

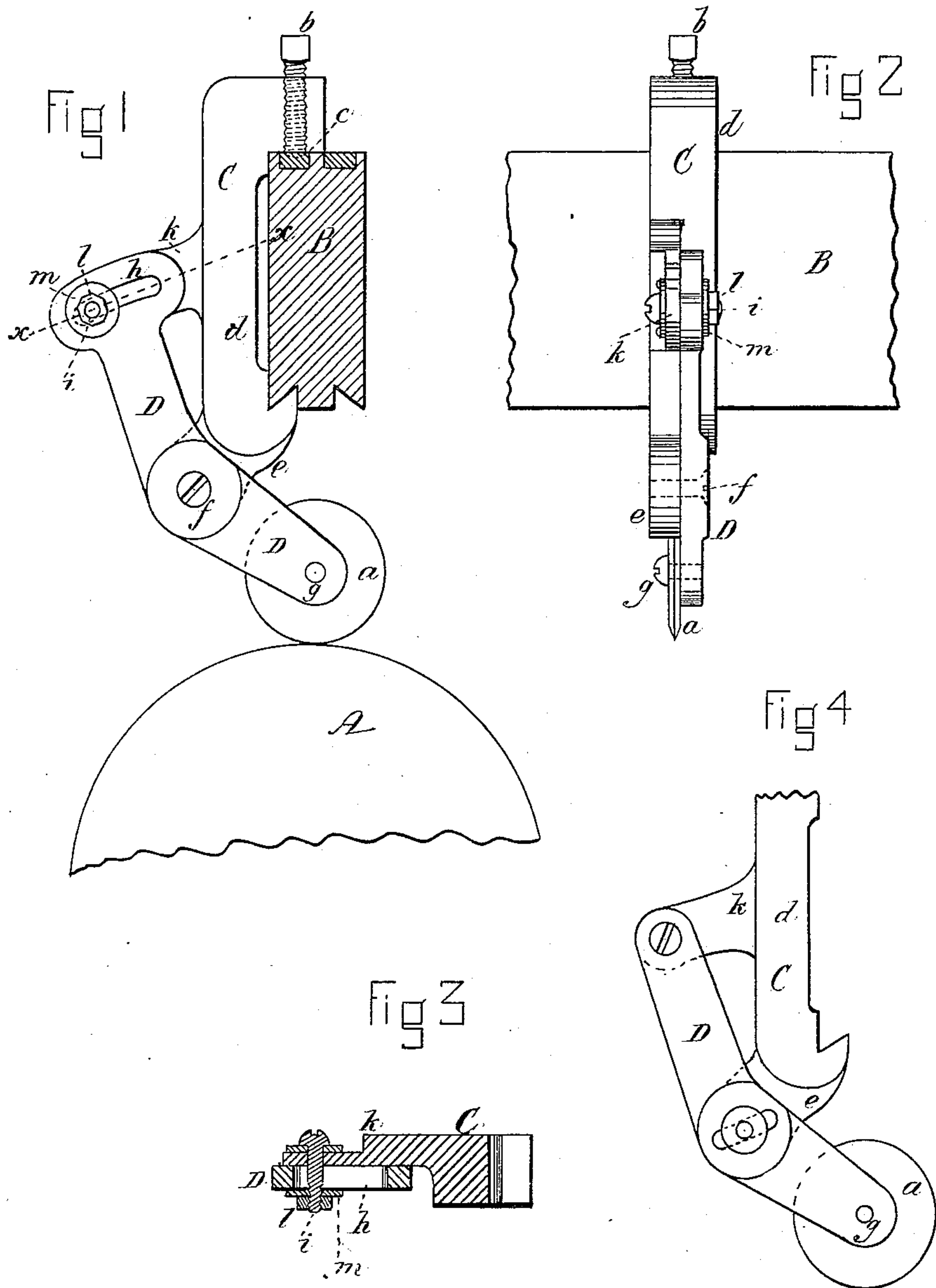
(No Model.)

J. C. MARSHALL.

CUTTER HOLDER FOR PAPER CUTTING MACHINES.

No. 246,892.

Patented Sept. 13, 1881.



WITNESSES
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CUTTER-HOLDER FOR PAPER-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 246,892, dated September 13, 1881.

Application filed June 27, 1881. (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 Cutter-Holders for 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 side elevation of a cutter-holder constructed in accordance with my invention, mounted upon the cross or cutter bar of a machine for scoring and cutting paper. Fig. 2 is an end elevation of the same. Fig. 3 is a section on the line *xx* of Fig. 1. Fig. 4 is a modification, to be hereinafter referred to.

My present invention relates to an improvement in the construction of the cutter-holders of that class of machines for scoring and cutting paper in which an under roll or cylinder is employed with a cross-bar located thereover, on which are mounted the movable cutter-holders which carry the rotary cutters.

In these machines as heretofore constructed, the cutters have been adjusted to bring their cutting-edges into, or nearly into, contact with the surface of the under roll for cutting or scoring the paper by the direct action of screws or nuts. It is found, however, in practice that after the cutters have been adjusted to the exact position required, unless the utmost care is taken in tightening these screws or nuts, the cutters will be forced down too hard, causing them to cut into the under roll and mar or injure its surface; and as this roll requires to be made perfectly true, it is quite expensive, and the action of the cutters thereon, when forced into its surface, as above described, necessitates its frequent renewal, thus entailing considerable loss and expensive repairs.

To overcome these difficulties is the object of my invention, which consists in a circular cutter mounted upon a lever pivoted to the stock or main portion of the cutter-holder, which slides upon or is attached to the cutter-bar, the cutter-lever being provided with a clamping device, by means of which it can be readily tightened and securely fastened in place when adjusted without any liability of moving it in

the slightest degree from the position in which it is set.

In the said drawings, A represents the main or under roll of a machine for scoring or cutting paper.

B is the stationary cutter-bar, which is secured, as usual, in a horizontal position immediately over the roll A and at the desired distance therefrom.

C represents one of the cutter-holders, any desired number of which may be employed, these holders being mounted upon the cutter-bar B, upon which they are adapted to slide longitudinally, in order that their revolving disk-cutters *a* may be set or adjusted at any desired distance apart, the cutter-holder being secured in place upon the bar B by means of a set-screw, *b*, which bears upon a block, *c*, adapted to slide in a longitudinal groove on the upper side of the bar B.

At the lower end of the stock or main portion *d* of the cutter-holder C is an offset or projection, *e*, to which is pivoted at or near the center, at *f*, a bent lever, D, to one side of the lower extremity of which is secured by means of a screw, *g*, the revolving disk-cutter *a*, which is of the usual form employed in machines of this description. The upper end of the lever D is enlarged, and is provided with a curved slot, *h*, through which passes a screw-bolt, *i*, projecting from the surface of a curved arm, *k*, extending out from and forming a portion of the stock *d* of the cutter-holder C, the bolt *i* having at its outer end a screw-nut, *l*, bearing on a washer, *m*, which is forced by the nut tightly against the surface of the enlarged end of the lever, a clamping device being thus formed, by means of which the lever D can be firmly secured in place when adjusted. This construction enables the cutter-lever to be quickly adjusted by hand with the greatest degree of nicety to cause the edge of the cutter to just touch the surface of the roll A, and when so adjusted to be securely clamped without any liability of its being moved in the slightest degree from the position in which it was set, thus entirely avoiding all danger of cutting into and injuring the surface of the under roll, A, as heretofore, and consequently greatly increasing the durability of the machine, and effecting a material saving in the cost of repairs. Further—

more, this capability of tightening or clamping the cutter without disturbing or moving it from its proper position is of great importance in setting the edge of the cutter at a short distance from the surface of the roll A, as is required for scoring paper, for the reason that it enables the operator to produce a cut of a given depth with absolute certainty, which is an exceedingly difficult operation in the ordinary machines.

Instead of pivoting the cutter-lever D at or near its center to the stock of the cutter-holder, as seen in Figs. 1 and 2, and applying the clamping device to its upper end, the lever may be pivoted at its upper end to the cutter-holder, as seen in Fig. 4, in which case the clamping device will be located between the pivotal point of the lever and the cutter *a* at its lower end. This construction I however regard as a mere modification of that shown in Figs. 1 and 2.

A cutter-holder constructed in accordance with my invention possesses many additional advantages over those of the old construction in which dovetailed slides are used, for the reason that it is stronger, more durable, and can be made at a much less cost, while the slides of the old construction require nice fitting to prevent play or loose motion of the parts, whereas with my construction, as there are no slides, the parts, (which are made interchangeable,) after being planed or milled, can be readily put together without nice or special fitting, thus effecting a saving in time and labor. Furthermore, the operation of removing the cutter-holders from the machine is greatly facilitated,

as the lower end of the lever D, with the cutter, can be instantly swung up out of the way, as required, by a single movement of the hand as soon as the clamping-nut *l* is loosened.

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

1. The combination, with the stock or main portion of the cutter-holder C, of the adjustable cutter-lever D, pivoted thereto, the cutter *a*, secured to the lever D, and means, substantially as described, for clamping the cutter-lever in position when adjusted, as and for the purpose set forth.

2. A cutter-holder for machines for scoring and cutting paper, consisting, essentially, of a stock or main portion, *d*, adapted to slide on the cutter-bar B, a lever, D, pivoted to the stock *d*, and carrying at its lower end the rotary disk-cutter *a*, and a clamping device adapted to hold the lever D and its cutter firmly in position when adjusted, substantially as described.

3. The lever D, with its rotary disk-cutter *a*, pivoted to an offset or projection on the cutter-holder C, in combination with the screw-bolt *i*, passing through the slot *h*, clamping-nut *l*, and the washer *m*, all operating substantially in the manner and for the purpose set forth.

Witness my hand this 24th day of June, A. D. 1881.

JAMES C. MARSHALL.

In presence of—

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