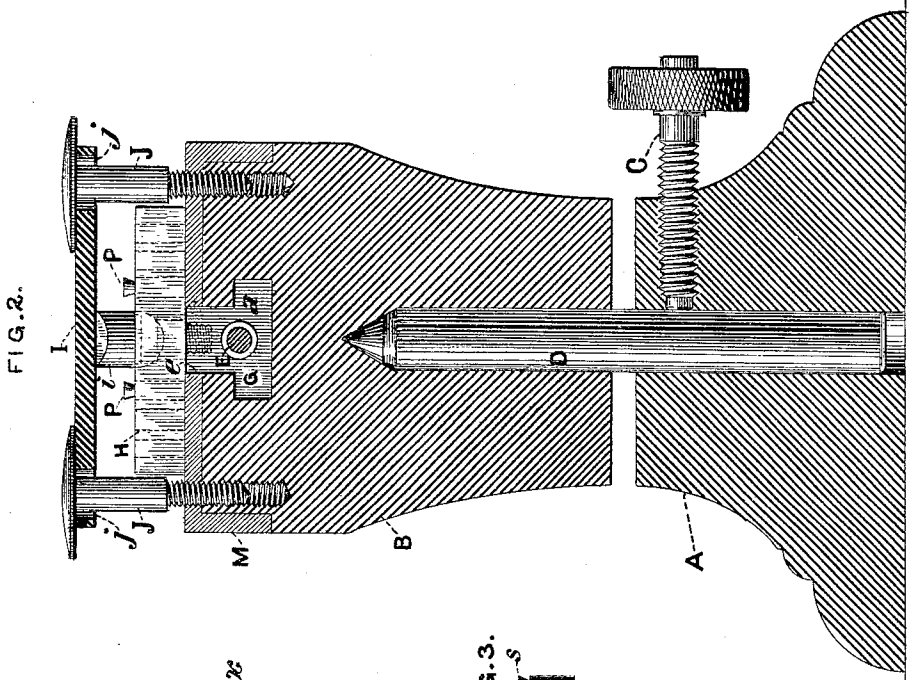
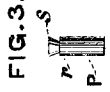
(No Model.) 2 Sheets—Sheet 1.

E. S. STEHMAN.

BLOCK FOR ENGRAVERS' USE.

No. 348,299. Patented Aug. 31, 1886.





WITNESSES:

Geo. A. Vaillant.

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(No Model.) 2 Sheets—Sheet 2.

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FIG. 6.

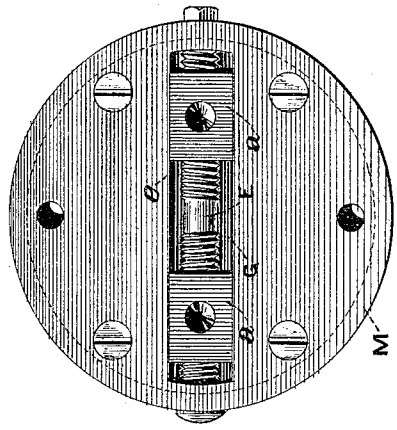


FIG. 4.

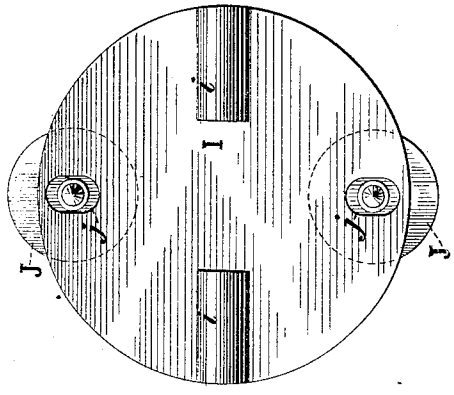


FIG. 7.

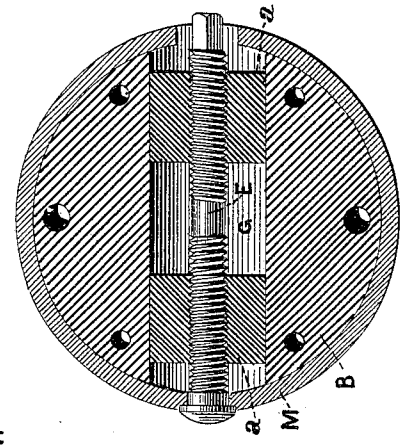
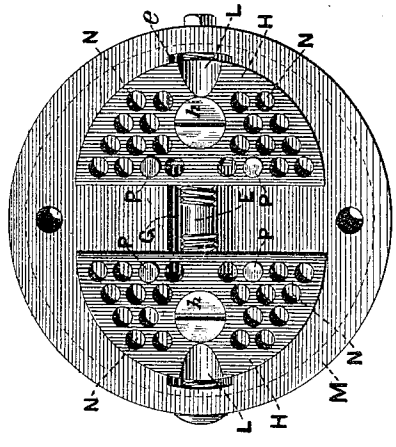


FIG. 5.



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UNITED STATES PATENT OFFICE.

EDWARD S. STEHMAN, OF LANCASTER, PENNSYLVANIA.

BLOCK FOR ENGRAVERS' USE.

SPECIFICATION forming part of Letters Patent No. 348,299, dated August 31, 1886.

Application filed January 25, 1886. Serial No. 189,591. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. STEHMAN, of Lancaster, in the State of Pennsylvania, have invented certain new and useful Improvements in Blocks for Engravers' Use, whereof the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a central vertical section through the apparatus; Fig. 2, a similar section on a plane at right angles to that of Fig. 1. Fig. 3 is a view of one of the holding-pins to be used in connection with the block. Fig. 4 is a view of the under side of the flat clamping-plate, which is upon the top of the block. Fig. 5 is a top or plan view of the block as it appears when said clamping-piece (shown in Fig. 4) is removed. Fig. 6 is a top or plan view when the jaws (which in Fig. 5 are marked L L) are removed, and Fig. 7 is a horizontal section on the line *x x* of Fig. 1.

My invention is intended to provide an engraver's block which has, among others, the following advantages over those now in use: It revolves upon a true vertical axis without appreciable friction, and in revolving has no projections from the main surface which are liable to catch in surrounding objects, it is adjustable at any height, and it is capable of holding objects of any shape, however irregular, either by lateral or downward pressure.

In the drawings, A represents a solid base-piece, in the center of which is a vertical hole adapted to receive a stout cylindrical pin, D, which fits snugly, but so as to move freely, within said hole, and which may be adjusted and secured by means of set-screws C at any desired height. The pin D terminates in a sharp-pointed cone, around whose base is a circumferential groove, as shown in Figs. 1 and 2. The bottom piece, B, of the revolving block is provided with a central vertical hole, terminating conically, which coincides with the upper surface and end of the pin D. A slot, G, shaped like an inverted T, extends diametrically across the block B, and said block is also formed with an offset extending around its upper portion, so that when the cap M, which fits over the entire top thereof, is placed in position the vertical sides of said cap shall be flush with the main surface of the block. Said cap M has a transverse slot, *e*, extending nearly across its upper surface and coinciding with the top of the slot G. Within said T-shaped slot G are two correspondingly-shaped nuts, *a a*, threaded to engage with the right and left screw E, which entends entirely across the block and through the sides of the cap M. Said screw has a detachable key, F, by which it can be turned in either direction. The tops of the nuts *a a* are just flush with the upper surface of the cap M, and of course can simultaneously be caused to approach the center of the block or retracted therefrom by turning the screw E in one or the other direction. A pair of semicircular jaws, H H, are secured to the tops of the nuts *a a* by means of screws *h h*, which are formed with shoulders adjacent to the threaded part, so as to permit each of said jaws to turn freely upon the shank of its fastening-screw as a pivot, the screw-holes in the jaws being also countersunk, so that the tops of said screws are flush with the top surface thereof. Referring now to Fig. 5 it will be seen that each of said jaws is perforated with a series of vertical holes, N, arranged symmetrically and as close together as the strength of the material will permit, which said holes receive the holding-pins P, which should be formed, as shown in Fig. 3, with shoulders *r* and heads *s* of inverted conical form.

As thus constructed, (and supposing that the top clamping-plate, I, is temporarily removed,) the apparatus is adapted to receive and hold by lateral pressure objects of any shape in the following manner: The object being laid upon the top of the jaws H H, as many pins P as the operator deems necessary to hold it are inserted in such of the holes N as are adjacent to its sides, and the screw E is then turned so as to bring the nuts *a a*, and consequently the jaws H H, toward the center of the block. The jaws being free to swivel upon the pivots *h h*, they will adapt themselves to the sides of the object, whatever be its form, and will hold it firmly, so that the engraver can work upon the top surface thereof, turning the block to any desired position. Ordinarily four of the pins P will, by reason of this swiveling capacity of the jaws, be sufficient to hold any object; but the operator may insert any number of pins and allow them to select the hold which is most natural.

The remaining parts of the apparatus are designed to hold objects of any shape by press-

ure upon the top, and are constructed as follows: By reference to Fig. 5 it will be seen that each of the jaws H H has on its top and in the center of its curved portion an inclined groove, L, whose bottom is circular in cross-section, and whose inclination, as shown by the dotted lines in Fig. 1, is outward. The flat clamping-plate I has upon its under side two inclined projections or wedges, *i*. (See Figs. 1 and 4.) The angle of these wedges, as well as the cross-section thereof, conforms to the inclination and circular cross-section of the grooves L L upon the jaws H H. Elongated slots *j* are formed near the periphery of the clamping-plate I, and through those slots flat-headed thumb-screws J or overhanging holders extend downward into threaded openings of the block B. These screws being inserted upon either side, it will be seen that that portion of the right and left screw E, which retracts the jaws H H, will force the grooved portions L L along the inclines of the wedges *i* in an outward direction, and will thus raise the clamping-plate I until it comes into contact with the under side of the flat heads upon the screws J. The reverse movement will cause the grooves L L to travel down the inclines of the wedges *i*, and will permit the clamping-piece I to descend. Supposing that a flat object—such as a spoon or knife—is to be engraved, it is inserted between the upper surface of the clamping-plate I and the lower surface of the screws or holders J. The screw E is then actuated so as to throw the jaws H H outward and the clamping-plate I is raised. If the object is of irregular height the clamping-plate I will tilt, by reason of the circular cross-section of wedges *i* and grooves L until it has adapted itself to the proper position for clamping each end of the object beneath the holders J. As before stated, the block can be revolved so as to permit the operator to work upon any side of the object; and since there is substantially no friction in rotating the block may be made very heavy without interfering with the manipulation thereof.

As is well understood by engravers, it is desirable that the block should be of very considerable weight; but in the devices heretofore used such weight rendered the block very cumbrous.

Having thus described my invention, I claim—

1. The combination of the base-piece A, having a central hole, and a pin, D, vertically adjustable therein, said pin terminating in a point at its upper end, with the block B, carrying on its upper face suitable clamping mechanism and having in its bottom a hole which conforms to the shape of the said pin D, whereby the block is suspended upon and rotates freely on the point of the pin D, substantially as set forth.

2. The combination, with the block B, the T-shaped groove G, nuts *a a*, sliding in said grooves, screw E, actuating said nuts, and slotted cap M, covering said parts, of the jaws H H, pivoted upon said nuts by means of the shouldered screws *h h*, substantially as set forth.

3. The combination, with the jaws H and their actuating mechanism, of the inclines L L, formed upon said jaws, the clamping-plate I, having wedges *i*, which conform to said inclines, and the holders J, overhanging the said clamping-plate, substantially as set forth.

EDWARD S. STEHMAN.

Witnesses:

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JNO. C. LONG.