

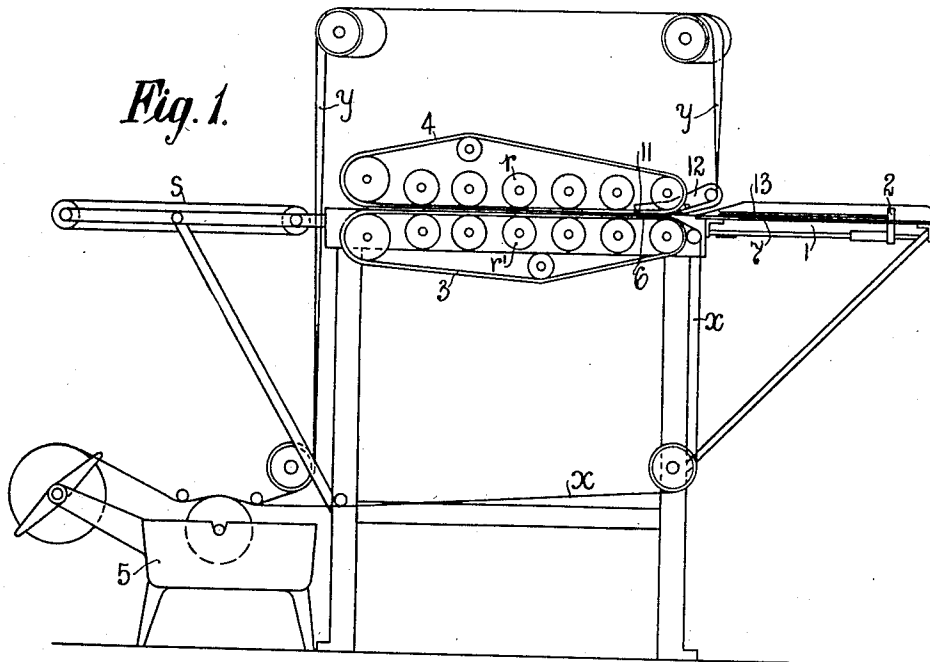
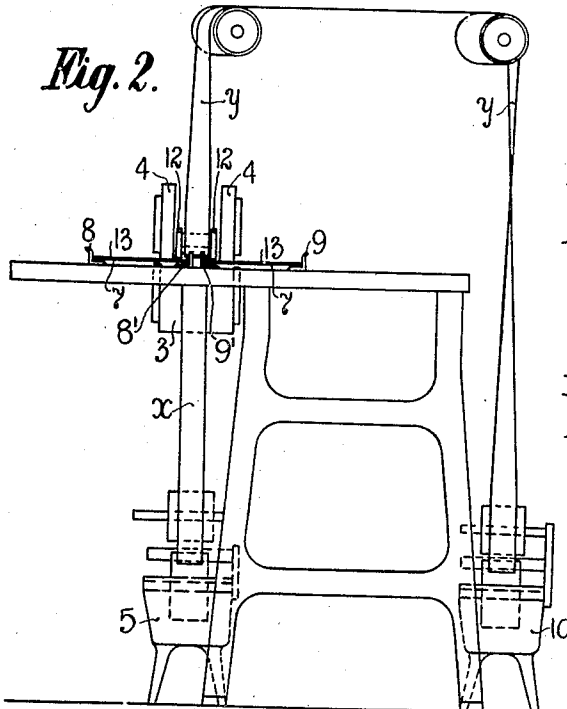
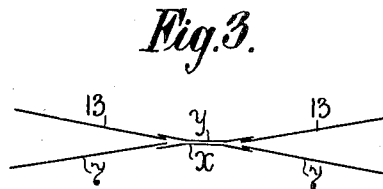
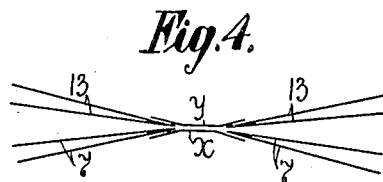
Jan. 3, 1933.

O. KLEINSCHMIT

1,892,987

FLAT GLUING MACHINE

Filed Aug. 1, 1929



Inventor:
O. Kleinschmit

By *Emil Bönnekyche*
Attorney

UNITED STATES PATENT OFFICE

OSCAR KLEINSCHMIT, OF LEIPZIG-PLAGWITZ, GERMANY, ASSIGNOR TO GEBRÜDER
BREHMER MASCHINENFABRIK, OF LEIPZIG-PLAGWITZ, GERMANY, A COMPANY OF
GERMANY

FLAT GLUING MACHINE

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In flat gluing machines of the type at present in use the sheets or sections which are to be stripped individually or in pairs are placed against feeding gauges by which they are mechanically advanced to a conveyor device or like transporting attachment, in which operation they are either met and connected together by a strip of material receiving a coating of glue while it is fed to the conveyor device from underneath the machine, or are directly glued one to the other along a more or less wide margin. In the production of strip-pasted sheets or sections for book and like work several of these sections may then be readily bound up with one another manually in a second operation.

The present invention concerns a device enabling double stripping to be produced in a single operation with the aid of an ordinary flat gluing machine.

According to the invention a second strip is fed in to the said conveyor or transporting attachment from above, from a separate paste applying or moistening device, and in its travel is guided by mechanism arranged in close proximity to the sheet gauges so as to synchronize with the arrival of the lower strip on the sheets or sections to be connected; both strips and the sections being thereafter flat glued together in the course of their joint advance, recourse being had if need be to an auxiliary compression device for their final connection.

A flat gluing machine embodying the invention is illustrated by way of example in the accompanying drawing in which:

Fig. 1 is a side view of the machine.

Fig. 2 is an end view thereof, and

Figs. 3 and 4 illustrate single and double sheets bound with the aid of this machine.

The sheets or sections are laid on the table 1, which, for this purpose, is provided with the movable gauges 2. Over this table runs a lower endless conveyor band 3, and over the latter a similar band 4, and between these two bands the work is moved along during the connecting operation. The lower strip x coming from a gumming or moistening device 5 enters at 6 beneath the sheet sections

7 and 13 to be connected while the latter are positioned respectively between side guides 8, 9 and 8', 9'. The upper strip y coming from a gumming or moistening device 10 on the opposite side of the machine enters the transporting device from above at 11 where it is guided by and between a pair of guide shoes 12, the toes of which extend fairly far between the conveyor bands 3, 4 whereby the accurate entry of the strip is properly safeguarded. In so entering, the strip y lies against the lower strip x in front of the forward edge of the sheets or sections 7 and 13, while the gauges 2 advance the sheet sections between the conveyor bands 3 and 4. The adhesive strips are thus pressed from above and below against one another and the sheet sections, use being made if need be of an auxiliary compression device such as series of upper and lower rolls r, r' , whereby the two strips and the sheets or sections are firmly flat glued and consolidated before their delivery over the stacker belt s or any other convenient device.

This arrangement may readily be used for flush-binding double or single sheets in edge-wise connection in the manner illustrated in Figs. 3 and 4. It warrants not only an increased and cheapened production but generally affords a cleaner operation as compared with the usual operation by hand when, due to the manipulation of moist and therefore somewhat stretched strips and dry sheets, the junctions produced become wrinkled, rendering the subsequent connection of such layers unsightly and defective, particularly in the case of thin paper. It is only by the simultaneous bringing together of all parts in the manner described that this operation results in clean and permanent joints. The second glue container, instead of being arranged in the rear of the machine, could obviously be situated at any other desired place and brought to its point of use by suitable guides.

I claim:

1. In flat gluing, stripping and like machines, in combination, means for feeding and guiding the work, in separate sections side by side, means for spacing the adjacent lateral edges of said sections a predetermined

distance apart, means for applying an adhesive strip to the work from below, means for feeding an adhesive strip to the work from above, and means for securing the inner faces of the adhesive strips one to the other in the centre thereof and to the said sections along the said lateral edges by jointly advancing the same under compression.

2. In flat gluing, stripping and like machines, in combination, a feed table, means for guiding the work on said table in separate laterally-spaced sections, sheet-compressing means, means for jointly advancing said sections between said compressing means, means for simultaneously applying adhesive strips above and below said sections, and means for securing the inner faces of said strips one to the other along the centre thereof and to the sections along the said lateral edges thereof.

3. In flat gluing, stripping and like machines, in combination, movable gauges and side guides for feeding and guiding the work, means for supplying an adhesive strip to the work from below, means for supplying an adhesive strip to the work from above, a conveyor device comprising two endless bands having juxtaposed co-operating stretches for jointly advancing and consolidating the work with the strips, an auxiliary compression device comprising series of upper and lower rolls associated with the co-operating stretches of said bands, and shoe-shaped guide means associated with the side guides of the work at the entry to the conveyor.

4. In flat gluing, stripping and like machines, in combination, a feed table, upper and lower conveyor bands associated with said feed table and having juxtaposed co-operating stretches, inner work guides spaced apart on said feed table and aligned with said conveyor bands, outer work guides mounted on said table and associated with said inner guides, means for feeding simultaneously to said conveyor bands individual sheets laid between said guides, and means for imposing separate adhesive strips simultaneously to the adjacent upper and lower lateral edges of the said sheets during their subsequent conveyance.

5. In flat gluing, stripping and like machines, in combination, a feed table, upper and lower conveyor bands associated with said feed table and having juxtaposed co-operating stretches, inner work guides spaced apart on said feed table and aligned with said conveyor bands, outer work guides mounted on said table and associated with said inner guides, means for feeding simultaneously to said conveyor bands individual sheets laid between said guides, means for imposing adhesive strips simultaneously to the adjacent upper and lower lateral edges of the said sheets during their subsequent

conveyance, and means for pressing together the opposed surfaces of the adhesive strips.

6. In flat gluing, stripping and like machines, in combination a feed table, upper and lower conveyor bands having juxtaposed co-operating stretches associated with said table, auxiliary compression rolls associated with said juxtaposed stretches of conveyor bands, inner lateral work guides spaced apart and aligned with said conveyor bands, outer lateral work guides associated with said inner guides, means for feeding simultaneously to said conveyor bands sheets placed between the said work guides, and means for imposing separate adhesive strips simultaneously to the adjacent upper and lower lateral edges of the said sheets during their subsequent conveyance.

OSCAR KLEINSCHMIT.

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CERTIFICATE OF CORRECTION.

Patent No. 1,892,987.

January 3, 1933.

OSCAR KLEINSCHMIT.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: At the top of page 1, for the patent number "1,893,987" read "1,892,987"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 16th day of May, A. D. 1933.

M. J. Moore.

Acting Commissioner of Patents.

(Seal)