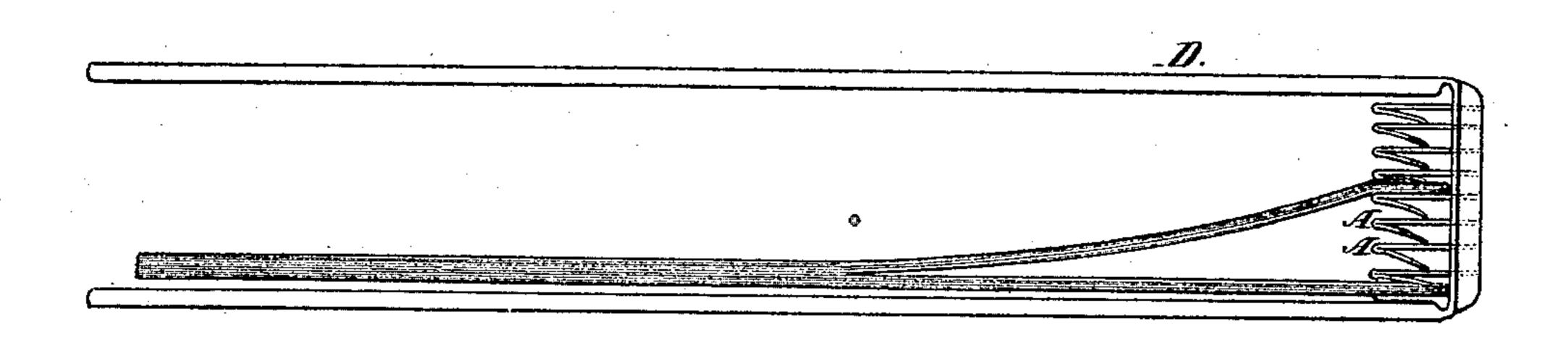
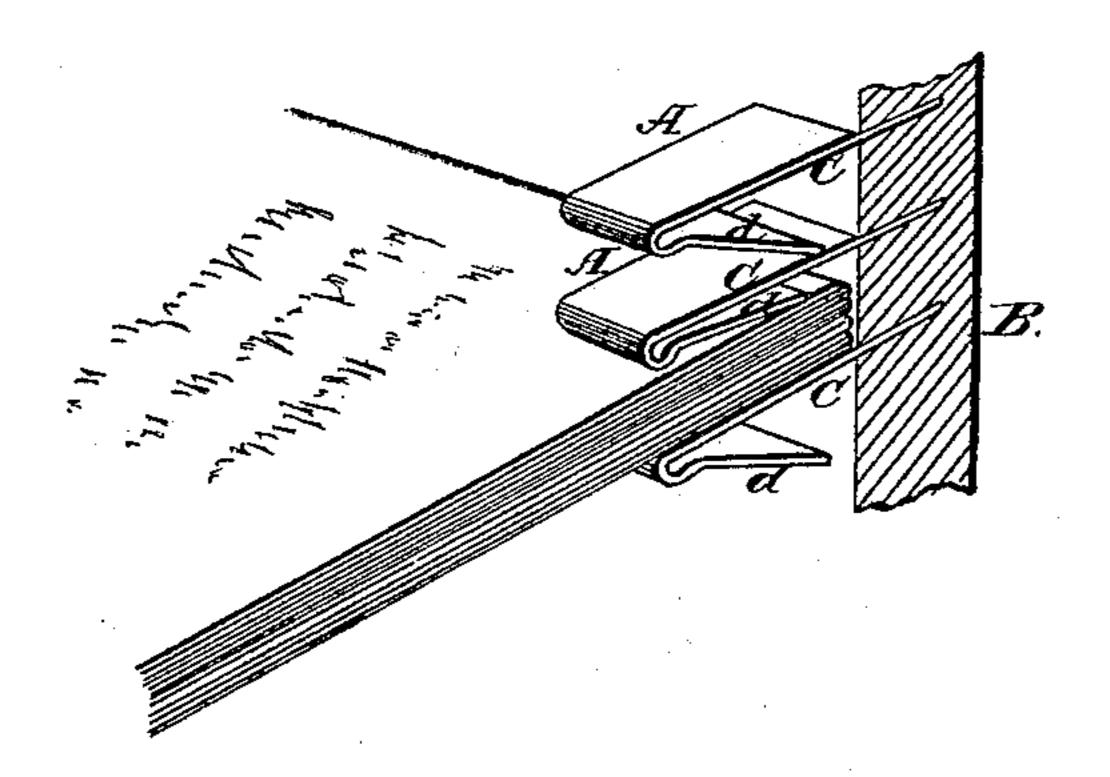
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INVENTOR. Whitney

## United States Patent Office.

## FRANK W. WHITNEY, OF BROOKLYN, NEW YORK.

Letters Patent No. 109,085, dated November 8, 1870.

## IMPROVEMENT IN PAPER-FILES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Frank W. Whitney, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Letter and Paper-Files; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in a file for preserving from damage and in regular order letters, sheet-music, and other papers, including newspapers, pamphlets, periodicals, &c.; and

It consists in a succession of springs, (more or less in number,) attached to a backing of suitable material, and either combined into a book-cover, or not, as may be desired, the arrangement being as hereinafter more fully described.

In the accompanying drawing—

Figure 1 represents an end view of my improved file attached to a book-cover.

Figure 2 is a top view, in perspective, showing the springs and backing with papers on file.

Similar letters of reference indicate corresponding parts.

A is the spring, which is a thin piece of flat steel or other suitable spring material, which is doubled up in the form of a loop or staple, with one long and one short leg, as shown in the drawing.

B is the backing, which may be of any suitable material, (as wood, rubber, or metal,) into which the long leg of the spring is inserted so as to hold the spring tirm and stationary.

c is the long leg, and d the short leg.

The short  $\log d$  is bent outward, so as to stand at

an angle of thirty degrees (more or less) with the long leg. These springs are inserted into the back B in a row, as represented, and are placed so that the ends of the short legs will bear against the long legs of the adjacent springs, as seen, so that a single thickness of paper may be securely held.

I do not confine myself to this particular arrangement of the springs, as they may be placed so as not to be in contact with each other when a number of thicknesses of paper are to be held by a single spring.

By these springs it will be seen that any single letter or paper may be inserted into or removed from the file without disturbing the rest.

The ends of the short legs are cut off square, so that the corner or outer angle of the leg will prevent the withdrawal of a paper until the spring is pressed back from the paper by the blade of an eraser, knife, or other thin instrument.

D represents the cover, to the back of which the backing B is attached.

Every paper secured in this file being held by a spring which acts independently of the rest, gives this mode of filing papers a great advantage over other devices for the same purpose.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

In combination with a letter or paper-file, the springs A, arranged to operate substantially as and for the purposes described.

FRANK W. WHITNLY.

Witnesses:

GEO. W. MABEE, T. B. Mosher.