

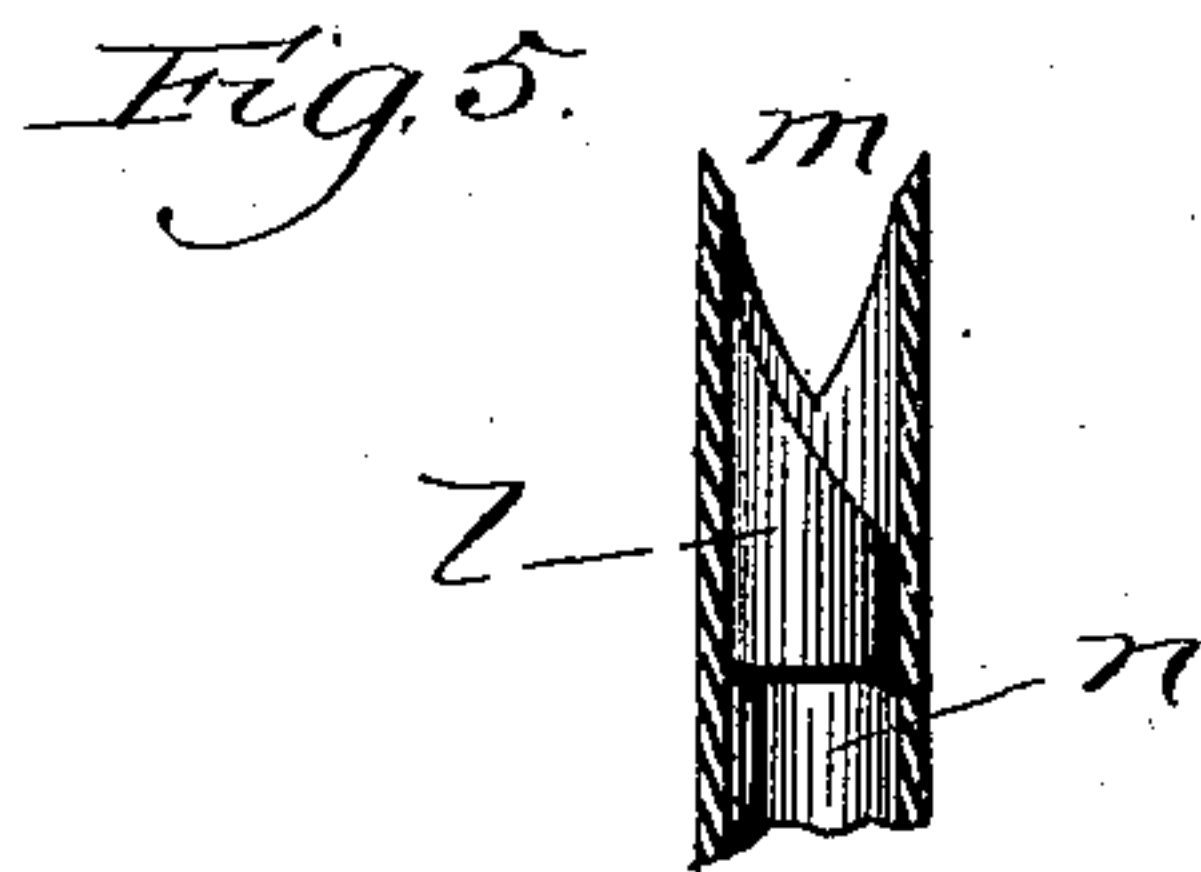
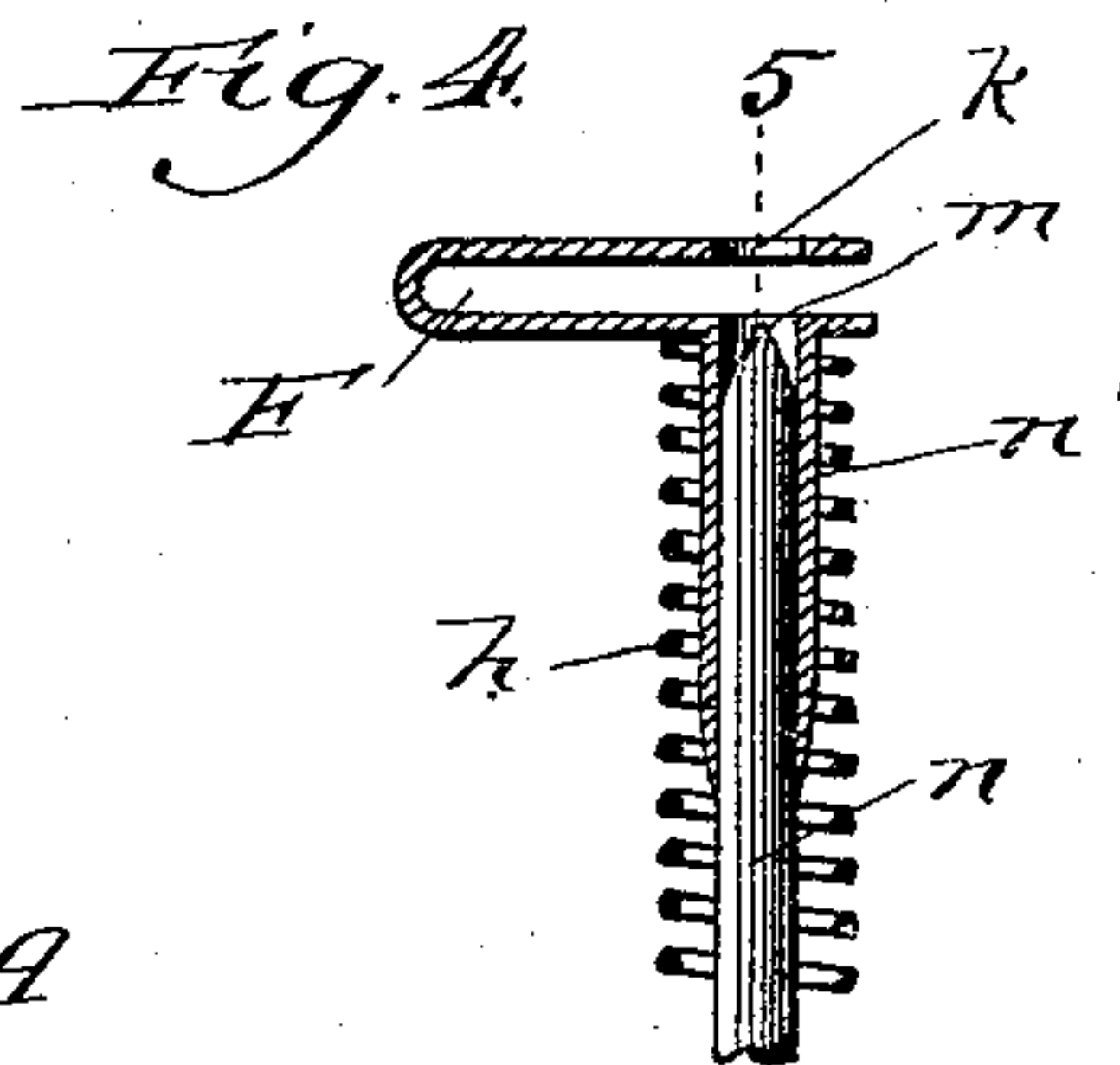
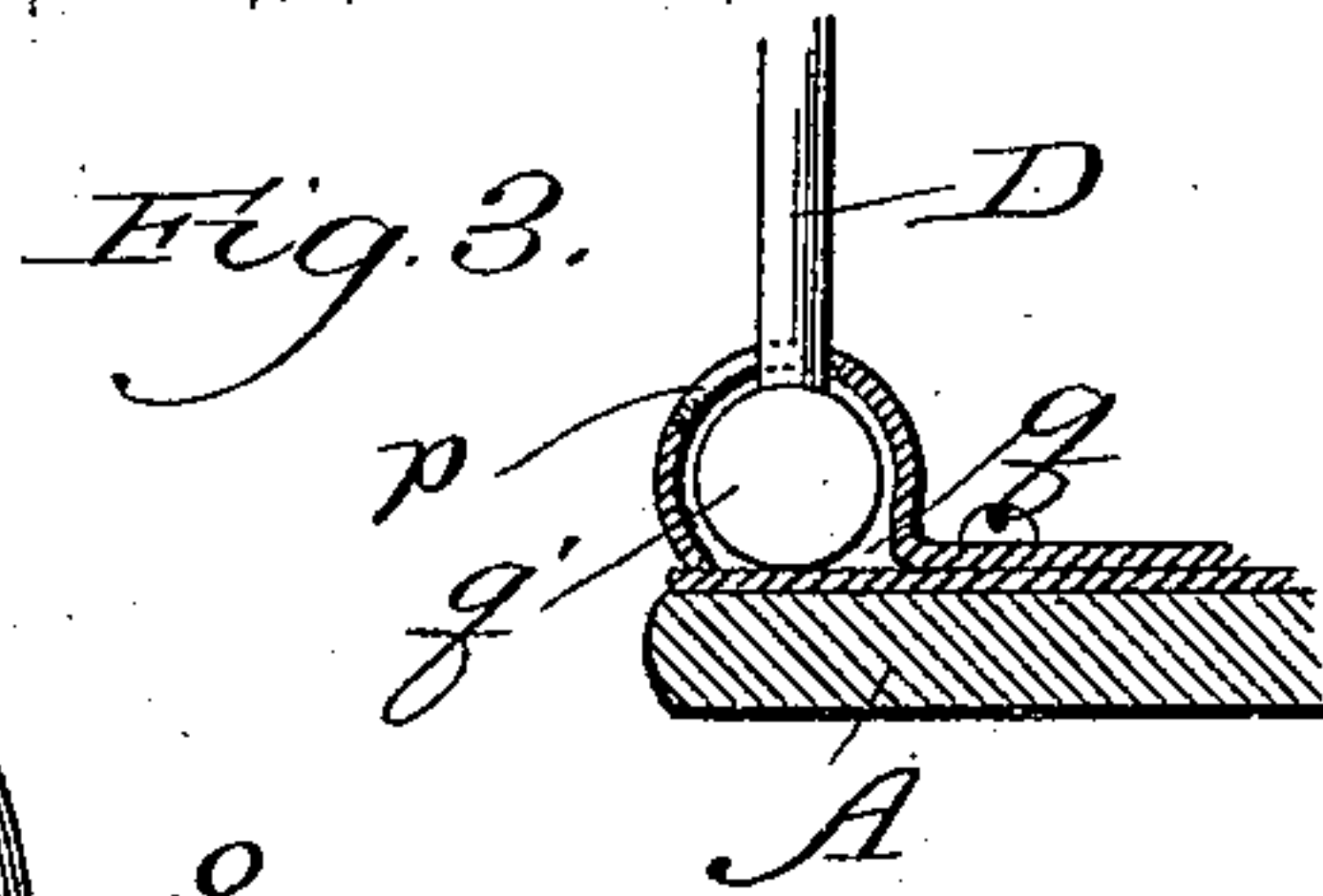
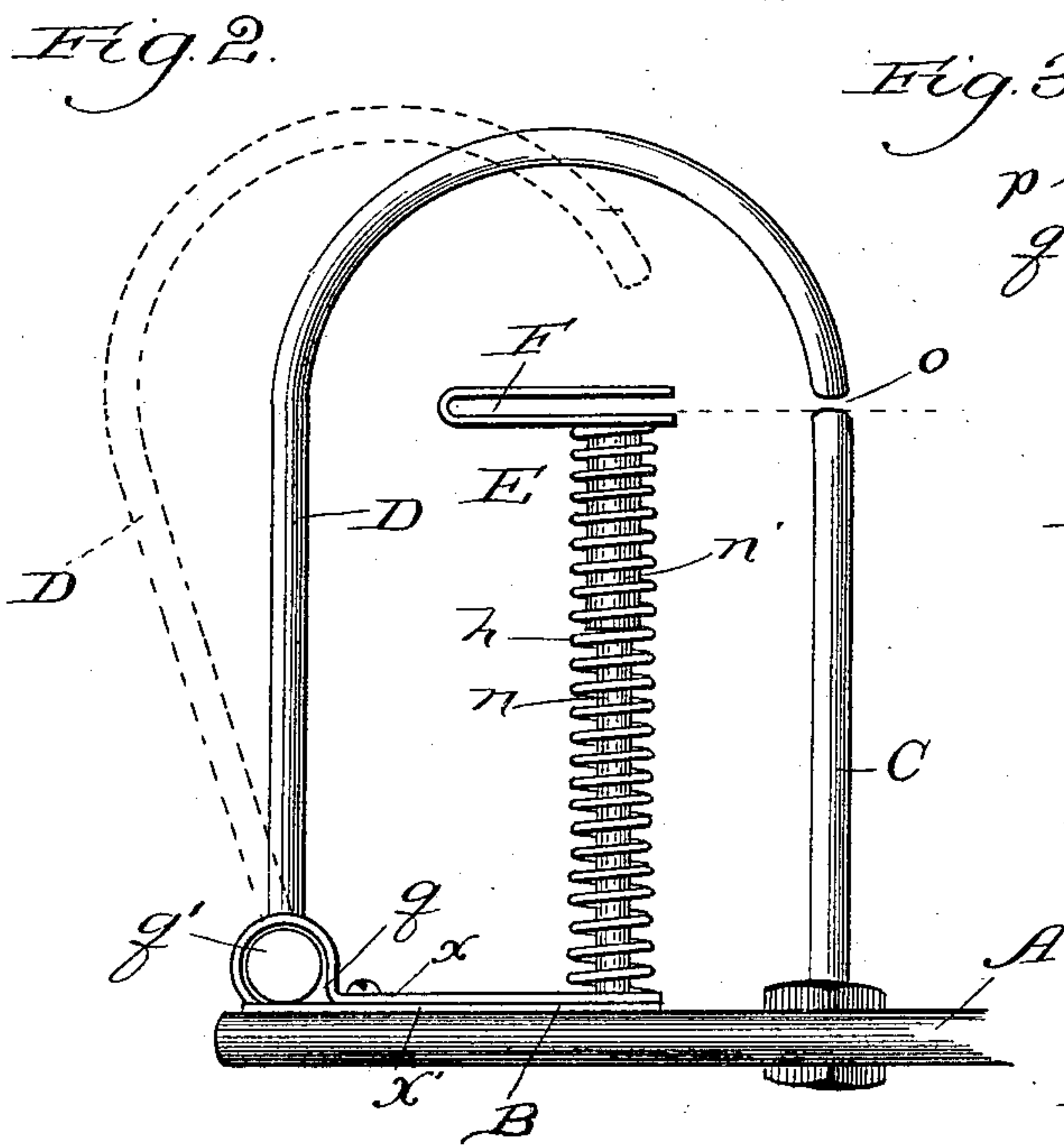
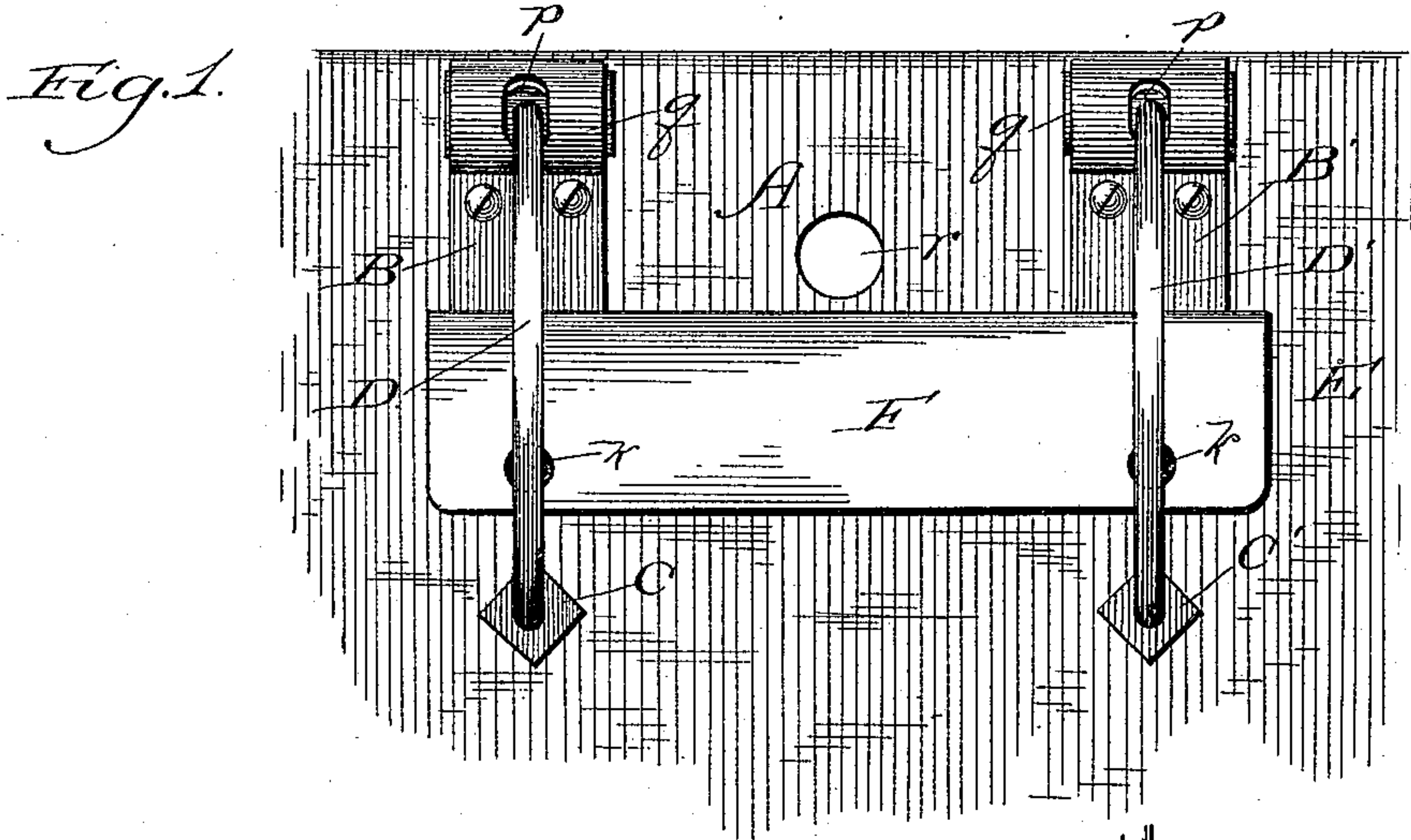
(No Model.)

A. B. SHERWOOD.

PAPER FILE.

No. 352,664.

Patented Nov. 16, 1886.



Witnesses:
Chas. E. Gaylord.
A. J. Paré

Inventor:
Alexander B. Sherwood.
By Dyrenforth & Dyrenforth
Attys.

UNITED STATES PATENT OFFICE.

ALEXANDER B. SHERWOOD, OF CHICAGO, ILLINOIS.

PAPER-FILE.

SPECIFICATION forming part of Letters Patent No. 352,664, dated November 16, 1886.

Application filed June 15, 1886. Serial No. 205,218. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER B. SHERWOOD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper-Files; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of files in which a base is provided toward its upper end with two parallel vertical receiving-wires and correspondingly-placed transfer-wires arched to cause their extremities to meet the tops of the receiving-wires, and serving the purpose of permitting the removal of filed papers covering a particular paper to which reference is desired without requiring the removed or transferred papers to be withdrawn from the file.

Files of the foregoing description are also sometimes provided on the bases with punching or puncturing devices, and I provide on my file a punching device of improved construction. In paper-files of the class named it is necessary, in each separate instance of filing, to remove or turn the arched transfer-wires from coincidence with the receiving-wires, which is an objection, since with each separate use of the file two distinct operations are required, one to turn the transfer-wires and the other to adjust the paper or papers on the receiving-wires, and when puncturing of the paper is resorted to a third operation is incurred.

It is the principal object of my improvement to provide a filing device wherein the necessity of moving the arched transfer-wires, as above stated, shall be avoided, thereby saving one operation and affording the consequent advantages of time-saving and convenience.

It is also my object to provide an improved form of combined punching and gaging device located in a most convenient position with reference to the filing-wires, whereby the punching and filing devices may be co-operative in their functions.

My invention consists in the general construction of my improved device; and it also consists in certain details of construction and combinations of parts, all as hereinafter more fully set forth.

In the drawings, Figure 1 is a plan view of

my improved file with a portion of the base broken away; Fig. 2, a side elevation of the same, illustrating a function of a detail, indicated by dotted lines, and showing only a part of the base; Fig. 3, a broken sectional view of a detail; Fig. 4, a similar view of another detail, and Fig. 5 an enlarged sectional view taken on the line 5 5 of Fig. 4.

A is the base, commonly and preferably comprising a flat polished hard-wood board, provided with means for its suspension (shown in Fig. 1) in the form of a hole, *r*, bored into the base near its upper edge. On opposite sides of the center of the base, secured to the latter and extending downward from its upper edge, are two plates, B and B', each formed for convenience in two parts, *x* and *x'*, as shown in Fig. 2, one upon the other, the top plate, *x*, being bent, as shown, toward its upper end to provide a socket, *q*, provided on its upper side with an opening, *p*, elongated lengthwise of the base.

C and C' are the receiving-wires, blunt at their upper extremities and secured vertically in position a predetermined distance apart on the base and in line longitudinally of the base A with the openings *p* in the sockets *q*. The sockets *q* afford each a receptacle for a cylindrical head, *q'*, fitting closely therein and forming the oscillatory base for a transfer-wire, D or D', secured at one end to the same and extending through the respective openings *p* in the socket. The transfer-wires are arched toward their upper ends, as shown, to bring their extremities coincident with the tops of the receiving-wires; but they do not touch the latter, a permanent space, *o*, being left between the adjacent extremities when the receiving and transfer wires are in their normal relative positions, as illustrated by the full lines in Fig. 2.

Between the receiving and transfer wires is a combined punching and gaging device, E, comprising tubular rods *n*, secured upon the plates B and B', one immediately behind the wire C and the other in line with the first-named, immediately behind the wire C', the lines formed by the two sets of wires C *n* D and C' *n* D' being parallel. The rods *n* are notched at their upper ends, as shown at *m*, Figs. 4 and 5, to present puncturing-points and cutting-edges, and a plug, *l*, inserted into each

rod n , is beveled on its upper surface to extend in an oblique direction across the interior of the rod and afford a stop.

F is the gage, comprising a strip, preferably of metal, bent on itself longitudinally to afford a receptacle having parallel, or substantially parallel, sides and closed at the back, and provided with openings k , extending through both parallel sides and having a diameter sufficiently large and being the proper distance apart to admit through them simultaneously the tubular rods n .

From the under side of each opening k and surrounding the latter extends a short tube, n' , to fit over a rod, n , and afford a guide for the movement of the gage F, which movement is performed in a downward direction for punching the paper previous to adjusting it upon the receiving-wires against the resistance of coiled springs h , surrounding the devices $n n'$, which springs operate by their resilience to return the gage to its normal position when released. The normal position of the gage F is that shown in Fig. 2, with its open side in line with the space o , though slight deviation from this position does not interfere with convenience in operating the device, which is performed in the following manner: The paper (or, if desired, the spaces o being sufficiently large though not so large as to impair the transfer, several sheets at a time) is passed through the spaces o into the gage F, to strike the back of the same for proper gaging when the gage is depressed, causing the notched extremities m of the tubular rods n to puncture the paper and eventually to sever from it the surfaces between the puncturing-points, which severed parts are removed by the action upon the beveled surfaces of the plugs l , which tend to tilt them off, and generally of themselves perform this function, though the primary object of the plugs is to prevent clogging of the tubular rods n with the small paper disks that are removed by the punching operation. After providing the openings in the paper, as aforesaid, the latter is drawn slightly forward to bring the openings coincident with the receiving-wires, when it drops upon the latter into position on the file. The punching operation is preferred to merely puncturing, inasmuch as the latter leaves raised edges around the openings in the papers, which prevent the desired orderly appearance of the same when filed and obviously lessen the capacity of the file. It will thus be seen that the operation of filing papers with my device is rendered convenient and rapid, besides obviating the necessity of manipulating the transfer-wires previous to the operation.

To remove the contents of the file (an operation of necessity whenever its capacity is exhausted to store the accumulated papers elsewhere in preparing the device for further use) and, for convenience, to render possible the removal of all the filed papers simultaneously, instead of one sheet or several sheets at a time, I make the transfer-wires D and D' movable

in a backward direction a distance (limited by the elongated openings p) sufficient to bring the extremities in line with the edge of the entrance to the gage, which permits the margins above the springs in the papers to be withdrawn without obstruction. The manipulation, as aforesaid, of the transfer-wires is performed without difficulty by simply pressing against them, and the operation requires performance so seldom, by comparison, that it is not a source of inconvenience. Of course, on removal of the contents of the file the transfer-wires are, together or separately, readjusted to their normal positions.

Two each of the receiving-wires and transfer-wires are usually employed, though in files for certain purposes but one of each is required. With the last-named construction of the combined punch and gaging device is single.

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

1. In a paper-file, the combination, with the base A, of a receiving-wire, and a transfer-wire arched to coincide at its extremity with the receiving-wire and provide a permanent space, o , substantially as and for the purpose set forth.

2. In a paper-file, the combination, with the base A, of a receiving-wire, and a movable transfer-wire arched to coincide normally at its extremity with the receiving-wire and provide a permanent space, o , substantially as and for the purpose set forth.

3. The combined punch and gage E for a paper-file, comprising in combination a tubular rod, n , notched at one extremity to provide puncturing-points and cutting-edges, a gage, F, provided with an opening, k , and a guide-tube, n' , to fit over the tubular rod n , and a spring, h , upon the parts $n n'$, substantially as described.

4. The combined punch and gage E for a paper-file, comprising in combination a tubular rod, n , notched at one extremity to provide puncturing-points and cutting-edges, a beveled stop, l , within the rod n , a gage, F, provided with an opening, k , and a guide-tube, n' , to fit over the tubular rod n , and a spring, h , surrounding the parts $n n'$, substantially as described.

5. In a paper-file, the combination, with the base A, of a receiving-wire, a transfer-wire arched to coincide at its extremity with the receiving-wire and provide a permanent space, o , and a combined gage and punch, E, between the receiving and transfer wires, substantially as and for the purpose set forth.

6. In a paper-file, the combination, with the base A, of two parallel receiving-wires, C and C', two transfer-wires, D and D', arched to coincide at their extremities with the adjacent receiving-wires and provide permanent spaces o , and a combined gage and punch, E, between the receiving and transfer wires, comprising in combination two parallel tubular rods, n , notched at adjacent extremities to pro-

vide puncturing-points and cutting-edges, beveled plugs *l* within the rods *n*, a gage, *F*, provided with openings *k*, and guide-tubes *n'*, to fit over the tubular rods *n* and maintain the
5 openings *k* coincident with the said tubular rods, and spiral springs *h*, surrounding the parts *n n'* and tending to maintain the gage

F normally with the entrance to the same coincident with the spaces *o*, substantially as described.

ALEXANDER B. SHERWOOD.

In presence of—

C. W. SHERWOOD,

J. W. DYRENFORTH.