No. 731,102. PATENTED JUNE 16, 1903.

G. F. FRALEY.

PHOTOGRAPHIC PRINTING FRAME.

APPLICATION FILED FEB. 19, 1903.

NO MODEL.

Fig. 1.

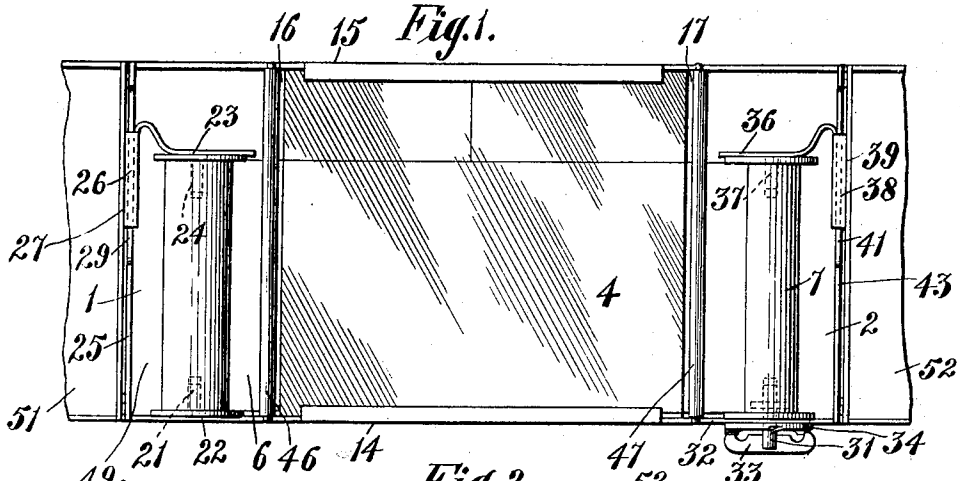


Fig. 2.

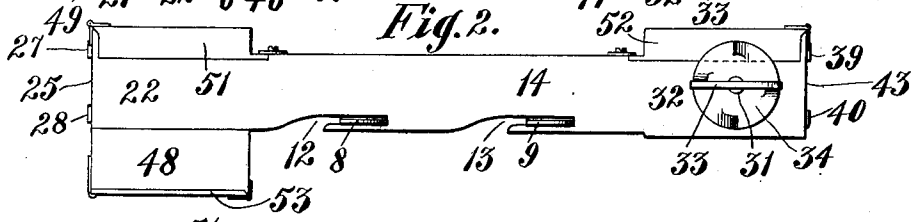


Fig. 3.

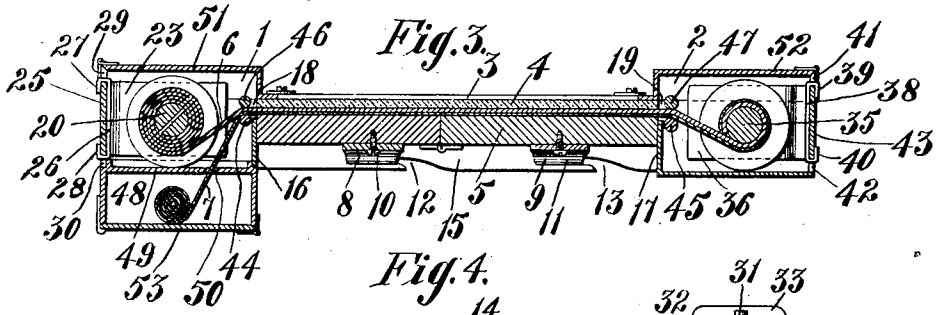


Fig. 4.

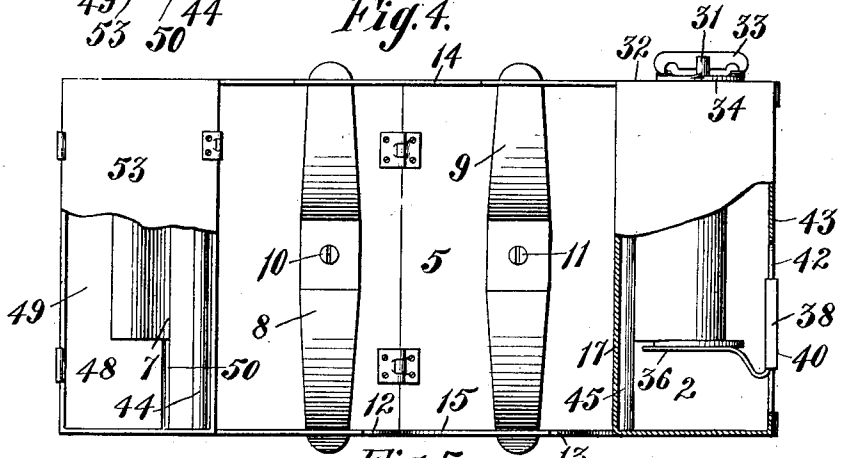
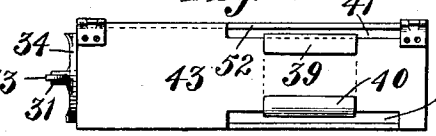


Fig. 5.



Witnesses:

F. G. Hachenberg.

Henry Thieme.

Inventor:

George F. Fraley

by attorneys

Brown & Durand

THE NORRIS PETERS CO. PHOTO-LITHO., WASHINGTON, D. C.

No. 731,102. Patented June 16, 1903.

UNITED STATES PATENT OFFICE.

GASSNER F. FRALEY, OF NEW YORK, N. Y., ASSIGNOR TO PATRICK H. BETTMAN, OF CHICAGO, ILLINOIS.

PHOTOGRAPHIC-PRINTING FRAME.

SPECIFICATION forming part of Letters Patent No. 731,102, dated June 16, 1903.

Application filed February 19, 1903. Serial No. 144,041. (No model.)

To all whom it may concern:

Be it known that I, GASSNER F. FRALEY, a citizen of the United States, and a resident of the borough of Manhattan, in the city and State of New York, have invented new and useful Photographic-Printing Frames, of which the following is a specification.

This invention relates to photographic-printing frames, and has for its object to provide a simple, effective, and inexpensive device in which prints may be conveniently taken from a long film or strip having a plurality of pictures or designs thereon.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents the printing-frame in front elevation, the doors which close the film-spool compartments being shown open and partially broken away. Fig. 2 is a view in side elevation of the frame. Fig. 3 is a longitudinal vertical section through the frame. Fig. 4 represents the printing-frame in back view, portions of the doors which close one of the film-spool compartments and the photosensitive-material-supply compartment being shown broken away; and Fig. 5 is a view of the frame in end elevation.

The printing-frame comprises two film-spool compartments or chambers 1 2 and an intermediate printing-compartment 3. This intermediate printing-compartment 3 is provided with a transparent front plate 4 and a hinged back plate 5, between which the film or other strip 6 and the photosensitive material 7 are arranged to be held. In the present instance each of the hinged sections of the back board 5 is shown as being provided with spring-latches 8 9, secured intermediate their ends at 10 11 to the said sections, which spring-latches are fitted to engage recesses 12 13 in the end walls 14 15 of the printing-compartment. The side walls 16 17 of the printing-compartment are provided with slots 18 19, through which the film or other strip 6 is fitted to pass when being drawn across the printing-compartment.

The film-spool compartment 1 is provided with means for detachably holding the film-spool 20 therein, which means comprises a stud 21, projecting inwardly from the end wall 22 of the compartment, which is fitted to enter the bore in one end of the spool, and a spring-actuated adjustable presser-plate 23, having a stud 24 fitted to enter the bore at the other end of the spool. This presser-plate 23 has a sliding engagement with the outer wall 25 of the compartment 1, preferably by providing the shank 26 of the plate with ears 27 28, fitted to slide along elongated slots 29 30 in the said end wall 25. By this arrangement the spool 20 may be readily inserted or removed by manipulating the plate 23. This plate 23 may also be caused to press to a greater or lesser degree against the end of the film-spool 20 for determining the frictional resistance to the unwinding of the film upon the said spool.

The compartment 2 is provided with means for detachably holding the film-winding spool therein, which means is constructed and arranged as follows: A short shaft 31 is mounted to rotate in the end wall 32 of the compartment, which shaft is provided with a suitable operating-handle 33 exterior to the compartment, which operating-handle has a pawl-and-ratchet engagement 34 with a stationary plate on the frame for preventing the reverse movement of the shaft 31. This shaft 31 may be locked within one end of the spool 35, used as a winding-spool. A spring-actuated adjustable presser-plate 36, similar to the presser-plate 23, is provided with a stud 37, arranged to enter the bore of the spool 35 at its other end, which presser-plate is provided with a suitable shank 38, having ears 39 40 arranged to travel along in slots 41 42 in the outer side wall 43 of the compartment 2.

To prevent the chafing of the film as it is drawn from one compartment into the other compartment across the printing-compartment, I provide an antifriction-roller 44 within the compartment 1 adjacent to the slot 18 and an antifriction-roller 45 within the compartment 2 adjacent to the slot 19. The film may be further held in position by means of an antifriction-roller 46 adjacent to the roller 44 and an antifriction-roller 47 adjacent to the roller 45.

In the accompanying drawings I have shown a device in which a continuous strip of photosensitive material 7 may be used, so that suc-

cessive pictures upon the film 6 may be printed upon the photosensitive material before the said photosensitive material is removed from the frame. To accomplish this result, I provide a compartment 48 for containing the roll of photosensitive material, which compartment is removably secured to the back of the film-compartment 1, the top wall 49 of the film-supply compartment 48 serving also to close the back of the compartment 1. A slot 50 in the top wall 49 serves to permit the strip of photosensitive material to be led therethrough into engagement with the antifriction-roll 44 and from thence across the printing-compartment 3.

The several compartments 1, 2, and 48 may be provided with suitable doors 51 52 53 for gaining access to the interior of said compartments.

If it should be desired to make separate prints of so much of the film 6 as is located within the printing-compartment, it is to be understood that separate sheets of photosensitive material may be inserted into the said compartment through the back thereof. Where it is desired to make a continuous set of prints on a single strip of photosensitive material of the pictures upon the film, the strip of photosensitive material is wound upon the spool 35 with the film. After the film has been wound to bring the picture desired to be printed within the printing-compartment the sectional back board 5 of the compartment is forced into position by the spring-latches 8 and 9 for clamping the film and the interposed photosensitive material in position against the transparent front plate 4. After the print has been made the back board 5 may be released, and the film and photosensitive material may be wound onto the spool 35 until the next succeeding picture or the picture desired to be printed is brought into position within the printing-frame, when the operation of clamping and printing is again performed.

By the use of the sliding presser-plates for supporting one end of the spools the frame is made suitable for use in connection with films of varying widths and the film-spools may be very readily placed into position within the frame and removed therefrom.

What I claim is—

1. A photographic-printing frame comprising a printing-compartment having slots in its opposite sides, two film-spool compartments at the sides of the printing-compartment, means for holding film-spools in the film-spool compartment, a separate photosensitive-material-supply compartment communicating with one of the film-spool compartments, means for leading the film and photosensitive material across the printing-compartment through the said slots and means for holding the photosensitive material at the back of the film within the printing-compartment.

2. A photographic-printing frame comprising a printing-compartment having slots in its opposite sides, two film-spool compartments at the sides of the printing-compartment communicating therewith through the said slots, means for holding film-spools within the said film-spool compartments, means for leading the film from one spool to the other across the printing-compartment through the said slots, means for holding photosensitive material at the back of the film within the printing-compartment and antifriction-rollers located adjacent to the slots in the sides of the printing-compartment for preventing the film from touching the edges of the slots.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 21st day of January, 1903.

GASSNER F. FRALEY.

Witnesses:
FREDK. HAYNES,
GEORGE BARRY, Jr.