

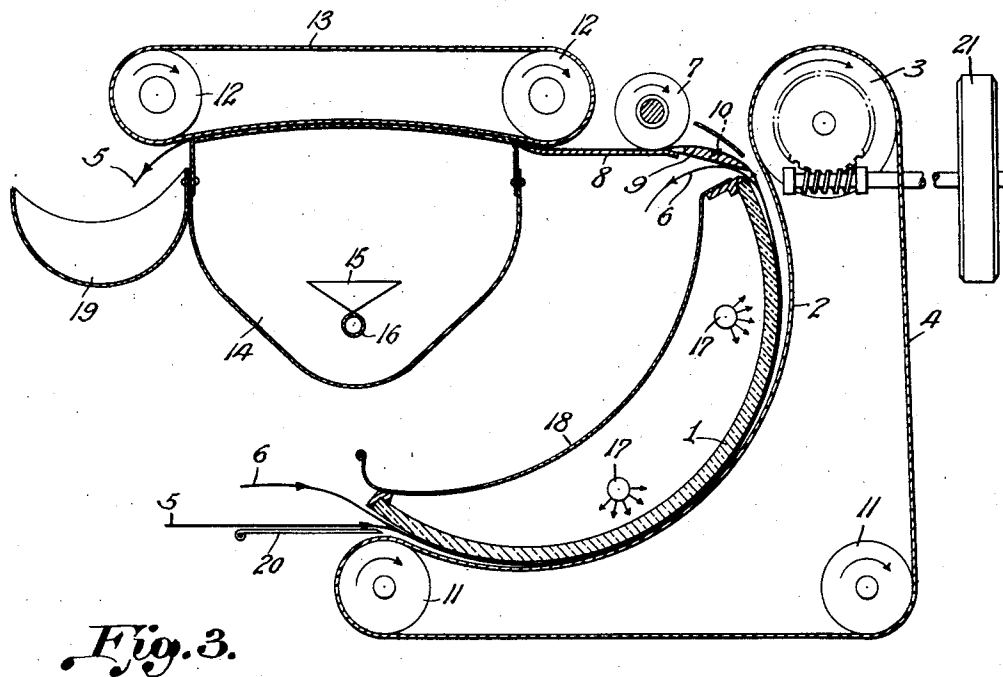
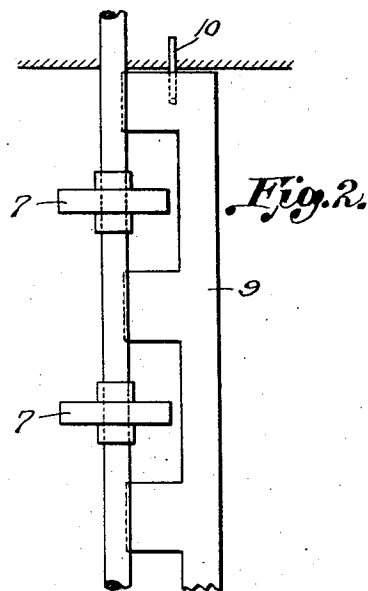
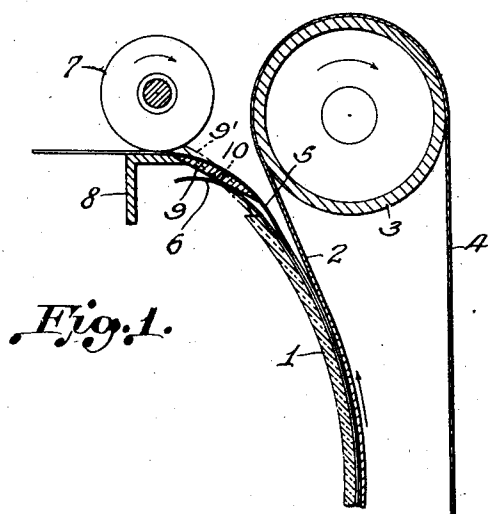
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APPARATUS FOR THE MANUFACTURE OF PHOTOGRAPHIC PRINTS

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APPARATUS FOR THE MANUFACTURE OF
PHOTOGRAPHIC PRINTS

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1 Claim. (Cl. 271—64)

The present invention relates to an apparatus for the manufacture of photographic prints. The apparatus is characterized by the following essential feature: it is connected with a device by which, as soon as the exposure to light is terminated, the original is automatically separated from the printing material so that both may be conducted to different places. It may be suitable to connect a developing device to the apparatus so that the paper exposed to light is passed directly to the developing device by the separating device named above. The machine then operates automatically from the introduction of the light-sensitive paper to the delivery of the finished print.

The separating device being the essential feature of the present invention consists of two parts. One part constitutes a tilting or tipping ledge which suitably is suspended so as to turn on two pivots. Said ledge is mounted in the path of the photographic printing material and the original leaving the exposure device so that, by the printing material somewhat projecting over the original, it is placed into a position in which an edge of it passes along the photographic printing material. As soon as the printing material has passed, the tipping ledge automatically returns in its initial position. The second part of the separating device according to the invention is a pulling or drawing device which consists for instance in a table and a roller rotating in contact therewith. The pulling device is mounted so that the photographic printing material is drawn thereby over the tilting ledge. The scraping part of the tipping ledge is thus tightly pressed against the photographic printing paper so that the original following the printing paper is lifted off and deflected from the printing material. A completely safe separation is thus attained.

The invention is illustrated by way of example in the accompanying drawing.

Fig. 1 shows a cross section of the most essential parts of the apparatus according to the invention. Fig. 2 shows a corresponding plan view. Fig. 3 illustrates a complete exposure and developing device which is suitable for the treatment of diazo printing paper.

The curved glass plate 1 is a part of an exposure device of a known construction and not illustrated in detail in the accompanying drawing. An endless cloth 2 runs over said plate 1 and returns by way of a pulley 3. Light-sensitive paper 5 and original 6 are placed between said cloth and the glass plate. Both are drawn over

the glass plate by the traveling cloth during which operation the paper is exposed to light by a source of light 17. Paper and original are placed between the glass plate and the cloth so that the paper projects over the original by some centimeters.

In the path of the photographic printing paper which has left the exposure device there is mounted a tilting ledge 9 turning on pivots 10. Said tipping ledge is provided with recesses for the pulleys 7 which suitably have a rubber covering. Pulleys 7 together with a stationary table 8 constitute a pulling device. The peripheral velocity of the roller 7 must be somewhat higher than the velocity with which the printing paper leaves the exposure device.

In the non-engaged state the tipping ledge takes the position 9' drawn in chain-dotted lines; but by the paper, after the latter has been seized by the pulleys 7, it changes into position 9 in which the back of the ledge being shaped as a scraper passes along the paper. As a traction is exercised on the paper which passes between the pulleys 7 and the table 8, the scraper-like back of the tilting ledge 9 is tightly pressed to the photographic printing paper so that the original which follows the paper is safely lifted off from the paper and is lead away underneath the tipping ledge. The printing paper is conducted between the pulleys 7 and the table 8 to the developing device.

If the tilting ledge is provided with recesses as herein described so as to be in gear with the pulleys of the drawing device, the machine operates with particular advantage. A ledge may, however, likewise be applied the longitudinal edges of which in their entire length have a parallel course.

14 in Fig. 3 is a tank in which ammonia gas is generated by causing an ammonia solution to drop into a channel 15 which is heated by the heating element 16. A conveying cloth 13 is passed over the perforated cover plate of the tank 14. Said cloth, moreover, runs over the two rollers 12, one of which is driven. 19 is a plate trough for collecting the developed prints 18 is a trough in which the originals are collected after having been separated from the photographic prints. Two sources of light are designated by 17. 20 is a table on which the photographic printing material and the original are placed before the printing process is started. 11 are two rollers over which the conveying cloth 2 is passed. 21 is a driving disk by which the roller 3 is driven by way of a worm gear. The prints

which are conveyed to the developing device by means of the roller 7 are developed by coming in contact with the ammonia gas on their way between the perforated cover plate of tank 14 and the cloth 13.

I claim:

A device for separating an original drawing from an exposed print thereof as they emerge from the exposure section of a combined printing and developing apparatus which device comprises a tilting ledge turnably mounted on two pivots, said tilting ledge being provided with recesses adapted to receive revolving disks, a table

adapted to receive the exposed print after it has passed over the tilting ledge, and a series of rotatable disks mounted on a common axle having peripheral contact with the table so as to exert a pulling action on the print, and having cooperating relationship with the recesses of the tilting ledge such that the traction on the print material passing between the revolving discs and table raises the back edge of the tilting ledge and presses it against the under side of the print thus causing a scraping action and separation of the original drawing from the print.

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