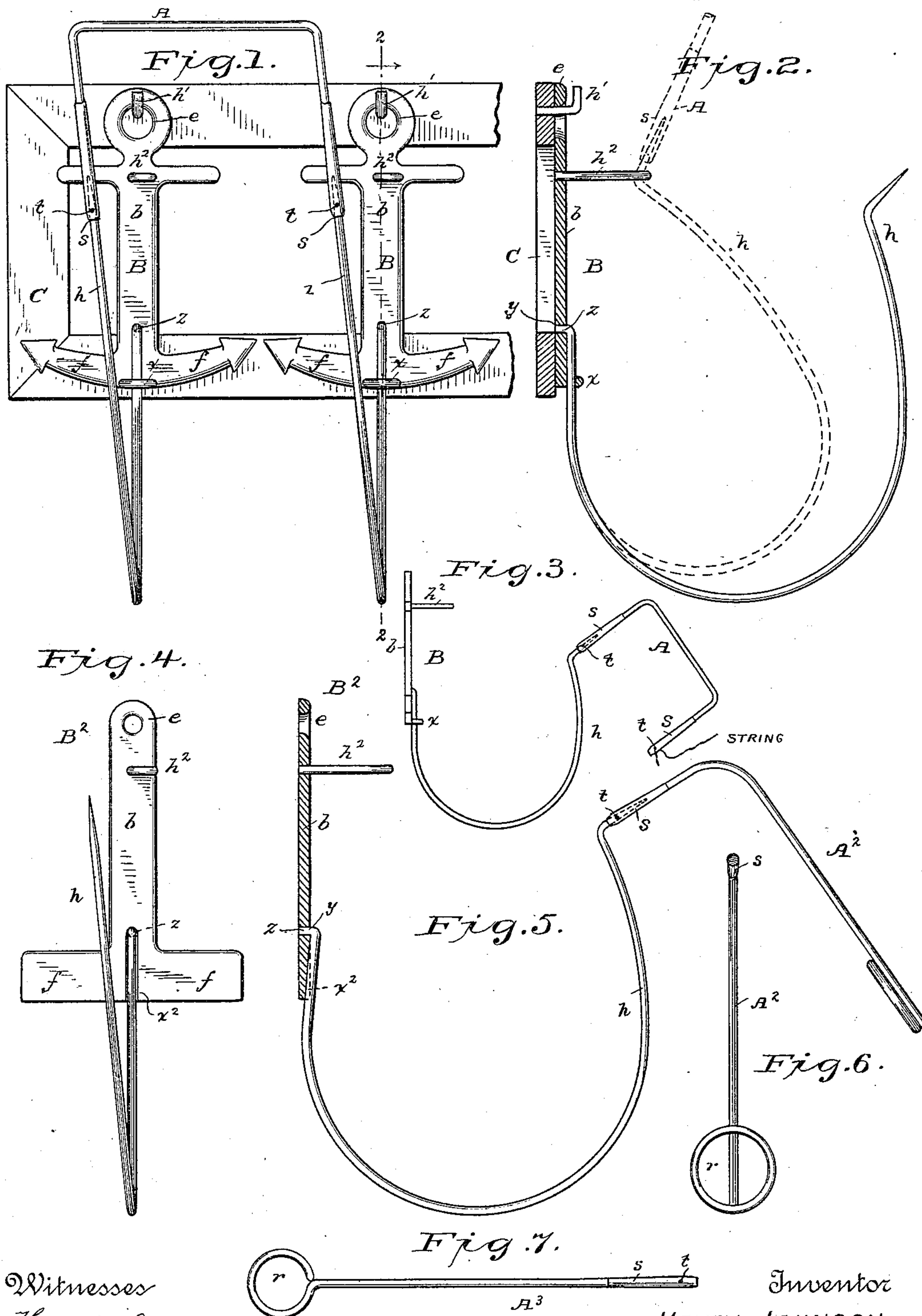


(No Model.)

H. JOHNSON.  
BILL FILE.

No. 426,996.

Patented Apr. 29, 1890.



Witnesses

H. A. Lamb

David O. Wolhaupter

Inventor

HENRY JOHNSON

By his Attorney

*W. L. Swin*



# UNITED STATES PATENT OFFICE.

HENRY JOHNSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BILL-FILE.

SPECIFICATION forming part of Letters Patent No. 426,996, dated April 29, 1890.

Application filed January 18, 1890. Serial No. 337,335. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY JOHNSON, a citizen of the United States, and a resident of Washington, in the District of Columbia, have  
5 invented a new and useful Improvement in Bill-Files, of which the following is a specification.

This improvement relates to that class of "bill-files" or paper-filing devices in which  
10 unfiling-wires are arranged to coact with impaling-wires, so that bills or other papers on file can be readily transferred from one to the other when any particular bill or paper is to be examined or removed and replaced, and  
15 is additional to the improvement in bill-files set forth in my specification forming part of United States Letters Patent No. 417,043, dated December 10, 1889.

The present invention consists in certain  
20 novel combinations of peculiarly-constructed parts, as hereinafter set forth and claimed.

An object of this invention in common with said patented invention is to furnish paper-filing devices suited to the requirements of  
25 different uses or of the various businesses in which such devices are or may be employed. Numerous modifications are therefore necessary.

The distinguishing objects of the present  
30 invention are, first, provision at once for unfiling the superposed "bills," as the papers are hereinafter termed, so as to expose any individual one at will, and for the transfer of the whole to a string or strings for tying them  
35 into bundles without any provision for either purpose in the individual files, and, secondly, provision in a simple and inexpensive way for rigidly uniting the impaling-hook with the "body" of each individual file, so that the  
40 hook shall permanently project with its sides at about right angles to the back of said body, as required, and may extend to any required extent below the file-body with but a single sharp bend, and the file shall possess the necessary adaptation to endure rough and hurried handling.  
45

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings is a front elevation of a bill-file or frame of files embodying  
50 all the several features of this invention and

illustrating the operation of removing or exposing to view any desired bill. Fig. 2 represents a section on the line 2 2, Fig. 1, showing the impaling-hook in its filing and fastened  
55 conditions by full and dotted lines, respectively. Fig. 3 is a small-scale edge view of one of the individual files in connection with the unfiling-wire, illustrating the transfer of the bills to a bundling-string. Figs. 4 and 5 are  
60 respectively a face view and a sectional edge view of a modified individual file, Fig. 5 showing also a modified unfiling-wire. Fig. 6 is a different elevation of said modified unfiling-wire, and Fig. 7 is an elevation of another  
65 modified unfiling-wire.

Like letters of reference indicate corresponding parts in the several figures.

A leading feature of the present invention is an unfiling-wire A or A<sup>2</sup> or A<sup>3</sup>, having at  
70 one or each extremity a tubular end or longitudinal socket s, provided with a transverse threading-hole t and operating in combination with individual files B or B<sup>2</sup>, having impaling-hooks h, which may consequently be  
75 inseparably attached in any preferred way and constructed without threading-holes, which is found to be important, especially in the manufacture of cheap styles. Applied to the sharp points of the unfastened impaling-  
80 hooks, as shown in Fig. 1 or 5, the improved unfiling-wires serve for transferring the bills from the former, so that any particular bill may be readily exposed to view or removed and replaced at will, and by threading the  
85 hole t with a string, as illustrated by Fig. 3, the bills may be readily transferred to the latter by the same simple part of the filing apparatus, so as to be tied into bundles for storage.

In the bill-file represented by Figs. 1, 2, and 3 the unfiling-wire A is of U shape, with a socket s at each end, formed by short tubes applied to the respective ends of a piece of suitably-bent ordinary wire, the latter being  
95 of the same thickness as the impaling-hooks h of the individual files B. Two or more of the individual files are mounted side by side on a frame C or other suitable support common to all. This may preferably be a simple  
100 frame adapted to be hung on or attached to a wall, door, or the like, and provided with



suspending-hooks  $h'$ , engaged by eyes  $e$  on the respective individual files, the latter having lateral projections  $f$  at their lower ends to engage with the lower bar of the frame, as shown in Figs. 1 and 2. This is not, however, an essential feature of the present invention. Each of the individual files has a fastening-hook  $h^2$ , which projects rigidly from the file-body  $b$  and engages with a re-entrant bend near the point of the elastic impaling-hook, as shown in dotted lines in Fig. 2. The unfiling-wire  $A$  connects the unfastened hooks of two adjoining individual files, as shown in Fig. 1, so that the bills may be passed from one file to the other in exposing or removing a bill, as aforesaid, and may mask the sharp points of the two impaling-wires when the latter are fastened, as shown in dotted lines in Fig. 2. In transferring the bills to bundling-string, one end of the unfiling-wire may receive the bills and the other end be threaded with the string, as shown in Fig. 3.

To provide for so attaching the impaling-hook  $h$  to the body  $b$  of each individual file that said hook shall project rigidly and strongly from the body with its sides substantially at right angles to the back of the file and may extend to any required extent below the file-body with but a single sharp bend, as aforesaid, I provide its heel end with a short fastening-stud  $z$ , Figs. 2 and 5, at right angles to the adjoining shank portion and provide the body  $b$  of each file with a hole  $y$  perpendicular to the back of the file to receive said stud at the distance of an inch (more or less) from the lower edge of the body, together with means comprising lateral abutments at the front of the file-body for laterally supporting said shank portion of the hook between said hole and lower edge, the heel end of the hook being finally made fast in position in any approved way.

In the preferred joint forming part of said file (represented by Figs. 1 to 3) the stud  $z$  is simply riveted fast, and said means for laterally supporting the shank portion consists of a perforated lug  $x$ , integral with the file-body, through which the hook extends, the sides of the longitudinal bore of said lug forming such lateral abutments at the front of the file-body.

In the modified individual file  $B^2$  (represented by Figs. 4 and 5) the shank portion of the impaling-hook occupies a groove  $x^2$  in the face of the file-body  $b$ , forming such lateral abutments, and said shank portion is soldered fast in said groove. The stud  $z$  may also be riveted, clinched, or soldered fast within the hole  $y$ .

The modified unfiling-wires  $A^2$  and  $A^3$  (shown, respectively, in Figs. 5, 6, and 7) have said sockets  $s$  with threading-holes  $t$  at one end only, the other end being provided with a ring  $r$ , by which to hang up the wire on the fastening-hook  $h^2$  of the file when it is not in use.

Other like modifications will suggest themselves to those skilled in the art, and details which have not been specified may be of any approved description. The parts may, for example, be made by any suitable processes, of any approved materials, and of shapes and sizes to suit the trade, and may be united by joints of any approved kind.

I am aware that in combination with a pair of tubular uprights in an individual file for letters and the like "a removable bent transfer-wire" has been employed that is of  $U$  shape, except that it has necessarily one long arm and one short arm. My  $U$ -shaped unfiling-wire has necessarily uniform ends of equal length. It coacts with two individual files each complete in itself as a filing device, and in common with the "single" unfiling-wires shown in Figs. 5 to 7 it provides for unfiling and tying up papers in combination with individual files which are wholly without any provision for these purposes, and may consequently be cheaply manufactured and freely used in any required number.

I am also aware that it is not broadly new to rigidly attach a recurved impaling-hook to a file-body so that it shall project at right angles to the face of the latter; but so far as I am informed this has not before been accomplished without repeated sharp bends in the wire, each of which materially increases the cost of the files and militates against making the hook of spring-wire, which should be the material used. Moreover, with my particular joints between the wire and the file-body I am enabled to extend the hook below the file-body to any desired extent without added bends, which has not before been accomplished, so far as I am advised.

Having thus described the said improvement, I claim as my invention and desire to patent under this specification—

1. In combination with individual files (one or more) having sharp-pointed impaling-wires, a detached unfiling-wire having at one or each extremity a longitudinal socket provided with a transverse threading-hole to receive a bundling-string, substantially as set forth.

2. In an improved individual file, a recurved impaling-hook constructed with a short fastening-stud, which projects rearwardly at its heel end, and with a shank portion extending downward at about right angles to said stud and merging into the hook portion without any further sharp bend, in combination with a file-body provided with a hole perpendicular to its back at some distance from its lower edge, and with lateral abutments at the front of the file-body, which afford lateral support to said shank portion between said hole and said lower edge, substantially as set forth.

HENRY JOHNSON.

Witnesses:

JAS. L. EWING,

DAVID P. WOLHAUPTER.