

(No Model.)

2 Sheets—Sheet 1.

E. J. BROOKS.
SEAL PRESS.

No. 328,106.

Patented Oct. 13, 1885.

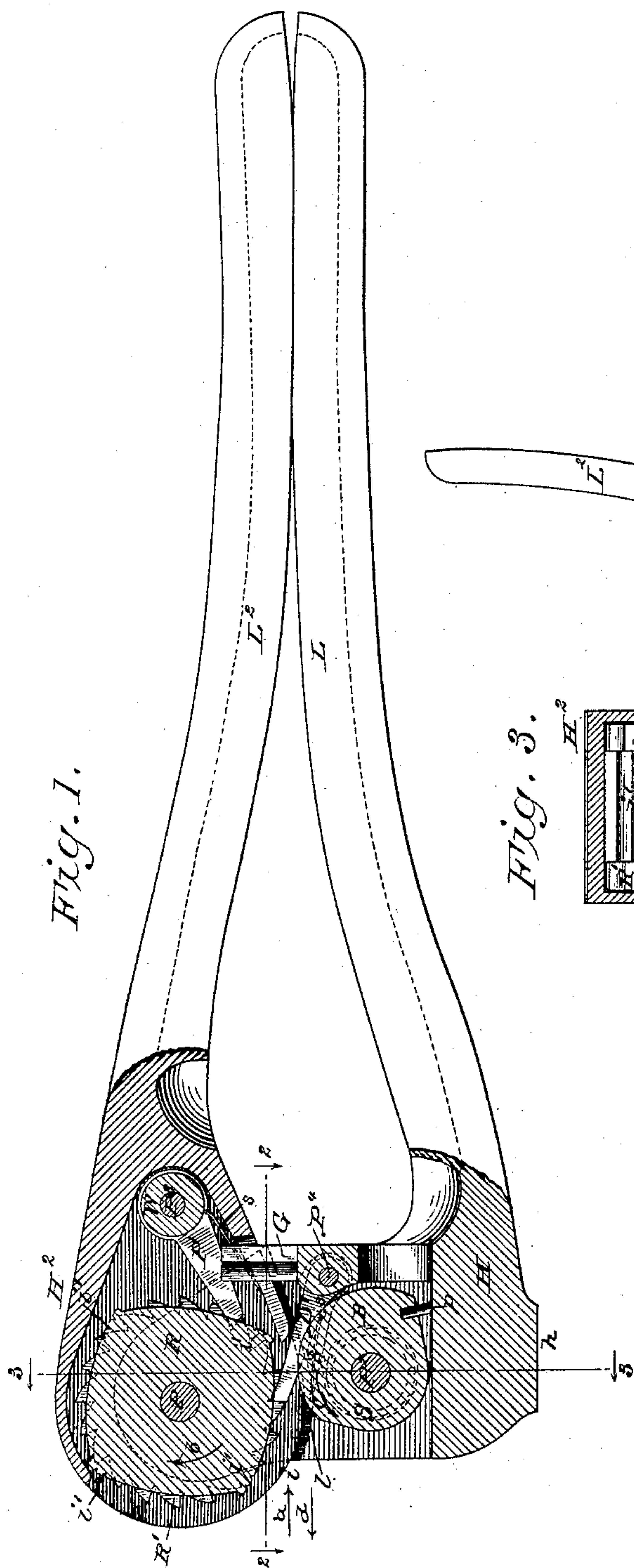


Fig. 1.

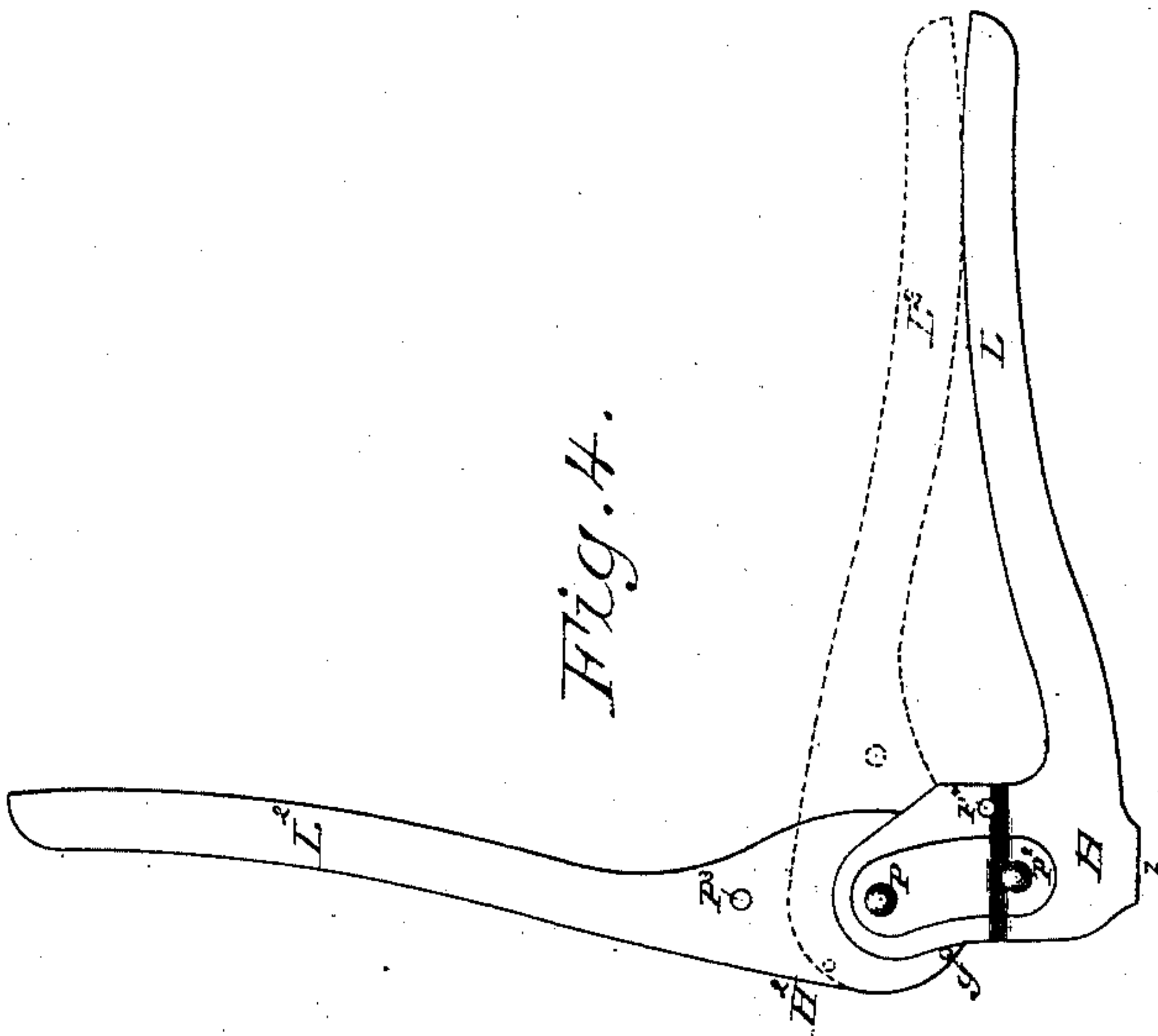


Fig. 4.

Fig. 3.

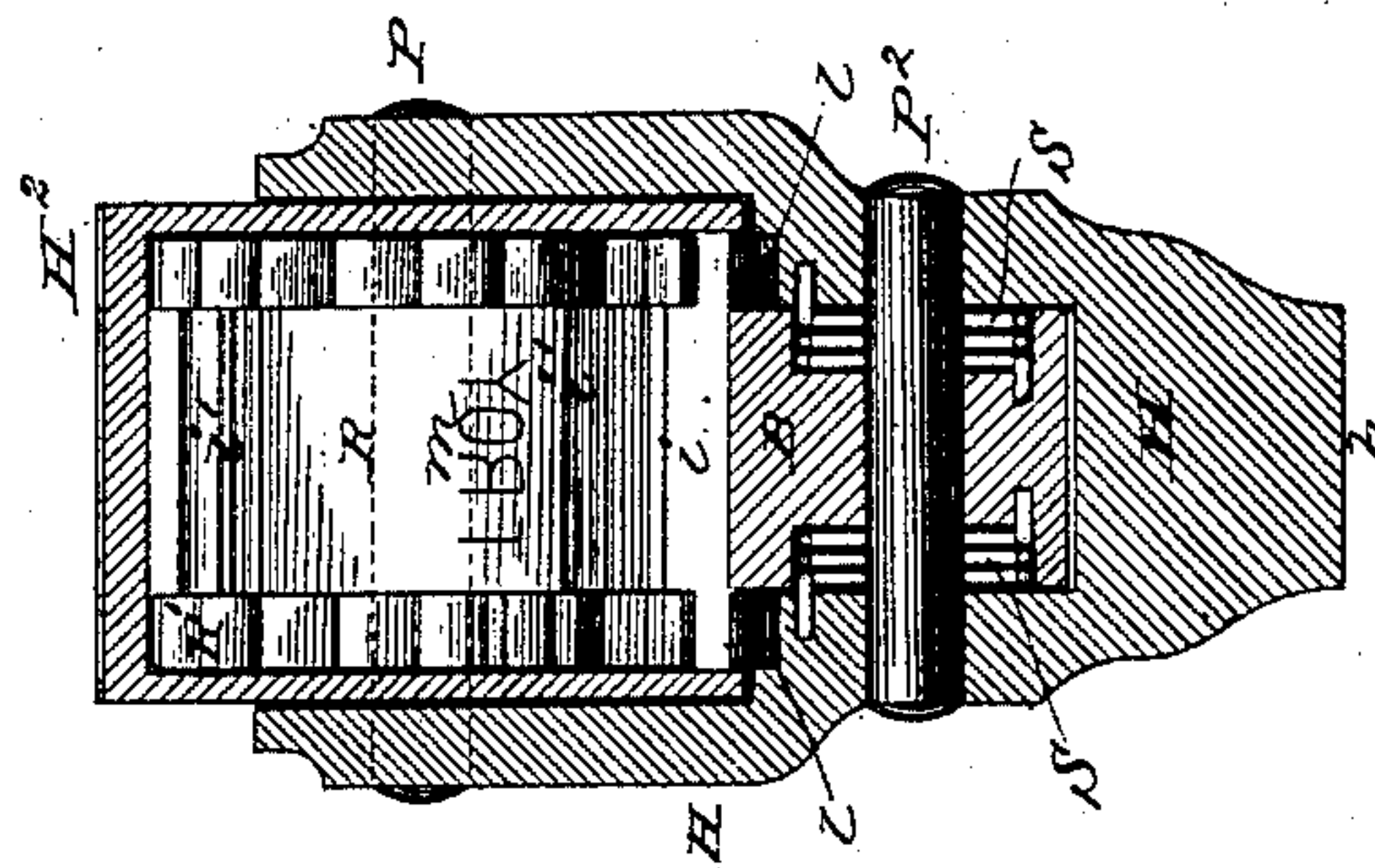
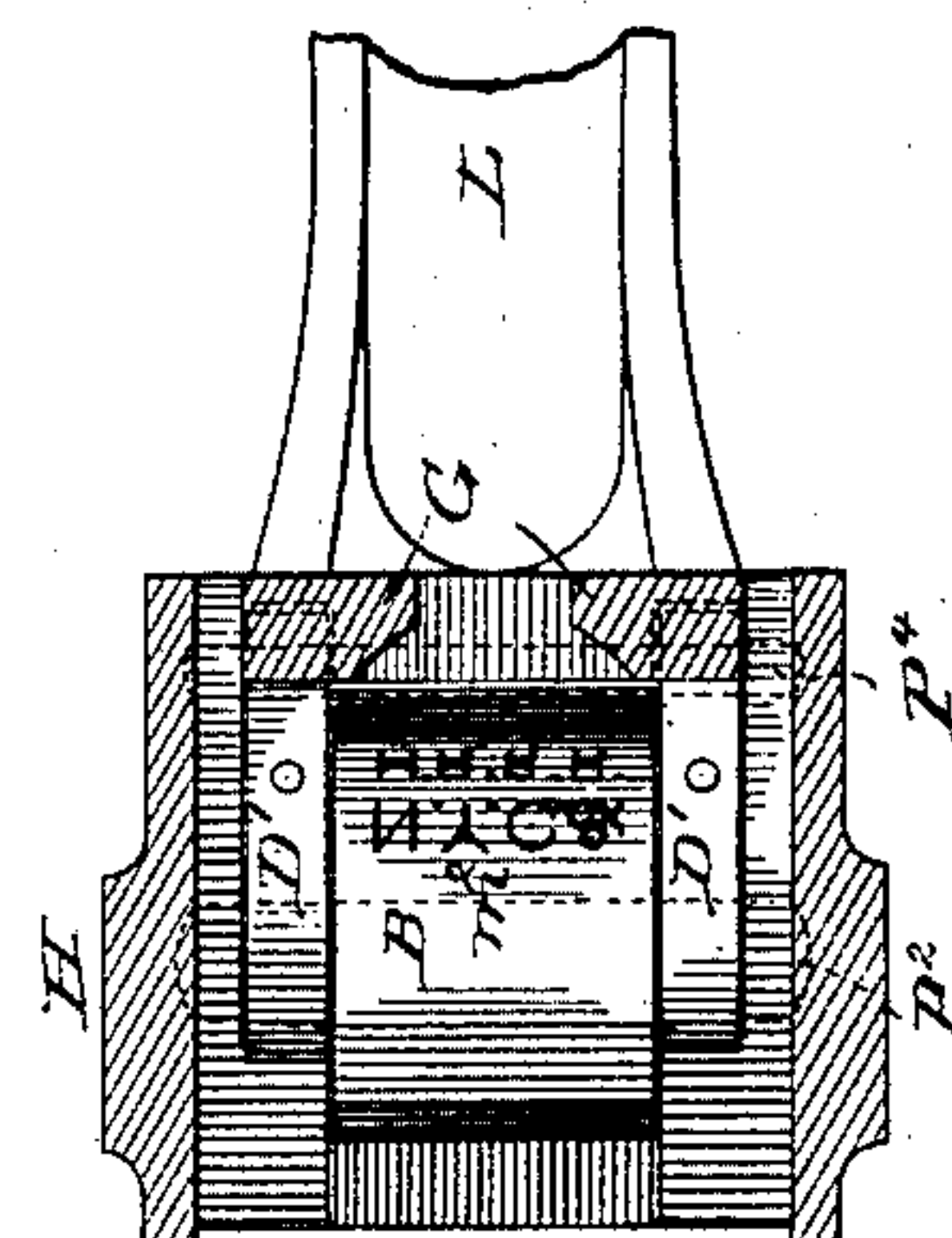


Fig. 2.



Witnesses

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SEAL-PRESS.

SPECIFICATION forming part of Letters Patent No. 328,106, dated October 13, 1885.

Application filed March 14, 1885. Serial No. 158,858. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, residing at East Orange, in the State of New Jersey, have invented a new and useful Improvement in Seal-Presses, (Ratchet-Roller,) of which the following is a specification.

This invention is additional to my "roller" improvement in seal-presses set forth in an application for patent filed November 3, 1884, Serial No. 147,121, relating therewith to improvements in means for compressing the seal-disks of seals which are thus secured or fastened, and impressing them with lettering or other distinguishing marks by rolling, in contradistinction to stamping or rectilinear pressing.

My present invention consists in a peculiar embodiment in seal-presses of said class of a pawl-and-ratchet device to facilitate and insure producing uniform impressions and perfected fastenings, according to my invention set forth and claimed in Patent No. 298,284, dated May 6, 1884, and in other novel features of construction, having for their objects rapid work, distributed strain, and inclosed and effectively located parts, as hereinafter described and claimed.

Two sheets of drawings bearing seven figures accompany this specification as part thereof. Figure 1 of these drawings represents a sectional side view of a "ratchet-roller" seal-press, illustrating all the several parts of this invention. Fig. 2 represents a section thereof on the line 2 2, Fig. 1. Fig. 3 represents a cross-section on the line 3 3, Fig. 1; and Fig. 4 is a small scale elevation of the press, illustrating by full and dotted lines the movements of its working-lever handle. Fig. 5, Sheet 2, represents a sectional side view of another ratchet-roller seal-press, illustrating modifications of the same invention. Fig. 6 represents a cross-section thereof on the line 6 6, Fig. 5, and Fig. 7 represents a sectional side view of the roll end of another ratchet-roller seal-press, illustrating additional modifications.

Like letters of reference indicate the same parts in the several views thereof.

In all their forms these improved seal-presses have as the principal part of each a pair of

lever-handles, $L L^2$, recessed head portions $H H^2$, rigidly connected with said lever-handles, respectively, a main pivot, P , articulating said head portions, pivots $P^2 P^3 P^4$ parallel with said main pivot, a rotary roll, R , or Rx or Rz , and a pair of ratchet-wheels, R' , united with said roll, mounted upon said main pivot P within said head portion H^2 , which is in turn within or partly within said head portion H ; a bed-roller, B , or Bx or Bz , mounted on said pivot P^2 within said head portion H ; a pair of working-pawls, P' , mounted on said pivot P^3 , within the recess of said head portion H^2 and coacting with said ratchet-wheels R' ; and a pair of detent-pawls, D' , on said pivot P^4 within said head portion H , engaging with the respective ratchet-wheels. In each press, as shown, the working parts are fitted to said pivots, so as to turn freely thereon. Said working-pawls P' and said detent-pawls D' have tail-springs s , which engage with abutment-ledges l within the respective head-portions, and keep them in effective contact with the ratchet-wheels R' , and the pivot-ends of said working-pawls are kept apart by a washer-sleeve, W . The bed-roller is adapted in one way or another to be ready to begin a pressing operation whenever it is not engaged in one, and the rotary-roll, if the press is properly worked, is likewise in proper position to begin a pressing operation whenever it is at rest. The rolls and bed-rollers are so shown in the drawings, as best seen in Figs. 1, 5, and 7.

A gage-stop, G , bridging the space between the side walls of each head portion H between the handles arrests a seal-disk introduced through the inlet-space i between the roll and bed-roller of the press. This insertion of the seal-disk is represented by an arrow (marked a) in each of said Figs. 1, 5, and 7. When the seal-disk is in position within the press, the lever-handle L^2 is thrown up to its position, represented in full lines in Fig. 4, in which position it is arrested by gage-stops g , projecting from one part in the form of studs, so as to come in contact with opposing surfaces of the other part. In this movement of said lever-handle L^2 the working-pawls P' ride over the teeth of the ratchet-wheels R' , while the

detent-pawls D' hold the latter. In returning said lever-handle to its position of rest, as represented by the dotted outlines thereof in Fig. 4, said working-pawls P' , engaging with the coinciding teeth of said ratchet-wheels R' , turn the roll, as indicated by arrow b thereon, the detent-pawls D' riding over and catching behind successive teeth, and through the medium of the seal-disk undergoing compression the bed-roller is turned synchronously, as indicated by arrow c thereon, the seal-disk moving outward, as indicated by arrow d , until at the end of the pressing operation it is discharged clear of the press. Until the pressing operation is thus finished the seal-disk is locked between the roll and bed-roller, and their motion cannot be reversed owing to the coaction of the pawls and ratchet-wheels, as aforesaid. Each pressing operation must consequently be fully completed, and all seals pressed by a given press will consequently be uniformly perfect in appearance and clearness of impression.

The movements of the lever-handle L^2 are limited, as aforesaid, in each of said seal-presses to ninety degrees. This answers with four, two, or one die-surface on the rotary roll as in the respective forms. Referring again to said Figs. 1, 5, and 7, it will be seen that in the first case, Fig. 1, a seal-disk may be fully pressed and discharged, and the roll set so as to admit the next at each return movement of the hand-lever L^2 ; in the second case, Fig. 5, at two return movements, and in the third case, Fig. 7, at four return movements. In either case the rotary roll is left in proper position to admit the next seal-disk, as aforesaid, through said inlet i , which is formed in part by recessing or cutting away the periphery of the roll immediately before the leading end of each die-surface, as represented.

In each of said seal-presses the die-surfaces of the rotary roll are provided with transverse grooves or indentations i' in the leading end of each to prevent slipping. Said rolls R R_x are also provided with intaglio lettering or marks m , to provide the pressed seals with distinguishing marks, and the bed-rollers B B_x are likewise provided with intaglio lettering or marks m^2 , to stamp the back of each seal-disk pressed thereon, and to insure the movement of the bed-roller with the rotary roll. Instead of the latter the periphery of the bed-roller B_x may be simply roughened or file-cut, and said roughening indentations i' in the roll R_x may be adapted to mark the seal-disks sufficiently, while numbers and other distinguishing marks may be added to suit purchasers of the presses. Said bed-rollers B B_x are also provided alike with retracting-springs S , Fig. 3, (shown in dotted lines in Figs. 1 and 5,) each spring being in the form of a short spiral coil of large diameter, inclosed within a recess in the roller end, concentric with the roller-pivot P^2 , and connected by oppositely bent extremities and matching-

holes with the roller and the walls of the head portion H , as best shown in said Fig. 3. A pair of such springs are preferably employed, as indicated, to distribute strain.

Each of the bed-rollers, except in the modification illustrated by broken lines in Fig. 7, is segmental, and consequently oscillating in its motion, and is provided with a stop-pin, p , to properly limit its return movement, said pin engaging with the floor of the recess in said head portion H . The bed-roller B has an eccentric periphery to coact with the relatively flat die-surfaces, four in number, on the roll R . That of said bed-roller R_x is concentric with the roller-pivot, as is also that of said bed-roller R_z . The bed-roller may instead be circular and rotary, as indicated by said broken lines at B_z in Fig. 7, when it is not required to carry specific intaglio marks m^2 .

In each seal-press the lever-handle L and head portion H , with the gage G and a hammer-face, h , are preferably formed, as represented, by one casting, which may be of malleable iron, and the lever-handle L^2 and head portion H^2 by another, and the ratchet-wheels R' are integral with the respective rotary rolls; but these and like details of mechanical construction not essential to the functions of the elements of my respective claims, hereinafter stated, are not considered necessary features of either seal-press.

Having thus described my said improvement in seal-presses, (ratchet-roller,) I claim as my invention and desire to patent under this specification—

1. A seal-press having a rotary pressing-roll actuated through the medium of pawl-and-ratchet devices, which limit its motion to one direction, substantially as herein specified, for the purpose set forth.

2. In a seal-press, the combination, substantially as herein specified, of a rotary pressing-roll actuated through the medium of pawl-and-ratchet devices, which limit its motion to one direction, and having one or more peripheral die-surfaces, and a bed-roller parallel therewith, having peripheral indentations to support and move with the seal-disk in each pressing operation.

3. The combination, in a seal-press, of a rotary pressing-roll actuated through the medium of pawl-and-ratchet devices, which limit its motion to one direction, and having one or more peripheral die-surfaces, a vibrating lever-handle which carries the working-pawls, and a gage-stop which limits the movement of said lever-handle to a given number of degrees proportioned to the number of die-surfaces on the roll, substantially as herein specified.

4. The combination, in a seal-press, of a vibrating lever-handle, a pair of working-pawls carried by said handle, a pair of ratchet-wheels united with the respective ends of a rotary pressing-roll, and a pair of detent-pawls pivoted within a head portion which is

rigidly united with another lever-handle, substantially as herein specified.

5 5. In a seal-press, in combination with a pressing-roll, an oscillating bed-roller having springs for effecting its return movements, each in the form of a large coil inclosed within a recess in the end of the roller, substantially as herein specified.

10 6. In a seal-press, in combination with a pressing-roll, an oscillating bed-roller having a stop-pin engaging with the floor of the head-recess, within which the roller is pivoted, to properly limit the return movements of said roller, substantially as herein specified.

15 7. The combination, in a seal-press, of a pair of lever-handles rigidly united, respect-

ively, with recessed head portions which are fitted one within the other and articulated by a main pivot passing through said head portions, a rotary pressing-roll, and ratchet- 20 wheels at its ends mounted on said main pivot within the inner head-recess, working-pawls pivoted within the head portion of the vibrating lever-handle, and detent-pawls, and a bed-roller pivoted within the other head portion, 25 substantially as herein specified, for the purposes set forth.

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