

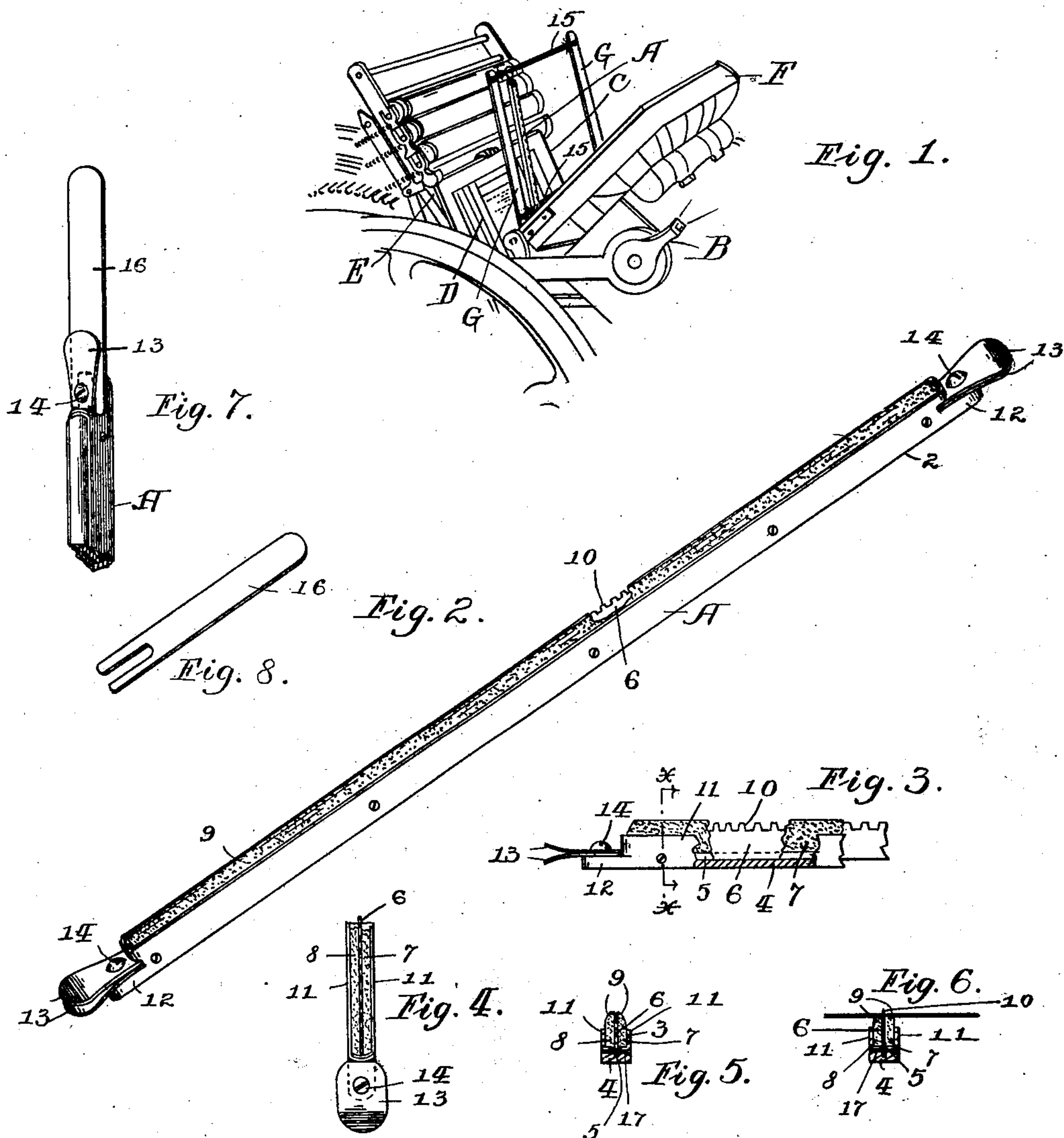
No. 713,107.

Patented Nov. 11, 1902.

J. KANE.
PERFORATOR FOR PRINTING PRESSES.

(Application filed Feb. 21, 1902.)

(No Model.)



Witnesses:
C. M. Boesel.
John M. Lynch.

Inventor: John Kane
by: Stryker & Bradbury
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN KANE, OF ST. PAUL, MINNESOTA.

PERFORATOR FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 713,107, dated November 11, 1902.

Application filed February 21, 1902. Serial No. 95,065. (No model.)

To all whom it may concern:

Be it known that I, JOHN KANE, a citizen of the United States of America, and a resident of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Perforators for Printing-Presses, of which the following is a specification.

My invention relates to improvements in perforators for printing-presses, and has for its object to provide a durable, inexpensive, and effective perforator that will quickly free itself from the material it perforates and may be readily attached to any ordinary printing-press. By the use of my improved perforator the printing and perforating are done simultaneously.

My invention consists of a blade having a perforating edge, with a bed of resilient material on each side. The resilient material in normal position extends beyond the perforating edge, recedes below the edge of the blade when the press closes, and resumes its normal position, freeing the perforated and printed material when the press again opens.

In the accompanying drawings, forming part of this specification, Figure 1 is a detail perspective view of a printing-press, showing my improved perforator attached thereto. Fig. 2 is a perspective view of my improved perforator. Fig. 3 is a detail side elevation of the perforator, partly in section and broken away. Fig. 4 is a detail plan view of the perforator. Fig. 5 is a section taken on the line X X of Fig. 3. Fig. 6 is a similar section, showing the paper to be perforated in position and the resilient material compressed when the press is closed. Fig. 7 is a detail perspective view of the perforator, showing a flexible extension attached; and Fig. 8 is a perspective view of the flexible extension detached.

In the drawings let A represent my improved perforator; B, a platen printing-press; C, its chase, which carries the form D. This chase is shown in position upon the bed E.

F represents the platen, and G the gripping-arms, all of which are of ordinary construction.

As shown, my improved perforator consists of the frame 2, which is provided with a longitudinal channel 3. The bed 4 of the frame

is slotted at 5 to receive the perforating-blade 6, which is detachable by means of the screws 17. The strips 7 and 8 of resilient material are placed in the channel on each side of the perforating-blade. The upper faces 9 of the resilient strips project above the cutting edge 10 of the perforating-blade, also above the side walls 11 of the frame 2. The ends of the frame are formed with the projecting lips 12, to which are fastened the springs 13 by means of the screws 14. My improved perforator may be attached to a printing-press by any suitable means. As shown, the gripping-arms are provided with cords 15, which stretch across the press between the platen and the form. The perforator is fastened in position with its perforating edge facing the platen by gripping the cords between the springs 13 on each end of the perforator, as shown in Fig. 1.

In operation the gripping-arms assume the position indicated in Fig. 1 when the press is open. The paper to be printed is placed upon the platen, and when the press closes the gripping-arms and the perforator are carried forward against the chase C. When the press is closed, the resilient strips 7 and 8 are compressed and the blade perforates the material to be printed, as illustrated by Fig. 6. The surface of the platen is provided with the usual backing of paper. (Not shown in the drawings.) When the press opens, the material is carried from the chase and form by the gripping-arms in the ordinary manner. The platen recedes and the printed material and backing are freed from the perforating edge 10 by the resilient strips, which assume normal position, as shown in Fig. 5.

It is obvious that the construction of my improved perforator may be varied without departing from the principles which I have applied, the general features of which are the perforating-blade having resilient or yielding material adjoining and a frame for carrying the parts, so that the perforator may be attached to a printing-press in any suitable manner. The gripping-springs 13 may be provided with flexible extensions 16, as shown in Figs. 7 and 8, for fastening to the arms to adjust the perforator in a horizontal position with reference to the form. These extensions may be tied by cords (not shown) to the gripping-arms or fastened by any suitable means.

Having described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. A device of the class set forth, consisting in combination with the gripping-arms of a printing-press and a yielding support carried by said arms, of a perforating-blade, a bed of resilient material adjoining said blade for freeing the perforated material from the blade, a frame for supporting said blade, a resilient bed, and clips fastened to said frame by which the perforator is adjusted to said yielding support.

2. A perforator of the class set forth, consisting of a perforating-blade, strips of yielding material adjoining and normally projecting above the perforating edge of said blade, a frame for detachably supporting said blade and strips, and clips carried by said frame, in combination with the gripping-arms of the printing-press and cords stretched between said arms, to which said clips are adapted to attach, and form a yielding support for said perforator.

3. A device of the class set forth, consisting in combination with a printing-press, of the gripping-arms between the bed and the platen thereof, a frame having side walls, a perforating-blade between said walls having its perforating edge above said walls, elastic material between the walls and the blade projecting above the perforating edge of said blade and adapted to recede below said perforating edge and to free the paper or other material being printed upon from said perforating edge when the press opens, and clips attached to each end of said frame for attaching said perforator in operative position to the printing-press.

4. In combination with the gripping-arms, of a printing-press and cords stretched between said arms, of a perforator consisting of an elongated receptacle, a perforating-blade having its cutting edge projecting above the walls of said receptacle and disposed between said walls, strips of resilient material on each

side of the blade, projecting above said perforating edge, and means for gripping the cords between the gripping-springs on each end of said receptacle, said strips of resilient material being adapted to recede below the perforating edge of the blade and to free the paper from the cutting edge when the press is operated.

5. A device of the class described, consisting of a base having side walls, a blade fastened to said base having its perforating edge projecting above said walls, elastic material between said walls and blade, adapted to recede below the perforating edge when the press is closed and to free the printed matter from the perforating edge when the press opens, gripper-arms, and spring connections between said arms and base for attaching said perforator in operative position to the printing-press, for the purposes specified.

6. In combination, with gripping-arms between the bed and platen of a printing-press, of a perforator and a yielding connection between said arms and perforator.

7. A perforator for printing-presses, consisting of a base, strips of resilient material and a perforating-blade, fastened to said base; said strips projecting above and adapted to recede below the perforating edge, when the press closes, so as to free the printed matter from the perforating edge when the press opens, in combination with gripper-arms and connections between said arms and base.

8. A perforator for printing-presses, in combination with gripper-arms, and a connection between said arms and perforator, by means of which, the perforator is vertically and horizontally adjustable.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN KANE.

Witnesses:

WILHELMINE L. THAUWALD,
F. G. BRADBURY.