Jan. 16, 1945. E. A. NICHOLS 2,367,424

DEVELOPING TANK FOR ROLL FILMS

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Fig. 1

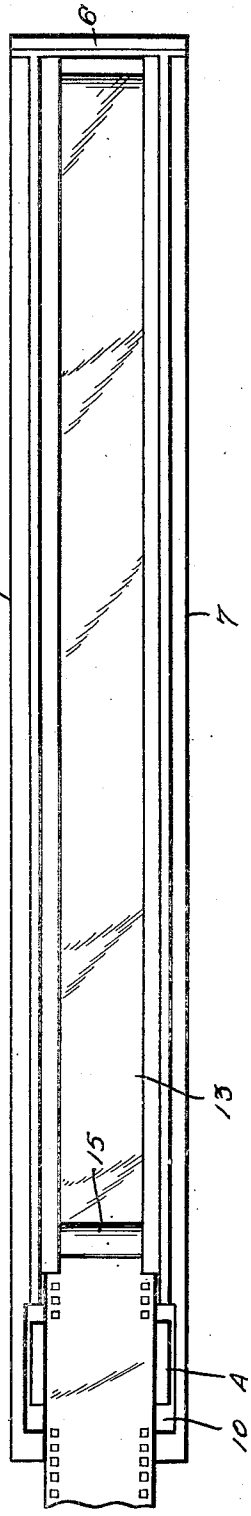


Fig 5

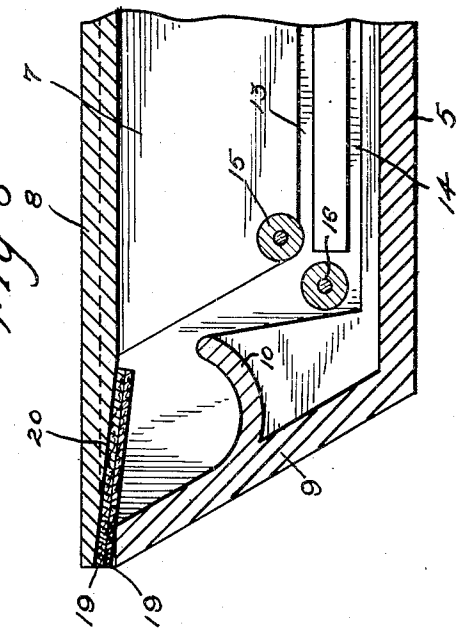
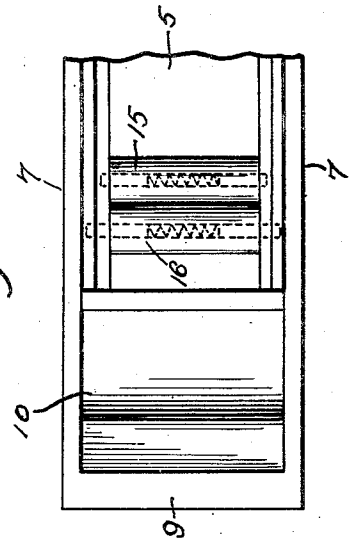


Fig 4



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DEVELOPING TANK FOR ROLL FILMS

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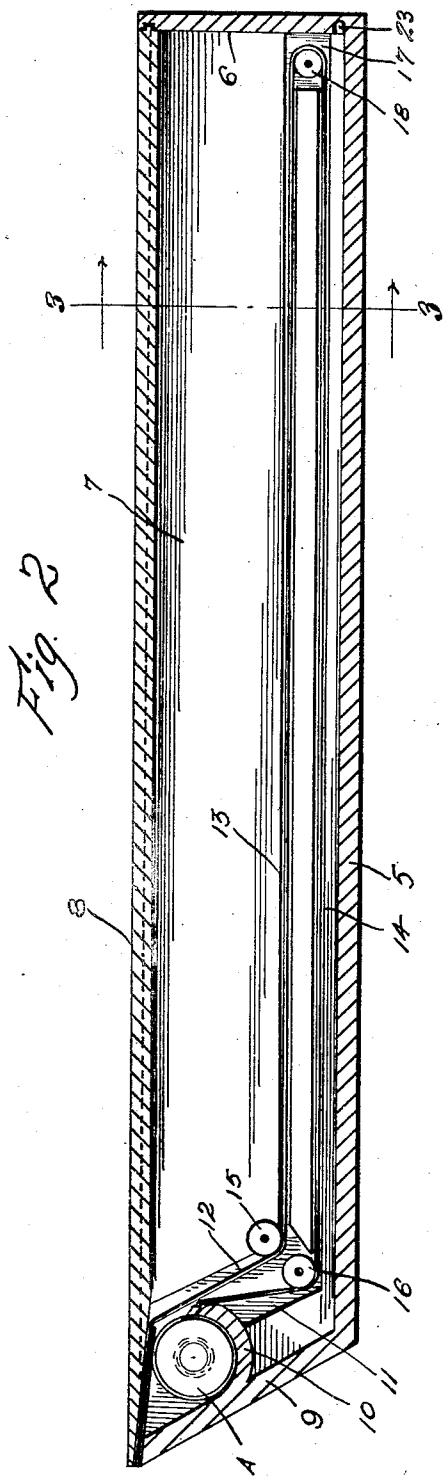


Fig. 2

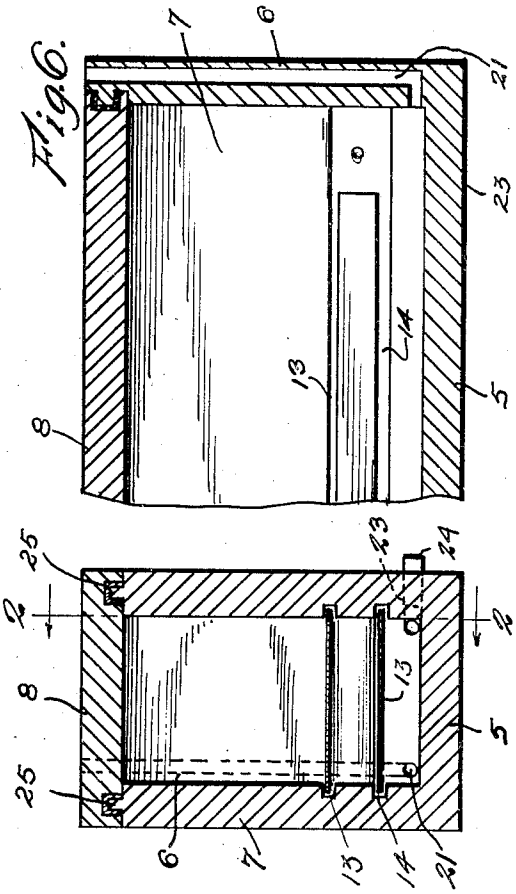


Fig. 6.

Fig. 5

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UNITED STATES PATENT OFFICE

2,367,424

DEVELOPING TANK FOR ROLL FILMS

Edward A. Nichols, Gainesville, Tex.

Application November 17, 1943, Serial No. 510,686

1 Claim. (Cl. 95—90.5)

This invention relates to new and useful improvements in developing tanks such as are used for roll films, the principal object of this invention being to provide such a tank in which film may be introduced in daylight or artificial light, without exposing the film.

Another important object of the invention is to provide a tank of the character stated which will be easy to use and wherein there is very little possibility of causing damage to film.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings:

Figure 1 is a top plan view of the tank with the cover removed.

Figure 2 is a longitudinal sectional view through the tank.

Figure 3 is a cross section on the line 3—3 of Figure 2.

Figure 4 is a fragmentary top plan view of the tank with the tank cover removed and without showing film trained therein.

Figure 5 is an enlarged fragmentary vertical sectional view through one end of the tank.

Figure 6 is a fragmentary vertical sectional view through one end of the tank disclosing the inlet and drain duct.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the tank consists of a bottom 5, a vertical end wall 6, side walls 7, a removable cover 8 and an inclined end wall 9 which has an inwardly disposed trough 10 in which a roll of film may be placed, this roll being denoted by reference character A.

Adjacent the trough 10 the side walls 7 have substantially vertical grooves 11 through which the edges of flights of film 12 can travel.

Upper and lower horizontal grooves 13, 14 are provided in the side walls 7 for receiving the edge portions of the flights of the film 12 as the same pass from and to the grooves 11.

A pair of rollers 15, 15 is provided at the lower portion of the grooves 11 at the introduction end of the tank. At the far end of the tank, the side walls 7 have recesses 17 where the film passes over a roller 18.

As can be seen in Figure 2, the film leaves the roll A goes under the roller 16, along the groove 14 to the roller 18 and back through the groove 13 to pass under the roller 15 and travel upwardly to pass out of the tank between a pair of felt light excluders 19, 19 which are disposed against a tapered portion 20 of the cover 8, as is clearly shown in Figure 5.

An inlet duct 21 is provided in wall 6 for the introduction of the necessary developing chemicals, while numeral 23 is a drain duct provided with a stopper 24.

It is preferable that the cover 8 be connected to the tank proper by tongue and groove connections 25.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

A developing tank for roll films comprising a horizontally elongated tank body having a removable cover and including parallel side walls, a bottom wall, a vertical end wall, and an inclined end wall, an integral transverse film roll supporting trough on the inclined end wall and connecting the side walls, said side walls having substantially vertical film edge receiving grooves in their inner surfaces leading downwardly from the inner side of said trough, upper and lower horizontal film edge receiving grooves leading from the lower ends of said vertical grooves to a point adjacent the vertical end wall, and recesses connecting the ends of said horizontal grooves adjacent said vertical end wall, spaced transverse guide rollers in the tank at the junctures of said horizontal grooves with said vertical grooves, a further transverse guide roller between the horizontal grooves at said recesses, the inclined end wall and the adjacent end of the cover being spaced to define an end film exit, and flexible light excluders for said exit.

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