

(No Model.)

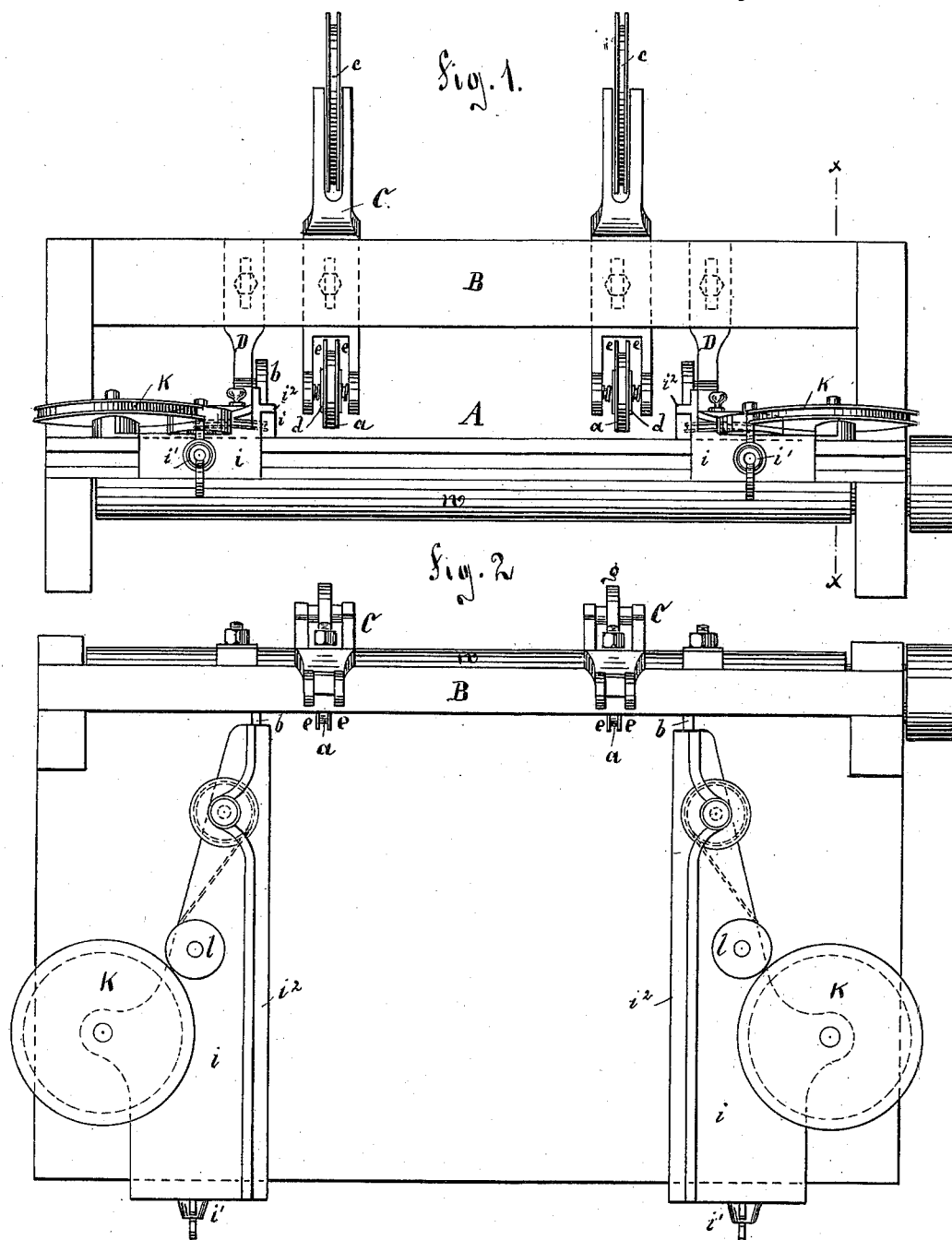
2 Sheets—Sheet 1..

T. REMUS.

APPARATUS FOR APPLYING STRIPS TO BOXES.

No. 383,656.

Patented May 29, 1888.



WITNESSES:

Henry Huber.
Sidney Mann.

Sidney Murray.

INVENTOR.

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Theodor Remus.

BY

Yours & Pargener

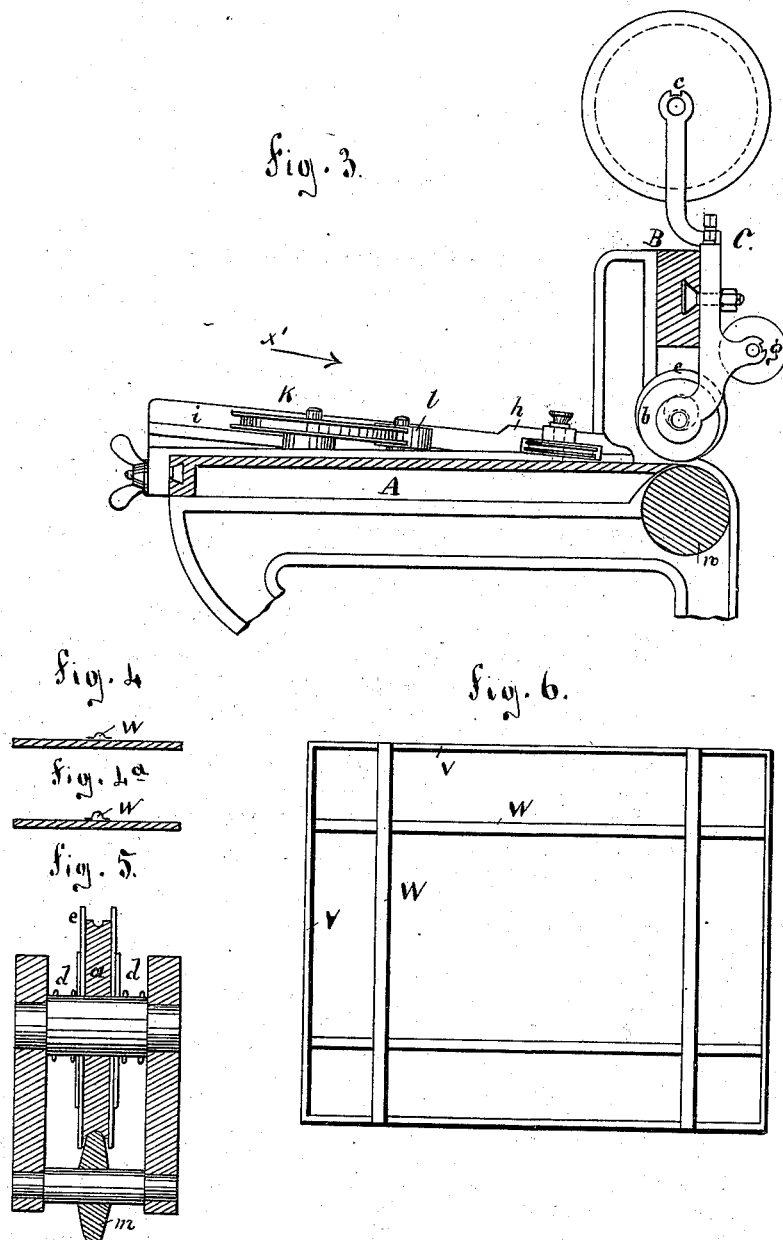
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UNITED STATES PATENT OFFICE.

THEODOR REMUS, OF DRESDEN, SAXONY, GERMANY, ASSIGNOR OF ONE-HALF TO JEAN SCHERBEL, OF SAME PLACE.

APPARATUS FOR APPLYING STRIPS TO BOXES.

SPECIFICATION forming part of Letters Patent No. 383,656, dated May 29, 1888.

Application filed May 20, 1887. Serial No. 232,829. (No model.) Patented in Germany April 14, 1887, No. 41,307; in Belgium May 3, 1887, No. 77,295; in France May 3, 1887, No. 183,306, and in England May 3, 1887, No. 6,505.

To all whom it may concern:

Be it known that I, THEODOR REMUS, a subject of the Emperor of Russia, residing at the city of Dresden, in the Kingdom of Saxony, Empire of Germany, have invented certain new and useful Improvements in Apparatus for Applying Strips to Boxes, (for which I have obtained Letters Patent No. 77,295, dated May 3, 1887, in Belgium; No. 183,306, dated May 3, 1887, in France; No. 6,505, dated May 3, 1887, in England, and No. 41,307, dated April 14, 1887, in Germany,) of which the following is a specification.

The object of my invention is to provide a new and improved machine for pasting strips of paper or other material on and over the edges of sheets of pasteboard used for making boxes, and also to paste strips of paper on said pasteboard sheet or blank along the lines on which said sheet or blank is to be bent to form the box.

The invention consists in the combination, with a table or support, of presser-rollers mounted to revolve in a vertical plane, and rollers revolving in a horizontal plane, and serving to apply a strip of paper or other material on the edges of a card-board sheet.

The invention also consists in the construction and combination of parts, as will be fully described and set forth hereinafter, and then pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of my improved machine for pasting paper or other strips on sheets or blanks for making pasteboard boxes. Fig. 2 is a plan view of the same, the reels being omitted. Fig. 3 is a cross-sectional view on the line *x x*, Fig. 1. Figs. 4 and 4^a are detail cross-sectional views of a sheet upon which a strip has been pasted at the crease for forming a corner. Fig. 5 is an enlarged horizontal sectional view of the pressing-roller used for pressing the strip hollow along the center. Fig. 6 is a plan view of a sheet upon which the strips have been pasted along the edges and along the creases.

Similar letters of reference indicate corresponding parts.

The feed-roller *w* is journaled horizontally along the front edge of the table A, upon which

the sheets can be placed. On a rail, B, above the roller *w* a series of holders, C, are held vertically and laterally adjustable by bolts passed through vertical slots in the holders, the bolts being provided at their inner ends with dove-tailed heads, which can slide in a dovetailed groove of the rail B, nuts being screwed on the outer ends of the bolts, and in the lower forked ends of said holders the pressing-rollers *a* are mounted, and at each side of each roller *a* a disk, *e*, is mounted loosely upon the shaft of the roller *a*, and said disks are pressed against the sides of the roller by springs *d*, surrounding the shaft of the roller and interposed between washers at the sides of the disks and the inner sides of the shanks of the forked ends of the holders. The apertures in the centers of the disk *e* are much greater than the diameter of the shaft, so that said disks can assume positions eccentrically to the shaft and roller *a*. On the upper end of each roller-holder C a reel or pulley, *c*, is mounted, from which a strip of paper or other material passes to the corresponding presser-roller, *a*, and between the corresponding disks, *e*, said strip *p* also passing over the edge of a roller, *g*, which is moistened or provided with gum or paste, so that the strip is made adhesive before being pressed upon the sheet. Adjacent to the holders C the adjustable holders D are held on the rail B, and on said holders D the presser-rollers *b* are journaled. On the table A the horizontal slides *i* are mounted to slide laterally, and are provided with suitable clamping devices, *i'*, for locking them in place, and with inclined guide-rails *i''* on their inner ends. On said slides are mounted the horizontal or almost horizontal circumferentially-grooved presser-rollers *h*, the moistening or gumming rollers *l*, and the reels or pulleys *k*. The edges of the slides *i* also serve as guides for the pasteboard sheet.

In case the pasteboard is rather thick and is provided with grooves or creases at the points at which it is to bend, the strip, W, pasted on would be torn, and for this reason the strip must be pasted on as shown in Figs. 4 and 4^a—that is, in such a manner as to form a hollow ridge, W'. When the sheet is bent at right angles, those parts of the strip that are

not pasted on rest firmly against the outer sides of the pasteboard.

In case the strips must be pasted on in such a manner as to form the hollow ridge, I provide the pressure-roller *a* with a circumferential groove and mount a comparatively sharp-edged roller, *m*, adjacent to the grooved roller *a*, the edge of said roller *m* pressing the strip of paper or other material into the circumferential groove of the presser-roller *a*.

The operation is as follows: The sheet of pasteboard is placed upon the table A and moved in the direction of the arrow *x'*, the slides or guides *i* being so adjusted that the side edges of the sheet pass along the edges of said guides. The circumferentially-grooved presser-rollers *h* press a gummed or moistened strip, V, of paper against the edges of the sheet, and said strip is then pressed firmly upon the top and bottom of the pasteboard sheet by the action of the presser-rollers *b*. If at the same time strips are to be pasted upon the surface of the sheet, the holders C are adjusted according to the desired positions of said strips, the strips being pasted on throughout their entire width or only along the edges, as in Figs. 4 and 4^a.

It is evident that the strips secured in one operation all run in the same direction, and the strips running in the opposite direction must be fastened by a second like operation.

The disks *e* serve as guides for the strip pressed down by the rollers *a*, and thus said disks must be mounted to yield.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a machine for pasting on strips, the combination, with a frame, of horizontal circumferentially-grooved rollers and presser-rollers for pressing the strips upon the surface of the sheet, substantially as shown and described.

2. The combination, with a table, of laterally-adjustable slides on the same, circumferentially-grooved rollers mounted horizontally on the slides, and pressure-rollers mounted to revolve in planes at right angles to that of the slides, substantially as shown and described.

3. The combination, with a table, of the roller *w*, the vertical presser-rollers *a* and *b*, and the horizontal rollers *h*, substantially as shown and described.

4. The combination, with the table A and the roller *w*, of the circumferentially-grooved presser-rollers *a* and the rollers *m*, substantially as shown and described.

5. The combination, with the table A and the roller *w*, of the rollers *a*, the disks *e*, washers resting against the sides of said disks, the springs *d*, the presser-rollers *b*, and the rollers *h*, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODOR REMUS.

Witnesses:

PAUL DRUCKMÜLLER,
EMIL DOMSCH.