G. C. BEIDLER.

DEVELOPING APPARATUS.

APPLICATION FILED OCT. 16, 1906.

904,399. Patented Nov. 17, 1908.

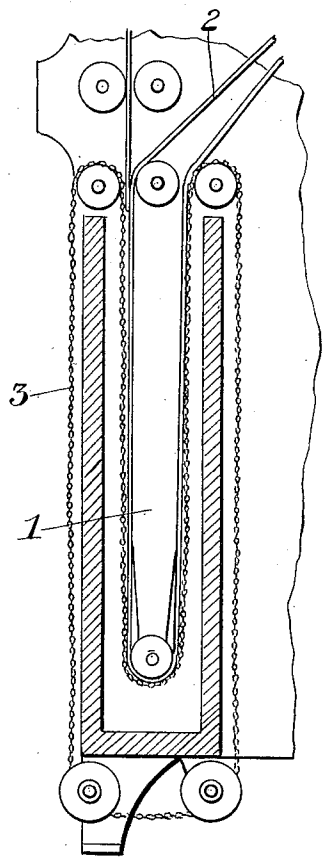


Fig. 1.

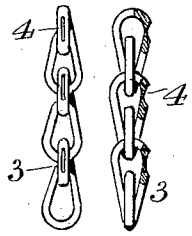


Fig. 3.

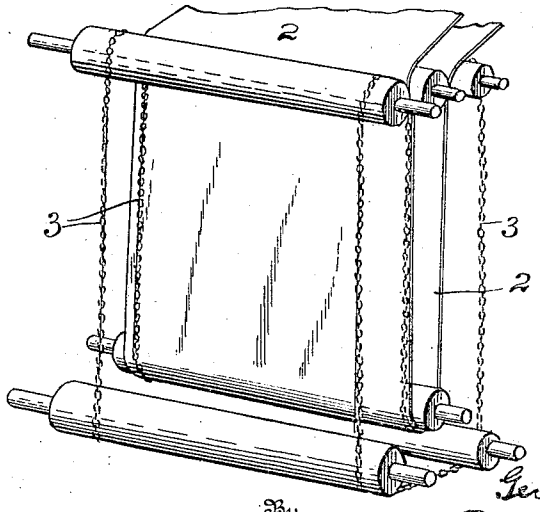


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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DEVELOPING APPARATUS.

No. 904,399. Specification of Letters Patent. Patented Nov. 17, 1908.

Application filed October 16, 1906. Serial No. 339,196.

To all whom it may concern:

Be it known that I, GEORGE C. BEIDLER, a citizen of the United States of America, residing at Oklahoma, in the county of Oklahoma, Oklahoma, have invented certain new and useful Improvements in Developing Apparatus, of which the following is a specification.

This invention relates to improvements in photographic developing apparatus and relates more particularly to the conveyer for carrying film through the developer. The present invention is intended to be employed in conjunction with the apparatus disclosed in my patent No. 810,388 and my pending application, Serial Number 310,732 and more especially the latter, although it is to be understood that it can be employed with any developing apparatus.

It has been found in practice that the continuous cords or bands employed with an apron for conveying the film, or severed film, leave upon the film a mark along its edge which is a disadvantage to the finished article. It has also been found that the developing fluids through which the cords or bands pass tend to destroy said cords or bands. By practical experience it has been found that these disadvantages are obviated by using linked chains, more especially chains formed or made of brass. These chains have been found to give a better gripping surface and do not obstruct the free flow of the developing fluid on the film. This is accounted for in view of the fact that the contacting surface of the chain is interrupted, which interruption is caused or effected by the natural arrangement of the links. This interruption of the chain is further enhanced by recesses or depressions formed in the contacting surfaces of the chain. These recesses reduce the contacting surfaces to a minimum.

It is an object of this invention to produce a device of the character noted which will possess advantages in points of simplicity, efficiency and durability, proving at the same time comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a fragmentary view of the developing apparatus showing the invention applied thereto. Fig. 2, is an enlarged detail view showing the invention. Fig. 3, is a detail of the invention.

In the drawings 1, indicates the compartment for containing the developing fluid and 2, the apron passing therethrough for conveying the severed portions of the film. Traveling with said apron through the compartment and contacting with the severed films are the brass link chains 3, which form the feature of this invention. These chains are arranged adjacent the edges of the apron. It is to be observed in the detail view that the contacting surface of this chain is interrupted and permits the free flow of the developing fluid entirely across the film. The construction of the chain is such in itself to permit this free flow of the developing fluid, but to further enhance the same, the contacting portions of the chain are provided with recesses or depressions 4, which reduce the contacting surfaces of the chains to a minimum.

While but one form of the chain has been illustrated it is to be understood that any form of chain may be employed that will work with the facility desired, the essential feature being that brass being used in the construction of said chain the developing fluid will not attack the brass or impair its usefulness.

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is—

1. In combination with a developing compartment an apron passing therethrough adapted to carry film, and linked chains traveling therewith, the surfaces of the chains being interrupted.

2. In a photographic and developing apparatus, chains in combination with other means for conveying film through the developing fluids, those portions of the chains contacting with the film being recessed.

3. In combination with a developing apparatus, an apron passing therethrough, adapted to carry a film and a flexible means acting in conjunction with the apron; said flexible means having the surface contacting with the film interrupted.

4. In combination with a device for con-

veying prints or films, members comprising loosely connected parts coacting with the conveying device for retaining the prints or films on the conveying device, the surfaces of the members contacting the prints or films being interrupted.

5. In a developing apparatus, an apron for carrying film through developing fluid, and a member engaging the film to hold it on the apron, said member having holes therein.

In testimony whereof I affix my signature in the presence of two witnesses this 3rd day of October, 1906.

GEORGE C. BEIDLER.

Witnesses:
B. D. SHEAR,
J. A. PETTIS.