S. GARRETT.

Paper-Fringing Machine.

No. 228,750. Patented June 15, 1880.

FIG I

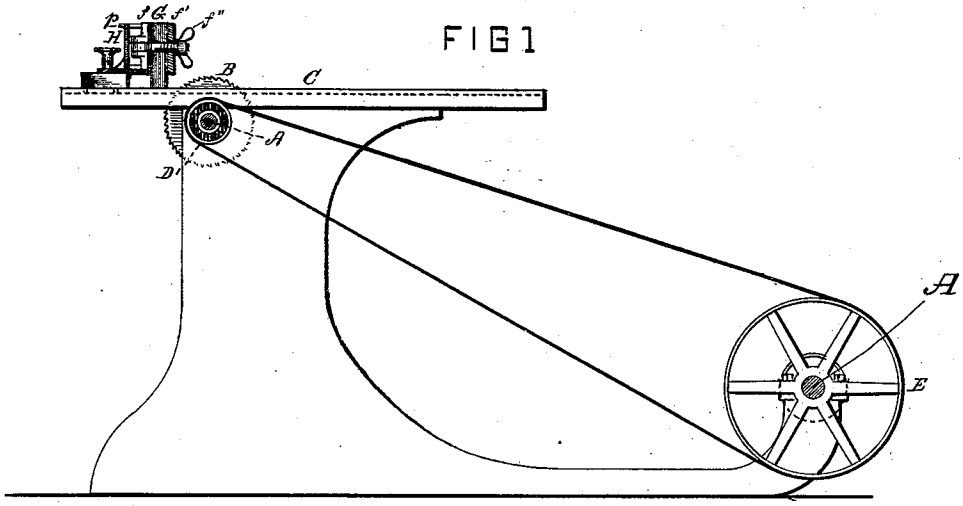


FIG II

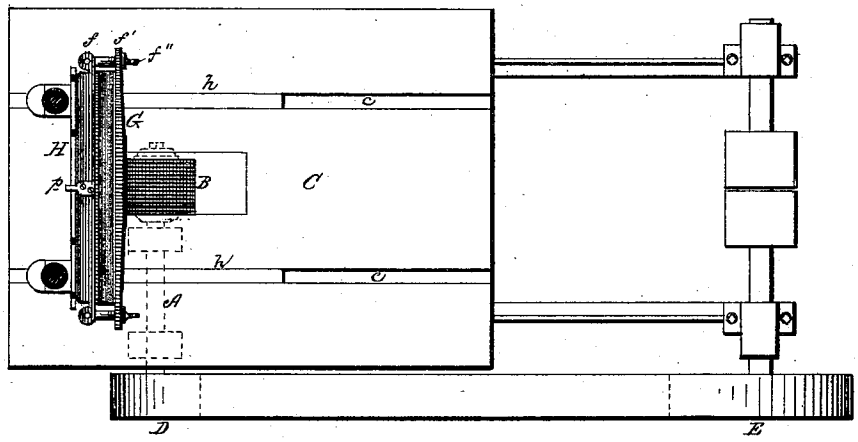


FIG III

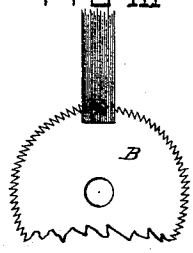
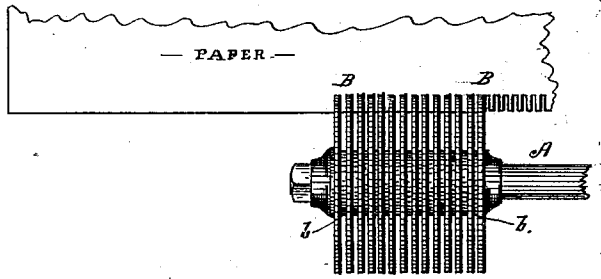


FIG IV



WITNESSES.

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SYLVESTER GARRETT, OF PHILADELPHIA, PENNSYLVANIA.

PAPER-FRINGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 228,750, dated June 15, 1880.

Application filed January 24, 1879.

To all whom it may concern:

Be it known that I, SYLVESTER GARRETT, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Fringing Paper, Leather, and Textile Fabrics, of which improvements the following is a specification.

The object of my invention is to provide suitable mechanism for cutting fringes upon the edges of paper, leather, or textile fabrics, to be used for paper napkins, the linings of boxes, decorative purposes, or wrappings for candies and fancy articles, said mechanism being designed to operate simultaneously upon a series of sheets or sections of material, and in such manner that the same can be afterward readily separated for use without liability to injury.

To this end my improvements consist in the combination of a series of circular saws mounted in bearings below a supporting-table, a sliding frame having the capacity of motion upon said table transversely to the axis of the saws, and an adjustable clamp for compressing and holding the material to be fringed upon said sliding frame, all as hereinafter more fully set forth.

The manufacture of fringed paper has been heretofore conducted, so far as my knowledge and information extend, only in a single way—to wit, by forming narrow slits or cuts in the edges of the sheets or sections by means of knives or shears, thereby effecting a partial separation without removing any material.

Such operation is slow for the reason that it is impracticable to cut many sections simultaneously, and is unsatisfactory in its results from the fact that the threads or slivers become matted or entangled when the sheets are packed together, and the latter, while being separated by the operatives employed in their final adaptation to use, are very liable to be torn and defaced, besides requiring to be slowly and carefully handled.

My invention has been found in practice to expedite and economize the manufacture of fringed paper, and the product is both neater and more durable than that derived from the former system of manufacture.

In the accompanying drawings, Figure I is a side view, partly in section, of a machine embodying my invention; Fig. II, a plan or top view of the same; Fig. III, a view in elevation and on an enlarged scale, showing the relation of a series of sections of material to the saws; and Fig. IV, a plan view, on an enlarged scale, of a portion of the saw-arbor, showing the series of saws cutting kerfs in the edge of a section of paper.

To carry out my invention I mount a saw-arbor, A, in proper bearings beneath a supporting-table, C, said arbor carrying a series of circular saws, B, which are adjustably secured upon it, and project through an opening in the table above the upper surface thereof. Washers *b* are interposed between the several saws of the series, the thickness of which regulates the width of the threads of the fringe to be formed. A kerf of determined width is removed from the paper or other material by each of the saws of the series, and by using washers of different thicknesses the width of the kerfs may be varied as desired. The saw-arbor A is rotated by a belt passing around pulleys D and E on the arbor and on a counter-shaft, A′, respectively.

In order to increase or diminish the depth of cut of the saws, so as to produce a fringe of desired length, the bearings of the arbor A on the table C may be made adjustable, so as to be raised or lowered at will.

The sheets or sections of paper to be fringed are placed between the side sections, *f f′*, of a clamp, G, and compressed therein by screws *f″*, so as to form a compact mass of, say, one and a half inch in thickness. The clamp G and the contained material are removably supported upon the vertical arm of a sliding frame, H, having horizontal guide-pieces *h*, which fit in guides or ways *c*, formed upon the surface of the table C at right angles to the axis of the saw-arbor. The frame H is traversed by hand toward and from the saws, and a projection, *p*, upon the clamp, fitting into notches in the frame, enables the transverse adjustment of the clamp to be accurately regulated after each cut.

In the operation of the machine the insertion and removal of the material and the fringing of each charge of material placed in the clamp are conveniently and speedily accom-

plished, the facility of operation greatly expediting the manufacture, and the product is neater, more durable, and of more ready application than that made in the ordinary manner.

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

The combination, with the table C, having the guides or ways *c* and an opening between said guides, of the screw-clamp G, removably supported above the table upon the vertical arm of the sliding frame H, having horizontal guide-pieces *h*, fitting into the guides or ways *c*, and a saw-arbor supported under the table at a right angle to the ways *c*, and carrying a series of circular saws separated by washers, which saws extend through the opening above the table for operation upon the paper held within the clamp G, substantially as set forth.

SYLVESTER GARRETT.

Witnesses:
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