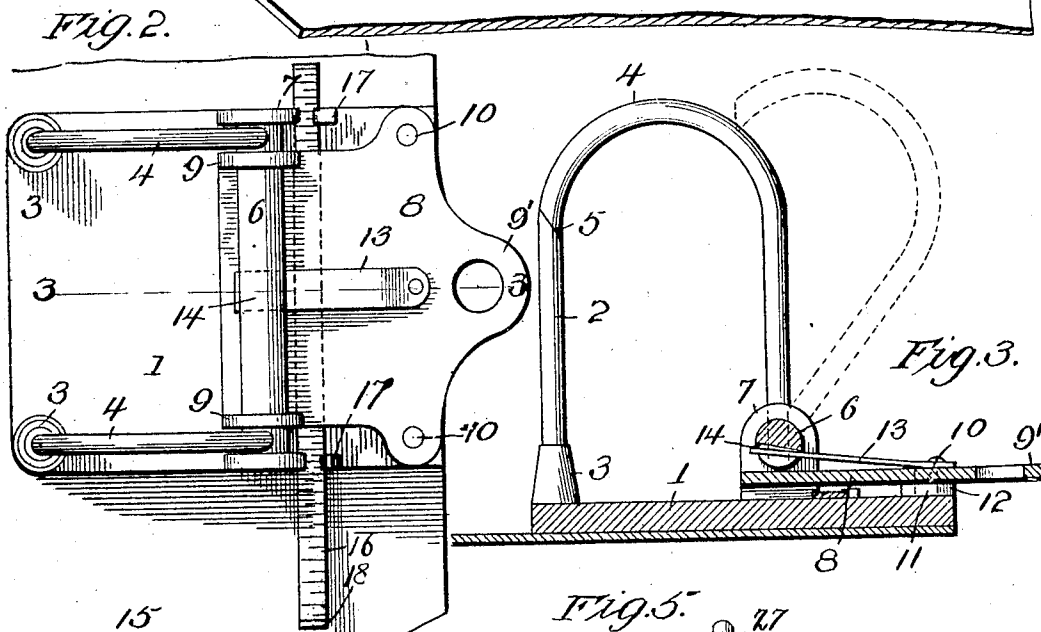
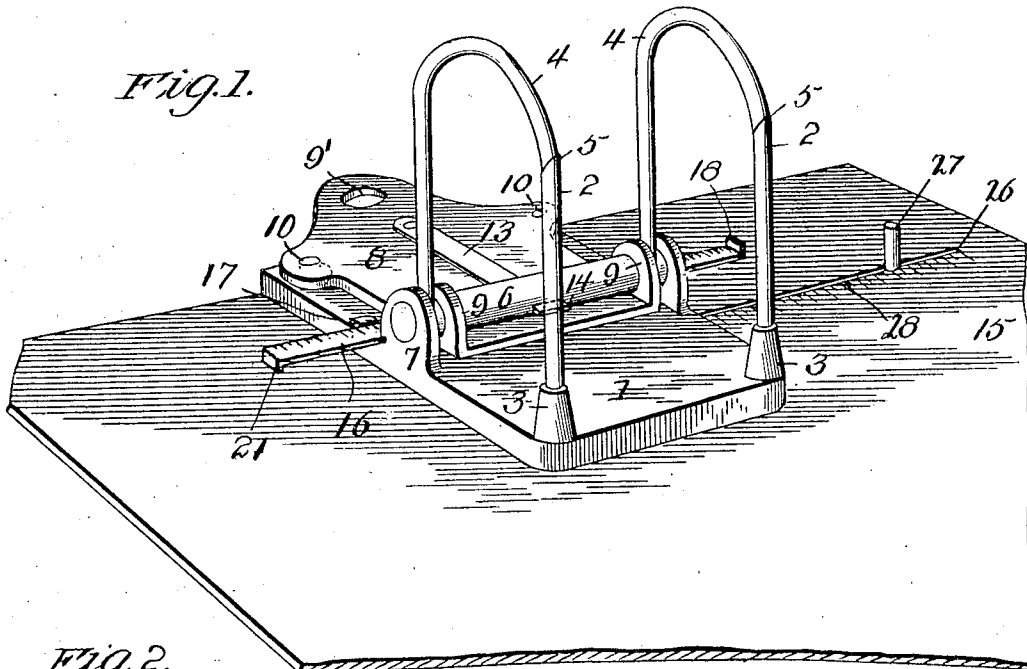


No. 878,320.

PATENTED FEB. 4, 1908.

C. SPIRO.
PAPER FILE AND PUNCH.
APPLICATION FILED SEPT. 20, 1907.



WITNESSES:
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Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES SPIRO, OF NEW YORK, N. Y.

PAPER FILE AND PUNCH.

No. 878,320.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed September 20, 1907. Serial No. 393,863.

To all whom it may concern:

Be it known that I, CHARLES SPIRO, citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Paper Files and Punches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a paper file and punch, and particularly to a construction embodying impaling pins and transfer wires.

The invention has for an object to provide a novel and improved construction and arrangement of the transfer wires to permit a pivotal movement thereof under tension, and also to mount a punch plate and retain it under tension.

20 Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawing:—Figure 1 is a perspective of the invention mounted upon a file board for use; Fig. 2 is a plan thereof; Fig. 3 is a vertical section on the line 3—3 Fig. 2; Fig. 4 is an enlarged detail section of the punch and plate, and Fig. 5 is a similar view of the adjusting gage mounted upon the file board.

30 Like numerals refer to like parts in the several views of the drawing.

The numeral 1 designates the base plate which may be of any desired size or configuration and is provided with fixed impaling pins 2 of any ordinary construction mounted at the front of the plate, as shown at 3. These pins cooperate with the curved transfer wires 4 which are provided at their free ends with beveled contacts 5 as is usual in this art. The opposite ends of the transfer wires are mounted in a rock shaft 6 which is pivoted in lugs 7 disposed at opposite sides of the base 1 so that the transfer wires may oscillate, as shown by dotted lines in Fig. 3.

45 The punch plate 8 is provided with pivoting lugs 9 at one end thereof mounted to travel on the rock shaft 6, and the opposite end of this plate is provided with the handle hanger extension 9' suitably apertured to permit the suspension of the file therefrom in any desired manner. At the opposite sides of this end of the punch plate the apertured punching extensions 10 are formed each being adapted to cooperate with a punch 11 disposed in alinement therewith

upon the base plate 1. Surrounding this punch is a washer or packing 12 of elastic material such as rubber which acts as a stripper to remove the punched material therefrom.

6 For the purpose of retaining the punching plate normally in contact with its punches, and the transfer wires in engagement with the impaling pins a flat spring 13 is secured to the upper face of the punch plate and extends beneath the rock shaft which has a seat or recess with a flattened face 14 formed thereon to receive the end of the spring.

65 For the purpose of determining the distance from the edge of the paper at which the holes shall be punched, the base plate is provided with an adjustable graduated bar 16 slidably mounted thereon and retained in position by a seat in one face of the lugs 7, and overlapping lugs 17 at the opposite side thereof. This bar or plate is provided at one end with an upturned gage portion 18 against which the edge of the paper to be punched is brought into contact, while the opposite end of the bar may be provided with a laterally disposed portion 21 to prevent the accidental removal of the bar from the base plate. This provides a construction wherein the adjustable gage bar is contained in the same structure with the file and punch and in definite relation to these parts.

Under some conditions it may be desirable to extend the distance from the edge of the paper at which the punched holes are formed, and this may be accomplished by a gage 27 adjustably mounted to slide in a slot 26 formed on the file board 15, the edge of such slot being graduated, as shown at 28. This gage 17 may be adjustably held in position by any desired means, for instance, by means of the screw 19 extending through slot 26 and provided with the bearing washer 20 between its head and the under face of the file board, as shown in Fig. 5.

From the foregoing it will be seen that this invention presents a simple, very efficient and economical construction embodying in one device a file and punch in which both of these parts are held under the desired tension, and either may be used without the other. The combination of the gage with this file provides means by which the punch may be used alone for punching holes in papers for permanent filing purposes at predetermined distances from the edge thereof,

while the punch properly spaces the holes from each other for alinement with the impaling pins carried at the opposite end of the structure. Both the punch and pins being
 5 mounted upon a common center provides economy in space and material and the use of a single tension device for both of these parts.

Having described my invention and set
 10 forth its merits, what I claim and desire to secure by Letters Patent is:—

1. In a paper file, a base provided with impaling pins, pivoting lugs provided upon said body, a rock shaft mounted in said lugs
 15 and carrying transfer wires, a punch plate extended in an opposite direction to said wires and having lugs pivoted to said shaft, and unitary means for holding said shaft and plate under tension.

20 2. In a paper file, a base provided with impaling pins, pivoting lugs provided upon said base, a rock shaft mounted in said lugs and carrying transfer wires, means for holding said shaft under tension, a punch plate
 25 pivotally mounted upon said rock shaft, and a punch upon said base to coöperate with said plate.

3. In a paper file, a base provided with impaling pins at one end and punches at the
 30 opposite end, pivoting lugs provided upon said base, a rock shaft mounted in said lugs and carrying transfer wires, means for holding said shaft under tension, a punch plate pivotally mounted upon said shaft, to co-
 35 operate with said punches.

4. In a paper file, a base provided with impaling pins, pivoting lugs carried by said base, a rock shaft mounted in said lugs, transfer wires carried by said shaft, a punch
 40 plate pivoted upon the rock shaft, and a tension spring carried by punch plate and bear-

ing in contact with a retaining face upon said rock shaft.

5. In a paper file, a base provided with impaling pins, pivoting lugs carried by said
 45 base, a rock shaft mounted in said lugs, transfer wires carried by said rock shaft, a punch plate pivoted upon the rock shaft, and a flat tension spring secured at one end to said punch plate and disposed at its oppo-
 50 site end in contact with an angular face upon said rock shaft.

6. In a paper file, the combination with impaling pins and transfer wires, of a file board provided with a laterally extending
 55 graduated slot therein, an adjustable gage mounted to travel in said slot, and a punch mechanism disposed at one end of said slot.

7. A paper file comprising a base having impaling pins at one end and punches at the
 60 opposite end thereof, a rock shaft pivotally mounted upon the base and provided with transfer wires to engage said pins, a punch plate pivoted upon said rock shaft, and a slidably mounted gage bar disposed beneath
 65 said plate parallel to said rock shaft.

8. A paper file comprising a base having impaling pins and punches thereon, transfer wires to engage said pins, pivoting lugs for
 70 said transfer wires, a punch plate mounted to coöperate with said punches, a graduated gage bar mounted to slide in contact with said lugs, and a holding lug upon the base disposed at the opposite side of the gage bar
 75 from the pivoting lugs.

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

CHARLES SPIRO.

Witnesses:

FRANK R. SHORLIN,
 HARRY KOPLIK.