

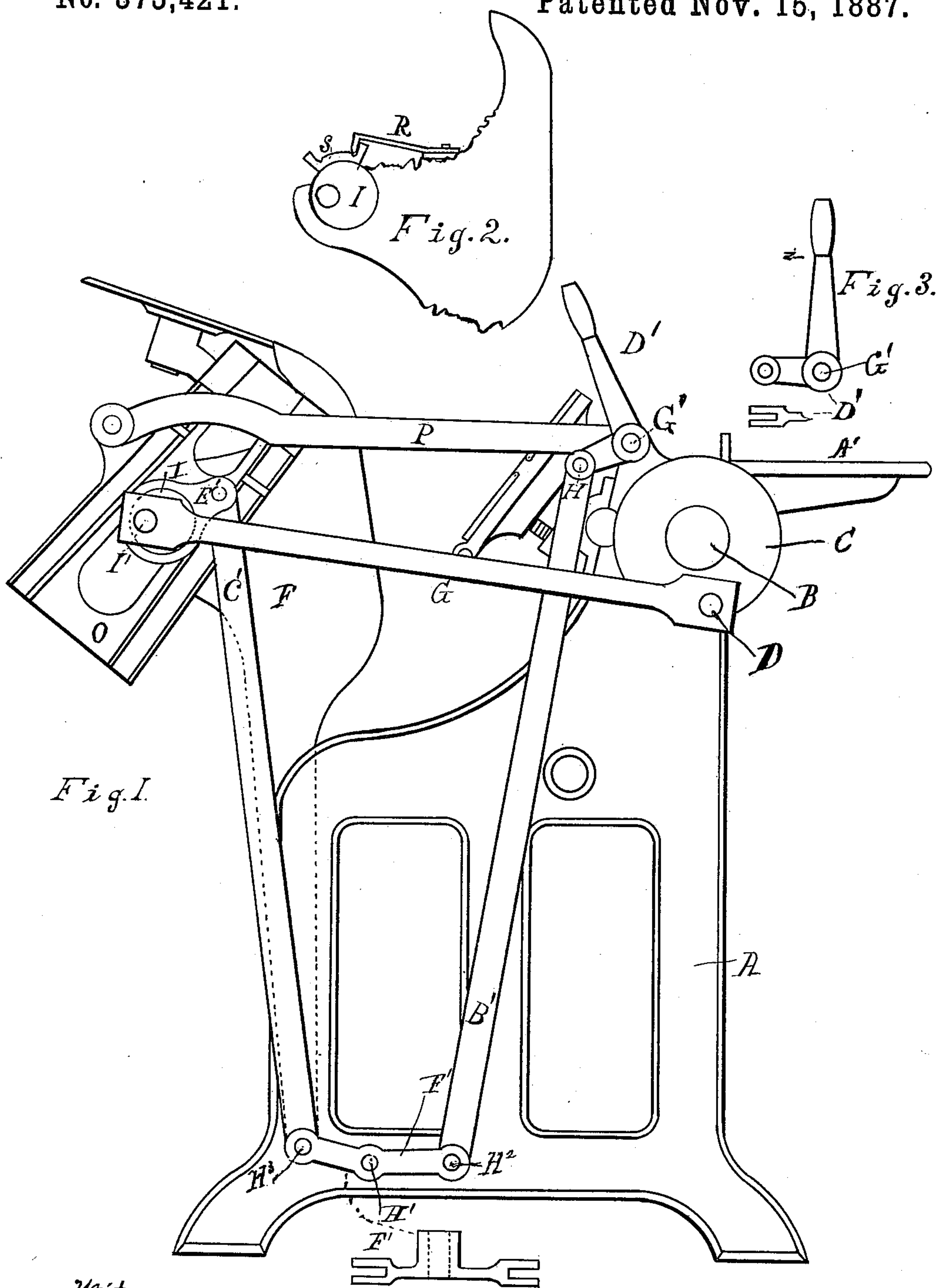
(No Model.)

H. SWAIN.

THROW-OFF FOR PRINTING PRESSES.

No. 373,421.

Patented Nov. 15, 1887.



Witnesses:  
*A. W. Dalm*  
*H. W. Swain*

Inventor:  
by his atty. *Hadwen Swain*  
*L. W. Swinbaugh*

# UNITED STATES PATENT OFFICE.

HADWEN SWAIN, OF SAN FRANCISCO, CALIFORNIA.

## THROW-OFF FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 373,421, dated November 15, 1887.

Application filed January 21, 1887. Serial No. 225,010. (No model.)

*To all whom it may concern:*

Be it known that I, HADWEN SWAIN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Throw-Offs for Printing-Presses, of which the following is a description.

This invention relates to certain improvements in that class of printing-presses in which means are provided for preventing the type from making an impression when desired; and it consists in certain improvements in the throw-off mechanism, whereby the same is simplified and rendered more efficient in operation than heretofore. These objects I obtain by the means hereinafter described and illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a press, showing my invention; Fig. 2, a detached detail view of a portion of the throw-off mechanism; Fig. 3, detached detail views of the lever for operating the throw-off mechanism.

The letter A indicates the frame of the printing-press; B, the main driving-shaft having a wheel, C, on one end, with a wrist-pin, D, connecting with the pressure-shaft I, mounted in the frame F of the bed, which is pivoted at its lower end to the main frame, as is usual. The wrist-pin is connected to the shaft by a pressure-rod, G, engaging the eccentric-stud I' on the end of the shaft. The rotation of the shaft B therefore causes the oscillation of the bed-frame, moving the bed and the form of types it carries to and from the platen a distance governed by the position of the stud I'.

The letter D' indicates an angular hand-lever which is pivoted to the stud C' of the frame conveniently adjacent to the feed-table A', the stud being the same to which the side arm, P, of the inking-roller frame O is attached. The lower end of the lever D' is forked to receive the rod B', which is pivoted to said lever by means of a pin or bolt, H. The lower end of the rod B' is pivoted at H<sup>2</sup> to the front end of the rocking beam F, which is bifurcated at both ends and is arranged in substantially a horizontal position, to rock on a stud,

H', which is secured to the main frame A, and forming an approximately central bearing for said beam. The rear end of the rocking beam or frame has pivoted to it on a pin, H<sup>3</sup>, one end of a connecting-rod, C', the other end of which is connected to a strap, E', fastened to the eccentric-shaft I. The eccentric-shaft I is held in position by a spring, R, fastened to the bed-frame, by the engagement of said spring with suitable notches in a strap, S, on said shaft.

It will be observed that in the position of the parts shown in the drawings, which is the position the parts have when impressions are to be produced, the pivot-pin H<sup>3</sup> of the throw-off devices is coincident or in line with the pivot of the bed-frame F, so that therefore the position of the eccentric-pin I' will not be changed by the oscillation of said frame, and the force of the impression will not be disturbed by the motion of the machine. Security to this end is further insured by the action of the spring-clip R on the strap S, the form of these parts, however, being such that the rocking of the shaft I is not hindered when the impression is to be thrown off by means of the hand-lever near the feed-table.

The operation of my invention is as follows: The lever D' is capable of an oscillatory movement, which imparts an upward and downward movement to the rod B'. This oscillates the rocking beam F', which in turn raises and lowers the connecting-rod C', which, through the strap E', gives a partial rotation to the shaft I and changes the position of the stud, to which the pressure-rod C is attached, thereby putting the bed and its form into position to make or avoid an impression, as desired.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. The oscillating bed-frame and its eccentric shaft, the approximately horizontal rocking beam centrally pivoted to the main frame and having its rear end connected by a rod to said shaft, and the pivoted hand-lever connected by a rod to the front end of said rocking beam, substantially as described.
2. The combination of the oscillating bed-frame and its eccentric-shaft with the hand-lever, the connecting-rods, and the approxi-



mately horizontal rocking beam centrally piv-  
oted to the main frame, the pivot in the outer  
end of which beam coincides with the pivot of  
the bed-frame when the lever is in position to  
5 allow impressions, substantially as described.

3. The pressure-rod G and the bed-frame F,  
carrying the spring-clip R, and the pressure-  
shaft I, having a pin, I', and a notched strap,

S, in combination with the connecting-rod C',  
the rocking beam F', the connecting-rod B', 10  
and the hand-lever D', all substantially as de-  
scribed.

HADWEN SWAIN.

Witnesses:

A. W. OXLEY,  
H. MARSHALL.