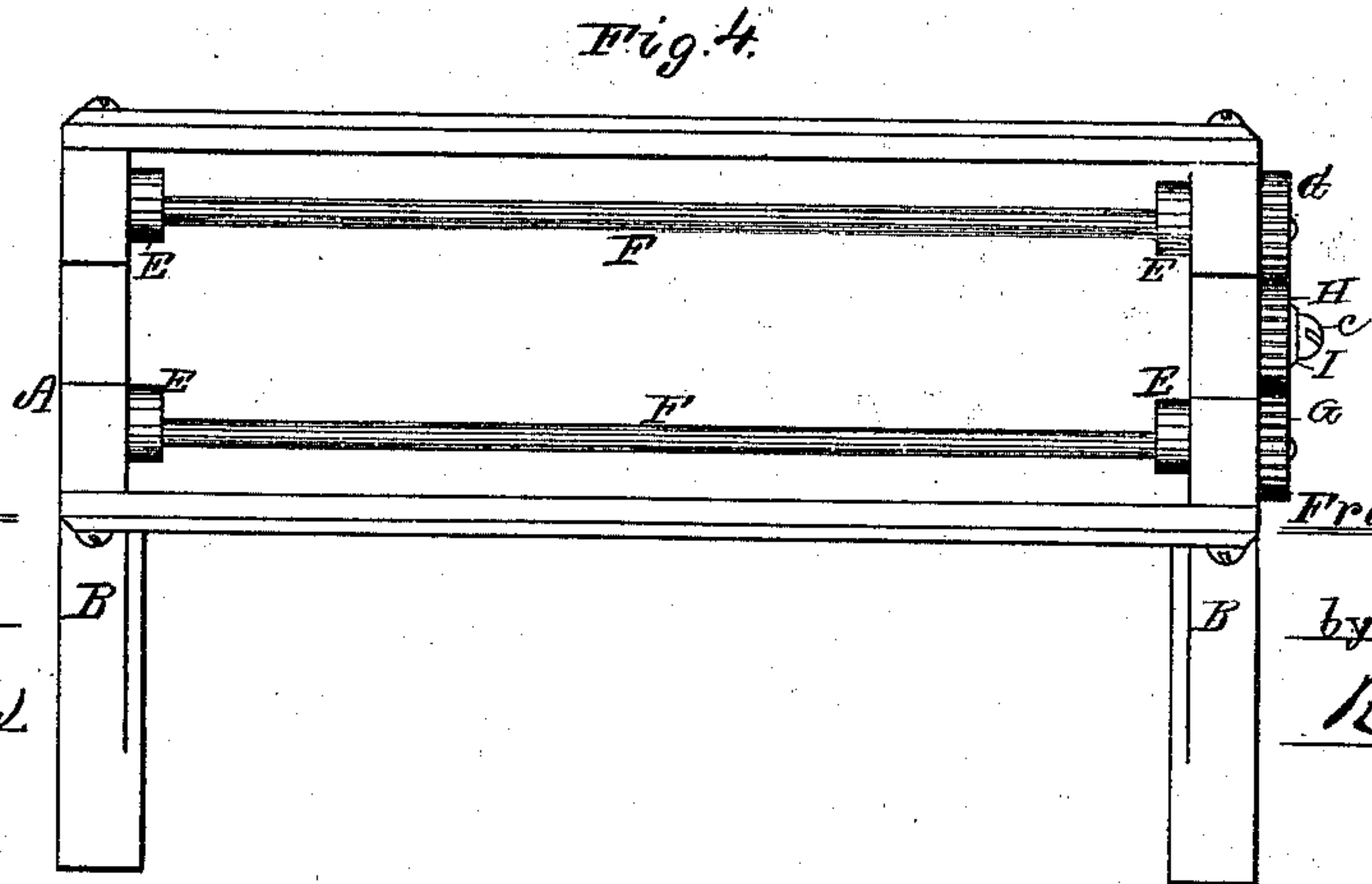
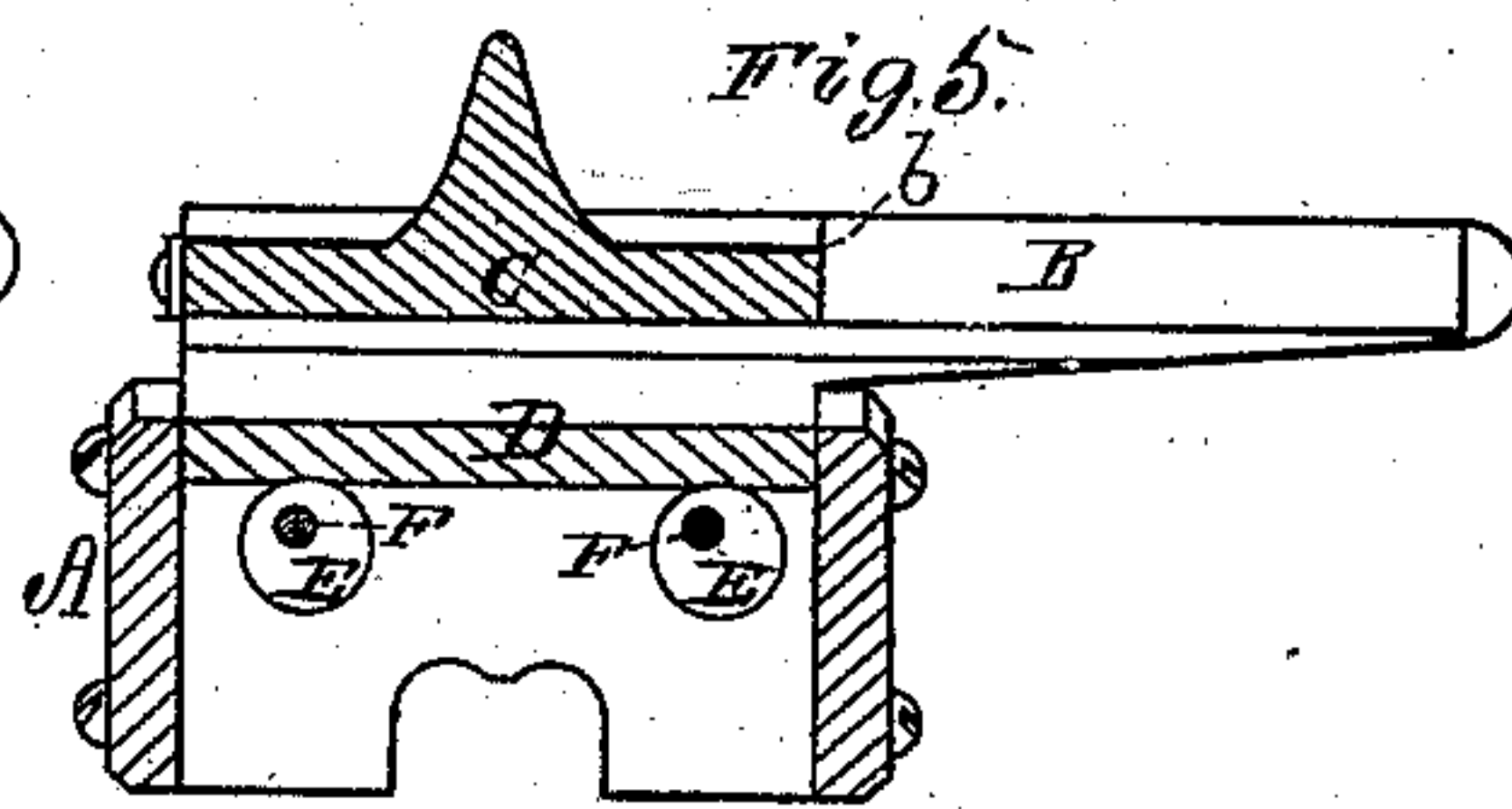
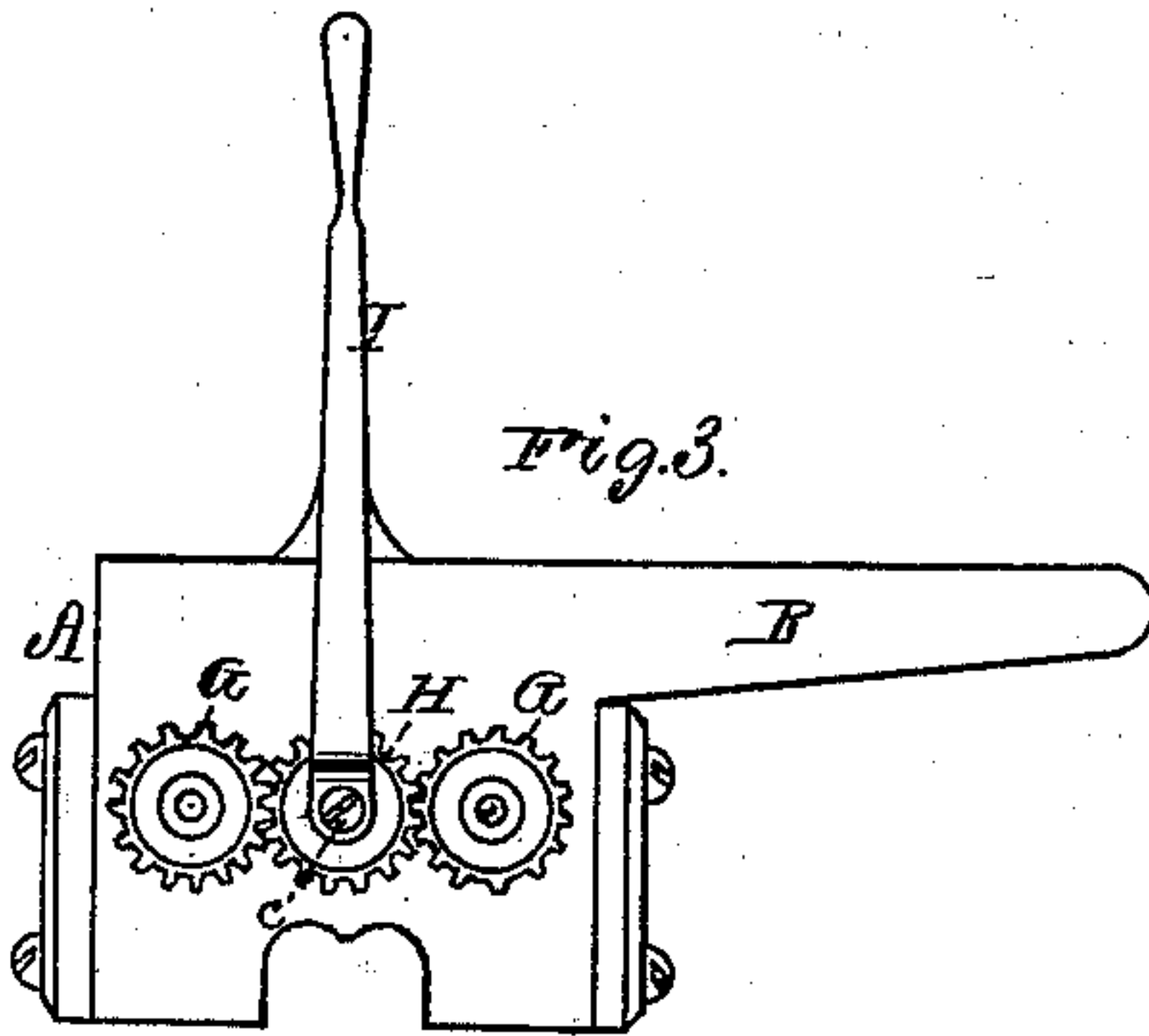
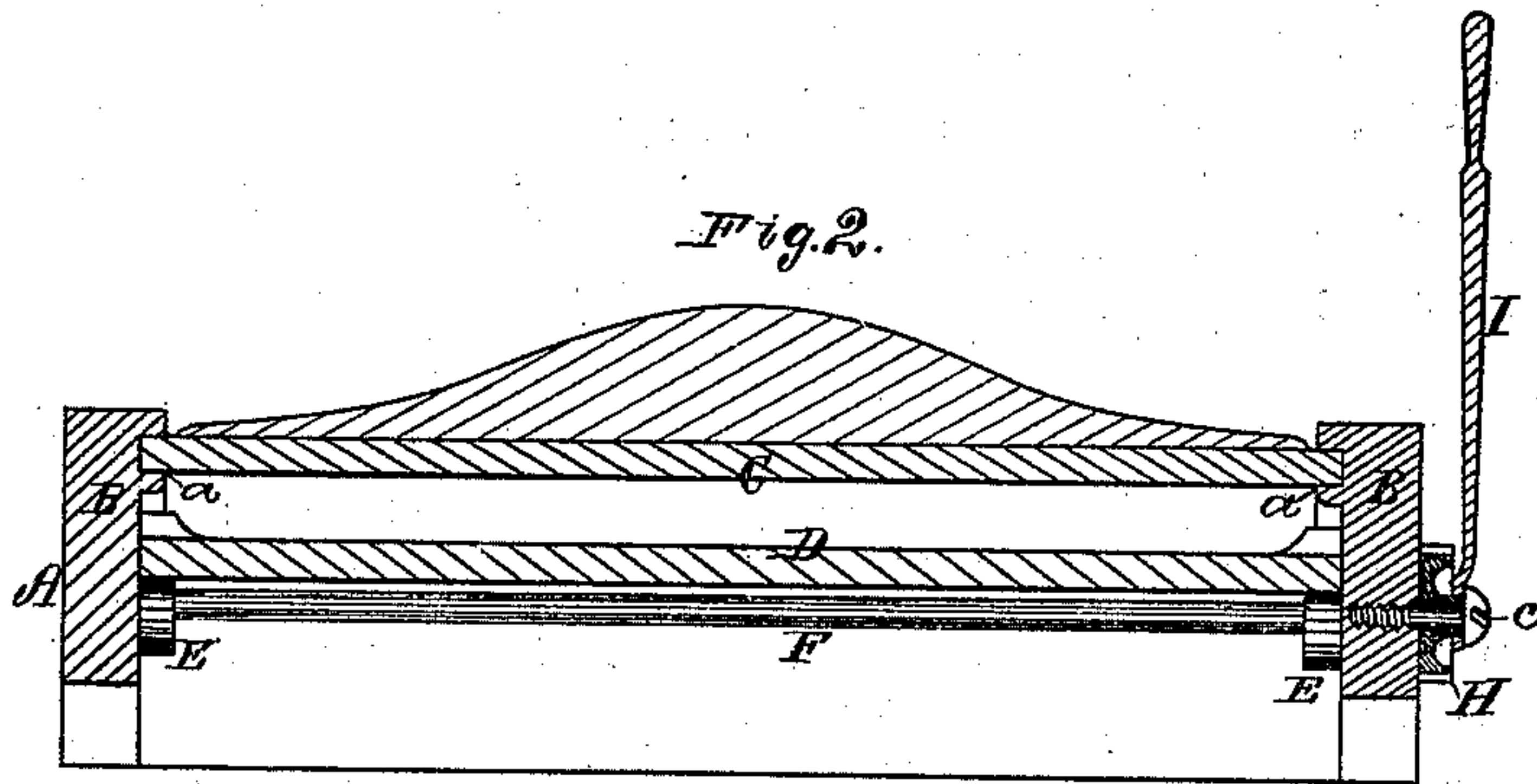
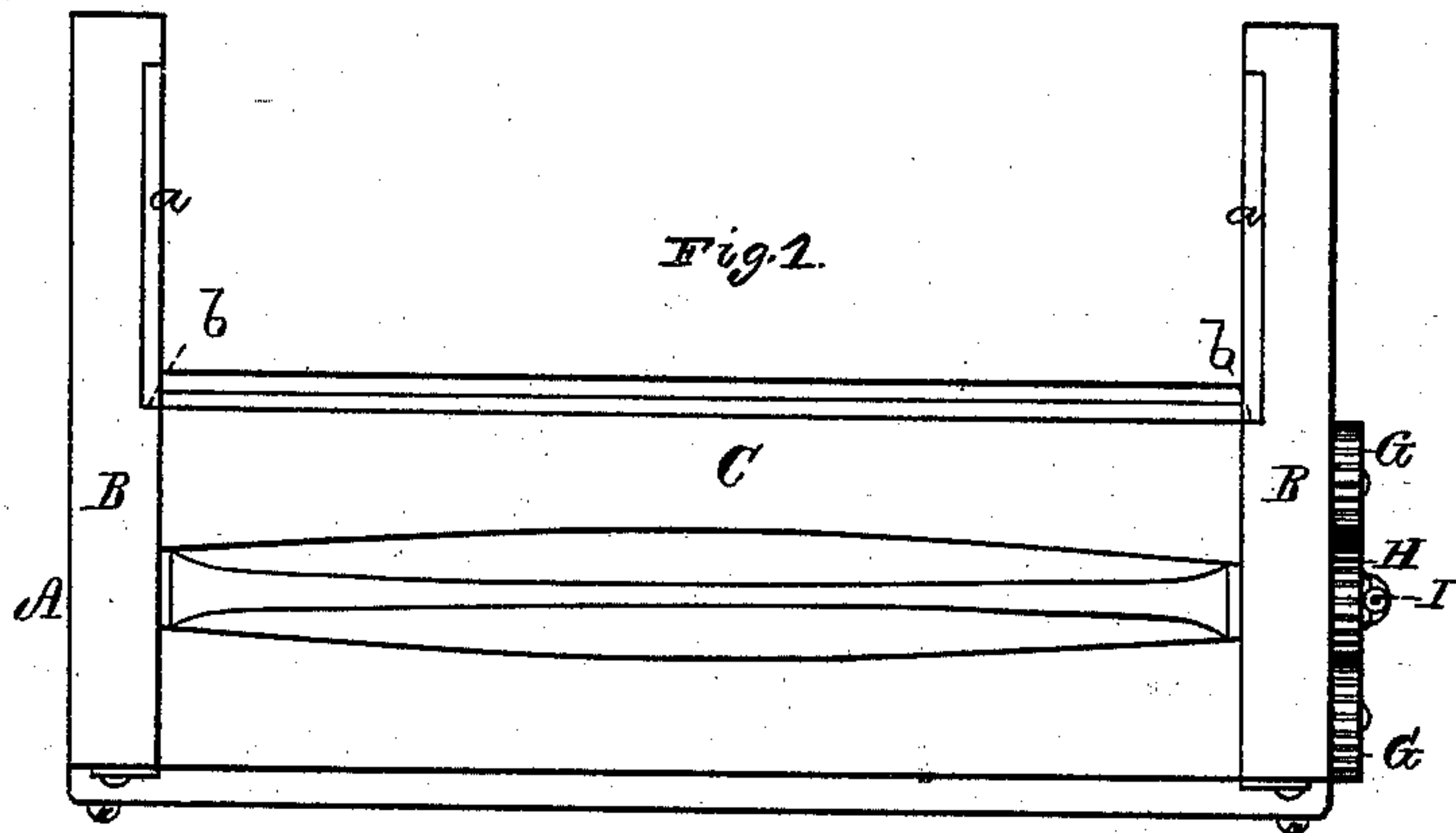


F. A. HOWARD.  
PRINTERS' PROOF-PRESS.

No. 173,792.

Patented Feb. 22, 1876.



Witnesses.  
S. W. Piper  
L. W. Milled

Frank A. Howard  
by his attorney  
R. H. Eddy



# UNITED STATES PATENT OFFICE.

FRANK A. HOWARD, OF BELFAST, MAINE.

## IMPROVEMENT IN PRINTERS' PROOF-PRESSES.

Specification forming part of Letters Patent No. 173,792, dated February 22, 1876; application filed October 12, 1875.

*To all whom it may concern :*

Be it known that I, FRANK A. HOWARD, of Belfast, of the county of Waldo and State of Maine, have invented a new or Improved Printer's Proof-Press; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a longitudinal section, Fig. 3 an end elevation, Fig. 4 an under side view, and Fig. 5 a transverse section, of it.

The nature of my invention consists in a new or improved printer's proof-press, consisting of a bed, its carrying frame and operative mechanism, and a platen, and certain grooved guide-rails therefor, all constructed, arranged and applied, substantially as herein-after set forth, and as represented.

In such drawings, A denotes a rectangular frame, provided at its opposite ends with two grooved and parallel rails or ways, B B, arranged as represented. Each of these rails is grooved lengthwise in its inner edge, as shown at *a*, and is provided with a mouth or opening, *b*, to such groove. These mouths are to enable a platen, C, to be inserted in or removed from the grooves, within which it is to be guided so as to carry it directly over the movable bed D, or wholly off or in rear thereof, as occasion may require. The said bed arranged within the frame A rests upon the peripheries of four eccentrics, E E E E, that are fixed on two parallel shafts, F F, extended through the frame A lengthwise thereof, and having their bearings therein, such shafts and eccentrics being arranged as shown.

Furthermore, to each of the said shafts there is fixed, at one end of it, one of three gears, G H G, the intermediate one of which turns upon a separate pivot or journal, *c*, engages with the other two, and has an arm I, projecting from it, all being as represented. On taking hold of the arm I, and moving it so as to revolve the gear H, both of the gears G G will be simultaneously turned, and, as a consequence, all the eccentrics will be equally revolved, and will either elevate the bed or permit it to descend by its own weight within the frame A.

In using this little press, a printer, having

slid the platen back from over the bed and laid and adjusted thereon his galley with its types, and duly inked the latter, should next place his proof-sheet carefully upon the inked type.

Having accomplished this, he, with his left hand, should next draw the platen forward in its guides, and immediately over the sheet, and with his right hand he should seize the arm I, and pull it, or move it, so as to cause the bed to be forced upward within its guide-frame A in a manner to press the paper hard-against the platen. Next, he should move the arm I the opposite way, and in the meantime force the platen in its guides back from over the sheet of paper which will have received an impression from the types, and may next be removed from the form.

The mechanism for actuating the bed consists of the four eccentrics E E E E, their two shafts F F, the three gears G H G, and the arm I, applied to the intermediate gear H, all being as hereinbefore explained. I would remark that each groove of each of the platen-guides is closed at each terminus or end, the termini constituting stops to arrest the movements of the platen.

This simple and convenient press has some of the characteristics of various other presses, viz: a bed and platen, and mechanism for operating the former, but with them and their frame I have combined and arranged the platen ways or guides, provided with grooves, having mouths, as described, such ways serving not only to hold the platen against the pressure of the bed, but to enable such platen to be moved over and off such bed, and when necessary to be removed from them (the ways) for the purpose of being cleansed.

I claim as my invention—

The described printer's proof-press, consisting of the bed D, its carrying-frame A, and operative mechanism, consisting of eccentrics E, shafts F, gears G H, and arm I, and the platen C, and its grooved guide-rails B B, all constructed, applied, and arranged substantially as set forth.

FRANK A. HOWARD.

Witnesses :

E. B. TOWLE,  
GEO. E. WALLACE.