

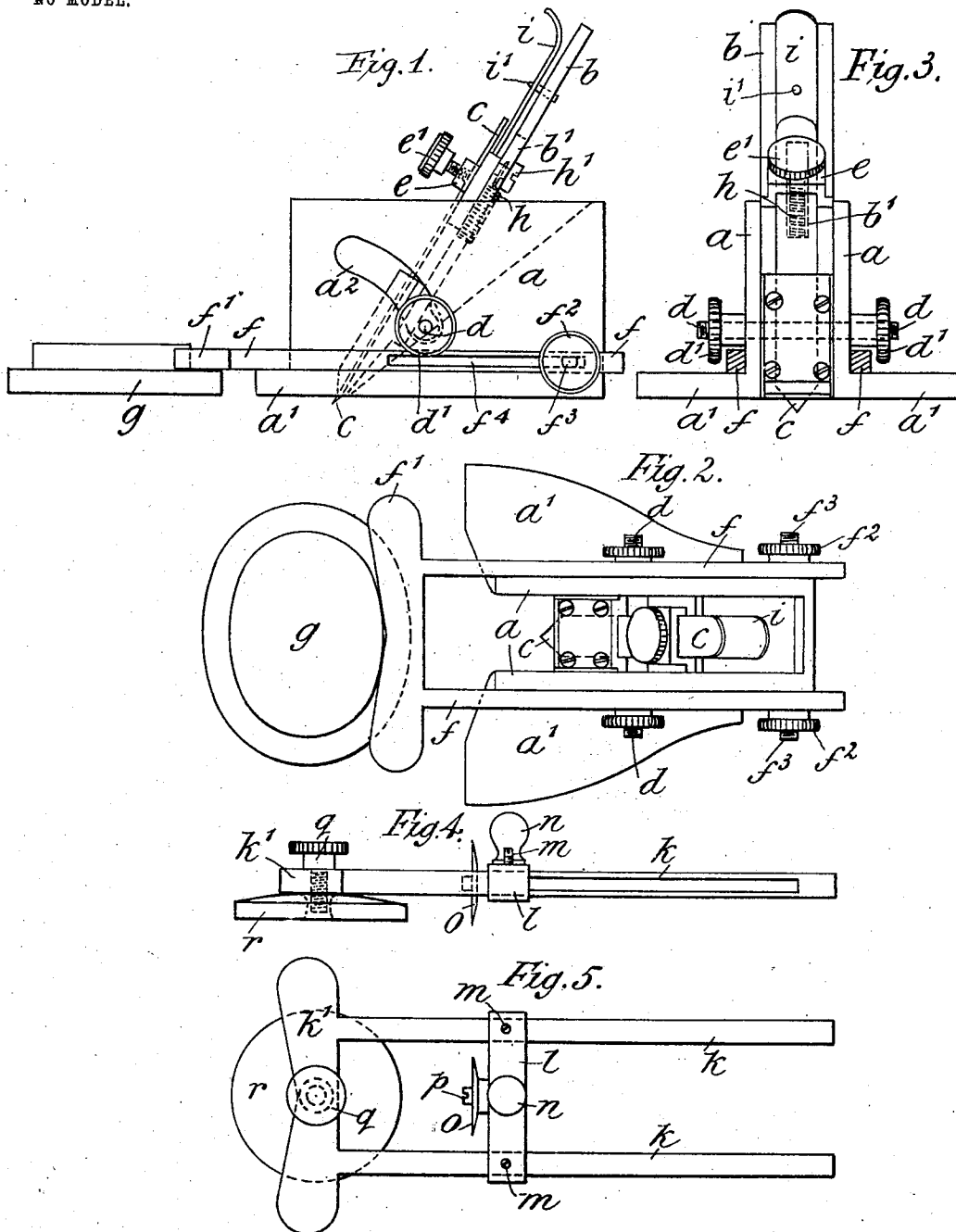
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PATENTED MAY 31, 1904.

C. JOHNSON.
APPARATUS FOR CUTTING AND BEVELING SHEETS OF CARDBOARD
OR THE LIKE.

APPLICATION FILED JULY 25, 1902.

NO MODEL.



Witnesses

J. J. Rowley

J. M. Mellor

Inventor

Charles Johnson
per J. B. Stewart
attorney.

UNITED STATES PATENT OFFICE.

CHARLES JOHNSON, OF GILLINGHAM, ENGLAND.

APPARATUS FOR CUTTING AND BEVELING SHEETS OF CARDBOARD OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 761,077, dated May 31, 1904.

Application filed July 25, 1902. Serial No. 117,042. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOHNSON, photographer, a subject of the King of Great Britain and Ireland, residing at High street, Gillingham, in the county of Dorset, England, have invented certain new and useful Improvements in Apparatus for Cutting and Beveling Sheets of Cardboard or the Like, of which the following is a specification.

This invention relates to apparatus for cutting and trimming to any desired bevel circular, oval, or other shaped openings in sheets of cardboard or other material suitable for photographic prints or other purposes.

According to this invention I provide a rectangular or other shape box or frame for supporting the knife, formed of wood, metal, or other substance and having side flanges constituting the base. The knife is held by a slotted metal carrier fixed to a plate or bar supported by a screw-threaded pin whose ends pass through curved slots formed in the sides of the box or frame for altering the angle of the knife-holder, the said pin being fixed in any desired position in the said slots by means of milled-edge nuts screwed on the ends against the outer sides of the box or frame or by other means. A flat spring is attached to the knife-carrier and engages with a pin on the plate or bar, so as to keep the knife in position when at work, and the knife is fixed to the carrier by means of a screw and is drawn up from its working position by a coiled spring attached thereto upon releasing the said flat spring from the pin on the plate or bar.

The box or frame is guided in its operating position by means of a metal frame or "multiplier," consisting of two slotted parallel bars resting upon the side flanges of the same and adjusted by screws passing through the slots in said bars and screwing into holes in the sides of the box. These bars are joined at their front ends by a cross-piece or block suitably recessed or shaped to bear against and engage with the circular, oval, or other shaped disk around which the box is turned for cutting the required hole. The said disk comprises a wooden or other suitable block

formed of two thicknesses, each having differently-shaped oval or other forms or adjustable blocks for forming different shapes, or blocks of a single thickness may be used.

In order that my invention may be more clearly understood, reference is had to the accompanying drawings, in which—

Figure 1 is a side elevation of the apparatus. Fig. 2 is a plan, and Fig. 3 an end view. Fig. 4 is a side view, and Fig. 5 a plan, of a modification.

In Figs. 1 to 3, *a* is the box or frame, and *a'* represents the side flanges or base of the same. *b* is the plate or bar for holding the knife *c*, and *d* is the screwed pin supporting said holder. *a²* represents the curved slots in the sides of the box *a* through which the ends of the said pin pass, and *d'* represents the nuts screwing on the said ends for fixing the knife-holder at the required angle to produce the beveled cut. *e* is the slotted carrier through which the knife is passed, and *e'* the screw for fixing the same therein. *f* is the frame or multiplier for guiding the motion of the box *a*, and *f'* is the cross-piece or block joining the front ends of the side bars of said frame and suitably recessed or curved for engaging with the oval or other shaped disk or block *g*, and which block *f'* may in some cases be hinged or otherwise made adjustable to alter its shape. The block *g* is constructed of two differently-formed ovals or other shapes for cutting differently-shaped openings. *h* is a spiral spring carried in an opening *b'* of the plate *b* and connected to the knife-carrier by a screw *h'* for raising the knife upon disengaging the spring *i* from the pin *i'*, fixed to the plate *b*.

In operation the block *g* is placed in the center of the space required to be cut, and the operator presses upon the same with one hand, while with the other he holds the box *a* and presses the multiplier *f'* against said block. The knife being then adjusted to the required depth and forced through the cardboard is caused to cut the opening therein to the required shape by turning the box round and keeping the multiplier at the same time closely in contact with the edge of the block

or guide *g*. The said block is turned over on its reverse side for cutting the opening to the shape of the said side.

In the modification shown in Figs. 4 and 5 the box or frame *a* is dispensed with and the cutter consists of a wheel or disk instead of a knife. The frame or multiplier *k* is similar to that described with reference to Figs. 1 to 3; but in place of the box *a* I provide a slide *l*, slotted at each end to engage with the side bars of the said frame *k*. This slide is fixed in any position on the said bars by means of screws *m*. *n* is a handle fixed to the slide *l* for revolving the frame around its center of motion. *o* is the wheel or disk forming the cutter fixed to the slide *l* by a screw *p* or other suitable means. *q* is a pin or stud passing through a hole in the head *k'* of the frame and projecting into a drilled hole passing through the center of a glass disk *r*, formed with a convex upper surface, where the hole is countersunk to permit of the easy insertion of the pin therein. The operator presses the head of the frame or multiplier against the circular block and turns the said frame by the handle *n*, so as to cause the wheel *o* to cut the opening in the paper to the required shape.

Having now fully described the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In apparatus for cutting and beveling sheets of cardboard and the like the combination of a frame having flanges at its base, a knife-holder consisting of a plate or bar provided with a slotted carrier for receiving the

knife fixed therein by a screw, a screwed pin fixed to the plate or bar and passing through curved slots in the sides of the frame, in which it is fixed by nuts for adjusting the angle at which the knife is held, a flat spring engaging with a pin on the plate or bar and secured to the knife-carrier, for holding the knife in position, a coiled spring at the back of the plate or bar for raising the knife when the flat spring is raised, and a guide or "multiplier" attached to the frame for giving the required motion to the same, substantially as described.

2. In apparatus for cutting and beveling sheets of cardboard and the like the combination of a frame carrying the knife and a guide or "multiplier" provided with a recessed or curved cross piece or head and having two slotted bars or sides engaging with said frame and capable of adjustment thereon, substantially as described.

3. In apparatus for cutting and beveling sheets of cardboard and the like the combination with a frame carrying the knife and a guide or "multiplier" fitted thereto, of a guiding-block constructed of two differently-shaped ovals or guiding edges against either of which the "multiplier" head is pressed, substantially as described.

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

CHARLES JOHNSON.

Witnesses:

BENJ. BROOKS,
W. D. RICHARDS.