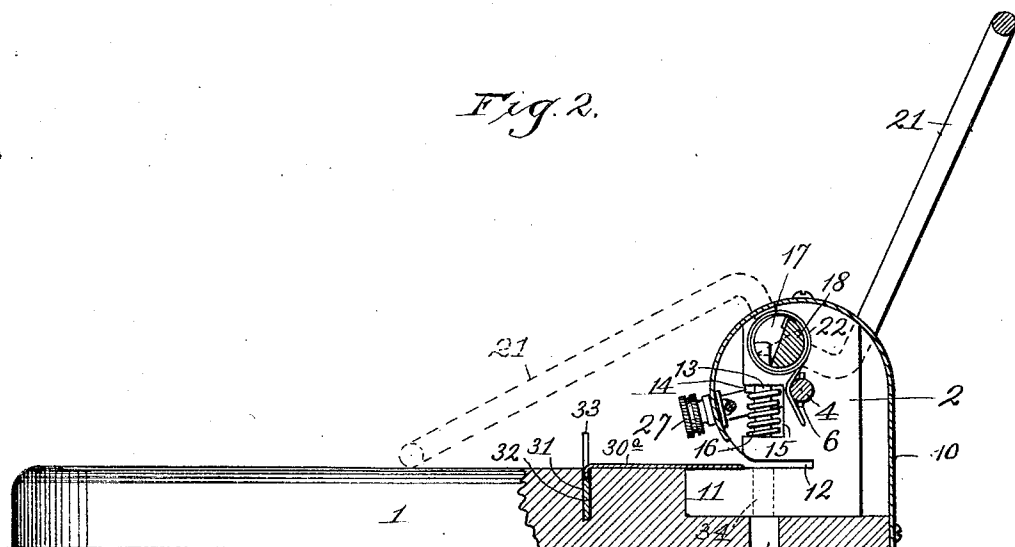
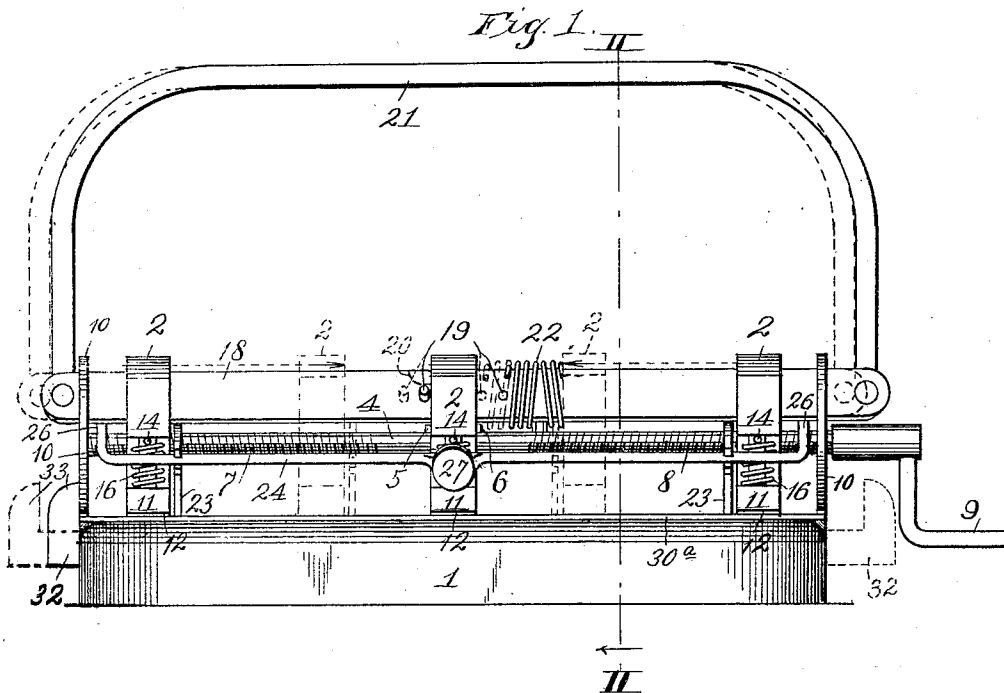


No. 806,914.

PATENTED DEC. 12, 1905.

W. P. PITT.
ADJUSTABLE PUNCH.
APPLICATION FILED APR. 8, 1904.

2 SHEETS—SHEET 1.



Witnesses:

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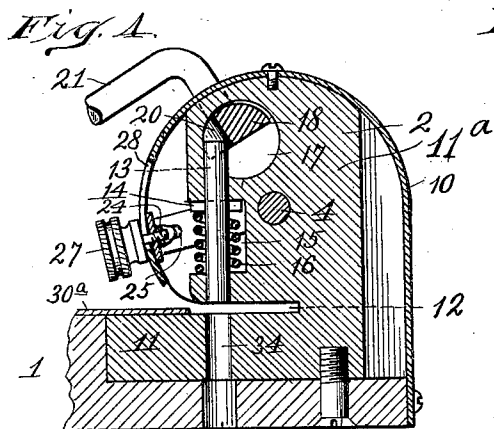
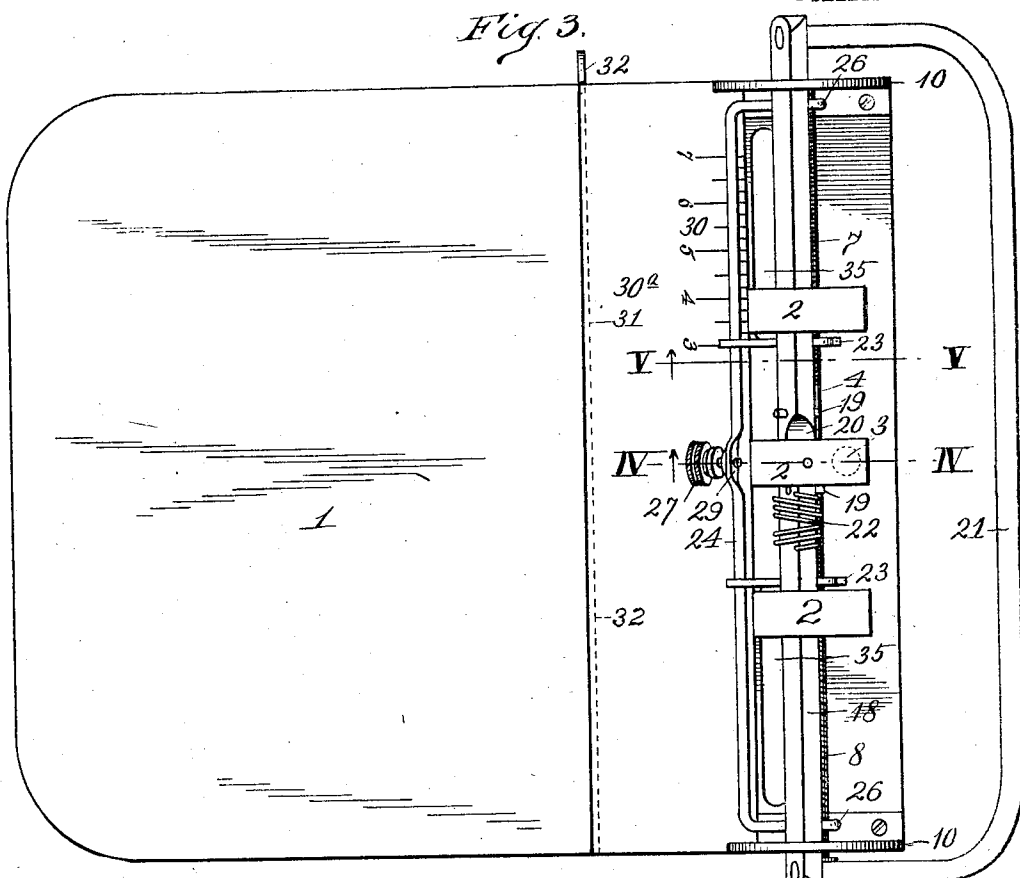
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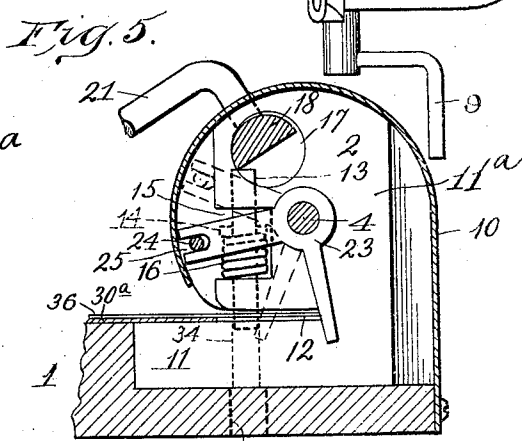
W. P. PITT.
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2 SHEETS—SHEET 2.



Witnesses: 35 3.

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UNITED STATES PATENT OFFICE

WILLIAM P. PITT, OF INDEPENDENCE, MISSOURI, ASSIGNOR TO THE
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ADJUSTABLE PUNCH.

No. 806,914.

Specification of Letters Patent.

Patented Dec. 12, 1905.

Application filed April 8, 1904. Serial No. 202,147.

To all whom it may concern:

Be it known that I, WILLIAM P. PITT, a citizen of the United States, residing at Independence, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Adjustable Punches, of which the following is a specification.

My invention relates to improvements in adjustable punches for perforating loose sheets for binders, files, loose-leaf books, &c.; and my object is to provide a punch whereby a variable number of holes may be made in a sheet of paper at any desired distance from its edges.

The invention consists in the novel construction, combination, and arrangement of parts hereinafter described, and pointed out in the claims.

In order that it may be fully understood, reference will now be made to the accompanying drawings, in which—

Figure 1 represents a front elevation of the device with the casing removed. Fig. 2 is a vertical section of the same, taken on line II II of Fig. 1, with the casing in position. Fig. 3 is a plan view of the device with the casing removed. Figs. 4 and 5 are vertical sections taken on lines 4 and 5 of Fig. 3 with the casing in position.

In constructing the device I employ a base-board 1, provided in this instance with three dies 2, arranged at the rear end of the base, the center die being rigidly secured to the latter by a set-screw 3. The two outer dies are adjusted laterally by a rod 4, journaled in the center die and provided with transverse pins 5 and 6, arranged on the opposite sides of said die to prevent lateral movement of the rod, which latter is provided with right and left screw-threads 7 8, engaging transverse threaded apertures in the two outside dies for the purpose of simultaneously adjusting the latter in opposite directions when the rod is revolved by crank 9, secured to one of its terminals, which projects through one end of casing 10. The rear portion of base 1 is reduced to receive base 11 of each die, which latter consists of said base and a head 11^a, formed integral therewith. The upper surface of each base is flush with the top of the base-board 1 and communicates with a slot 12, extending rearwardly in each of the dies

for the reception of the loose sheets to be perforated.

13 designates a vertical punch arranged in the forward portion of each die and provided at its upper portion with a transverse pin 14, normally held in contact with the upper surface of recess 15 by an expansion-spring 16, interposed between said transverse pin and the lower surface of the recess. The upper end of punch 13 projects into the forward portion of circular apertures 17, extending transversely through the upper portion of each die.

18 designates a semicircular punch-operating bar loosely mounted in aperture 17 and the opposite ends of casing 10, so that it might oscillate therein and be shifted laterally, the latter movement being limited by two transverse pins 19, secured thereto at opposite sides of the central die a distance equal to the width of a marginal recess 20 in the front portion of the operating-bar midway between its opposite ends. Bar 18 is provided with a bail 21, normally held in an elevated position by a coil-spring 22, loosely encircling said bar and contacting at its opposite ends with the flat portion thereof and the smooth central portion of rod 4. The distance at which the holes should be punched in the sheet from its edge is determined by a gage consisting of a pair of bell-crank levers 23, the depending members of which intersect slots 12, a U-shaped bar 24 engaging the bifurcated ends 25 of the bell-crank levers and provided at its opposite ends with loops 26, loosely embracing rod 4, and a set-screw 27, extending through a slot 28 in the casing and engaging the flattened central portion 29 of the U-shaped bar. By loosening and elevating set-screw 27 the depending members of the bell-crank levers will be drawn forward, as shown by dotted lines, Fig. 5, and thus prevent the edge of the sheet of paper from passing but a slight distance beyond the rear edge of punches 13. The bell-crank levers are threaded where right and left threads 7 and 8 pass therethrough so they will be adjusted laterally with the two outside dies. The distance between the end dies is determined by a scale 30, arranged near one end of a metallic plate 30^a, secured to the upper side of base-board 1 and bent downwardly at its forward edge to enter a

transverse groove 31 in the base-board. 32 designates a gage slidingly arranged in the groove to determine the distance at which the holes shall be punched from one end of the sheet. This gage is reversible in order that its vertical portion 33, against which the end of the paper is placed, may be arranged at either side of the base-board.

34 designates vertical apertures in bases 11 for the reception of the lower ends of the punches when the latter are depressed. Said apertures communicate with slots 35, extending through the base-board for the discharge of the disks out from the paper by the punches.

In operation the bell-crank levers are adjusted to intersect slots 12 at the desired point by loosening and adjusting set-screw 27, after which the latter is tightened until it binds against the casing, and thus reliably holds the several parts of the gage in position. The two outer dies are then adjusted laterally by rotating crank 9, the scale 30 determining when said dies are the proper distance apart. This is readily ascertained by the inner edge of the base of one of the adjustable dies registering with the proper graduation on scale 30. Gage 32 is then properly adjusted, so that when a number of loose sheets 36 are successively inserted in slots 12 against gage 32 and the bell-crank levers all of the holes punched in the sheets will register. If three holes are to be punched in each sheet, the operating-bar 18 will be slid laterally to the position shown in Fig. 3, so that when turned by the bail it will contact with and depress all the punches; but when only two holes are to be punched in each sheet bar 18 is slid to the position shown by full lines, Fig. 1, so recess 20 will register with the central punch and fail to depress the latter on the depression of the bail. (See Fig. 4.)

The front portion of casing 10 is segmental in cross-section and forms, in conjunction with the base-board, a flaring mouth at the forward ends of sheet 12, thereby facilitating the entrance of the sheets into the latter.

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

1. In a device of the character described, dies adjustably mounted consisting of bases and heads formed integral with the bases, said bases being provided with apertures, punches carried by the heads and arranged in coincidence with the apertures, means for operating said punches, and a single rod provided with threads for simultaneously adjusting the dies, substantially as described.

2. In a device of the character described, a base-board, dies arranged thereon the center die being rigidly secured thereto, said dies consisting of bases and heads formed integral with the bases, said bases being provided

with apertures, punches carried by the heads and arranged in coincidence with the apertures, means for operating said punches, and a threaded rod journaled in the center die and engaging the other dies so the latter will be adjusted in opposite directions when the rod is rotated, substantially as described.

3. In a device of the character described, a plurality of dies suitably mounted, punches carried by said dies, and a member adjustably arranged in the dies adapted to operate all of the punches when it is adjusted to one position, and operate only a portion of said dies when it is adjusted to another position.

4. In a device of the character described, a plurality of dies suitably mounted, punches carried by said dies, and a bar slidably arranged in the dies adapted to operate all of the punches when it is slid in one direction and provided with a groove which registers with one of said dies when the bar is slid in the opposite direction.

5. In a device of the character described, a base-board, dies carried thereby, punches carried by the dies, a bar arranged to slide and turn in the dies and operate the punches provided with a marginal groove which registers with one of the punches when the bar is slid in one direction, and a handle for operating the bar.

6. In a device of the character described, dies suitably mounted and provided with slots for the reception of the paper to be perforated, a gage having members intersecting the slots to limit the entrance of the paper therein and means for simultaneously adjusting said members, either backward or forward.

7. In a device of the character described, suitably-mounted dies provided with slots for the reception of the material to be operated on, a gage having members intersecting the slots to limit the entrance of the material therein, and means for simultaneously adjusting the dies and said members laterally to accommodate material of different widths.

8. In a device of the character described, suitably-mounted dies provided with slots for the reception of the material to be operated on, a journaled rod connecting the dies and provided with right and left threads for simultaneously adjusting said dies laterally, and a gage having members intersecting the slots and engaging the right and left threads so they will be adjusted laterally with the dies.

9. In a device of the character described, a base-board, dies suitably arranged thereon and provided with slots for the reception of the paper to be perforated, a rod extending through the dies, bell-crank levers fulcrumed on the rod and having their depending members intersecting the slots to limit the entrance of the paper therein a U-shaped bar pivotally secured to the rod which engages

the bell-crank levers, and means for holding said U-shaped bar at any desired position.

10. In a device of the character described, a base-board, a plurality of dies secured upon
5 the base-board having rearwardly-extending slots arranged on a level with the upper surface of said base-board, and a casing inclosing the dies having a segmental front portion

forming a flaring entrance to the slots in the dies.

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

WILLIAM P. PITT.

Witnesses:

J. W. BOLING,
F. G. FISCHER.