

Sept. 9, 1924.

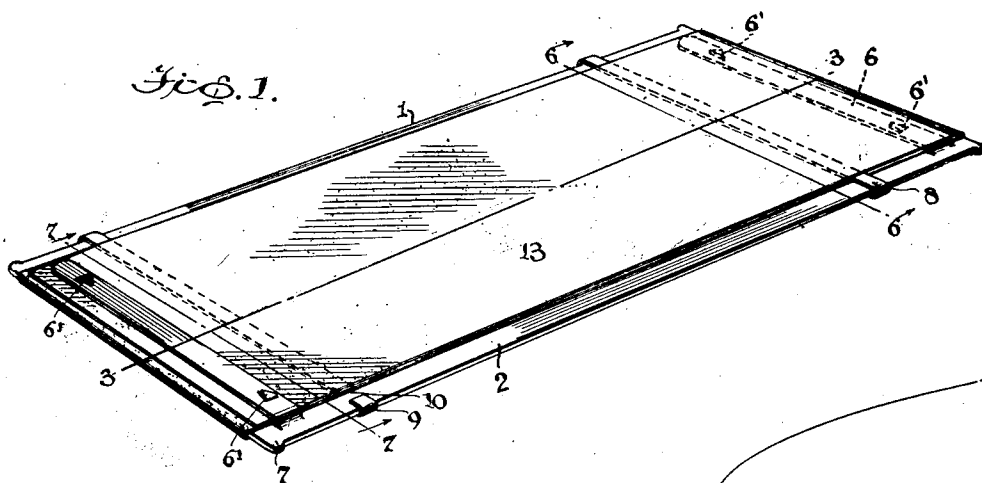
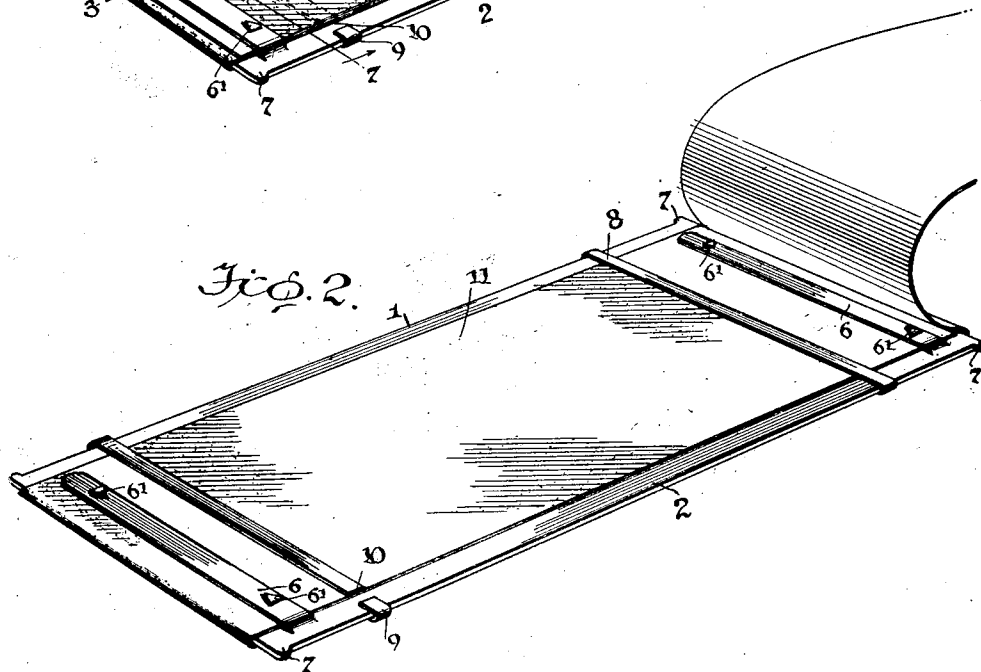
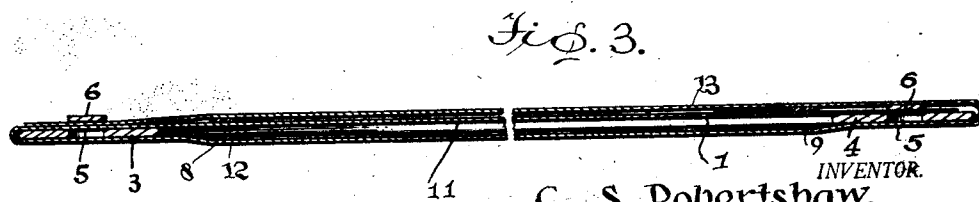
1,507,856

C. S. ROBERTSHAW

DEVELOPING DEVICE

Filed June 18, 1923

2 Sheets-Sheet 1



C. S. Robertshaw,

BY
Geo. P. Kimmel
ATTORNEY.

Sept. 9, 1924.

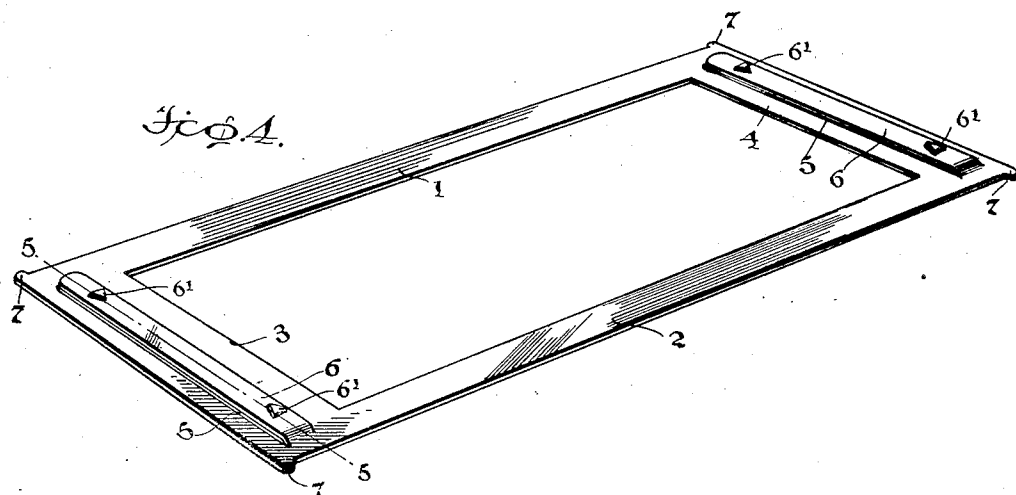
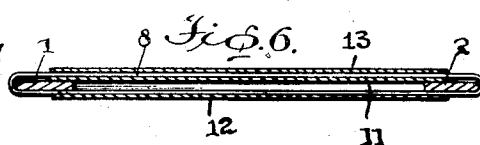
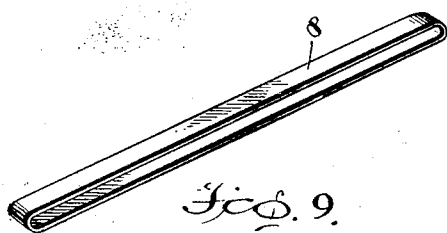
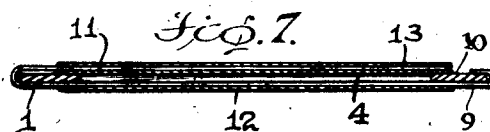
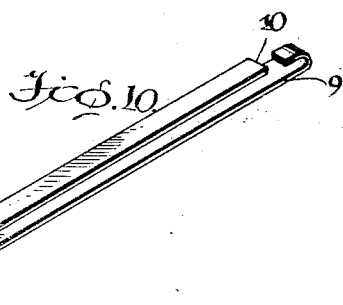
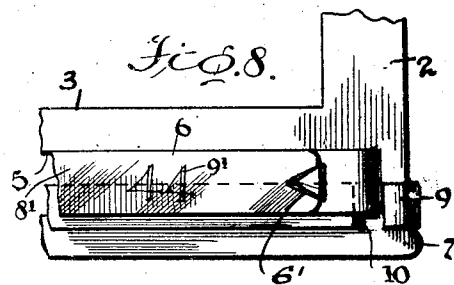
C. S. ROBERTSHAW

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DEVELOPING DEVICE

Filed June 18, 1923

2 Sheets-Sheet 2



C. S. Robertshaw,
INVENTOR.

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UNITED STATES PATENT OFFICE.

CHARLES S. ROBERTSHAW, OF NATCHITOCHES, LOUISIANA.

DEVELOPING DEVICE.

Application filed June 18, 1923. Serial No. 646,166.

To all whom it may concern:

Be it known that I, CHARLES S. ROBERTSHAW, a citizen of the United States, residing at Natchitoches, in the parish of Natchitoches and State of Louisiana, have invented certain new and useful Improvements in Developing Devices, of which the following is a specification.

This invention relates to a developing device for use in connection with the developing of roll films in photography, and has for its object to provide, in a manner as hereinafter set forth, a device for the use referred to having means to overcome the curling and scratching of the film during the developing thereof, as well as the preventing of the sticking together of the sections of the films during development, and further to permit of the convenient examination and separation of the section or sections of a film which is or are developing too fast or too slow from the other section or sections of the film due to over exposure or undertiming, further to enable an operator to satisfactorily develop a film at all times, and further whereby the film can be washed and dried on the device and after drying conveniently removed therefrom.

Further objects of the invention are to provide a device for the purpose set forth and in a manner as hereinafter referred to, which is simple in its construction and arrangement, strong, durable, compact, thoroughly efficient and convenient in its use, readily assembled and inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein life reference characters denote corresponding parts throughout the several views:—

Figure 1 is a perspective view of a developing device, in accordance with this invention, showing the arrangement of a film in connection therewith for development.

Figure 2 is a like view with one of the sections of the film extended.

Figure 3 is a section on line 3—3, Figure 1. Figure 4 is a perspective view of the frame of the device.

Figure 5 is a section on line 5—5, Figure 4.

Figure 6 is a section on line 6—6, Figure 1.

Figure 7 is a section on line 7—7, Figure 1.

Figure 8 is a fragmentary view, upon an enlarged scale, of one end of the frame of the device and further illustrating one of the separating members positioned in proximity to one end of the frame.

Figure 9 is a perspective view of one of the separating members.

Figure 10 is a like view of another one of the separating members.

Referring to the drawings in detail, a developing device in accordance with this invention, comprises a rectangular frame formed of a pair of side rails 1, 2, and a pair of end rails 3, 4, which are of greater width than the side rails 1, 2. The frame is formed of thin material, preferably metal, and the rails thereof are flat, and at each end of the frame, a slit 5 is provided and which extends from one side rail to the other side rail and the material freed by each of the slits 5 is offset to form a transversely extending film retaining tongue 6, which is integral with the side rail 2 and terminates at the side rail 1.

Each corner of the frame is formed with a laterally extending lug 7, forming stops for arresting the movement of the separator members to be presently referred to.

Shiftably mounted on the frame, as well as extending transversely with respect thereto, is a pair of separator members 8, 9. The member 8 is formed from a continuous piece of material, whereas the member 9 is split to form a passage 10 whereby the member 9 can be shifted to a point in close proximity to that end of the frame formed by the end rail 3. The passage 10 provides a clearance for the point of joinder between the tongue 6 and a side rail 2.

The tongues 6 are employed for connecting or retaining the section 11 of a film against the frame, and said section 11 also passes under the members 8 and 9, as clearly shown in Figures 2 and 3. The film is passed around the end rail 3 and the section 12 thereof is positioned below the lower or inner face of the frame and spaced therefrom by the members 8 and 9. The film is then extended around the end rail 4 and over the

— tongue 6 at the said end rail 4, and the section 13 of the film is positioned upon the members 8 and 9 and extended under the tongue 6 arranged at the end rail 3, as clearly shown in Figure 3.

The members 8 and 9 can be shifted to prevent any possibility of the sections of the film sticking. When the film is set up with respect to the frame in the manner as stated, the sensitized face is uppermost.

The tongue 6 may be provided with any suitable means for connecting therewith a tag or other marker to indicate to whom the film belongs and as shown each of the tongues 6 is slitted and with the slits offset as at 6' to provide holding barbs for retaining a strip of celluloid 8' to the tongue 6, and said strip of celluloid has a suitable indication as at 9' to indicate to whom the film belongs. As shown, the indication 9' is a number. Other means than the strip of celluloid 8' can be employed.

If it be desired to see how the films are progressing, the free end of the section 13 is detached from under the tongue 6, at the end rail 3, and examined, and section 11 can also be released and examined, whereas section 13 can be viewed right through the opening formed by the frame and if the development is not satisfactory, it is very easy to replace the sections in their order and place the frame back with the film into the developer, until finished.

The device can be positioned in a developing tray or box in any suitable manner, and if desired the frame can be provided with a suitable hanger for drying purposes in connection with the film, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the light of the invention as claimed.

What I claim is:—

1. A developing device for use in photography, comprising a frame provided at each end with a transversely extending retaining tongue, and a shiftable separator member extending transversely of and slidably connected with said frame.

2. A developing device for use in photography, comprising a frame provided at each end with a transversely extending retaining tongue, a shiftable separator member extending transversely of and slidably connected with said frame, and means forming a part of said frame to prevent the disconnection therefrom of said member.

3. A developing device for use in photography, comprising a flat frame of relatively thin material having a transversely extending retaining tongue at each end thereof and struck therefrom, and a plurality of shiftable separator members slidably con-

nected with said frame and extending transversely thereof.

4. A developing device for use in photography, comprising a flat frame of relatively thin material having a transversely extending retaining tongue at each end thereof and struck therefrom, and a plurality of shiftable separator members slidably connected with said frame and extending transversely thereof, one of said members being continuous and the other slitted.

5. A developing device for use in photography, comprising a flat frame of relatively thin material having a transversely extending retaining tongue at each end thereof and struck therefrom, and a plurality of shiftable separator members slidably connected with said frame and extending transversely thereof, one of said members being continuous and the other slitted, and said frame having each end thereof provided with means to prevent the disconnection of said members therefrom.

6. A developing device for use in photography, comprising a frame formed of relatively thin material and provided at one end with a retaining tongue, and a separator member extending transversely of said frame and slidably connected therewith.

7. A developing device for use in photography, comprising a rectangular frame provided with a plurality of transversely extending film retaining tongues, and a plurality of transversely extending film separating members slidably connected with said frame.

8. A developing device for use in photography, comprising a rectangular frame provided with a plurality of transversely extending film retaining tongues, and a plurality of transversely extending film separating members slidably connected with said frame, one of said members being continuous and the other split.

9. A developing device for use in photography, comprising a rectangular frame provided with a plurality of transversely extending film retaining tongues, and a plurality of transversely extending film separating members slidably connected with said frame, one of said members being continuous and the other split, and said frame provided at each end with means to prevent disconnection therefrom of said members.

10. A developing device for use in photography, comprising a frame, a plurality of film retaining tongues carried thereby, and a plurality of film separators slidably mounted on and extending transversely of said frame.

In testimony whereof, I affix my signature hereto.

CHARLES S. ROBERTSHAW.