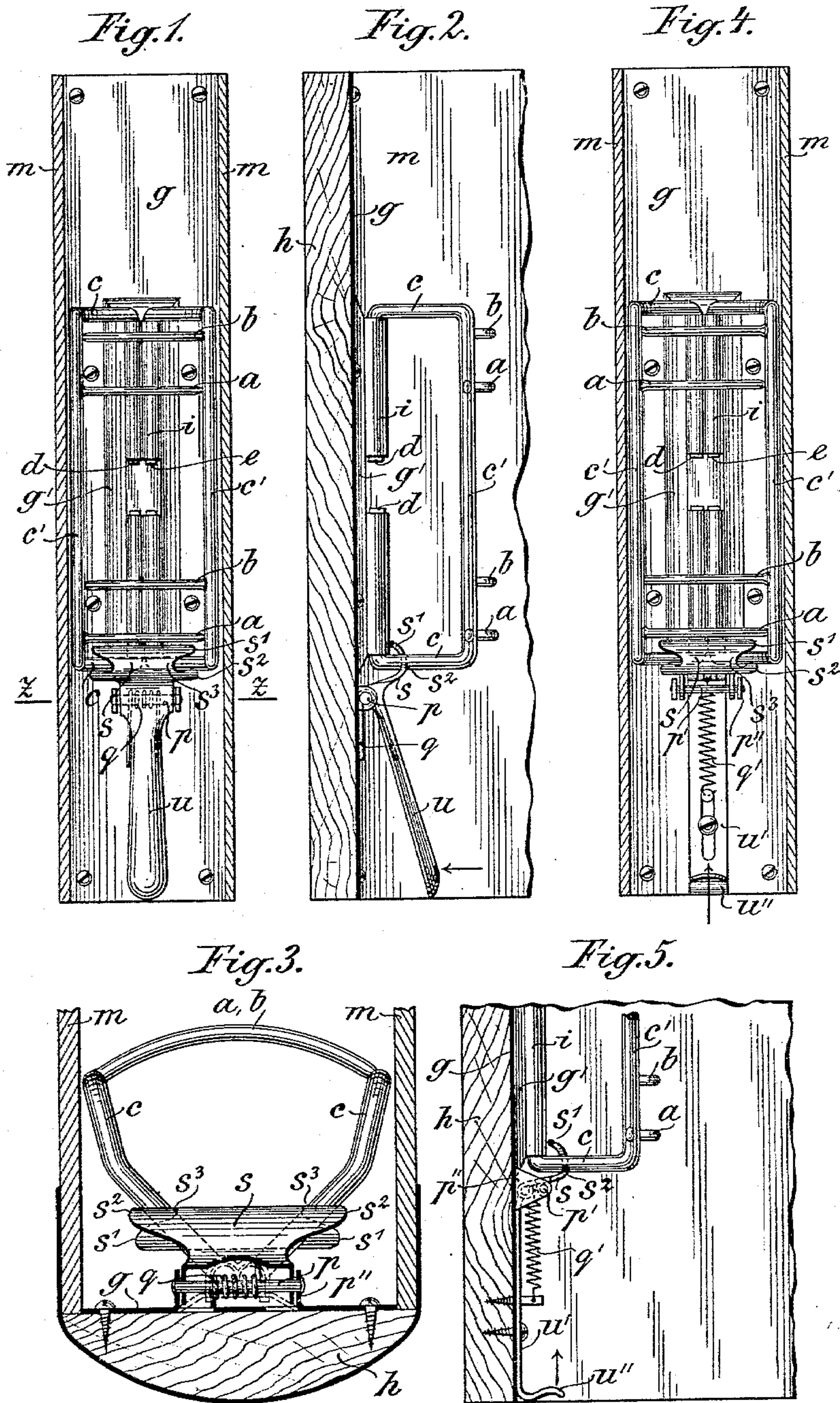


(No Model.)

A. KRAH.  
LETTER FILE.

No. 566,717.

Patented Aug. 25, 1896.



Witnesses:  
Thos. A. Green  
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# UNITED STATES PATENT OFFICE.

ARMIN KRAH, OF BERLIN, GERMANY.

## LETTER-FILE.

SPECIFICATION forming part of Letters Patent No. 566,717, dated August 25, 1896.

Application filed April 17, 1896. Serial No. 587,984. (No model.)

*To all whom it may concern:*

Be it known that I, ARMIN KRAH, a citizen of the Kingdom of Prussia, residing at Berlin, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Letter-Files, of which the following is a specification, reference being had to the accompanying drawings.

This invention is a modification of the device described in the specification of prior Letters Patent No. 544,231, dated August 6, 1895, and especially relates to the sheet-metal pieces indicated therein, with flanges or projections for holding the wires in the closed position of the file. These sheet-metal pieces have the disadvantage that a pressure, although slight, must be applied to open the file, which disadvantage can be avoided by an arrangement whereby the said sheet-metal pieces are not made elastic, as heretofore, but are arranged rotatably around their lower extremity. A device may be combined with the above by which the file can be at once automatically opened.

This invention is shown in the accompanying drawings, in which—

Figures 1 to 3, inclusive, represent the invention in plan, in side elevation, and in end elevation, respectively. Figs. 4 and 5 represent a modification thereof.

According to the present invention, instead of the two sheet-metal pieces *s*, referred to in the aforesaid patent, only one sheet-metal piece is provided in order that the whole arrangement may be simplified. This sheet-metal piece is provided at the front extremity of the retaining-wires *a c d* and *b c e* and bears against the hinged wires *c c*. In place of the grooves provided in the sheet-metal pieces formerly used two deep incisions or recesses *s*<sup>3</sup>, Figs. 1 and 3 are provided, in which the hinged wires *c* are located and held fast. The sheet-metal piece, moreover, is bent inwardly, so as to form approximately a right angle at that place where it is narrowest. From the incisions or recesses *s*<sup>3</sup> the sheet-metal piece increases in width and forms the two flanges or projections, which, as will be hereinafter described, serve to separate the receiving-wires from one another when the file is being opened.

The sheet-metal piece is at the base rota-

table around a small pivot *p*, located in two turned-up flanges or projections *p*<sup>''</sup> of the sheet-metal base. A spiral spring *q* is provided to permanently force the sheet-metal piece *s* toward the interior of the file. To the sheet-metal piece is connected a lever or handle *u* for operating it. Preferably the lever or handle and sheet-metal piece are made integral with each other. The handle or lever *u* does not project beyond the lower edge of the file, and so does not form any hindrance to the opening of the letter. The operation of this arrangement will be readily understood. When the front extremity of the lever is depressed by the finger in direction of the arrow, Fig. 2, the sheet-metal piece *s* is caused to turn around its axis or pivot *p* and the flanges or projections *s*<sup>'</sup> on each side thereof are caused to slightly force apart the hinged wires *c c*, and consequently also the receiving-wires *a b*. The papers then slide down upon the receiving-wires *a b* and become separated at the place where they were previously opened. On now releasing the lever *u*, which had before been depressed, the exterior edges of the flanges or projections *s*<sup>2</sup> of the sheet-metal piece enter between the semi-opened hinged wires *c c* and force them, together with the receiving-wires *a b* entirely apart, thus fully opening the file. If, therefore, any document or paper is required to be removed from or inserted into the file, the latter is opened at the desired place, and the extremity of the lever *u* is depressed by the finger, whereupon the file is instantly thrown half-open. If, then, the lever *u* is again released, the portfolio opens entirely, so that any document can be easily removed from or a fresh one slid down upon the receiving-wires. In order to close the file, the covers *m m* are folded down toward each other in the same way as previously.

In the modification shown in Figs. 4 and 5, instead of utilizing the rotary movement of the sheet-metal piece other equivalent contrivances, for instance, a thrust-rod, may be employed to achieve the same purpose. In this instance the axis *p*<sup>'</sup> is located slightly higher than is the case in the arrangement first described, so that a link arranged in addition below has sufficient play to act upon the thrust-rod *u*<sup>'</sup>, which is turned up at *u*<sup>''</sup>



so as to form a hook, and is acted on by a spring  $q'$ , Fig. 5. On moving the rod forward in the direction of the arrow, the sheet-metal member will be actuated in a similar way to that above described. Such mechanisms may be easily modified.

What I claim is—

1. In a letter-file, the combination with a sheet-metal piece  $s$ , pivotally mounted upon an axis  $p'$ , and provided with flanges or projections  $s'$  and  $s^2$ , of hinged wires  $c, c$ , and receiving-wires  $a, b$ , substantially as described.
2. In a letter-file, the combination with

hinged wires  $c, c$ , and receiving-wires  $a$  and  $b$ , of a sheet-metal piece  $s$  having flanges, or projections,  $s'$  and  $s^2$ , and provided with a handle or lever  $u$ , and spring  $q$  to operate the sheet-metal piece substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ARMIN KRAH.

Witnesses:

J. LEMAN,

ALFRED UNGAR.