

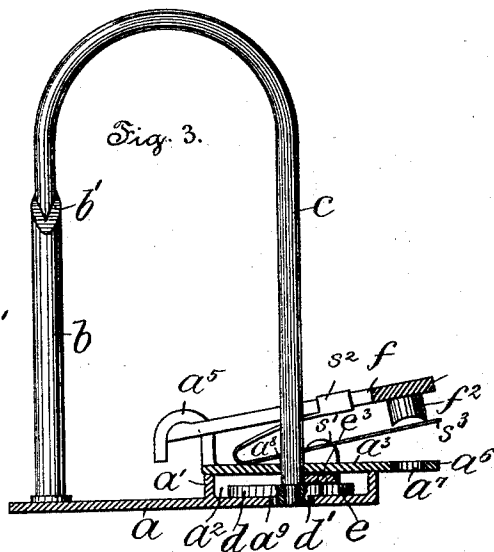
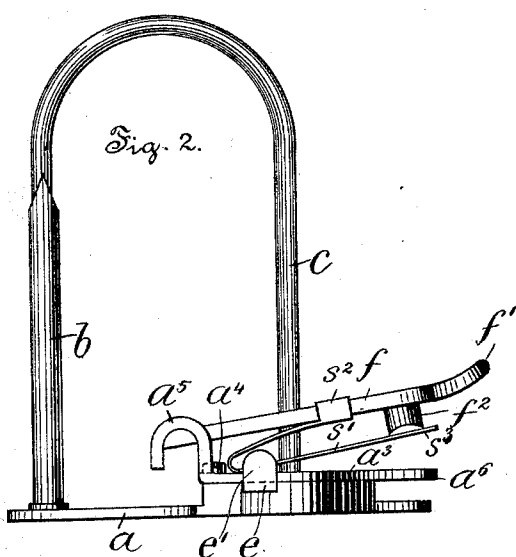
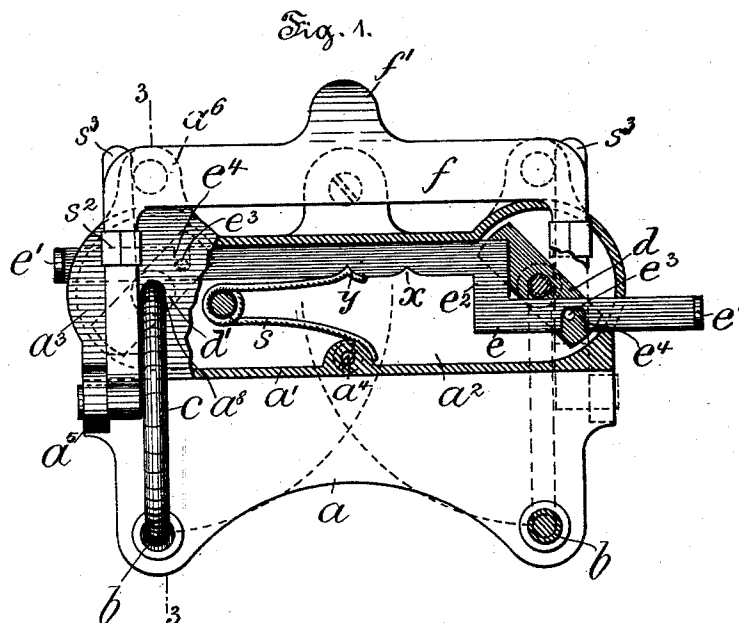
(No Model.)

J. W. GRANTLAND.

COMBINED PORTABLE BILL AND LETTER FILE AND PERFORATING
APPLIANCE.

No. 485,102.

Patented Oct. 25, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

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COMBINED PORTABLE BILL AND LETTER FILE AND PERFORATING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 485,102, dated October 25, 1892.

Application filed April 14, 1892. Serial No. 429,099. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. GRANTLAND, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Portable Bill and Letter File and Perforating Appliance, of which the following is a specification.

10 The principal objects of my present invention are, first, to provide a simple, light, efficient, inexpensive, and portable bill and letter file and perforating appliance; second, to provide an operating-rod accessible from the exterior of the main frame for turning the curved transfer-wires about the axes of their vertical shanks, whereby accidental contact of the hands of an operator with the points of the curved portions of the transfer-wires is avoided, and, third, to provide a combined bill and letter file and perforating appliance with receiving-pins, transfer-wires, and a chamber for the reception of the working parts of the device and with a cover adapted to be applied to the chamber and having openings therein forming guides for the transfer-wires, and also provided with suitable trunnions forming pivotal supports for a detachable swinging spring-controlled perforator-frame.

30 My invention consists, in a combined bill and letter file and perforating appliance, of a main frame having receiving-pins, transfer-wires provided with crank-arms and having a rotary movement on or about the axes of their vertical shanks, and an operating-rod connected with the crank-arms.

My invention further consists, in a bill and letter file and perforating appliance, of a main frame having receiving-pins, transfer-wires having a movement on or about the axes of their shanks, and a spring-controlled operating-rod suitably connected with the transfer-wires.

My invention further consists of a combined bill and letter file and perforating appliance provided with a main frame having a covered chamber and receiving-pins, transfer-wires and means connected therewith for affording the transfer-wires a range of rotary movement on or about the axes of their vertical shanks, a swinging frame pivotally connected

with trunnions formed integral with or attached to the cover of the chamber, and a spring-controlled swinging frame and complementary dies and punches interposed between the swinging frame and cover of the chamber.

My invention further consists of a combined bill and letter file and perforating appliance having a covered chamber provided with trunnions and dies, crank-arms mounted in the chamber and provided with transfer-wires having a range of rotary movement about the axes of their vertical shanks, and a spring-controlled frame connected with said trunnions and provided with punches; and my invention further consists of the improvements hereinafter described and claimed.

The nature, scope, and general characteristic features of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a view, partly in plan and partly in section, of a portable bill and letter file and perforating appliance embodying features of my invention and with a portion of the housing concealing the working parts of the device removed in order to expose to view the means for actuating the curved transfer-wires. Fig. 2 is an end elevation of Fig. 1, showing one of the transfer-wires in a closed position; and Fig. 3 is a transverse section on the line 3 3 of Fig. 1.

In the drawings, *a* is a main frame adapted for attachment to a panel, table, or other article and provided at the rear thereof with a vertical lip or flange *a'*, forming the wall of a chamber *a*².

b are receiving-pins projecting upward from the front portion of the main frame *a* and provided, respectively, with sockets *b'* for the reception of the pointed ends of the curved transfer-wires *c*.

*a*³ is a lid or cover detachably connected with the lip or flange *a'* by means of screws *a*⁴ and provided at the front thereof with trunnions *a*⁵ and at the rear thereof with projections or lugs *a*⁶, having dies *a*⁷ formed therein. This lid or cover *a*³ is provided with openings *a*⁸, forming guides for the vertical

shanks of the transfer-wires c , and with the trunnions a^5 , preferably formed integral with the cover or lid a^3 to form supports for a detachable spring-controlled swinging frame to be hereinafter fully described.

d are crank-arms located in the chamber a^2 and provided, respectively, with offsets d' , forming bearings, which are pivotally supported in seats a^9 , provided in the main frame a to receive them. The lower extremities of the shanks of the transfer-wires c , passing through the openings a^8 in the lid or cover a^3 , are reduced in cross-section and made to tightly fit into suitable apertures in the crank-arms d , as fully illustrated in Fig. 3, so that the curved portions of the transfer-wires are afforded a freedom of rotary motion on or about the axes of their shanks by means and in the manner to be hereinafter more fully described.

e is an operating-rod the respective extremities of which project through apertures in the side walls of the chamber a^2 and are provided with handles e' , accessible from the exterior of the main frame a . This rod is interposed between the crank-arms d and the cover a^3 and is offset, as at e^2 , so that it is afforded a freedom of motion or play in the direction of its length.

e^3 are pins projecting upward from the crank-arms d and working in slots e^4 , located upon opposite sides of the operating-rod e . These slots e^4 and pins e^3 accommodate the throw of the crank-arms when the rod e is shifted in the direction of its length. The crank-arms d are disposed with relation to each other in such manner that the transfer-wires c do not collide when the rod e is shifted, and this result is in the present instance attained by affording the right-hand pin e^3 a slight range of play in its complementary slot e^4 , whereby the right-hand transfer-wire is caused to lag behind the left-hand transfer-wire.

s is a spring connected with the interior of the chamber a^2 and adapted to engage the notches x and y in the operating-rod, in order to limit the range of motion of the same.

f is a swinging frame pivotally connected with the cover a^3 by means of the trunnions a^5 . This swinging frame f is provided with a handle f' and with punches f^2 , that register with the dies a^7 when the swinging frame is depressed.

s' are springs adapted to slide upon the cover a^3 , and having, respectively, one of their extremities s^2 connected with the swinging frame f and the other of their extremities s^3 located intermediate of the dies a^7 and adapted to serve as strippers for the punches f^2 .

Preparatory to filing a paper it is perforated by inserting one of its edges between the spring strippers s^3 and the swinging frame f , whereupon the latter is depressed, and thus causes the punches f^2 and dies a^7 to cut two holes adapted for the reception of the receiving-pins b , it being understood that the spring

stripper s^3 serves to automatically remove the perforated paper from the punches without danger of tearing or mutilating the same. The operating-rod e is then shifted manually toward the left in Fig. 1 until the spring s engages the notch x , and this motion of the rod e causes the wires c to be turned inward toward each other and out of engagement with the receiving-pins b , and the spring s and notch x serve to maintain the parts in such position. The paper is then placed on the file by passing the receiving-pins through the holes previously formed therein by means of the swinging frame f and its accessories. The operating-rod e is then shifted in a reverse direction until the spring s engages the notch y , and this motion of the rod e causes the transfer-wires c to be turned into contact with the receiving-pins b , and the spring s by engaging the notch y maintains the parts in such position, so that all the papers on the file may be transferred to the transfer-wires c , in order to facilitate the filing of additional papers in regular order, and also to permit of a separate examination of any or all of the papers on the file.

It may be remarked that the hereinabove-described combined portable bill and letter file and perforating appliance possesses many advantageous features. For example, it is self-contained—that is, all the parts are connected with or carried by the main frame a , and all danger of injury to the hands of the operator by accidental contact with the points of the transfer-wires is avoided, because these points are turned inward out of the way during the perforating operation and are shifted by means of the operating-rod e , as has been hereinabove fully explained. Moreover, the cover of the chamber containing the working parts of the device not only serves to conceal said parts from view and act as a guide to the vertical shanks of the transfer-wires, but also serves, by providing the same with the trunnions, as described, to pivotally support the detachable spring-controlled swinging frame of the perforating part of the entire appliance, and also as the dies for the complementary punches of the swinging frame, whereby greatly-improved results in the operation as well as in the filing and puncturing of papers or documents are obtained. Moreover, the cost of production is materially lessened, and the device thereby greatly simplified.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combined portable bill and letter file and perforating appliance comprising a main frame provided with receiving-pins and a covered chamber provided with dies, transfer-wires connected with crank-arms and having a rotary movement about the axes of their vertical shanks, an operating-rod accessible from the exterior of the chamber, and a swing-

ing frame pivotally connected with said cover and having a spring and punches, substantially as and for the purposes set forth.

2. A combined portable bill and letter file and perforating appliance provided with a main frame having receiving-pins, transfer-wires provided with crank-arms and having a rotary movement about the axes of their vertical shanks, and an operating-rod connected with the respective crank-arms and accessible from the exterior of the device, substantially as and for the purposes set forth.

3. A combined portable bill and letter file and perforating appliance provided with a main frame having receiving-pins and a chamber, crank-arms journaled in said chamber and having transfer-wires, pins projecting from said crank-arms, and a recessed operating-rod mounted in said chamber and accessible from the exterior thereof, substantially as and for the purposes set forth.

4. A combined portable bill and letter file and perforating appliance provided with a main frame having a covered chamber, receiving-pins provided with sockets, transfer-wires having a rotary movement about the axes of their vertical shanks, a spring-actuated swinging frame pivotally connected with the cover of said chamber and one extremity of the spring adapted to operate as a stripper, and complementary dies and punches interposed between said swinging frame and the cover of said chamber, substantially as and for the purposes set forth.

5. A combined portable bill and letter file and perforating appliance provided with a main frame having receiving-pins, transfer-wires having a rotary movement about the axes of their vertical shanks, and crank-arms connected therewith, an operating-rod, pins and slots interposed between said operating-rod and crank-arms, and one of said pins afforded a range of play in its slot to prevent collision of the transfer-wires when the same are turned inward, substantially as and for the purposes set forth.

6. In a portable bill and letter file and perforating appliance having a main frame provided with receiving-pins and transfer-wires having a rotary movement about the axes of their vertical shanks, an operating-rod accessible from the exterior of the main frame, and suitable connections between said rod and transfer-wires, substantially as and for the purposes set forth.

7. A combined bill and letter file and perforating appliance provided with receiving-pins and transfer-wires having a movement about the axes of their vertical shanks and a spring-controlled and slotted operating-rod suitably connected with said transfer-wires and accessible from the exterior of the hous-

ing, substantially as and for the purposes set forth.

8. A combined bill and letter file and perforating appliance provided with a main frame having a covered chamber and receiving-pins, transfer-wires, means for affording said transfer-wires a range of rotary movement about the axes of their vertical shanks, a swinging frame pivotally connected with trunnions formed integral with the cover of said chamber, and a spring-stripper, and complementary dies and punches interposed between the swinging frame and cover of said chamber, substantially as and for the purposes set forth.

9. A combined portable bill and letter file and perforating appliance having a main frame provided with receiving-pins and a chamber, crank-arms mounted in said chamber and provided with offsets forming bearings, which are journaled in seats formed in the main frame, transfer-wires connected with said crank-arms, and an operating-rod accessible from the outside of said chamber, substantially as and for the purposes set forth.

10. A combined bill and letter file and perforating appliance having a covered chamber provided with trunnions and dies, crank-arms mounted therein and provided with transfer-wires having a range of rotary movement about the axes of their vertical shanks, and a spring-controlled frame connected with said trunnions and provided with punches, substantially as and for the purposes set forth.

11. In a combined bill and letter file and perforating appliance having a covered chamber provided with guides, transfer-wires having means for permitting the same to be afforded a range of rotary movement on or about the axes of their shanks, and a spring-controlled operating-rod concealed within said chamber and accessible from the exterior thereof for actuating said transfer-wires, substantially as and for the purposes set forth.

12. A combined bill and letter file and perforating appliance provided with receiving-pins, transfer-wires, a chamber for the reception of the working parts of the device, provided with a detachable cover having trunnions, guides, and dies, and a spring-controlled swinging perforator-frame provided with punches, and said frame detachably connected with the trunnions of said cover, substantially as and for the purposes set forth.

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

JOHN W. GRANTLAND.

Witnesses:

THOMAS M. SMITH,

RICHARD C. MAXWELL.