(No Model.) 3 Sheets—Sheet 1.

B. BROWER.

LETTER FILE.

No. 422,181. Patented Feb. 25, 1890.

Fig. 1.

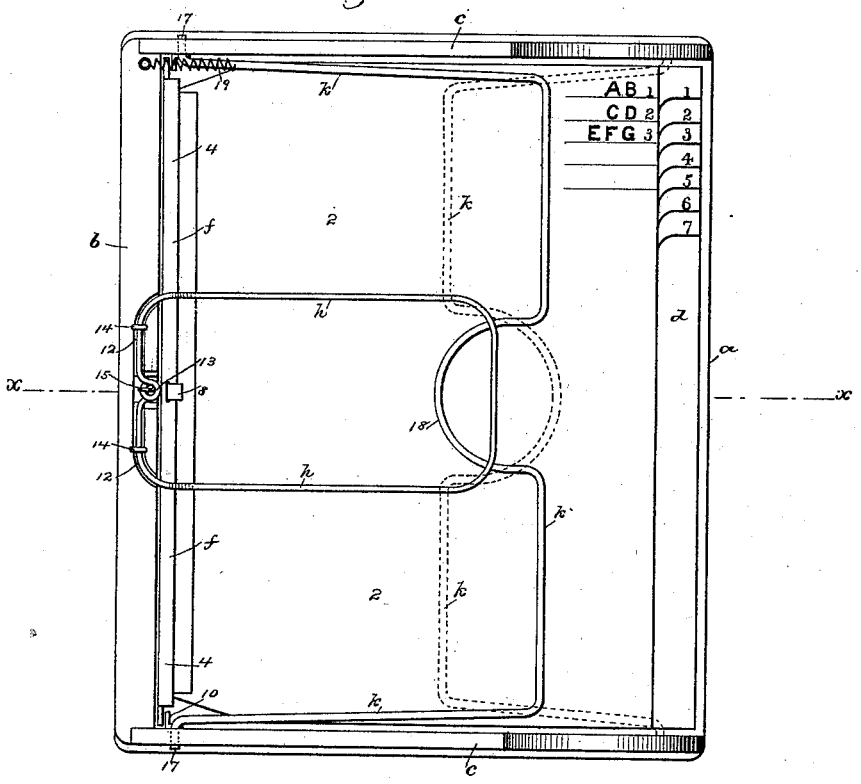

Fig. 2.

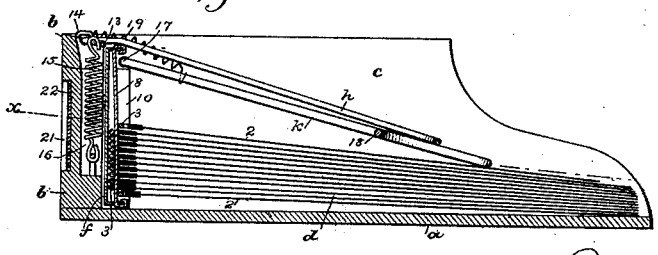

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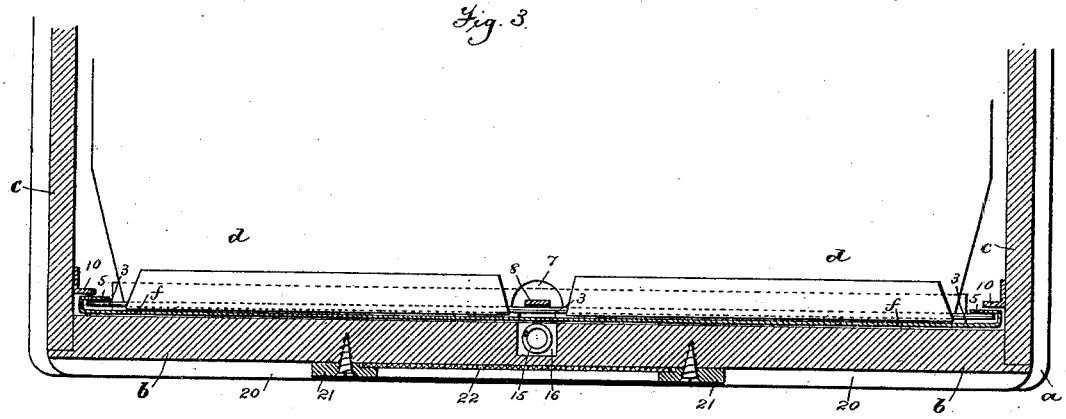
Fig. 3.



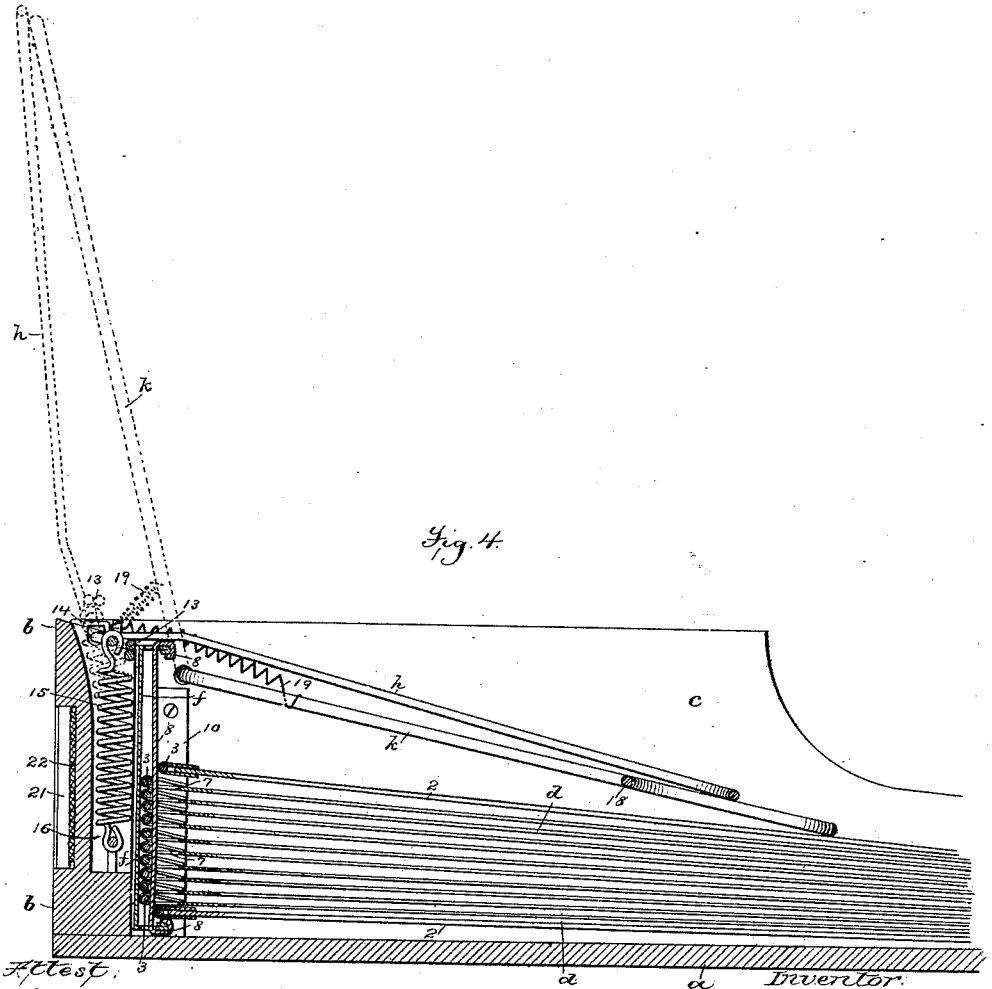


Fig. 4.

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Fig. 5.

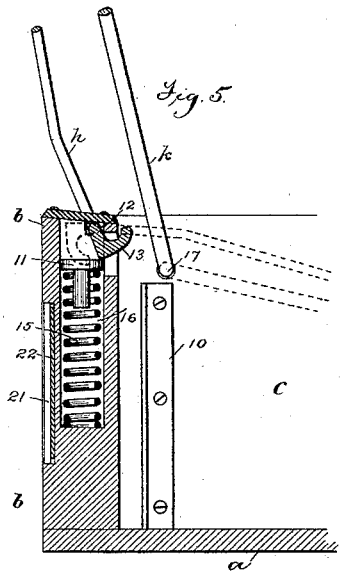


Fig. 6

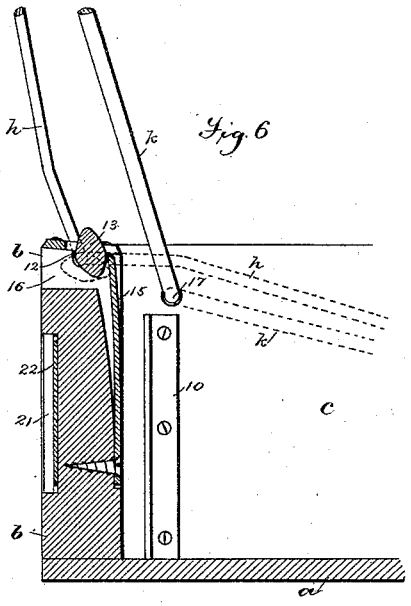


Fig. 7.

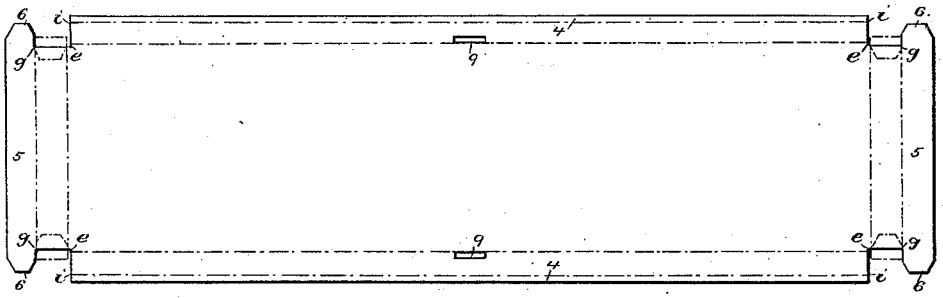


Fig. 8.

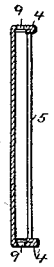


Fig. 9.

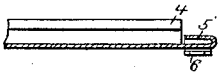
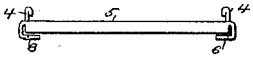


Fig. 10.



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UNITED STATES PATENT OFFICE.

BLOOMFIELD BROWER, OF NEW YORK, N. Y.

LETTER-FILE.

SPECIFICATION forming part of Letters Patent No. 422,181, dated February 25, 1890.

Application filed April 9, 1886. Serial No. 198,354. (No model.)

To all whom it may concern:

Be it known that I, BLOOMFIELD BROWER, a 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 Letter-Files, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to a letter-file of the same general construction as that shown in United States Letters Patent Reissue No. 10,073, it being the object of the invention to improve the construction and organization of the various parts of the file, whereby the use of the file will be facilitated and the file as a whole rendered more compact, convenient, and serviceable.

To that end the invention consists in specific improvements in certain of the details of the file, and also in certain combinations of parts in the complete organization, all of which will be hereinafter fully described and pointed out.

As a full understanding of the invention can be best imparted by a detailed description of the complete letter-file embodying the invention, all preliminary description will be omitted and a full description given, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view of a letter-file embodying the improvements constituting the present invention. Fig. 2 is a cross-section of the same, taken upon the line *x x* of Fig. 1. Fig. 3 is a horizontal section upon an enlarged scale, taken upon the line *x x* of Fig. 2. Fig. 4 is an enlarged view of a portion of Fig. 2. Figs. 5 and 6 are views similar to Fig. 4, illustrating modifications in certain details; and Figs. 7, 8, 9, and 10 are views illustrating the construction of the removable back which holds the index-leaves of the file, Fig. 7 being a view of the sheet-metal blank from which the back is made; Fig. 8, a cross-section of the completed back; Fig. 9, a partial longitudinal section of the same, and Fig. 10 an end view of the same.

Referring to said drawings, it is to be understood that the body of the file or file-holder, as herein shown, is of substantially the form which is usual where the file-holder is intended to be slid into a casing in the form of a drawer. It consists of a bottom *a*, one side *b*, which for convenience will be termed the "front," and ends *c*, the top or cover and the second side being omitted in order to obtain more ready access to the file, and also because they are not needed for the protection of the file and contents where the file-holder is used as a drawer. In those cases where the file-holder is not to be used as a drawer it may be provided with a hinged top or cover and also with a second side, which will also preferably be hinged to the bottom and disconnected from the ends so as to be turned down, and thus open the side of the file-holder and expose the edges of the index-leaves.

The file proper consists of a series of index-leaves *d*, between which the letters or other papers to be filed are placed in the usual manner. The index-leaves *d* are secured at their rear edges to rods 3, which are secured in a back *f* in such manner as to allow the leaves to separate as the papers accumulate between them, and thus allow the file to expand and contract to conform to its contents. The back *f* rests against the inside of the front *b*, and is held in position by cleats 10, secured to the ends *c*, thus allowing it and the index-leaves *d*, which it carries, to be removed from the holder whenever desired. The removable back *f* is formed of a single sheet-metal blank of the form shown in Fig. 7. The edges of the blank are first folded inward on the lines *i i* to stiffen them, after which they are bent up at right angles on the lines *e e* to form the flanges 4, as shown in Figs. 8, 9, and 10. The end portions 5 are then folded inward on the lines *g g*, as best shown in Fig. 9, and the corner portions 6 folded around the body of the blank, so as to hold the portions 5 in position without soldering, as shown in Figs. 9 and 10 and by dotted lines in Fig. 7. The rods 3, to which the index-leaves *d* are secured, are simple pieces of wire, around which the back edges of the leaves are folded and pasted, as shown in Fig. 4. The ends of the rods extend beyond the edges of the leaves, as shown in Fig. 3, and enter the recesses formed behind the portions 5 of the back. The rods 3 can

readily be sprung into the back after the latter is completed, and when they are in this position they are free to move up and down behind the portions 5, so as to allow the leaves *d* to be more or less separated, according to the contents.

In order to prevent the rods 3 from being sprung so as to release the leaves *d* from the back, the leaves are provided at or near their middles with notches, which form openings 7, (see Fig. 3,) through which, after the leaves are in position, there is inserted a wire or narrow strip of sheet metal 8, which passes inside of the rods 3, (see Figs. 3 and 4,) and has its ends secured in openings 9 in the flanges 4. (See Fig. 4.) By this means the rods 3 are held securely in the back *f*, while they are left perfectly free to move up and down, and at the same time the rods are left perfectly free to turn as the leaves are opened or turned back one after another. The index-leaves *d* are provided with the usual outside or cover sheets 2, and it will be observed that these sheets are not provided with the notches 7, and that their rods 3 pass in front instead of behind the strip 8. This is to permit the rods 3 of these sheets to be sprung into and out of the back *f* in order to reverse the sheets to provide for different systems of indexing, and also to provide another or clean cover when required, as described in Letters Patent No. 237,241.

With a file of this character, and particularly where the body of the file or file-holder is of the character herein shown, it is desirable that means should be provided for holding the free ends of the index-leaves pressed together, not only to prevent them from projecting above the edges of the end portions *c*, and thus interfering with the sliding of the holder into its casing, but also to prevent the papers from falling from between the index-leaves when the file is handled. This has usually been effected by means of a spring-arm which was arranged to bear upon the upper leaf near its front edge, and was arranged to be turned away from the leaves when access was to be had to the file. These arms as heretofore arranged have not, however, been entirely satisfactory, in some cases because they were inconvenient to operate and in others because they occupied considerable room in the file-holder, and thus made it necessary to correspondingly increase the size of the holder. To obviate these difficulties, and to provide a spring-presser for the index-leaves which will be convenient to operate and which will not necessitate an increase in the size of the file-holder, is one of the objects of the present invention. To this end the front *b* of the file-holder is provided with a presser-arm *h*, made in the case shown in the form of a hoop, which is hinged to the upper edge of the front *b*, and is of such size as to extend about two-thirds or three-fourths of the distance from the back *f* to the free edges of the leaves *d*. This arm *h* rests in a groove 12, formed in the upper edge of the front *b*, so that when in the position shown in Figs. 1 and 2 it will be just or about flush with the top of the holder, and thus not prevent the holder from fitting closely into its casing. The arm *h* is provided with a loop or projection 13, which extends forward of its hinges 14, and is connected to a spiral spring 15, (see Figs. 1 to 4,) which is located in a recess 16, formed in the front *b*. From this it will be seen that the spring 15 is so arranged that it does not occupy any space inside the file-holder and does not prevent the back *f* from being placed directly against the inside of the front *b*, as shown in Figs. 1 and 2. The spring 15, loop 13, and hinges 14 are so arranged that when the arm *h* is in the position shown in Figs. 1, 2, and 4 the point at which the spring is connected to the arm will be inside the hinges, and the spring will act to draw and hold the arm down onto the index-leaves, but that when the arm is turned up to the position shown by dotted lines in Fig. 4 the point at which the spring is connected to the arm will be carried outside of the hinges, and the spring will consequently act to draw and hold the arm in the opposite direction.

In order to press and hold down the index-leaves along their entire length, there is provided a follower *k*, which is also made of wire and in the form of a loop or bail, and has its ends provided with pivots 17, which enter openings in the ends *c* of the holder. This follower is provided with a loop 18, preferably upon which the arm *h* bears, so as to press it down onto the index-leaves. The follower *k* is sufficiently elastic to permit the pivots 17 to be readily sprung into and out of their bearings by springing the two arms of the follower toward each other. The follower *k*, instead of being pivoted to the ends *c* near the front *b*, as shown, may be pivoted to the ends *c* near the free ends of the index-leaves, as shown by dotted lines in Fig. 1. So, also, the follower *k*, instead of being pivoted to the ends *c*, may be pivoted or hinged to the upper edge of the front *b*, and in that case the pivots 17 may be formed by bending the ends of the follower either inward or outward. The follower *k* will preferably be provided with a spring or springs, as 19, which will act to raise and hold the follower away from the leaves as soon as the arm *h* is raised.

The manner of using the file thus organized is as follows: The file-holder having been withdrawn from its casing, the arm *h* will be turned up from the position shown in Figs. 1, 2, and 4 to the position shown by dotted lines in Fig. 4. The spring 15 will then act to hold the arm in this position. The follower *k* will at the same time be acted on by the spring 19, so as to follow the arm and take the position shown by dotted lines in Fig. 4; or, if the follower is pivoted at the other ends of the ends *c*, as shown by dotted lines in Fig. 1, the spring 19 will turn it out in the opposite direction. The leaves *d* can then be raised and turned back one by one,

like the leaves of a book, and as they are thus turned back they and the papers between them will find a rest and support against the follower *k* and arm *h* or the arm alone, as the case may be. This function of the follower and arm is one of particular importance. After the use of the file is completed the leaves will be turned down and the follower *k* and arm *h* restored to the position shown in Figs. 1, 2, and 4. The spring 15, being stronger than the spring 19, will then hold the arm and follower down and the leaves pressed together. It is to be remarked that the spring 15 need not be of the form and arrangement shown in Figs. 1 to 4. In Figs. 5 and 6 two other forms and arrangements of springs are shown which perform the same function and operate in substantially the same manner.

As shown in Fig. 5, the arm *h* is provided with a cam projection 13, which extends outward beyond the hinges 14 and acts upon a head 11, which is pressed upward by a spiral spring 15. When the arm *h* is turned up to the position shown by full lines, the cam projection 13 is brought inside the hinges 14 and the upward pressure of the spring 15 acts to hold the arm in its raised position. When, however, the arm is turned down to the position shown by dotted lines, the cam projection 13 is brought outside the hinges and the spring acts to hold it in that position. The construction shown in Fig. 6 is substantially the same, except that the spring 15 is of the flat instead of the spiral form.

In a file of this class it is highly desirable that the front of the file or file-holder should be marked or labeled in such manner as to indicate the general character of the contents. It is also important that the label or other means by which the contents of the file are designated should not project beyond the front *b* of the holder, so that the front of the holder will be left perfectly smooth and so that when the holder is slid into the file-case the door of the case may be closed directly against the front of the holder. To effect this, the front *b* is provided with a shallow longitudinal recess 20, in which are located two vertical cleats 21, which are provided with flanges, behind which can readily be inserted the ends of a card or label 22, upon which can be written or printed such letters or words as will indicate the contents of the file. By this means the face of the front *b* is left perfectly smooth and even. The card 22 can readily be inserted and removed from behind the cleats 21, so as to be changed when desired, and by changing the position of the cleats—that is, by placing them a greater or less distance apart—longer or shorter cards can be employed.

What I claim is—

1. The combination, with a file-holder and its index-leaves, of the follower *k*, made in the form of a loop or bail, having the pivots 17 at its ends and composed of elastic metal, whereby its pivots can be sprung into and out of their bearings by springing the ends of the follower toward each other, and whereby the follower is held in position by its own elasticity, substantially as described.

2. The combination, with the file-holder and its index-leaves, of a pivoted follower *k* and a hinged presser-arm *h*, acting upon the follower to press the latter against the leaves, substantially as described.

3. The combination, with the file-holder and the index-leaves, of the pivoted follower *k* and the presser-arm *h*, hinged to the upper edge of the front *b*, and the spring 15, located in the recess 16 and arranged to hold the arm both in its raised and lowered position, substantially as described.

4. The combination, with the back of a letter-file, of index-leaves having rods 3 secured to their edges, and having openings 7 in front of said rods, and the strip 8, secured to the back and passing through said openings in front of said rods, substantially as described.

5. The combination, with the back of a letter-file having recesses at its ends, of index-leaves having rods 3 secured to their edges and entering said recesses in the back, and having openings 7 in front of said rods, and the strip 8, secured to the back and passing through said openings in front of said rods, substantially as described.

6. The combination, with the back of a letter-file having recesses at its ends, of index-leaves having rods 3 secured to their edges and entering said recesses in the back, and having openings 7 in front of said rods, the strip 8, secured to the back and passing through said openings in front of said rods, and the cover-leaf 2, having a rod secured to its edge, which also enters said recesses in the back and passes in front of said strip 8, substantially as described.

7. An index-leaf for a letter-file, having its inner edge folded and secured around a rod 3, which projects beyond the ends of the leaf, and provided with an opening in front of said rod, substantially as described.

8. The combination, with the index-leaves and their rods 3, of the back *f*, made from a single sheet-metal blank folded to provide the flanges 4, end portions 5, and corner portions 6, for holding the end portions in position, substantially as described.

9. The holder having its front *b* provided with the longitudinal recess 20, and the vertical cleats 21, forming a holder for a card or label, as 22, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BLOOMFIELD BROWER.

Witnesses:
JAMES A. HOVEY,
JAS. J. KENNEDY.