

(No Model.)

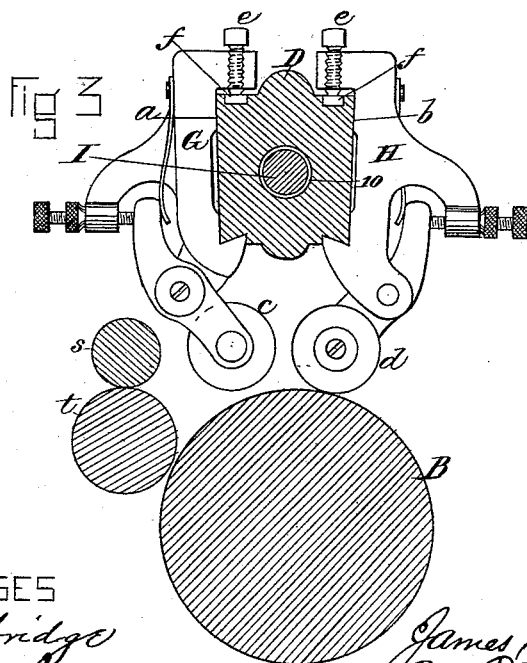
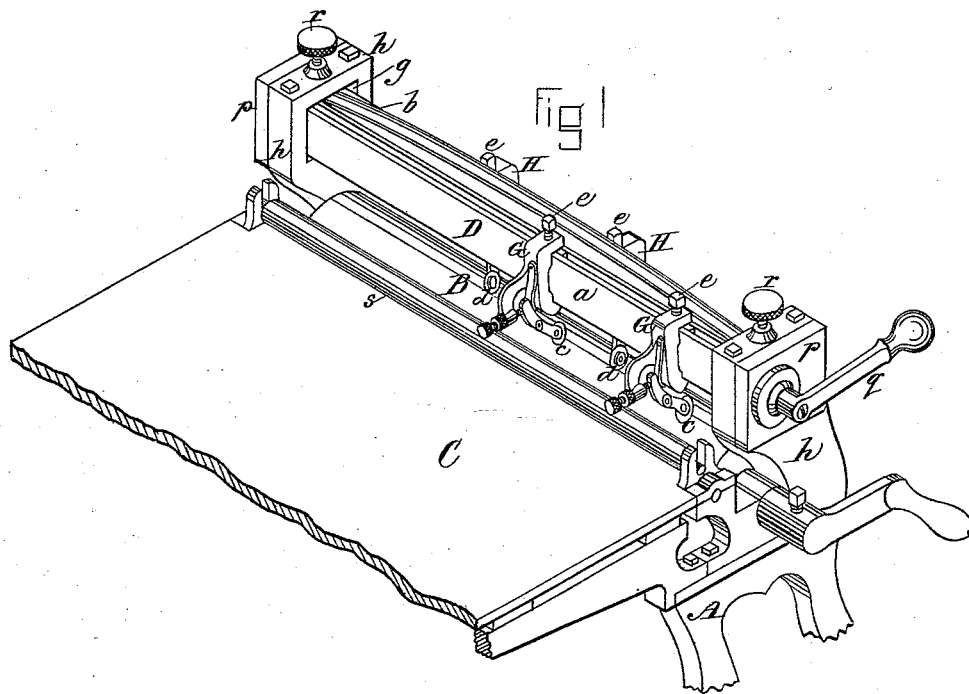
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J. C. MARSHALL.

MACHINE FOR SCORING AND CUTTING PAPER FOR BOXES.

No. 347,492.

Patented Aug. 17, 1886.



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J. S. F. Huddleston

INVENTOR  
James C. Marshall  
By J. E. Tenkumacher

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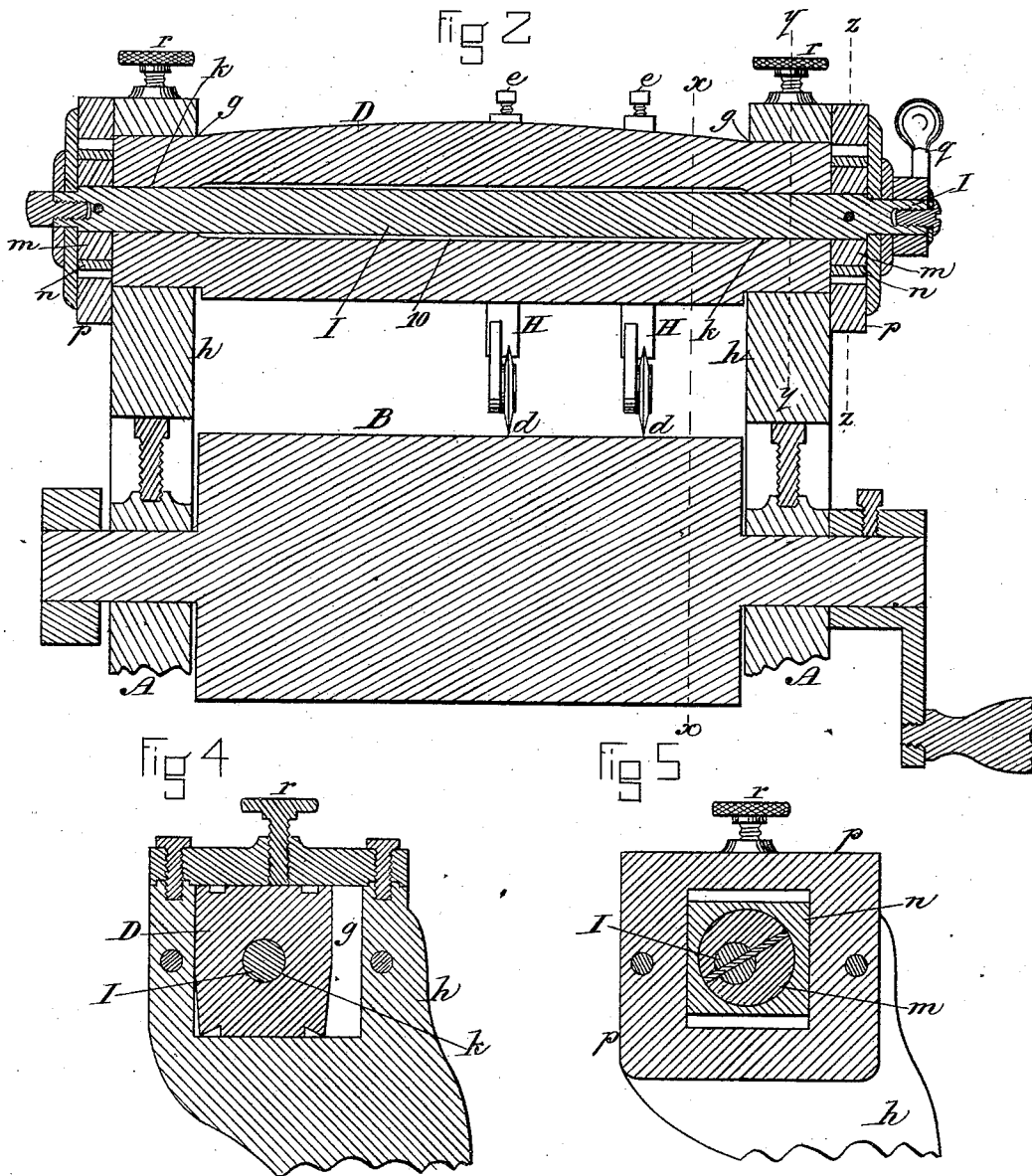
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*By P. C. Schenck*

# UNITED STATES PATENT OFFICE.

JAMES C. MARSHALL, OF BOSTON, MASSACHUSETTS.

## MACHINE FOR SCORING AND CUTTING PAPER FOR BOXES.

SPECIFICATION forming part of Letters Patent No. 347,492, dated August 17, 1886.

Application filed May 14, 1886. Serial No. 202,209. (No model.)

### *To all whom it may concern:*

Be it known that I, JAMES C. MARSHALL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Machines for Scoring and Cutting Paper for Boxes, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a portion of a paper scoring and cutting machine having my improvements applied thereto. Fig. 2 is a longitudinal vertical section of the same, taken in a plane passing through the center of the cutter-carrying bar. Fig. 3 is a transverse vertical section on the line *xx* of Fig. 2. Fig. 4 is a transverse vertical section on the line *yy* of Fig. 2. Fig. 5 is a transverse vertical section on the line *zz* of Fig. 2.

My invention relates to machines for scoring and cutting paper for boxes, &c., in which two independent series of cutters are employed, either of which series may be brought into operative position at will, to avoid the loss of time which would otherwise be occasioned by adjusting a single series of cutters for a small order prior to the completion of the job for which the cutters were originally set, and then subsequently readjusting the said cutters to complete the original order. This has been accomplished by partially rotating the cutter-carrying bar on its longitudinal axis, whereby either of the two independent series of cutters mounted thereon could be brought into operative position, as required; but this construction is open to several objections, which it is the purpose of my invention to overcome; and to this end my invention consists in the combination, with the main or bed roller, of a cutter-carrying bar having a lateral movement in a horizontal plane over said roller, and two independent series of cutters on its two opposite sides, either series of which may be brought into operative position with relation to the paper on the bed-roller by a lateral movement of the said cutter-bar, while by a partial lateral movement of the cutter-bar into a position directly over the center of the bed-roller both series of cutters may be brought into a posi-

tion to enable them to be set to operate at the same time, which enables them to be employed in the same manner as in the ordinary machines in general use, having a stationary cutter-bar, which is often very desirable, as it enables two cutters—one on each side of the cutter-bar—to be set closer together than can be accomplished with two cutters of a single series mounted side by side on the cutter-bar.

My invention also consists in certain novel combinations of parts and details of construction, as hereinafter set forth and specifically claimed.

In the said drawings, A represents the framework of the machine, in suitable bearings in which run the journals of the main or bed roller B, which is rotated by hand or other suitable power for the purpose of moving the paper to be scored or cut over the surface of the bed or table C.

D is the cutter-carrying bar, which extends transversely across the machine in a horizontal position immediately above the roller B, and upon the two opposite sides *a b* of this bar D are mounted two independent series of cutter-holders, G H, of any suitable construction, which carry the rotary disk-cutters *c d*, of the usual form and construction employed in machines of this description. These cutter-holders are adapted to slide longitudinally upon the cutter-bar D, in order that their revolving disk-cutters may be set or adjusted at any desired distance apart, each cutter-holder being secured in place upon the cutter-bar, in a well-known manner, by means of a set-screw, *e*, which bears upon a block, *f*, adapted to slide in a longitudinal groove in the upper side of the cutter-bar. The opposite ends of the cutter-bar D are supported in openings or bearings *g* in the standards *h* of the framework, within which they are moved laterally in the following manner:

I is a horizontal shaft, which extends through a longitudinal aperture, 10, in the cutter-bar D, at the opposite ends of which are formed bearings *k* therefor, as seen in Fig. 2.

At the opposite ends of the shaft I are immovably secured two eccentrics, *m*, adapted to turn within rectangular blocks *n*, which slide within boxes *p*, secured to the standards *h* on the outer sides of the openings *g*, and thus when the shaft I is turned by means of a

hand-lever, *g*, secured to it at one end, the cutter-carrying bar is moved laterally in a horizontal plane until its ends are brought firmly against the sides or cheeks of the openings *g*, toward which the bar is moved, which sides serve as stops to limit the lateral movement of the bar in either direction, the eccentrics being preferably so made that they will bring the bar to a firm bearing against the cheeks or sides of the openings *g* before completing their throw, thus allowing for wear, and insuring the rigid locking of the bar when moved over to either side.

*r r* are clamping-screws, which are applied to the upper portions of the standards *h*, and when turned down serve to clamp the ends of the cutter-carrying bar and prevent it from being moved when set in any desired position.

From the foregoing it will be seen that either series of cutters, *c* or *d*, can by the lateral movement of the cutter-bar *D*, as above described, be instantly brought into operative position at the same time that the series on the opposite side of the bar is thrown out of action, thus enabling either series of cutters to be used without disturbing the opposite series, while if it should be desired to employ both series of cutters at the same time, as is often customary in the ordinary machines having a stationary cutter-bar, it is merely necessary to move the hand-lever *q* half-way over or into a vertical position, when the cutter-bar *D* will be moved laterally into a position directly over the center of the roller *B*, and both series of cutters can then be made available by properly adjusting them in their holders to set their edges at the desired distance from the surface of the roller *B*—an important advantage, which cannot be secured with a partially-rotating cutter-bar having two series of cutters, as heretofore constructed.

I do not confine myself to the eccentric mechanism shown for effecting the lateral movement of the cutter-carrying bar, as it is obvious that any other suitable well-known mechanism for effecting this movement of the cutter-carrying bar may be employed instead, if preferred, without departing from the spirit of my invention.

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

1. In a machine for scoring and cutting paper, the combination, with the main or bed roller, of a cutter-carrying bar having a lateral movement in a horizontal plane over said roll-

er, and carrying two independent series of cutters on its two opposite sides, either series of which may be brought into operative position with relation to the paper on the bed-roller by a lateral movement of the said cutter-carrying bar, substantially as described.

2. In a machine for scoring and cutting paper, the combination, with the main or bed roller, of a cutter-carrying bar having a lateral movement in a horizontal plane over said roller, and carrying two independent series of cutters on its two opposite sides, either series of which may be brought separately into operative position with respect to the paper on the bed-roller, or both series be brought into position to be made available in operating simultaneously upon the paper by a greater or lesser lateral movement of the said cutter-carrying bar, substantially as set forth.

3. In a machine for scoring and cutting paper, the combination, with the main or bed roller *B*, of the laterally-moving cutter-carrying bar *D*, supported at its opposite ends in openings or bearings in the frame-work of the machine, and carrying two independent series of cutters on its two opposite sides, the horizontal shaft *I*, extending longitudinally through the bar *D* and having bearings at the ends of the same, and provided with an operative hand-lever and eccentrics, whereby as the shaft *I* is turned by the hand-lever the cutter-carrying bar will be moved laterally in its bearings to one side or the other, substantially in the manner and for the purpose set forth.

4. In a machine for scoring and cutting paper, the combination, with the main or bed roller *B*, of the laterally-moving cutter-carrying bar *D*, supported at its opposite ends in openings or bearings *g* in the standards *h*, the horizontal shaft *I*, extending longitudinally through the bar *D* and having bearings *k* in the ends of the same, and provided with an operative hand-lever, *q*, at one end, and the eccentrics *m*, secured to the ends of the shaft *I*, and turning in blocks *n*, sliding in boxes *p*, secured to the standards *h*, all operating substantially in the manner and for the purpose described.

Witness my hand this 13th day of May, A. D. 1886.

JAMES C. MARSHALL.

In presence of—

P. E. TESCHEMACHER,  
W. J. CAMBRIDGE.