F. W. SMITH & J. S. SHANNON.
Paper-Holder.

No. 217,909. Patented July 29, 1879.

Fig: 1.

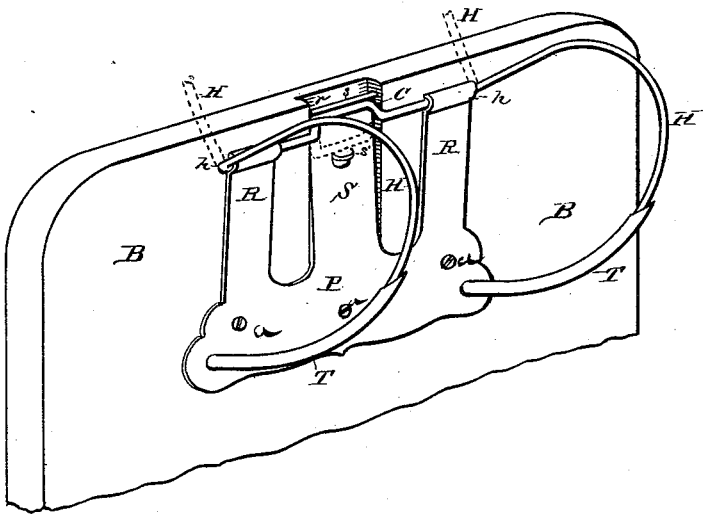


Fig: 2.

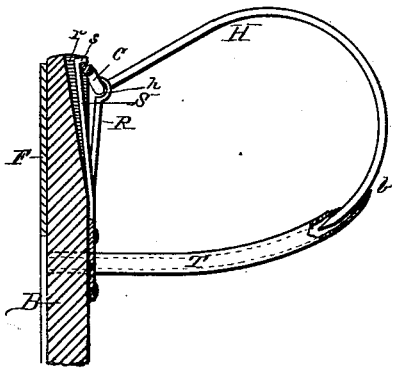
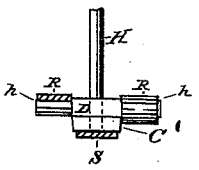


Fig. 3



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UNITED STATES PATENT OFFICE.

FREDERICK W. SMITH AND JAMES S. SHANNON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN PAPER-HOLDERS.

Specification forming part of Letters Patent No. **217,909**, dated July 29, 1879; application filed June 21, 1879.

To all whom it may concern:

Be it known that we, FREDERICK W. SMITH and JAMES S. SHANNON, of the city of Chicago, in the State of Illinois, have invented certain new and useful Improvements in Temporary Binders or Paper-Holders; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to that class of paper-files or temporary binders adapted, by having separable uniting-wires, to allow of the withdrawal of any one of many papers thereon held, or the insertion of papers between those already on the file, without disturbing the order in which the others are placed.

The object of our invention is to provide a file more prompt and positive in its action, less calculated to tear the papers filed thereon, more convenient of manipulation, and adapted, in its double form especially, to serve as a writing-tablet for the lap or desk.

It consists, first, in a paper-holder with duplex parallel hinged transfer-wires made from one piece; second, in a paper-holder having the fixed wires and movable wires secured to the same connecting-plate, whereby those parts may be separately packed and attached to any desired base-board; third, in the structure of the puncturing-wire; fourth, in a felt or plush covering for the bottom of the base-board; fifth, in the stop to limit the movement of the hinged wires.

The drawings illustrate the duplex form of our invention more especially; but after a description of this form, the single file will be easily understood.

Figure 1 is a perspective view of a double or duplex file applied to a tablet, showing the fixed wires as being tubular and the movable ones solid. It also shows the movable or transfer wires formed of a single piece of wire, bent in its connecting or horizontal portion in the shape of a crank, and hinged near its angles. This figure also shows the fixed and movable wires attached to a single plate, removable from the tablet, which plate is cut to form the hinges by which the transfer-wires are movably held, and the spring by which they are operated.

Fig. 2 is a section of the plate and tablet of Fig. 1, between the parallel rings of that figure, and it may also be taken to represent a single file. Fig. 2 also illustrates the form given to the beveled point of the puncturing-tube, whereby the point proper is made to lie close to the transfer-wire, to permit the papers to be freely transferred from one wire to the other without tearing them.

B is a tablet or base, made of wood or any other suitable material, of size adapted to the position in which it is to be used or to the papers to be filed.

P is a metallic plate, to which the tubular wires T T are rigidly fixed so as to stand parallel, whether they be curved, as shown, or straight and vertical.

The plate is deeply notched to leave the projections R R S. The outer ones are bent at their ends to form eyes for the admission of the wire H, and the inner one, S, has its end upturned to form the stop *s*. A lip is also lifted at *s'* for the same purpose, as will be presently more fully explained.

The two parallel transfer-wires H H are formed of a single piece of wire, bent at right angles at *h h*, passing horizontally through the eyes formed on R R, to make hinged joints with the plate P. Between the hinges described the horizontal portion of the wire is bent to form a crank, C, against which bears the projection S, thus made to operate as a spring.

The crank C is given such direction relative to the parallel portions H H that when the latter are rotated in contact or proximity with T T, the spring bears on the crank to hold them there firmly, and when they are rotated in the opposite direction the crank will be thrown past the perpendicular on the spring, and the latter will bear upon the crank to hold the rings open.

The stop *s* is intended to limit the throw of the wires H H somewhat independently of the puncturing or tubular wires T T, which they are arranged to squarely meet or enter, at least relieving the tubes of the strain that would fall upon them by the action of the spring S in the absence of the stop.

The second stop, *s'*, acts to limit the throw of the wires H H backward. The tablet may be made to serve the same purpose, if desired;

and obviously other stops may be elsewhere applied to serve the purposes of both *s* and *s'*.

In bending the wire H H care is taken to make the curved free portions parallel with each other throughout their length, and at such distance apart that their extremities, preferably pointed or rounded, will enter the tubes T.

Fig. 2 shows the point of H thrust within the tube T a proper distance to give and preserve continuity of the two and to insure steadiness of both.

In fitting the tube T to serve as a puncturing-wire, the free end is beveled from one side to the other to give a single solid puncturing point or edge at one side of the aperture. In order to prevent the tearing of papers in shifting them back and forth from one wire to the other and to give freedom to this movement, the beveled point *b* is bent inward so as to lie in the line of the interior surface of the tube, or, in other words, closely upon the wire H.

Instead of bending the point it may be ground or filed off externally; or the wire H may be so formed as to meet the point *b* without bending or otherwise changing the latter; but it is believed to be better to bend the point inward, as described.

The plate P is shown to be secured to the tablet B by means of screws *a a a*. As it is necessary for the purpose of stringing the papers when finally removed from the file or holder to have the aperture of the tubes continued through the tablet, this object and additional permanence are given to the plate upon the tablet by extending the tubes themselves through the tablet, as plainly shown in Fig. 2. As it is the purpose to pack the tablets and plates with their attachments separately, to be joined on arrival, the holes prepared for the tubes in the tablet will definitely guide a person in applying the plates without special skill or care. The tablet is also provided with a recess, *r*, beneath the spring S, to permit the latter to work freely.

In the drawings, the hinge-projections R R serve equally with S as springs; but obviously they may be held rigidly to the tablet by screws near the hinges, and S only act as a spring. The latter construction will be preferable as always holding the wires H H in fixed relation to the tubes T T.

In order to better adapt the tablet to use as a general paper-holder for the desk or the knee, the under face thereof is provided with a felt or plush surface. (Shown in section at F in Fig. 2.) This covering may be complete or partial; but in the latter case it should extend along two opposite margins, or, preferably, entirely around the tablet. This provision will render the tablet noiseless when used upon a desk, and will prevent its slipping about thereon, and when used upon the knee it may be more easily held.

The foregoing description largely relates to the duplex form of our invention, and to the connection thereof to a tablet by means of a metallic plate arranged and constructed to hold the parts in operative relation when disconnected from the tablet.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. The combination, in a paper-holder, of a base-board, two parallel fixed puncturing-wires, and two parallel hinged transfer-wires, made in a single piece, arranged thereon as shown, to form two parallel rings, adapted to be opened and closed at pleasure, substantially as and for the purposes set forth.

2. In combination with the duplex file or paper-holder, substantially as shown, a rigid connecting part, joining the hinged wires, so that both may be rotated or held by applying force for the purpose to either, substantially as set forth.

3. In combination with the fixed wires T and the movable wires H, the plate P, constructed to give hinged support to H at *h h*, and to have the central bearing-spring, S, all arranged and adapted to operate substantially as described.

4. The combination, with the fixed wires T and hinged wires H, of the plate P, having the hinge-arms R and the spring-tongue S, and supporting said wires T and H in working position, whereby the working parts of the file or paper-holder are adapted to be applied to any tablet by screws *a a*, substantially as and for the purposes specified.

5. In a paper-holder having a tubular puncturing-wire, sharpened by having its end beveled from one side to the other, and a second wire entering the tube to serve as a transfer-wire, the inwardly bent or curved form of the beveled point of the tube, whereby the said point may lie close to the transfer-wire, substantially as described, and for the purpose set forth.

6. The tablet B, having a paper-holding device on one side and a felt or plush covering on the other, substantially as described, and for the purposes stated.

7. In combination with the hinged wires H and a spring operating them, as described, a stop, *s*, or stops *s* and *s'*, arranged to arrest the throw of the wires H, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our invention we affix our signatures in presence of two witnesses.

FREDERICK W. SMITH.
JAMES S. SHANNON.

Witnesses:
M. E. DAYTON,
EDW. HALE.