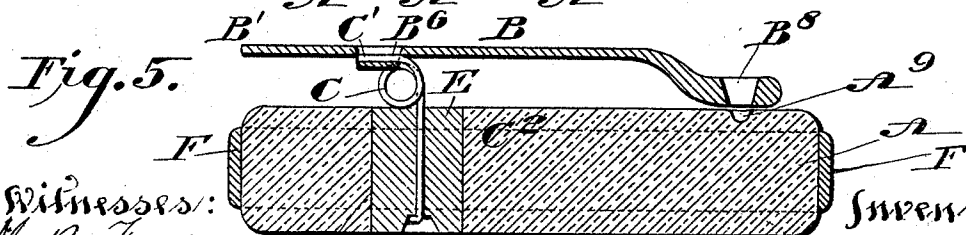
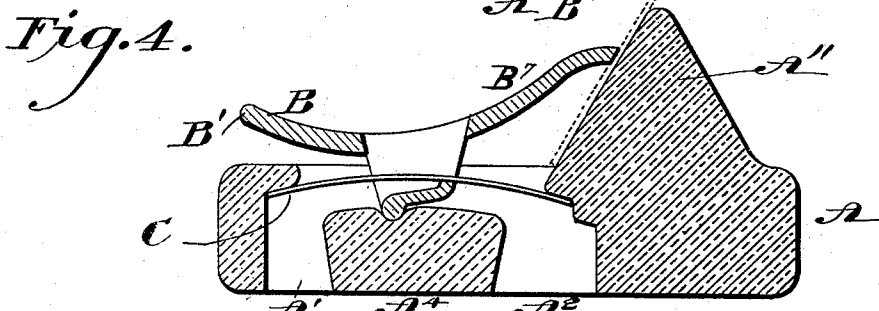
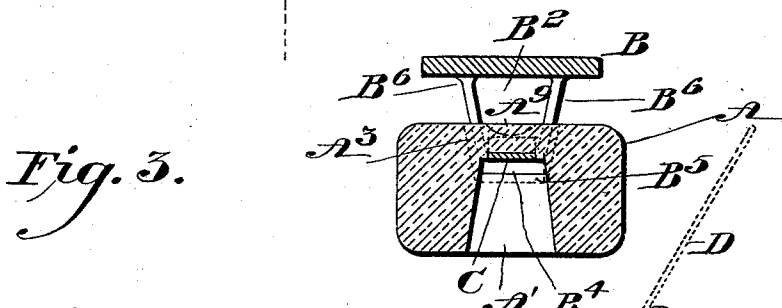
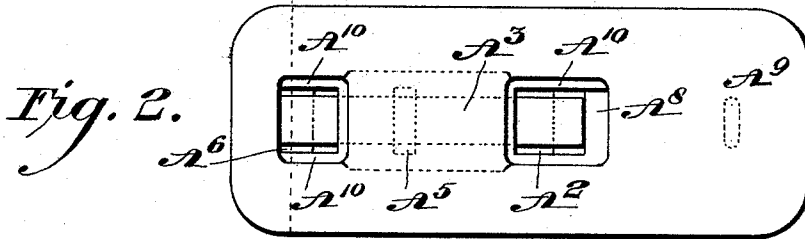
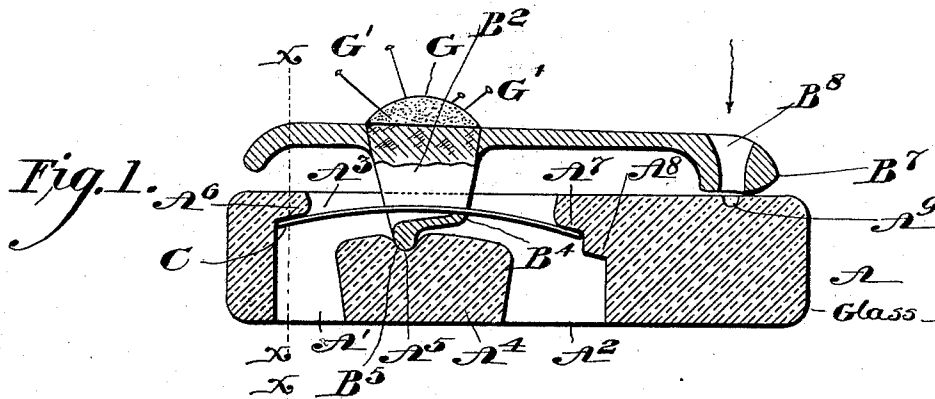


(No Model.)

I. W. HEYSINGER.
COMBINED PAPER WEIGHT AND CLAMP.

No. 509,900.

Patented Dec. 5, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

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COMBINED PAPER WEIGHT AND CLAMP.

SPECIFICATION forming part of Letters Patent No. 509,900, dated December 5, 1893.

Application filed March 18, 1893. Serial No. 466,597. (No model.)

To all whom it may concern:

Be it known that I, ISAAC W. HEYSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Paper-Holding Clamps, of which the following is a full, clear, and exact description, reference being had to the drawings which accompany and form a part of this specification, in which—

Figure 1 is a longitudinal vertical section through a paper clamping device which embodies my invention. Fig. 2 is a plan view from beneath, showing the recesses of the upper surface in dotted outline through the glass base. Fig. 3 is a transverse vertical section of Figs. 1 and 2, through the dotted line $x-x$, and showing the more forward parts in end view, above or through the glass of the base. Fig. 4 is a view similar to that shown in Fig. 1, except that the clamping surface of the base is formed at a slope, instead of level, so as to hold the papers in a somewhat elevated position, and the clinching recess of the other figures is not shown. Fig. 5 is a view similar to that shown in Fig. 1, except that a modification of the spring is shown, by which the clamping arm is brought down upon the base; and also, in Fig. 5 is shown an external jacket or case in which the glass base may be inserted, if desired.

The lettering in all the figures is uniform.

My invention consists in the construction of a glass paper weight, such, substantially, as are in general use, having a weight of from a half pound to one or two pounds, as may be desired, and made of pressed glass, to the upper surface of which is secured, by a suitable bearing, a vibrating clamping arm, the forward end of which is adapted to be compressed against the upper surface of said glass paper weight, and a clamping spring adapted to operate against said clamping arm and habitually compress the said arm against the said glass paper weight, until temporarily released by pressure upon the thumb lever at the rear end of said clamping arm, and in rear of the bearing thereof, or by other means of raising the said arm, if desired. It is obvious that any such construction of the glass paper-weight as is employed in the bases of

ordinary paper clips or clamps would be inadmissible, as the fragile nature of the material used, pressed glass, would permit breakage under the slightest rough usage. Hence the glass base must be so molded as to retain its greatest solidity and strength, so that the latter are not materially impaired by the modifications necessary to adapt to it the clamping arm and its attachments.

My invention also includes a concave clinching recess formed in the body of the glass base, and a clincher guiding opening, or its equivalent, in the free end of the clamping or guide arm, so that the article is adapted to form a clinching base for metallic staples as is shown in my Letters Patent No. 226,402, dated April 13, 1880, wherein is clearly shown one of the staple holding and driving tools, and a clinching base and clamping arm adapted thereto. In my present invention, as stated, I form this clinching recess, in which the legs or points of the metallic staples are bent inward and clinched, during the process of driving them through the papers held in place by the clamping arm, by a groove embedded or sunken in the top surface of the glass paper weight which constitutes the base of my present device, or in other words I make and use a concave clinching groove or recess of glass or other vitreous material in combination with a staple driving tool and means for guiding the latter in opposition thereto. The advantages of glass are the greater smoothness of surface and rigidity, together with lack of affinity between the points of the metallic staple legs and the glass surface, so that they are clinched much more readily, and the concave surfaces of the grooves are not dug up or dented by the points of the staples when constantly used, as is the case with metal clinching recesses operating against the points of steel staples. Of course the glass body must be sufficiently solid and large to bear the blows of the staple driver, but, this provided for, the clinching recess of glass may be used in any or all forms of staple driving and clinching tools. I prefer to press the clinching groove or recess in the surface of the glass during the formation of the same, by means of a suitably embossed mold, as the compressed surface has a chill or natural surface which it never loses, and which is much more resistant than the glass

beneath, if said original surface be cut away, and is also smoother to the end thrust of the staple legs than any tool-cut groove will be, but, if desired, in special cases the grooves
5 may be cut with a tool, though I do not recommend it.

Referring to the drawings, I show, at A, an oblong glass paper weight, having rounded corners and edges. I secure to the upper surface thereof, as shown, an elongated bar, or
10 arm, B, which extends along the top of the glass paper weight, A, and rests, at its forward end, B⁷, against the same. The rear end of the arm, B, extends backward, in rear of
15 the support of said arm, and forms a thumb-lever, B', by depressing which the front end of said arm will be raised, as shown. Along said arm, B, on its under side I provide a
20 spring, C, which, as shown in Fig. 5, may itself, form the support of the arm, B, or, as in Figs. 1 and 4 may act against a lug or stud of the arm B, which has an independent bearing in the top surface of the glass base A.

In Fig. 5 I show a coiled spring, of which I
25 prefer to use two side by side, and which are secured to a wooden plug, E, driven or cemented in the vertical recess, A', the lower ends of the wires, at C², being bent to prevent their escape. The upper extremity of the coiled
30 spring, C', I secure to the arm, B, by solder, or preferably by striking down the top surface of B, as shown at B⁶ (Fig. 5) and inserting the end of the coil therein, or any other means desired may be used for this purpose.
35 I prefer however to use the means of forming the clamp shown in Figs. 1, 2, 3, and 4, as being more accurate and powerful. This is substantially similar to the device shown in my Letters Patent No. 334,016, dated January
40 12, 1886, and consists of forming the arm, B, with a sunken cup, B², open from front to rear, but closed at the sides. Across the rear end of the lower surface of said cup or depression, is an enlargement, B⁵, which is
45 rounded, to form a bearing in the depressed upper surface of the glass base, A, as shown at, A⁵, Figs. 1 and 3.

The glass base A, is recessed from beneath, as shown at A' and A², Figs. 1 and 2, the recesses extended entirely through the glass
50 base, A. But the rear part of the recess A', and the front part of A², do not pass entirely through the glass base, but terminate at A⁶, and A⁷ A⁸, leaving spring shoulder seats between the clearance flanges, A¹⁰ A¹⁰. The rear
55 spring seat, A⁶, is a single offset, but the forward spring-seat is divided, so that A⁷ and A⁸ form two shoulders, the forward one, A⁸, slightly lower than the rear one, A⁷. This is to admit the spring, C, as will be shown. The
60 forward margin of the bottom of the cup or depression, B², is raised into an upwardly presenting cross rib, B⁴, against which rests the under surface of the spring C.

To put the parts together the arm, B, is laid
65 upon the base, A, in proper position, the ribbed bearing, B⁵, resting in the groove, A⁵.

The spring, C, which is a simple flat strip of tempered steel, say three-eighths of an inch
wide and three inches long, and which may
70 be of No. 21 gage, is inserted, from the rear, through the cup or depression, B², its forward end passing through the latter and extending downward under the forward spring seat or
shoulder, A⁸, Fig. 1. The rear end of C thus
75 is enabled to clear the front margin of the rear spring seat, A⁶. The rear of the spring C is then drawn down by a hook from beneath, or forced down by a tool from above, and, at the same time the front end of the
80 spring is forced back from the shoulder, A⁸, by a tool applied from beneath, until it snaps into place in the spring-seat, A⁷, and the whole is held in place. When pressure is applied
85 to the thumb-lever, B', B⁵ acts as a fulcrum, and the rib, B⁴, acting against the under surface of the spring, C, raises the front end of the clamping arm, B⁷, to admit the insertion
90 of papers and the like. It will be seen that the only weakening of the solid glass base is by the two vertical holes A' and A², and I make these with rounded corners, so that the clip base is as strong, practically, as though it were a solid construction. Beneath the clincher,
95 B⁷, the glass base is entirely solid. The forward end of the clamping arm, B, I vertically slot, as shown at B³, and through this slot, which is accurately fitted to match with the clinching
100 recess, A⁹, I insert a portable staple driving tool, and insert and clinch metallic staples through any papers placed between the said clamping jaw and said base. The clinching
105 recess, A⁹, is a simple concave groove which may be transverse or longitudinal, or may be cross-shaped, as shown in my Letters Patent No. 274,941, dated April 3, 1883, the
110 vertical slot in the end of the clamping arm being formed to correspond as is shown and fully described in said Letters Patent. In Fig. 4 I show the device adapted to a raised
115 top surface of the glass base in the manner shown in my Letters Patent No. 327,440, dated September 29, 1885, so that the device is adapted to hold papers in a vertical or more or less inclined or upright position.

In Fig. 5 I show the glass paper weight base
surrounded by an external protecting cover
or jacket, F, into which the glass base may be
cemented or otherwise secured. This jacket
120 may be of leather, wood, metal, or other suitable material, and may surround the whole base, or the clinching portion alone. I prefer, in general however, to use such a protecting
jacket, when I use it at all, around the whole
125 base, and it may be made of an ornamental character. The glass surface of the bottom, A, I usually leave exposed, as a glass surface is much preferable for a paper weight than
one of metal, which frequently becomes rough-
130 ened from oxidation and, when damp, is apt to stain or discolor the paper upon which it rests. It is for these reasons that paper weights of glass are in such general use, but the difficulty in forming bearings and attach-

ments for spring clamps for combining the said glass weight with a paper clip attachment has heretofore restricted their use to simple paper weights, the usual variation being calendars or advertisements cemented to their under surfaces, or the like.

In Fig. 1 show the cup or depression, B², which forms a socket open above, provided with a pin-cushion, G, which I clamp or cement into the cup, having a convex surface above, as shown in Fig. 1, in which a number of pins, G' G' G', are shown in place. This forms a useful addition to the device, and more particularly when used by tailors, garment-cutters, and the like, who require to use pins in laying out their work, the weight, A, holding the fabric in place, and the clamp, B, holding a paper containing the measurements required.

I do not in this application rigidly confine myself to the precise construction set forth, or shown in the drawings, but modify the same, as would be done by any skilled mechanic, to meet special requirements, without departing from the principles and scope of my invention as herein shown, described, and claimed.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture a combined paper weight and spring clamp, consisting of a glass paper weight, which forms the base, and a vibrating clamping arm secured above the same, and its free extremity adapted to form contact under compression with the upper surface of said paper weight, and a spring secured to and adapted to automatically close said clamping jaw by spring pressure acting between said arm and said glass base, substantially as described.

2. As an article of manufacture a combined paper weight and clamping device, consisting of a heavy glass base, and a metallic clamping arm adjustably secured to said glass base, and having a thumb lever in rear of its attachment to said base, and a forwardly extended clamp, together with a spring adapted to operate between said base and said arm, and compress the said clamp against the surface of said base, or papers contained between the same, except when pressure is applied to the thumb-lever thereof whereby the said clamp is adapted to be raised, substantially as described.

3. As an article of manufacture a paper-weight and clamp consisting of a glass base adapted to support, part way along the top surface thereof, a pivoted clamping arm, having thumb-lever in rear of said support, and free forward clamping extremity, and a spring adapted to close said clamp, under spring pressure, against said glass base, and a vertical slot in the forward extremity of said clamping arm, adapted to receive and guide the nozzle of a portable staple-driving tool, and a clinching groove formed in the upper surface of said glass base, and adapted to pre-

sent beneath said vertical slot of said clamping arm, and adapted, when such staple driver is used, to bend together the legs of a staple contained in the staple channel thereof and projected downward by the driving blade of said staple driving tool, substantially as described.

4. In combination with a staple guiding device adapted thereto, a staple clinching groove adapted to receive and clinch the legs of a metallic staple when forced against the concave bottom of the same, the staple clinching surfaces of said groove formed of glass or other vitreous substance, substantially as described.

5. In combination with a body of pressed glass having formed therein a concave staple-clinching groove, substantially as described, with curved ends against which the legs of staples are adapted to be forced, and bent, means for guiding the nozzle of a staple-driving tool, and the legs of the staple contained therein, against the concavity of the said glass clinching groove, substantially as described.

6. In combination with the heavy pressed glass base, A, having spring seats, A⁶ A⁷, upwardly open bearing A⁵, pivoted clamping arm, B, pivot bearing, B⁵, abutment, B⁸, spring, C, and clamping arm, B B', having clamping jaw, B⁷, adapted to engage with the top surface of glass base, A, and thumb lever, B', adapted, by being depressed, to raise the forward clamping end of B, said glass base vertically pierced at A' A², for the reception of said spring C, and otherwise left strong and solid, substantially as described.

7. In combination with the glass clinching base A, having concave clinching groove, A⁹, and adapted to receive and clinch the legs of metallic staples therein, the external strengthening jacket, F, surrounding said clinching groove and glass base, substantially as described.

8. In combination with the glass base, A, and spring clamping arm, B, secured thereto and adapted to operate by its clamping jaw against said glass base, a pin-cushion, G, secured thereto, substantially as described.

9. In a spring clamping device, in combination with clamping arm, B, having recess, B², open above, and pivoted bearing, B⁵ B⁴ A⁵, beneath, spring, C, and base, A, the pin cushion, G, fitted into said opening of cup or recess, B², and projecting from the open upper part of same, substantially as described.

10. As an article of manufacture a paper weight and clamp, consisting of a glass base, A, vertically pierced, at A' and A², the upper portions of said perforations opening through said glass base, adjacent, in front and rear, to pivoted bearing, and having in rear of A' the internal shoulder, A⁶, and in front of A², the internal shoulder A⁷, and in front of A⁷ the clearanceshoulder, A⁸, to admit the spring, C, during the insertion of the same, and a depression, A³, in the upper surface of the glass

base, A, opening, in rear, into the vertical opening, A⁷, and in front into, A³, the top surface of said depression grooved transversely, at, A⁵, and a pivoted lever, B, having central
5 pivot bearing, B⁵, adapted to enter and pivot in said groove, A⁵, and a spring, C, shouldered under A⁶ and A⁷, and its middle sprung over said pivot, B⁵, from front to rear and engaging with supporting margin, B⁴, and adapted

to compress the forward end of said clamping arm, B, against said glass base, the whole constructed to operate substantially as and for the purposes described.

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