(No Model.)

J. PENROSE.

Clamp for Book Cutting Machines.

No. 242,972. Patented June 14, 1881.

Fig. 1.

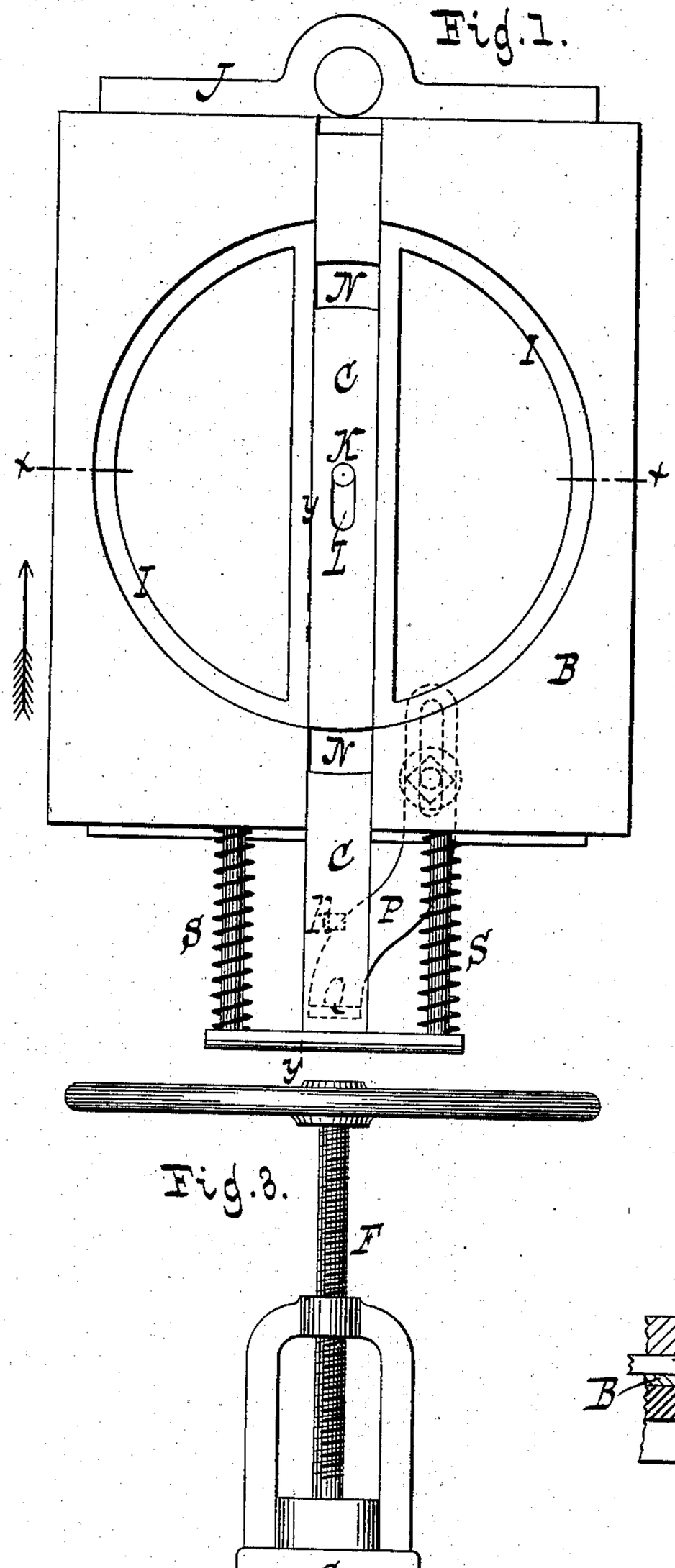

Fig. 2.

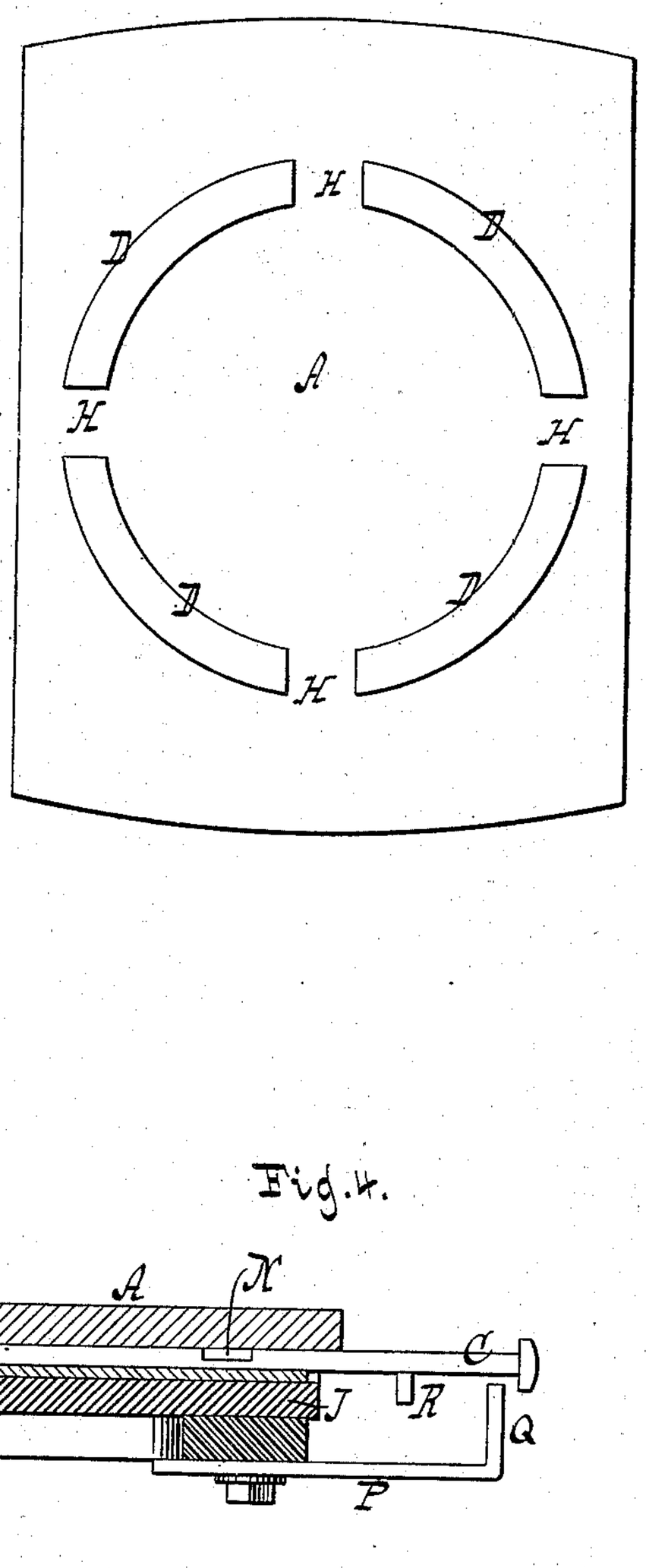

Fig. 3.

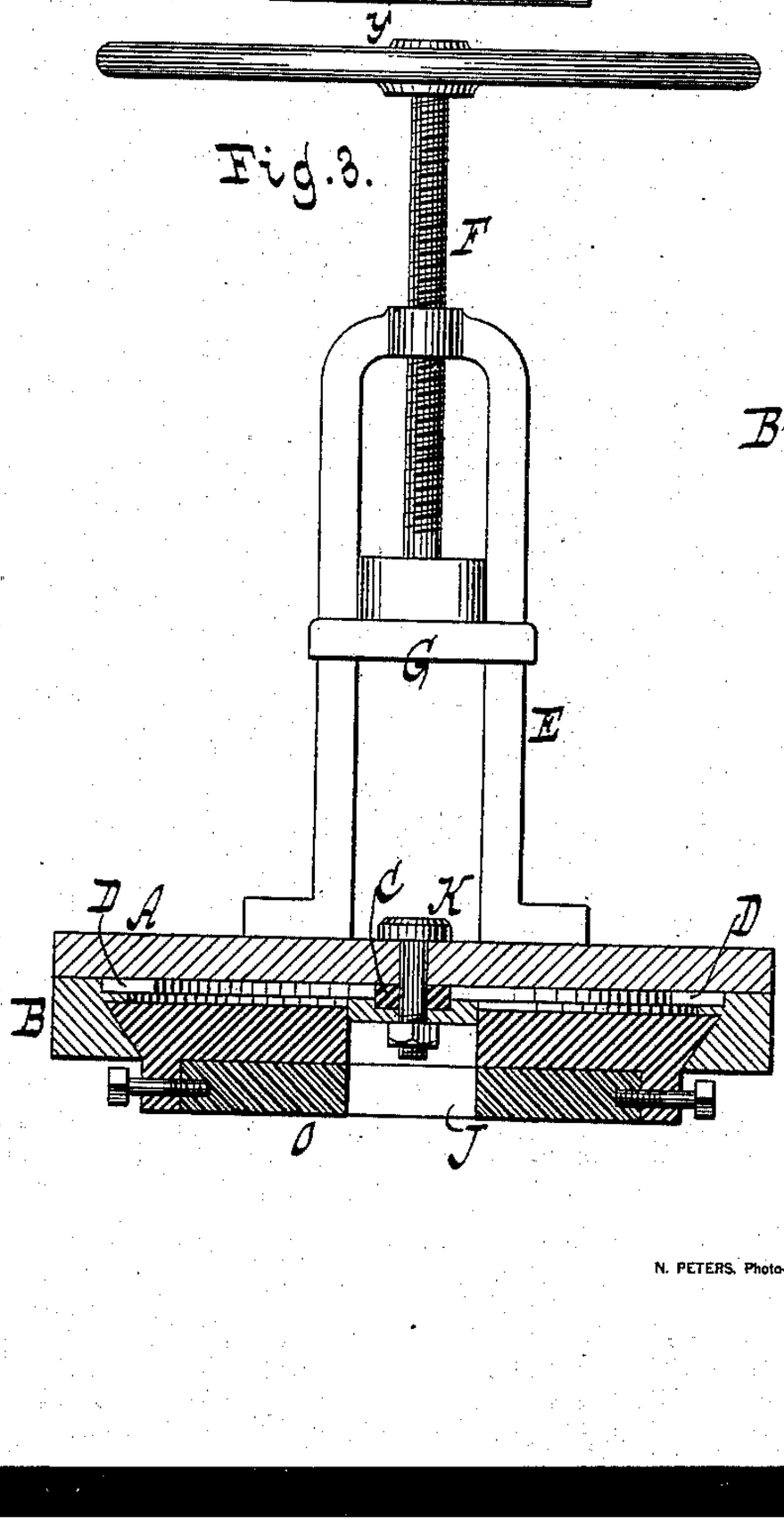

Fig. 4.

Inventor.
John Penrose
by VanSantvoord & Hauff
his Attys.

Witnesses.
Chas. Wahlers.
William Miller

UNITED STATES PATENT OFFICE.

JOHN PENROSE, OF NEWARK, N. J., ASSIGNOR TO T. W. & C. B. SHERIDAN, OF NEW YORK, N. Y.

CLAMP FOR BOOK-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 242,972, dated June 14, 1881.

Application filed April 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN PENROSE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Book-Clamps for Paper-Cutting Machines, of which the following is a specification.

This invention relates to clamps for holding books during the operation of trimming the edges thereof in paper-cutting machines, and especially that class of clamps in which the bed is adapted to revolve on a carriage which is capable of sliding toward and from the knife of the machine and in which a spring-locking bolt is applied to the sliding carriage for preventing the revolution of the bed under normal conditions, the locking-bolt having notches adapted to register with the segments of a divided guide-rail applied to the lower surface of the revolving bed.

Prior to my invention it has been necessary, in order to cause the notches of the bolt to register with the rail-segment, thereby releasing or allowing the revolution of the clamp-bed, to force back the bolt against its springs by manual labor, the usual way being for the workman to apply his hip to the end of the bolt.

The object of my invention is to produce a means whereby the bolt is automatically set or retracted to free the clamp-bed whenever it and the carriage are moved outward or away from the machine, as hereinafter fully set forth.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a plan or top view of the sliding bed-carriage. Fig. 2 is an inverted plan view of the revolving clamp-bed. Fig. 3 is a vertical cross-section of the entire clamp, taken on the line *x x*, Fig. 1. Fig. 4 is a longitudinal section of a portion thereof, taken on the line *y y*, Fig. 1.

Similar letters indicate corresponding parts.

The letter A designates the clamp-bed; B, the bed-carriage; C, the locking-bolt, and D the rail-segments. The construction and arrangement of these parts form no part of my invention; but, in order to render intelligible the working of my invention, I will describe them briefly.

Upon the bed A is secured a bracket, E, which constitutes a guide for the clamping-screw F and for the platen G at the lower end of this screw. The rail-segments D are secured to the lower surface of the bed A, and the spaces H between them are equal respectively to the width of the bolt C, these segments being a medium for guiding the bed in its revolutions on the carriage B, which latter is provided with sockets I on opposite sides of the bolt to receive the segments.

The bed-carriage B slides on a dovetailed guide, J, which is secured to the frame of the cutting-machine, a portion of which is shown at O, Fig. 3, in such a manner that the movement of the carriage is toward and from the machine-knife; but inasmuch as this arrangement is well known I have deemed it unnecessary to illustrate the same. The bolt C is sunken into the bed-carriage B, and is capable of sliding therein, its motion, however, being limited by a stop-pin, K, passing through a slot, L, therein. Two notches, N, are formed in the bolt C of equal width to the rail-segments D, and at such a distance from each other that they are adapted to register with the rail-segments, while springs S are arranged to act on the bolt with a tendency to draw the same forward and bring its notches out of a line with the rail-segments, as shown in Fig. 1.

To the part O of the machine-frame is secured a horizontal arm, P, Figs. 1 and 4, the outer end of which is directly beneath the bolt C, where the arm is provided with an upwardly-projecting stop-finger, Q, preferably formed by bending the arm in an appropriate manner, and on the lower side of the bolt C is formed or secured a downwardly-projecting pin or stump, R. The arm P is preferably made adjustable.

When the apparatus is applied to use two books are clamped under the platen G, one on each side of the bracket E. The clamp-bed A, with its carriage B, is then slid toward the knife of the machine to bring one edge of the book under the knife, the direction of this movement being indicated by the arrow marked opposite to Fig. 1. The knife is now caused to descend to trim the edge of the book, and

then the bed and carriage are pulled back or outward away from the machine, during which movement the bolt-pin R comes in contact with the stop-finger Q, and by this means the movement of the bolt is checked. The movement of the bed and carriage, however, is continued until the notches N are brought opposite to and register with the rail-segments D. The bed A is then turned one-quarter of a revolution—namely, so as to cause one rail-segment to pass through the notches N, respectively, whereby another edge of the book is brought into a position for trimming. The bed and carriage are then again slid toward the machine-knife, when the bolt is set free and allowed to follow the action of its spring S, thus relocking the bed against a revolving motion.

It will be readily understood from this description that the locking-bolt C is automatically set or retracted to free the clamp-bed whenever it and the carriage are moved outward or away from the machine, and hence I overcome a very serious disadvantage of the old clamp—namely, that of requiring the workman to force back the bolt with his hip, while the means employed to effect this purpose is a very simple one.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the revolving clamp-bed A, having rail-segments D, the sliding bed-carriage B, the spring locking-bolt C, having notches N, and a mechanism, substantially such as described, whereby the bolt is automatically retracted to free the clamp-bed, as set forth.

2. The combination of the revolving clamp-bed A, having rail-segments D, the sliding bed-carriage B, the spring locking-bolt C, having notches N, the bolt-pin R, and the stop-finger Q, substantially as described, for the purpose set forth.

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

JOHN PENROSE. [L. S.]

Witnesses:

W. HAUFF,

D. VAN SANTVOORD.