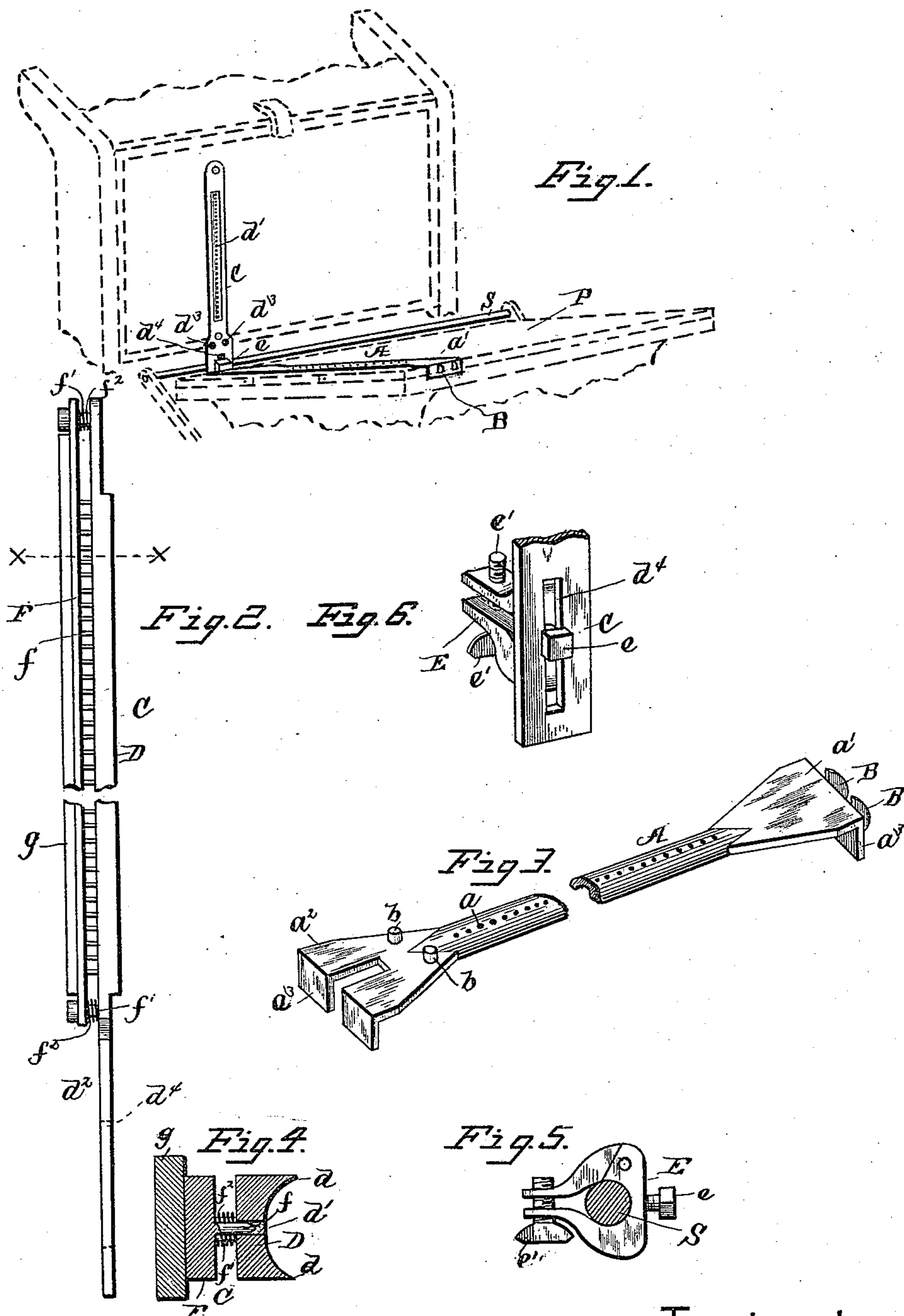


(No Model.)

W. T. NICKERSON.
GRIPPER PERFORATOR.

No. 442,536.

Patented Dec. 9, 1890.



Witnesses

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WILL T. NICKERSON, OF WORTHINGTON, INDIANA.

GRIPPER-PERFORATOR.

SPECIFICATION forming part of Letters Patent No. 442,536, dated December 9, 1890.

Application filed August 9, 1890. Serial No. 361,576. (No model.)

To all whom it may concern:

Be it known that I, WILL T. NICKERSON, a citizen of the United States of America, residing at Worthington, in the county of Greene and State of Indiana, have invented certain new and useful Improvements in Gripper-Perforators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to certain new and useful improvements in grippers for printing-presses, having for its object the production of simple and highly-efficient improved means for perforating the paper while being
15 printed.

The invention comprises a convexed bar having a series of holes or openings and a gripper-arm having a perforated concaved portion and a yielding or spring-held bar or
20 plate carrying perforating pins or teeth, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective showing my improvements attached to a portion of a printing-press. Fig. 2 is a view of the perforating gripper-arm. Fig. 3 is a view of the perforating convexed bar detached. Fig. 4 is a transverse sectional view on the line xx , Fig. 2.
25 Figs. 5 and 6 are details.

Referring to the drawings, A designates a bar or rod, which is convexed on its outer surface and provided throughout with a series of holes or perforations a . The under side of
35 this bar is concaved to permit the punchings to fall freely to the floor. This bar is provided with widened flattened ends a' a^2 , which have right-angular flanges a^3 for fitting over the upper and lower ends of the platen P of
40 a printing-press. Through the flange a^3 of the upper end a' work two thumb-screws B, by which the bar is secured in position. From the lower flattened end a^2 project two short parallel lugs or studs b .

45 C is the perforating gripper-arm. It comprises a bar D, which is concaved on one face, between two parallel flanges d . A series of holes or perforations d' is formed in this bar between said flanges, the same corresponding
50 with those of the bar A. In the lower extended flattened end d^2 of this bar are formed two eyes or holes d^3 , designed to receive the

lugs or studs b of bar A when the parts are brought together, and thus cause the holes or perforations of bar A and arm or bar
55 D to coincide. A slot d^4 is formed in the lower end of bar D for the insertion there-through of a screw e of a two-part clamp E, by which the same is secured to the gripper-shaft S of the press, said parts being united
60 by a thumb-screw e' , working in the ends thereof.

F is the movable bar or plate, provided with a series of perforating teeth or pins f , designed to pass through the holes or perforations of the arm or bar D and bar A. This
65 bar or plate is secured at its ends on short screws or posts f' of bar D, and it and its pins are normally held retracted by coil-spring f^2 , encircling said posts or screws and located
70 between arm or bar D and bar or plate F. To the rear side of the latter is secured (or it may be formed therewith) a slug or block g , which extends to near the ends of said bar or plate and is slightly wider than the latter. This
75 slug or block serves to make the parts the same height as the type, and thus insure the depression of the perforating-pins at each operation of the machine.

In practice the bar A is secured at the de-
80 sired point across the face of the platen, and the gripper-arm is so adjusted on its shaft by the clamp E as to cause the holes or eyes thereof to coincide with the lugs or studs of bar A when the parts are brought together at
85 each impression of the type. When the latter occurs, the bar or plate carrying the perforating-pins is depressed as against the action of the springs, and the pins thereof are forced through the coincident holes or per-
90 forations of the bar or arm D and the bar A. Thus a series of holes is formed in the card or paper sheet previously placed over the outer convexed face of said latter bar. The
95 "punchings" or waste caused by the perforation are allowed to readily fall from the machine from beneath the concaved face of the bar A.

The advantages of my invention will be apparent to those skilled in the art to which it
100 appertains, and it will be especially observed that a uniform pressure is secured throughout the length of the movable bar or plate, whereby all the perforating-pins are simul-

taneously depressed, thereby securing perfect results and holding the card or paper firmly in place while being printed and perforated. The parts are extremely simple, 5 cheap, and durable, and not likely to readily get out of order or become deranged.

I claim as my invention—

1. The herein-described improved gripper-perforator, comprising the bar having an outer 10 convexed face and a series of holes or perforations, the arm or bar having a concaved face and a corresponding series of holes or perforations, and the perforating-pins, substantially as set forth.

15 2. The herein-described improved gripper-perforator, comprising the bar having an inner concaved face, an outer convexed face, and a series of holes or perforations, the arm or bar having an outer concaved face, parallel 20 side flanges, and a corresponding series of holes or perforations, and the movable bar or plate carrying the perforating-pins, substantially as set forth.

25 3. The herein-described improved gripper-perforator, comprising the bar having a series

of holes or perforations and upper and lower widened ends and provided with short lugs or studs, the thumb-screws for securing said bar in place, and the perforating-arm having a lower extended flattened end provided with 30 holes or eyes for the reception of said lugs or studs and carrying the spring-held bar or plate having the perforating-pins, substantially as set forth.

4. The combination, with the gripper-shaft 35 of a printing-press and the bar secured to the platen of such press and having a series of holes or perforations, of the perforating-arm having a lower extended flattened end provided with a slot and the two-part clamp se- 40 cured to said gripper-shaft and having a set-screw designed to be inserted through said slot, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILL T. NICKERSON.

Witnesses:

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