

SEAL PRESS.

953,507.

Patented Mar. 29, 1910.

2 SHEETS—SHEET 1.

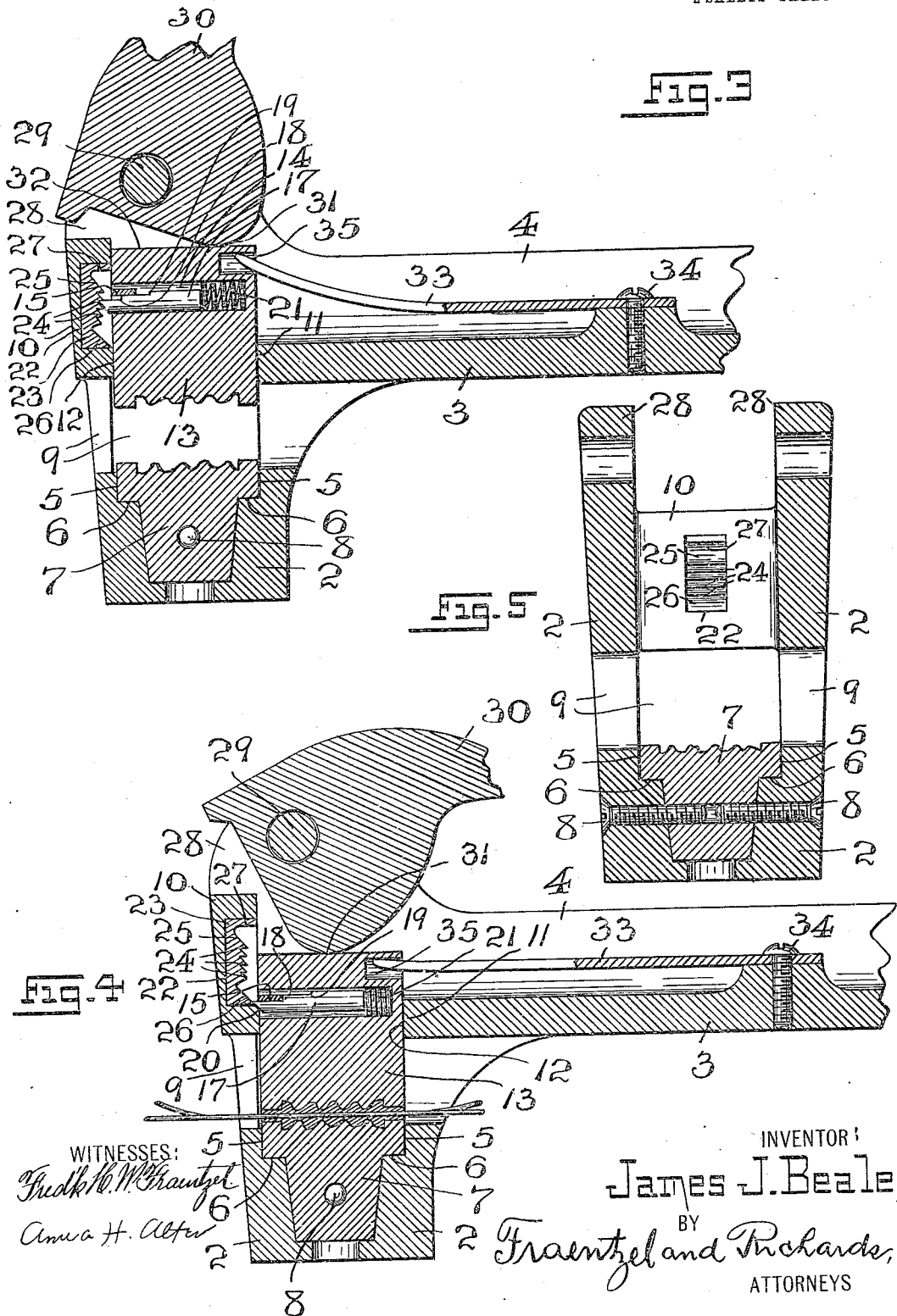


J. J. BEALE.
SEAL PRESS.
APPLICATION FILED JULY 26, 1909.

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2 SHEETS—SHEET 2.

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UNITED STATES PATENT OFFICE.

JAMES J. BEALE, OF NEWARK, NEW JERSEY.

SEAL-PRESS.

953,507.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed July 26, 1909. Serial No. 509,553.

To all whom it may concern:

Be it known that I, JAMES J. BEALE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Seal-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention has reference, generally, to improvements in seal presses; and, the invention relates, more particularly, to that class of presses which are ordinarily carried in the hand and are used especially for securely fastening the end-portion of the usual wire-fasteners to a seal, for sealing-purposes of the various kinds, and impressing suitable symbols, or the like, upon the usual seals or rivet-heads.

The principal object of my present invention is to provide a simply constructed seal-press of the general character hereinafter set forth, and which is known as the "ratchet-type", and which is of such a construction so that after the pressing operation has been begun, it will be absolutely necessary to complete the pre-determined distance of the movable die, before the latter can be returned to its normal initial and operative position, thereby insuring a perfect pressure and producing the seal with positive and distinctly marked impressions; and, furthermore insuring more securely fastened seals or rivet-heads upon the end-portion of the wires, cords, or similar fastening means.

This invention has for its further purpose to provide a seal-press in which the ratchet and locking devices are arranged and secured within a tubular or chambered press-head or frame of the press, so that the parts can not be tampered with; and, furthermore, by such arrangement of the parts, securing a device in which the ratchet and locking devices are protected from injury by accident.

Other objects of this invention not at this time more particularly enumerated will be clearly understood from the following detailed description of my present invention.

With the various objects of my present invention in view, the said invention consists, primarily, in the novel seal-press of the general character hereinafter more particularly set forth; and, the invention consists, furthermore, in the novel arrangements and combinations of the several devices and parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification and then finally embodied in the clauses of the claims which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a seal-press made according to and embodying the principles of this invention. Figs. 2, 3 and 4 are detail longitudinal vertical sections made on an enlarged scale, of the head-portion of the press with its dies, and the ratchet and locking devices, Fig. 2 representing the parts in their normal initial positions, Fig. 3 showing the positions of the parts when the movable die has been but partially lowered and is locked against the return to its normal initial position, and Fig. 4 illustrating the parts during the full-stroke of the movable die while making a perfect impression upon the seal. Fig. 5 is a transverse vertical section of the head-portion of the press, with the movable die and the locking device omitted from said view, but showing the ratchet in elevation; and Fig. 6 is a side elevation of the movable die and end-view of the locking device carried by said die. Fig. 7 is a detail sectional view of a part of the head-member of the seal-press and a slightly modified construction of rack-block connected therewith.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates a complete seal-press showing one embodiment of my present invention, the same comprising a suitable head-member 2 from which extends a suitable and fixed hand-piece, as 3, which is preferably grooved or channeled, as at 4, see Figs. 2, 3 and 4 of the drawings. The said head-member 2 is made with a suitably formed receiving portion 5, preferably formed with a suitable

seat, as 6, for the arrangement in the lower part of the said head-member 2 of a fixed die 7, said die being secured in place against accidental displacement by a screw or screws 8. In its front, as well as in its sides, the said head-member is formed, at suitable points above the said receiving portion 5 and the die 7 therein, with seal-receiving openings, as 9, and above the said openings 9, the said head-member 2 has a connecting wall-portion 10, the lower portion of which forms with the part 11 of the fixed hand-piece 3, a guide or bearing-portion 12 in which is movably arranged a reciprocatory die 13 of the general character and construction hereinafter more fully set forth. This movable die, as will be seen from the several figures of the drawings, is formed with a laterally extending tubular recess or chamber 14, and extending across the upper front portion of said recess or chamber is a flat holding or retaining plate 15 which is preferably secured in place by having its ends suitably secured in slots or saw-cuts 16 formed in said die 13, substantially as illustrated in Fig. 6 of the drawings. Loosely fitted in said recess or chamber 14 is a holding or locking bolt or dog 17, which is formed with two offsets 18 and 19, forming stops for the purposes hereinafter more fully set forth, and said bolt or dog having its one end extending from said recess or chamber 14, and chamfered, as at 20, to provide a suitable nosing. Within said recess or chamber 14 and back of said bolt or dog 17 is a coiled spring 21, the purpose of which will hereinafter more fully appear.

The previously mentioned wall-portion 10 is made with a receiving depression 22 in which is suitably secured and concealed a rack-block or element 23, said block being provided in its face toward the movable die 13 with a depression and being formed with a series of rack-teeth 24, a pair of chamfered parts 25 and 26, and a stop-edge 27. The said head-member 2 is also provided with upwardly extending ears or lugs 28 which are perforated to receive a pintle 29 upon which is pivoted a suitable operating handle 30. This handle is made with a suitably formed cam-shaped portion 31 which rides upon the upper surface 32 of the movable die 13, substantially as shown. The upward movement of said die 13 is produced by a spring-like finger 33 which is secured at one end by means of a screw 34, or other suitable fastening means, to the fixed hand-piece 3, as shown, the other end-portion of said spring-like finger 33 being operatively connected with said movable die 13, preferably by extending into a suitable receiving depression 35 in said die 13.

In lieu of the block-shaped rack-device hereinbefore described, I may use the form of rack-device illustrated in Fig. 7 of the

drawings. In that case, the head-member is formed in its wall-portion 10 with a tubular part 36 which is drilled into said wall-portion from the top, said part being screw-threaded, as at 37, and communicating with an opening 38 in the inner side of said wall-portion. The rack-block in this case is a cylindrical body 39 which has a screw-threaded part 40 formed in the end with a slot 41 for the reception of the end of a screw-driver, and for the purpose of securing and properly adjusting the said rack-block in its proper bolt or dog-engaging position within said tubular part 36. In its side, opposite the opening 38, the rack-block 39 is formed with a series of rack-teeth 42, a pair of chamfered portions 43 and 44, and the stop-edge 45, with which the nosing of the locking bolt or dog of the movable die, which nosing projects into and through the opening 38, can be brought in operative engagement, as will be clearly evident. The said head-member is also formed with socket, as 46 into which the lower part of said cylindrical body 39 projects and rests upon the compressed coils of a spring 47. The purpose of this spring is to exert a constant and sufficient pressure upon the device 39 after it has been adjusted, so as to guard the same against displacement and to prevent the rack-teeth of the device being thrown out of alinement with the nosing of the locking bolt or dog 17.

Having in the foregoing description in a general manner described the construction of a seal-press made according to and embodying the principles of my present invention, I will now briefly describe its operation.

When the press is not in use, then the various parts are in their normally inoperative positions shown in Figs. 1 and 2 of the drawings, with the upper surface of the movable die pressed, by means of the end of the spring-finger 33 directly against the cam-shaped portion 31 of the handle 30. When in this condition, the locking end or nosing of the bolt or dog 17 extends directly beneath the retaining plate 15, and into the space formed by the upper chamfered part 25 and stop-edge 27 of the rack-block shown in Figs. 2, 3 and 4, or into the space formed by the chamfered part 43 and stop-edge 45 of the rack-block shown in said Fig. 7 of the drawings. By operating the pivoted handle 30 the cam-shaped surface 31 will force the movable die 13 in a downward direction, with the nosing of the spring-controlled locking bolt or dog sliding over the rack-teeth, which will prevent, as will be clearly evident, the return of the movable die to its normal initial position, unless the nosing of the bolt or dog 17 is brought past the rack-teeth and its chamfered surface brought into operative en-

gement with the lower chamfered part 26 of the block shown in Figs. 2, 3 and 4, or the chamfered part 44 of the block shown in Fig. 7. The result will be that the bolt or dog 17 is forced in an inward direction into the recess or chamber 14, against the action of the spring 21, bringing the offset 18 back of and into holding engagement with the rear edge of the retaining plate 15, in the manner clearly represented in Fig. 4 of the drawings. The free end or nosing of the bolt or dog 17 is thus held out of its path of engagement with the rack-teeth which permits the spring-finger 33 to return the die 13 in its upward direction until the slightly extending end of the bolt or dog 17 engages the stop-edge 27 of the construction represented in Figs. 2, 3 and 4, or the stop-edge 45 shown in said Fig. 7, whereupon the off-set 18 of the bolt or dog 17 is again disengaged from the retaining plate 15 so as to bring the several parts again into their normal initial positions shown in said Fig. 2 of the drawings. Thus it will be clearly evident, that after the pressing operation has begun, it will be absolutely necessary to complete the pre-determined distance of the moving die, before the latter can be returned to its normal initial position, thereby insuring a perfect pressure upon the seals, and causing them to be marked with distinct impressions.

I am aware that some changes may be made in the general arrangements and combinations of the several devices and parts, as well as in the details of the construction of the same, without departing from the scope of my present invention as set forth in the foregoing specification, and as defined in the claims which are appended to the said specification. Hence I do not limit my present invention to the exact arrangements and combinations of the devices and parts as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

I claim:—

1. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, and a ratchet device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by one of said dies, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

2. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a

seal, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by one of said dies, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

3. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a spring-pressed bolt carried by one of said dies, said receiving recess having a screw-threaded part, and a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

4. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a spring-pressed bolt carried by one of said dies, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

5. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, one of said dies having a chamber and a retaining plate extending across a portion of said chamber, a bolt within said chamber having an offset adapted to be brought in engagement with said retaining plate, said receiving recess having a screw-threaded part, and a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

6. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, one of said dies having a chamber and a retaining plate extending across a portion of said chamber, a bolt within said chamber having an offset adapted to be brought in engagement with said retaining plate, said receiving recess having a screw-threaded

part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

7. A seal-press comprising a chambered head-member provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, one of said dies having a chamber and a retaining plate extending across a portion of said chamber, a bolt within said chamber, said bolt being formed with an offset, a spring within said chamber back of said bolt for bringing said off-set in engagement with said retaining plate, and a rack-block in said receiving recess past which said bolt is adapted to be moved and interlock with said bolt.

8. A seal-press comprising a chambered head-member provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, one of said dies having a chamber and a retaining plate extending across a portion of said chamber, a bolt within said chamber, said bolt being formed with an offset, a spring within said chamber back of said bolt for bringing said off-set in engagement with said retaining plate, said receiving recess having a screw-threaded part, and a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

9. A seal-press comprising a chambered head-member provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, one of said dies having a chamber and a retaining plate extending across a portion of said chamber, a bolt within said chamber, said bolt being formed with an offset, a spring within said chamber back of said bolt for bringing said off-set in engagement with said retaining plate, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

10. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by one of said dies, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-

block within said receiving recess, said rack-block being made in its side with a depression formed with an upper stop-edge, an upper and a lower chamfered part, and intermediate rack-teeth, substantially as and for the purposes set forth.

11. A seal-press comprising a chambered head-member, provided with a rack-block receiving recess, a pair of dies mounted therein, means for closing the same upon a seal, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by one of said dies, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement, said rack-block being made in its side with a depression formed with an upper stop-edge, an upper and a lower chamfered part, and intermediate rack-teeth, substantially as and for the purposes set forth.

12. A seal-press comprising a chambered head-member, provided with seal-receiving openings and with a rack-block receiving opening, a fixed hand-piece, and a handle pivoted thereto, a lower fixed die, and an upper spring-controlled movable die, said handle being formed with a cam-shaped edge for depressing said movable die, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by said movable die, said receiving recess having a screw-threaded part, and a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

13. A seal-press comprising a chambered head-member, provided with seal-receiving openings and with a rack-block receiving opening, a fixed hand-piece, and a handle pivoted thereto, a lower fixed die, and an upper spring-controlled movable die, said handle being formed with a cam-shaped edge for depressing said movable die, and a ratchet-device mounted directly within said head-member for insuring fully completed pressing operations comprising a bolt carried by said movable die, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

14. A seal-press comprising a chambered head-member, provided with seal-receiving openings and with a rack-block receiving

opening, a fixed hand-piece, and a handle pivoted thereto, a lower fixed die, and an upper spring-controlled movable die, said handle being formed with a cam-shaped edge for depressing said movable die, said movable die being formed with a laterally extending bolt-receiving chamber, a retaining plate extending across a portion of said chamber, a bolt within said chamber having an offset, a spring back of said bolt for bringing said offset in engagement with said retaining plate, and a rack-block arranged in the receiving recess of said head-member past which said bolt is adapted to be moved and interlock with said block.

15 15. A seal-press comprising a chambered head-member, provided with seal-receiving openings and with a rack-block receiving opening, a fixed hand-piece and a handle pivoted thereto, a lower fixed die, and an upper spring-controlled movable die, said handle being formed with a cam-shaped edge for depressing said movable die, said movable die being formed with a laterally extending bolt-receiving chamber, a retaining plate extending across a portion of said chamber, a bolt within said chamber having an offset, a spring back of said bolt for bringing said offset in engagement with said retaining plate, said receiving recess having a screw-threaded part, and a rack-block having a screw-portion screwed into said screw-

threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess.

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16. A seal-press comprising a chambered head-member, provided with seal-receiving openings and with a rack-block receiving opening, a fixed hand-piece and a handle pivoted thereto, a lower fixed die, and an upper spring-controlled movable die, said handle being formed with a cam-shaped edge for depressing said movable die, said movable die being formed with a laterally extending bolt-receiving chamber, a retaining plate extending across a portion of said chamber, a bolt within said chamber having an offset, a spring back of said bolt for bringing said offset in engagement with said retaining plate, said receiving recess having a screw-threaded part, a rack-block having a screw-portion screwed into said screw-threaded part of the receiving recess for the adjustment of said rack-block within said receiving recess, and a spring bearing upon said rack-block to guard said block against displacement.

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In testimony, that I claim the invention set forth above I have hereunto set my hand this 21st day of July, 1909.

JAMES J. BEALE.

Witnesses:

FREDK. C. FRAENTZEL,

FRED. H. W. FRAENTZEL.