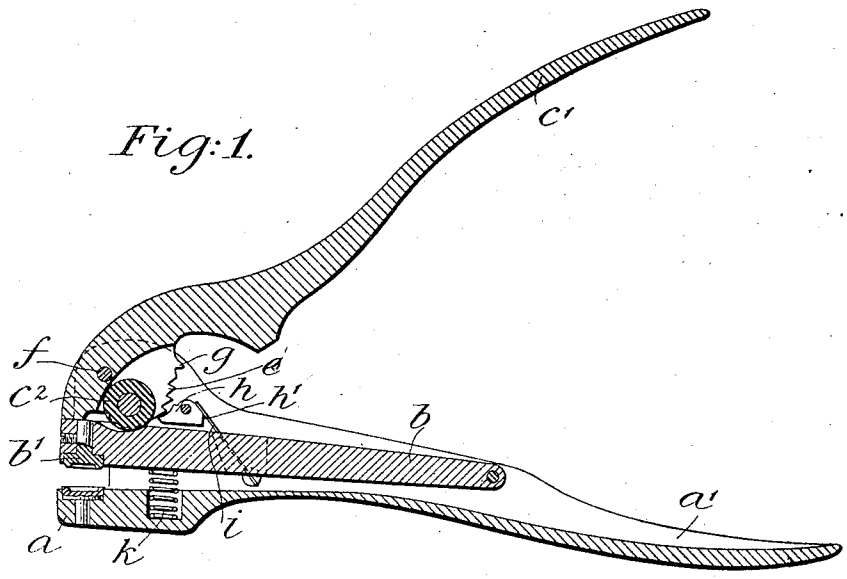



Fig: 2.

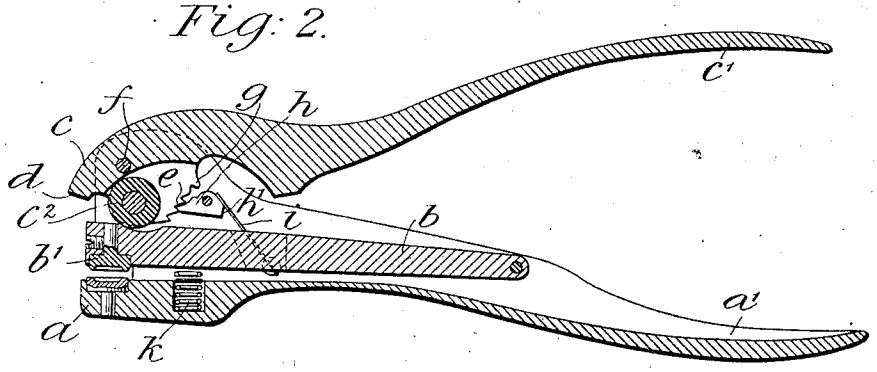



Fig: 3.

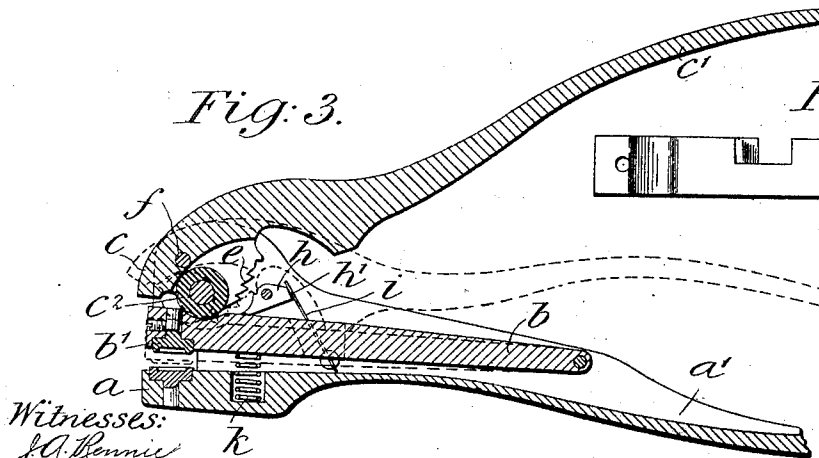
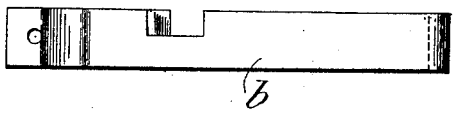



Fig: 4.




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# UNITED STATES PATENT OFFICE.

ALEXIS KRAH, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE KEYSTONE SEAL & PRESS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## SEAL-PRESS.

SPECIFICATION forming part of Letters Patent No. 693,612, dated February 18, 1902.

Application filed January 13, 1902. Serial No. 89,457. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXIS KRAH, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Seal-Press, of which the following is a specification.

My invention relates to a ratchet seal-press, with the object in view of providing a press of high power, positive in its action, durable, and not liable to get out of order under the wear and tear and hard usage to which the press is liable to be subjected. The type of press, exclusive of the ratchet mechanism, is quite similar to that shown, described, and claimed in the pending application of Albert B. Schofield, Serial No. 68,140, my present invention relating particularly to the ratchet mechanism by means of which a pawl is held by a spring out of engagement with the ratchet-teeth during the opening of the press and in engagement with the ratchet-teeth during the closing of the press, the pawl being tilted past center with respect to its pivot and its bearing against the spring as the press approaches the limits of its opening and closing movements.

In the accompanying drawings, Figure 1 is a longitudinal section of the press, showing the parts in the position which they assume when the press is opened for receiving the seal to be pressed. Fig. 2 is a similar view showing the parts in the position which they assume when the seal is partially pressed. Fig. 3 is a similar view showing in dotted lines the parts in the position which they assume when the seal is completely pressed, this view also showing in full lines the position which the parts assume when the press nears the completion of its opening movement; and Fig. 4 is a plan view in detail of the die-carrying bar which swings between the handles of the press.

The press comprises, exclusive of the ratchet, three general parts, viz: the lower die-carrying jaw *a*, terminating in a handle *a'*, the spring-actuated swinging die-carrying bar *b*, pivoted between the sides of the handle portion *a'* of the bar *a* and carrying at its free end a die *b'*, opposite the die in the jaw *a*, and the swinging cam-jaw *c*, terminating in the handle *c'* and carrying a cam (in the present instance a roller-cam $c^2$) for throwing the free end of the cam-carrying bar toward the jaw *a*.

The cam-jaw *c*, terminating in the handle *c'*, is pivotally secured between the uprising ears *d* of the jaw *a*, it being understood that the half section of the press not illustrated in the drawings is quite similar to the half section shown, with the exception that the ratchet mechanism hereinafter to be described may be applied to one side only of the press.

The cam-jaw *d*, which operates the die-carrying bar *b*, is provided on its under face with a series of ratchet-teeth *e*, arranged in an arc the center of which corresponds to the pivotal point *f* for connecting the cam-jaw with the lower die-carrying jaw, and at the outer end of the series of ratchet-teeth *e* there is formed on the jaw *c* a projection *g* for throwing the pawl *h*, to be hereinafter described, out of its operative position.

The pawl *h* is pivoted to the side *d* of the jaw *a* with its nose in position to engage the ratchet-teeth *e*, and a spring (in the present instance a bar-spring *i*) is fixed at one end to the side of the jaw *a*, with its free end resting on the tail of the pawl *h*. The tail end of the pawl *h* is preferably flattened, as shown at *h'*, for the purpose of giving the spring *i* a more extended bearing against it to hold it out of engagement with the ratchet-teeth during the return or opening movement of the handle *c'*. When the press is in its full open position, (shown in Fig. 1,) the pressure of the spring-bar *i* on the tail of the pawl *h* is in a direction to hold the nose of the pawl in engagement with the ratchet-teeth, and this position the pawl maintains during the closing movement of the press, as shown in Figs. 1 and 2; but just before the press completes its closing movement the projection *g* on the jaw *c* engages the pawl *h* near its pivot, and the further slight movement of the handle *c'* toward the handle *a'* forces the nose of the pawl away from the series of ratchet-teeth *e* into the position shown in Fig. 3, with the bar-spring *i* resting on the flattened end *h'* of the pawl, where the pressure of the bar-spring *i* tends to hold the pawl *h* with its nose away from the ratchet-teeth, the pawl having been swung

by the final slight closing movement of the handles into the position past center with respect to the line connecting the center of its pivot and the bearing of the spring-bar on it. The handle $c'$ is now free to be opened into the position shown in Fig. 1, the die-carrying bar $b$ just before the opening movement is completed coming into engagement with the nose of the pawl $h$, as shown in full lines, Fig. 3, so that the final slight opening movement of the press will tilt the pawl past center again into the position shown in Fig. 1 and into engagement with the ratchet-teeth $e$, where it requires the full closing movement of the press before the press can again be opened. The bar-spring $i$ for retaining the pawl in its position is extended through a recess $b^2$ in the side of the bar $b$, the slight cutting away of the bar for this purpose serving to effect a material reduction in the weight of the press by bringing the parts more nearly to the center and not requiring the extension of the metal so far to one side to provide room for the spring-bar.

By utilizing the die-carrying bar $b$ for throwing the pawl into its operative position the bar $b$ may be maintained at full width at that part where the strain on it is the most severe, and it insures the full opening of the spring-actuated die-carrying bar before the pawl is thrown into operative position. The spring $k$, which actuates the die-carrying bar, has by its structure a threefold function—viz., the lifting of the die-carrying bar $b$, the return of the cam-jaw to its open position, and the throwing of the pawl $h$ into its operating position. By holding the pawl out of engagement with the ratchet-teeth during the opening of the press the wear on its nose and on the teeth is avoided and the sharpness of the lines and positive action of the pawl thereby maintained for a much longer time than where the pawl is at all times in engagement with the teeth. Furthermore, the rocking of the pawl on its pivot is through a comparatively small arc, since it is not reversed, but simply thrown away from the teeth in the same direction in which it is rocked by the teeth during the travel of its nose from one space to another.

The construction is a simple one, and the parts are so located and operated that they will not be liable to become displaced during any rough handling of the press to which it may be subjected.

What I claim is—

1. A seal-press comprising a pair of jaws pivoted together and terminating in handles, one of said jaws being provided with a die and the other with a cam, a spring-actuated die-carrying bar located between the said jaws and handles, a series of ratchet-teeth carried by the cam-jaw and a spring-actuated ratchet-pawl mounted on the die-jaw, the said pawl being under the control of the cam-jaw to be thrown out of operative position as the dies approach the limit of their closing movement and under the control of the die-carrying bar to be thrown into operative position as the dies approach the limit of their opening movement.

2. A seal-press comprising a die-carrying jaw, a cam-jaw pivoted to the die-jaw and provided with a series of ratchet-teeth, means for opening the jaw, a pawl pivoted to the die-jaw, a spring for holding the pawl both in and out of operative position and a spring-actuated die-carrying bar movable between the die and cam jaws, and means for throwing the pawl out of operative position as the dies approach the limit of their closing movement, the said pawl being under the control of the said die-carrying bar to be thrown into operative position as the dies approach the limit of their opening movement.

In testimony that I claim the foregoing as my invention I have signed my name in the presence of two witnesses.

ALEXIS KRAH.

Witnesses:
C. W. JOHNSON,
F. P. PFLEGHAR, Jr.