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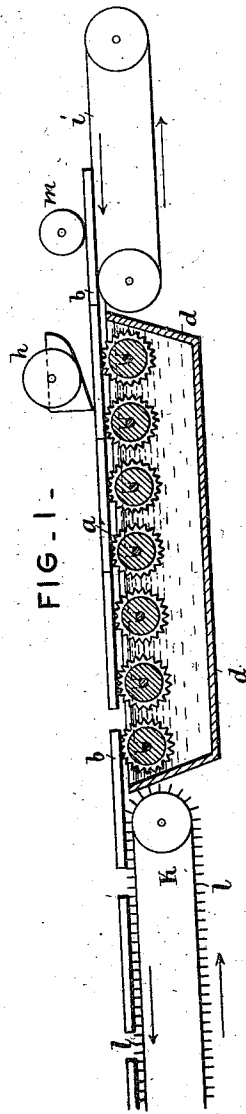
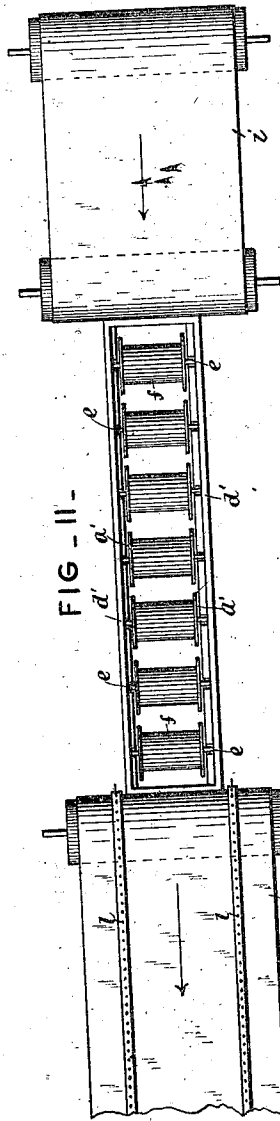
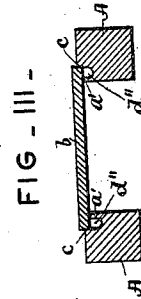
(No Model.)

M. P. ISMAY & E. DODDS.

APPARATUS FOR COATING PHOTOGRAPHIC PLATES.

No. 357,483.

Patented Feb. 8, 1887.



Attest:
F. A. V. Rine
H. B. Knight

Inventor:
Matthew Parker Ismay
Edwin Dodds
By Smith & Co.
Attys.

UNITED STATES PATENT OFFICE.

MATTHEW PARKER ISMAY, OF NEWCASTLE-UPON-TYNE, AND EDWIN DODDS, OF LOW FELL, GATESHEAD, ENGLAND

APPARATUS FOR COATING PHOTOGRAPHIC PLATES.

SPECIFICATION forming part of Letters Patent No. 357,483, dated February 8, 1887.

Application filed August 30, 1886. Serial No. 212,252. (No model.) Patented in England July 9, 1886, No. 8,972.

To all whom it may concern:

Be it known that we, MATTHEW PARKER ISMAY, druggist, and EDWIN DODDS, photographic chemist, subjects of the Queen of Great Britain and Ireland, and residing, respectively, MATTHEW PARKER ISMAY, at 1 Sydenham Terrace, Newcastle-upon-Tyne, England, and EDWIN DODDS, at 5 Church Road, Low Fell, Gateshead, England, have invented certain Improvements in Apparatus for Coating Photographic Plates, (for which I have applied for a patent in Great Britain, No. 8,972, on the 9th of July, 1886,) of which the following is a specification.

The object of this invention is to provide improved apparatus by means of which, when glass or other plates are coated with gelatine emulsion or other fluid, the coating material is prevented from getting on the back or under side of the plates.

In carrying out this invention, we will proceed to describe it, with reference to the accompanying drawings, in which—

Figure I is a longitudinal section of a preferred form of our improved apparatus. Fig. II is a plan view thereof with the coating-trough and weighted roller removed, and showing the wheels provided with knife-edges. Fig. III is a cross-section of a modified form of the device.

The plates to be coated, instead of being carried on a traveling belt under the vessel containing the coating material, as heretofore, are caused to travel along rails, as shown in Fig. III, or, as we prefer, over wheels, as shown in Figs. I and II, the plates being arranged with their contiguous edges in contact and the forward plates being driven along the rails or over the wheels by the succeeding plates, thus insuring very close joints between the plates, through which little or none of the coating material can pass.

Where rails are employed, as shown in the transverse section, Fig. III, they are provided with knife-edges *a'*, upon which the plates *b* are supported. The rails *A* are arranged at such a distance apart that the plates are supported by the knife-edges *a'*, as near as may be to the edges of the said plates, so that any accidental mark on the back of the plate is

confined to the margin. The rails *A* are provided with projections *c*, extending above the knife-edges *a'*, so as to form guides for the plates, and a channel or groove, *d*, is provided between these projections and the knife edges, in which grooves a stream of tepid water may be kept running to wash away any of the coating material that may pass over the edges of the plates, and so keep the knife-edges clean. The plates are placed on the knife-edges *a'*, and the forward plates are propelled or caused to slide therealong by the succeeding plates, whereby close joints are insured between the contiguous edges of the plates, and the coating material thus prevented from passing between them.

In Figs. I and II is represented an apparatus wherein wheels are employed instead of rails to support the plates *b* while being coated. The wheels *e* may be fitted, as shown, to rotate in water, spirit, or other liquid contained in a trough or vessel or troughs or vessels *d*, so that any chance drops of emulsion or coating material which may fall onto the wheels or onto their bearings *e* are at once washed off. The wheels may be provided with knife-edges or needle-points, or with teeth, as shown, upon which the plates rest. In order to insure the rotation of the wheels as the plates pass over them, they may be attached to cylinders *f*, arranged to float in the liquid contained in the trough or troughs *d*, and so that they are pressed up against the plates; or they may be pressed up to the plates by means of levers or springs or their equivalent. The plates may be conducted onto the wheels *a* beneath the trough *h*, containing the coating material, by means of an endless traveling belt, *i*, and while being coated they are propelled along or over the wheels by the pressure of subsequent plates onto a setting or cooling table or endless band, *k*, provided with points or teeth *l*, upon which the plates rest, and which help to keep the back of the said plates clean. A weighted roller, *m*, may be caused to press on the plates to prevent the feeding endless belt *i* from slipping beneath the plates as they are being fed toward the toothed supporting-wheels *a* or the knife-edges *a'*.

Having now particularly described and as-

certained the nature of our invention and in what manner the same is to be performed, we declare that what we claim is—

1. In an apparatus for the reception and support of glass or other plates while being coated with gelatine emulsion or other fluid, means for supporting the plates, having projections upon which the plates impinge, and troughs or grooves containing a cleansing-liquid in conjunction with said supports, substantially as and for the purposes set forth.

2. In apparatus for the reception of glass or other plates while being coated with gelatine emulsion or other coating-fluid, wheels upon the flanges or rims of which the plates are supported and over or upon which they are caused to travel, substantially in the manner and for the purpose hereinbefore described, and illustrated by our drawings.

3. In an apparatus for coating glass or other plates with gelatine emulsion or other fluid, the combination, with wheels over the flanges or rims of which the plates are caused to travel, of a trough or troughs containing liquid, in which trough or troughs said wheels are mounted, substantially as and for the purposes set forth.

4. In apparatus for coating glass plates with gelatine emulsion or other fluid, wheels upon which the plates are supported and over or upon which they are caused to travel, having suitable means by which said wheels are cushioned, so as to maintain the wheels in contact with the plates, substantially as hereinbefore described.

5. The receiving-table or endless band *k*, provided with teeth or points *l*, onto which the coated plates pass from the wheels, substantially as and for the purpose hereinbefore described.

6. The combination of the wheels, feeding-band *i*, and roller *m*, substantially as and for the purpose hereinbefore described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MATTHEW PARKER ISMAY.
EDWIN DODDS.

Witnesses:

JOHN G. V. ISMAY,
Newcastle-upon-Tyne.

R. N. BOWMAN,
17 Groat Market, Newcastle.