

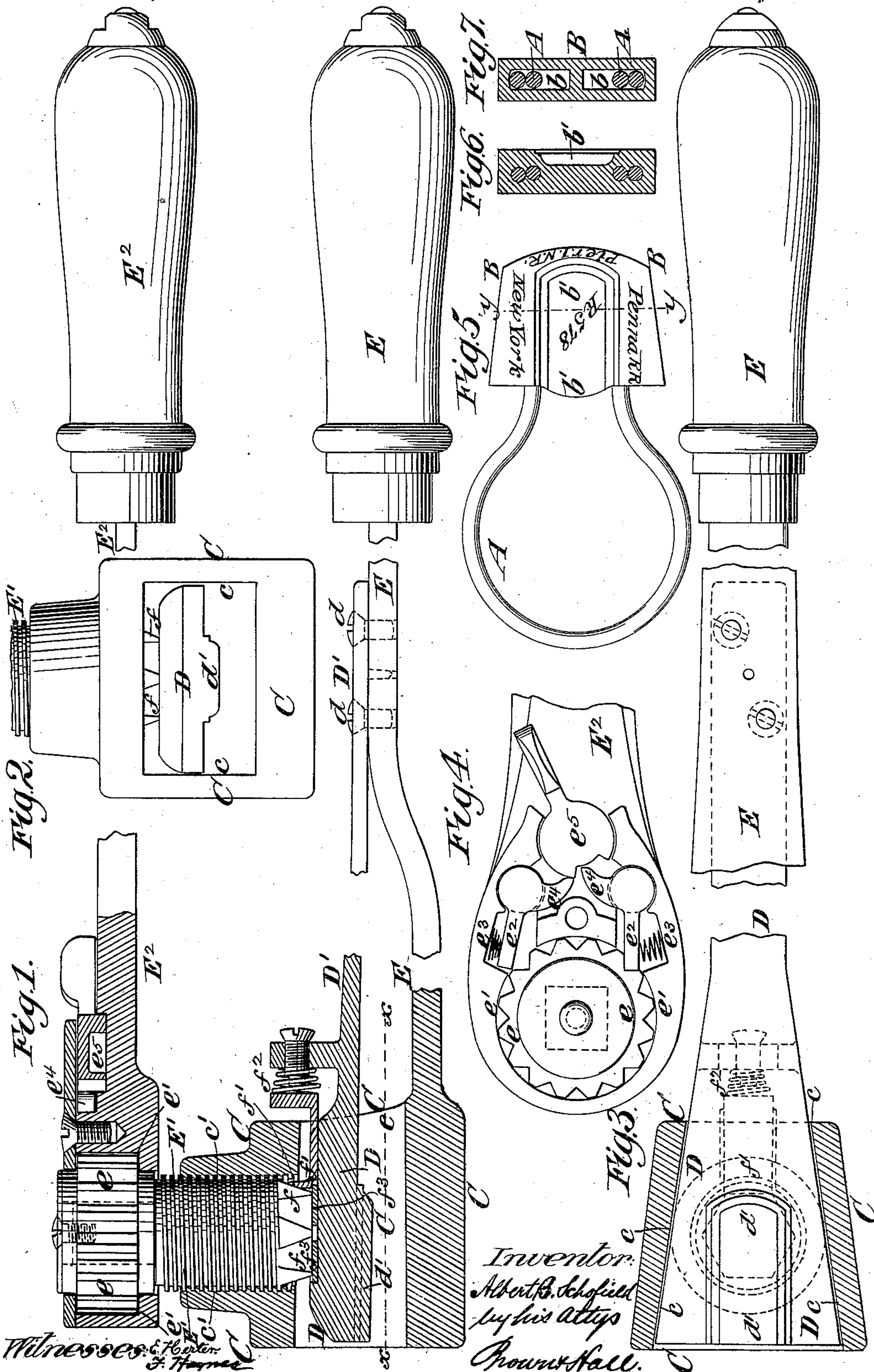
(No Model.)

A. B. SCHOFIELD.

SEAL PRESS.

No. 373,201.

Patented Nov. 15, 1887.



UNITED STATES PATENT OFFICE.

ALBERT B. SCHOFIELD, OF JERSEY CITY, NEW JERSEY.

SEAL-PRESS.

SPECIFICATION forming part of Letters Patent No. 373,201, dated November 15, 1887.

Application filed February 1, 1887. Serial No. 226,122. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. SCHOFIELD, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Seal-Presses, of which the following is a specification.

In my pending application for Letters Patent, Serial No. 206,921, I have shown and described a seal for car-doors, which consists of a soft-metal body and a bail or loop, the arms of which are provided with shoulders engaging with shoulders in the interior of the body, and are secured in the body by exerting on opposite faces of the body a pressure sufficient to close the soft metal thereof about the arms of the bail or loop. The seal-body shown in said application has its opposite edges converging toward one end; or, in other words, it is wedge-shaped as to its edges, and has its opposite faces substantially flat.

My invention consists in the combination, in a seal-press, of a box or frame having upright side walls converging from the front thereof inward and a die having its side edges correspondingly converging and snugly fitting against the side walls of the box or frame, the die being substantially parallel with the bottom of the box or frame, and movable toward and from the same to produce pressure on opposite faces of the seal-body. The pressure which is exerted upon the seal-body by my die serves to force or produce the flow of the soft metal in the body about the shouldered arms of the bail or loop, and it is important to make the opposite side walls of the box or frame converging from the front inward, and make the seal-body of like form, because the seal-body may then be readily removed from the box or frame of the press after its metal has been displaced by the pressure exerted upon it. Inasmuch as the converging side walls of the box or frame confine the metal laterally and prevent any enlargement in width, the recesses in the body of the seal which receive the shouldered arms of the bail or loop are caused to tightly embrace such shouldered arms, and by the pressure upon it the seal-body will also be somewhat elongated. The die must also be made of converging form or wedge-shaped to fit the box or frame and have its side edges work snugly against the

side walls of the box or frame, else when pressure is applied the soft metal of the seal-body would be caused to flow upward between the edges of the die and the side walls of the box or frame. It will therefore be observed that when a seal-body is placed within the box or frame and the die applied to it, the soft metal of the seal is confined on opposite edges and on the top and bottom.

The form of the box or frame and seal-body above described is also advantageous, because it enables the body to be properly placed in the box or frame to receive the pressure of the die without any difficulty, it being only necessary to slip the seal-body into the box or frame until the converging edges of the seal-body come to a bearing around the converging side walls of the box or frame.

The die which is included in my new combination above set forth preferably has a projection extending lengthwise between the converging edges and upon the middle portion of its face, and by the operation of the die the seal-body will be subjected to pressure between the arms of the bail or loop, so as to cause the metal of the body to flow outward in opposite directions around such arms, and will afterward be subjected to pressure upon substantially the whole of its face. A screw operated by a ratchet-lever constitutes a convenient means for producing the pressure of the die upon the seal-body; and in order to prevent the accidental turning of the screw, or, rather, to prevent it from turning backward with the ratchet-lever when said lever is returned to take a new hold thereon, I make the screw with a polygonal formation between its ends, and I provide a spring-actuated keeper which bears upon the polygonal portion of the screw and serves to prevent the return movement of the screw with the ratchet-lever.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved press, a portion of the two handles being broken away to reduce the length of the figure. Fig. 2 is an end view of the box or frame of the press and the die which is movable therein. Fig. 3 is a horizontal section through the box or frame of the press upon the plane indicated by the dotted line *xx*, Fig. 1, showing an in-

verted plan of the die and the arm which carries it. Fig. 4 is a plan view of the ratchet-head of the screw and the pawl mechanism carried by the operating lever or handle. Fig. 5 is a plan of a seal which has been closed or subjected to pressure in the press; and Figs. 6 and 7 are transverse sections of the seal-body on the dotted line $y y$, Fig. 5, respectively showing the body after it has been subjected to pressure and before it is subjected to pressure.

Similar letters of reference designate corresponding parts in all the figures.

In Figs. 5, 6, and 7 I have shown a seal like that forming the subject of my aforesaid application, and which consists of a bail or loop, A, having its arms shouldered and inserted within recesses b in the soft-metal body B, after which the soft-metal body is subjected to the pressure of the die, the die forming in the face of the body a depression, b' , and thereby causing the metal to flow outward in opposite directions around the arms of the bail or loop A, in order to closely confine them in the body.

C designates the box or frame of my press, the top and bottom walls of which are substantially flat and parallel, while the opposite side walls, c , converge from the front of the box or frame inward, giving the box or frame a wedge shape in its horizontal section.

D designates a die, which is of corresponding wedge shape to the box or frame, as shown in Fig. 3, and which is movable in the box or frame toward and from the bottom thereof. The converging edges of the die snugly fit the walls c of the box or frame. This die D is in this example of my invention supported at the end of a spring or resilient arm, D', attached at d to one of the levers or handles E. The lever or handle E has upon its end the box or frame C, and the attachment of the die D, by means of the elastic arm D', causes the die to automatically rise after it has been forced downward to exert pressure upon the seal-body.

Upon the face of the die D is a projection, d' , so situated as to bear upon the middle of the body B of the seal between the arms of the bail or loop A, and when said die is forced down upon the seal-body the projection d' produces the recess or depression b' in the face of the body, and the die during the latter portion of the operation exerts a pressure over substantially the whole face of the body.

Any words, letters, or other symbols may, by the die, be impressed upon the body. For example, the body may show in the recess or depression the letter and numerals "R 578" and on the margin of the body around such depression it may show the letters "Penna R. R.," "Pier 1 N. R.," "New York," as is shown in Fig. 5. The inspector then has a ready means of detecting whether the seal has been properly closed. If the seal shows simply the letter and numerals "R 578," and not the matter upon the body around the depression or re-

cess b' , the inspector at once sees that the seal has not been properly closed.

The making of the box or frame with converging side walls or wedge-shaped in horizontal section is very desirable for several reasons. By such form the metal of the seal-body is confined on all four sides and the metal of the body is caused to flow outward around the arms of the bail, and then flow lengthwise. When the seal-body and the box or frame are both wedge-shaped, or have converging sides, provision is afforded for adjusting the seal-body to the exact position desired in the press without any care being necessary, it being necessary only to push the seal-body into the box or frame until its converging edges come to a bearing against the converging side walls of the box or frame, and the seal-body will then be in the exact position desired for receiving the pressure of the die D d' . The wedge-shaped form of the box or frame and seal-body also enables the body to free itself from the box or frame after pressure has been applied and then removed. If the opposite side walls of the box or frame were parallel and served to confine the seal-body during pressure, it would be almost impossible to withdraw the seal-body from the box or frame after the pressure is removed therefrom.

For operating the die D, I have here represented a screw, E', which fits a nut, c' , in the box or frame, and which is operated by a ratchet handle or lever, E². It is necessary that the ratchet movement through which the screw is operated be of such character that the screw can be backed out after it has been turned to force the die D down upon the body, and I have here shown an ordinary form of ratchet mechanism, to which I make no claim. Upon the end of the screw is secured a ratchet-head, e , fitting a small cavity, e' , in the lever or handle E², and with this ratchet-head engage pawls e^2 , which are caused by springs e^3 to engage the ratchet-head e . The pawls e^2 have arms or toes e^4 , and by means of a notched tumbler, e^5 , one or the other of said pawls may be tripped and held out of engagement with the ratchet-head. When it is desired to force the die downward to exert pressure upon the seal-body, one pawl should be adjusted so as to engage with the ratchet-head E, and when backing out the screw the other pawl should be adjusted to engage with said ratchet-head.

During the first portion of the movement of the screw, when it is turned to operate the die, and during its operation to release the die, or remove pressure therefrom, it is necessary that the screw be prevented from turning backward when the ratchet-lever E² is turned to secure a fresh hold upon the ratchet-head e . To accomplish this, I construct the screw with a polygonal formation, f , as here shown, at the end thereof, upon which bears a keeper or saddle, f' . This keeper or saddle is actuated by a spring, f^2 , to press and hold it in contact with the polygonal formation f of the screw, as best shown in Fig. 1, and the saddle

or keeper exerts a sufficient resistance to the turning of the screw to prevent it from turning backward when the lever or handle E^2 is moved backward to take a fresh hold upon the ratchet-head of the screw. The two levers or handles E E^2 are operated in a manner very similar to a bolt-clipper or other shears.

In this example of my invention I have shown in the back of the die D a wearing-plate, f^3 , against which the end of the screw E' impinges.

I am aware that in a ticket-press comprising a platen and a type-roller arranged above it outwardly-diverging side walls or cheeks have been provided to form a funnel-like guide to direct the ticket between the platen and the type; and I am also aware that it is not broadly new to provide a die in a press for car-seals with a projection across its face, and the bed of the press with a corresponding recess, so that when pressure is applied to the seal it will be bent into concavo-convex form. I do not seek to cover either of the things just described as old.

I am not aware of any press which has ever been made for seals and which had a box or frame the bottom of which is substantially flat and the sides of which converge from the end inward, and the die which not only is substantially parallel with the bottom of the box or frame, but has its opposite edges converging correspondingly to the side walls of the box or frame and snugly fitting the box or frame with such a press, the soft metal of the seal-body introduced into the box or frame is

confined on four sides—that is, on the top, bottom, and the converging sides—and consequently by pressure of the die the metal in the seal-body is caused to flow lengthwise and the entire filling up of the recesses in the seal-body and the closing of the soft metal tightly around the shouldered arms of the bail or loop is insured.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a seal-press, of a box or frame having side walls converging from the front thereof inward and a die having its side edges correspondingly converging and snugly fitting the side walls of the box or frame, the die being substantially parallel with the bottom of the box or frame, and movable toward and from the same to produce pressure on opposite faces of the seal-body, substantially as herein described.

2. The combination, in a seal-press, of a box or frame, a die movable therein to compress a seal-body between it and the bottom of the box or frame, a screw for operating the die, and having a polygonal formation, a lever and ratchet-and-pawl mechanism for operating the screw, and a spring-actuated keeper bearing on the polygonal portion of the screw to prevent the accidental turning of the screw, substantially as herein described.

ALBERT B. SCHOFIELD.

Witnesses:

WM. H. SCHOFIELD,
C. HALL.