(No Model.)

J. H. LANEY.

PUNCH.

No. 332,666. Patented Dec. 15, 1885.

FIG. 1.

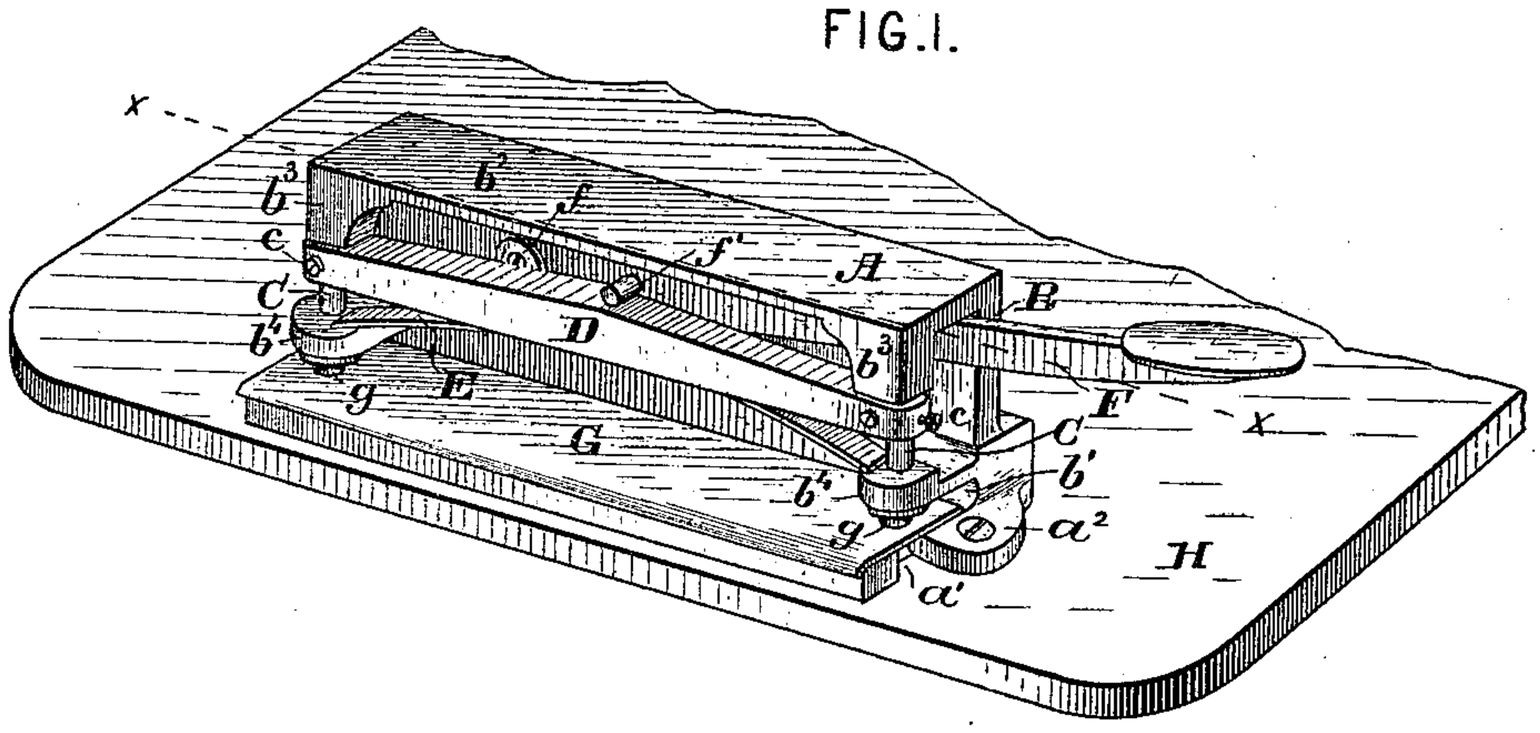


FIG. 2.

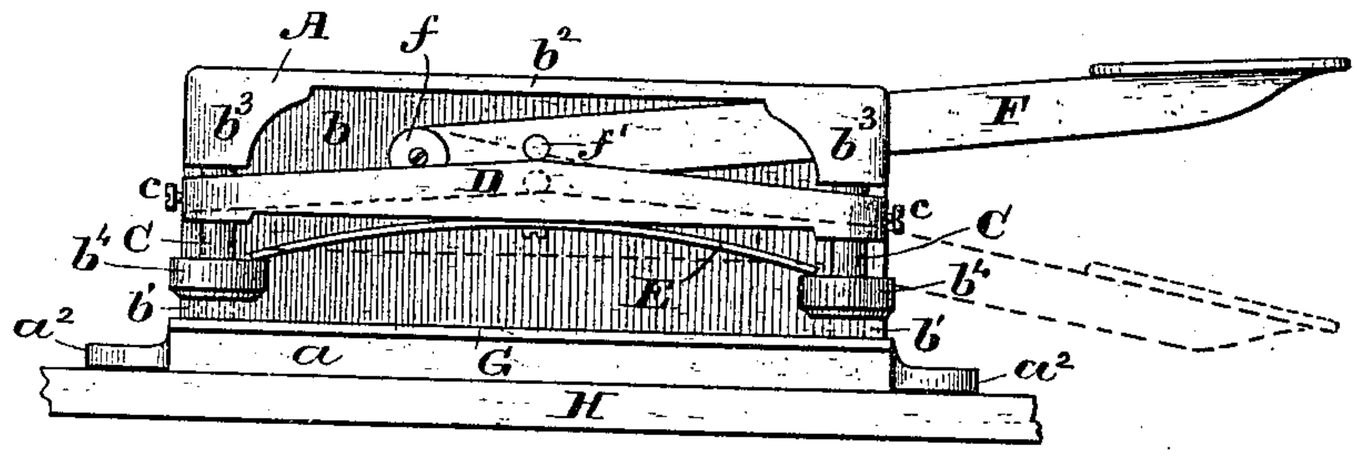


FIG. 3.

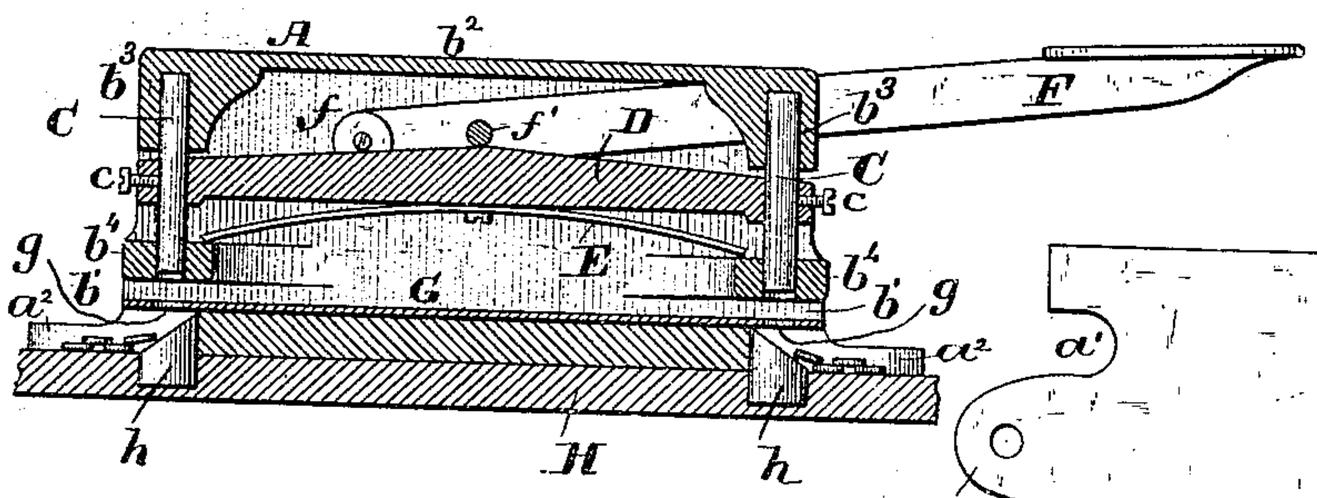
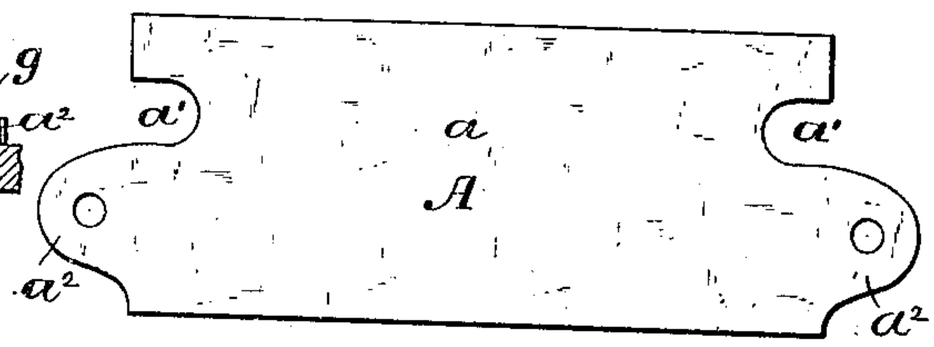


FIG. 4.



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PUNCH.

SPECIFICATION forming part of Letters Patent No. 332,666, dated December 15, 1885.

Application filed April 24, 1885. Serial No. 163,343. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. LANEY, a citizen of the United States, residing at Indiana, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Punches, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved punching device complete. Fig. 2 is a front view indicating by the aid of full and dotted lines the movable parts of the punch in two positions. Fig. 3 is an enlarged section taken through the punch vertically and transversely, as indicated by the dotted line *x x* on Fig. 1. Fig. 4 is a view of the bottom of the punch.

Similar letters of reference indicate like parts in the several figures.

This invention relates to devices which are especially designed for punching holes through letters, bills, and other valuable papers which it is desired to preserve on file in due order for conveniently finding them wanted; and the nature of my invention consists, essentially, in the combination, with an open front frame, of two or more punches or plungers connected by a cross-head acted on by a spring and a hand-lever, in combination with a gage for the edge of the paper, a perforated steel cutting-plate and beveled dischargers for the punchings, all of which will be fully understood from the following description, when taken in connection with the annexed drawings.

The frame A of my improved compound lever-punch is preferably cast entire, and it consists of a base, *a*, having notches *a' a'* in its ends to allow the free escape of the punchings or bits of paper punched from one or several sheets. The ends of this base *a* are also cast with perforated ears a^2 a^2, to receive screws or nails that secure the device rigidly upon a desk, a hanging board, or other established object. From the rear edge of the base rises the upright back B of the frame, which has a deep horizontal recess, *b*, affording two straight bearings, *b' b'*, that form a gage for the edge of one or more sheets of paper, to allow the same to be properly adjusted beneath the punches or plungers. The back of the frame rises to a suitable height, then extends forward to form a cap, b^2, from which depend two upper guides, b^3 b^3, for the punches. The lower guides, b^4 b^4, thereof are cast on the back portion, B, and extend forward a suitable distance, so as to horizontally overhang the base *a*, as clearly shown in the drawings.

C C designate two cylindrical solid punches or plungers, which are movable in the guides b^3 b^3, b^4 b^4, and are perpendicular to the plane of the base *a*. These punches C C are secured by set-screws *c c* to a cross-head, D, so that they move together with this head, and so that by loosening the said screws the punches can be removed from the machine.

E designates a bow-spring, the ends of which rest upon the lower guides, b^4 b^4, and which is secured at the middle of its length to the cross-head D. The object of this spring is to raise the cross-head and with it the two punches.

F designates a hand-lever, which is pivoted at *f* to the back portion, B, of the frame A, and which has rigidly secured to it a stud, *f'*, that bears centrally upon the cross-head D. By means of the lever F the cross-head and its punches can be conveniently depressed.

On top of the base *a* of the frame A, I rigidly but removably secure a steel cutting-plate, G, which extends well forward, and has its front edge beveled, so that it forms a guide for readily adjusting one or more sheets of paper beneath the punches and squarely against the bearings *b' b'*, that form the gage, as above described. This plate also extends over the notches *a' a'* in the ends of the base *a* of the frame A, and is perforated at *g g* in direct lines with the axes of the punches. The perforations *g g* are of such diameter with relation to the diameter of the punches that when they are depressed—one or more sheets of paper being on the plate G—the punches will sharply punch out circular bits from the paper and force these bits through the plate-holes *g g* into the recesses formed by the notches *a' a'*.

In practice the punch will be secured upon a desk or other established object, indicated in the annexed drawings by the letter H, so that steadiness is afforded while depressing the lever F with one hand and holding the sheet or sheets of paper with the other hand. Into such object I fix studs *h*, one of which is shown in Fig. 3, which studs lie in close contact with the ends of the notches *a'*, directly beneath the

holes *g* through the plate G, and have the upper sides beveled, as shown in said Fig. 3. These studs serve as dischargers for directing the punchings out of the notches *a'*, and thus preventing them from clogging beneath punches.

I contemplate using the above-described punch in connection with my improved file-clip, which forms the subject of my application for Letters Patent numbered 163,340, bearing even date with the filing of this. The distance between the punches in such case will be exactly equal to the distance between the tubular paper-holders therein described, and both devices will be secured to a board adapted to be hung against a wall, thus affording great convenience and facility in filing away papers.

Having described my invention, what I claim as new is—

1. In a paper-punch, the combination of a frame having a notched base, punch-guides, and gage-bearings with a perforated plate, punches and their guides, a spring-actuated cross-head to which the punches are secured, and a depressing-lever therefor, all arranged substantially as described.

2. The combination, with the notched or recessed base and the perforated plate G, secured thereon, of two or more punches actuated as described, and gage-bearings *b' b'*, substantially as described.

3. The combination of an open-faced frame, the perforated cutting-plate G, and the gage-bearings with a spring cross-head and its punches guided and actuated substantially as described.

4. The combination, in a punching-machine, of the perforated cutting-plate G, the punches, and beveled studs for discharging the punchings, arranged as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. LANEY.

Witnesses:

HARRY P. GRIFFITH,

G. W. SWAN.