No. 773,382. PATENTED OCT. 25, 1904.

W. F. FOLMER.

PLATE HOLDER.

APPLICATION FILED FEB. 23, 1904.

NO MODEL.

Fig. 1

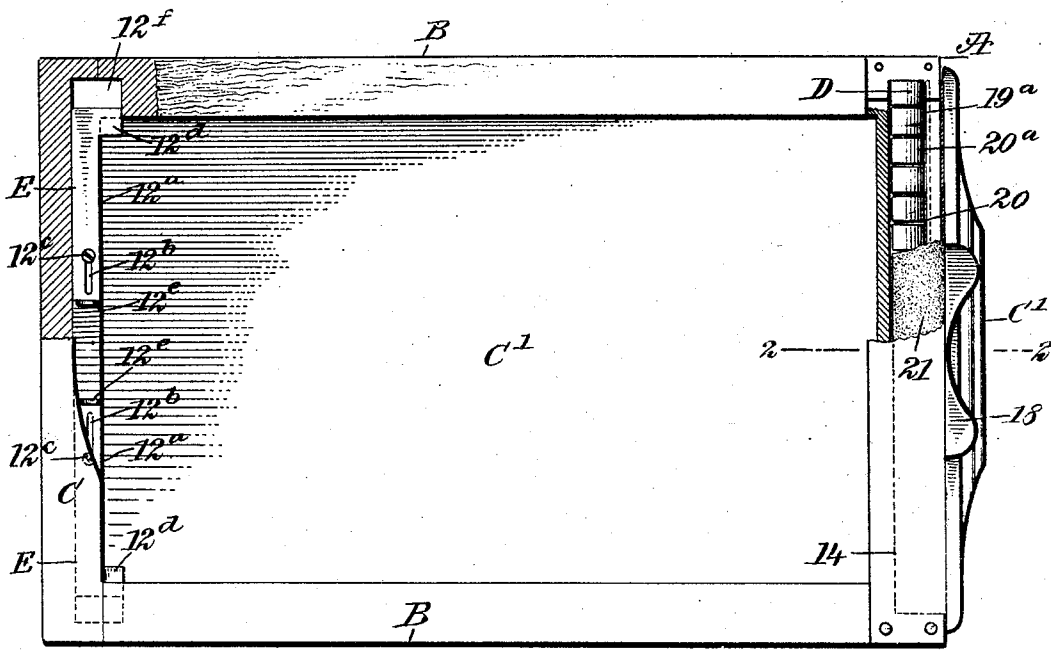


Fig. 2.

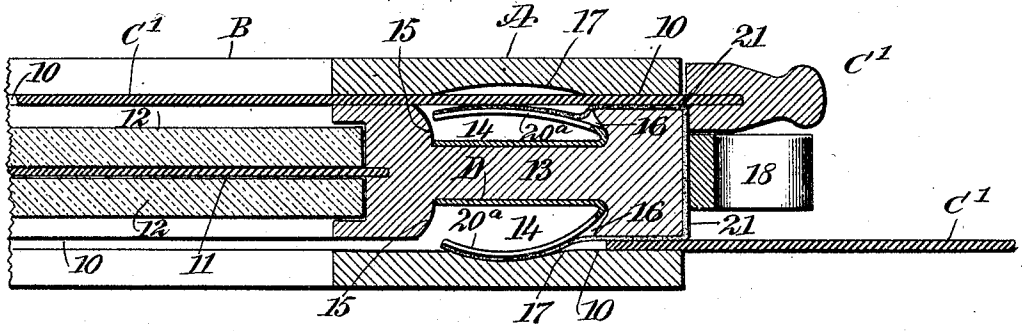
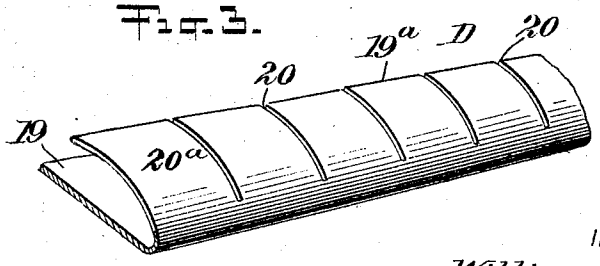


Fig. 3.



WITNESSES:

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No. 773,382. Patented October 25, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM F. FOLMER, OF NEW YORK, N. Y.

PLATE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 773,382, dated October 25, 1904.

Application filed February 23, 1904. Serial No. 194,764. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. FOLMER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Plate-Holder, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a plate-holder which will not leak light when a slide is being introduced into the holder or is being withdrawn therefrom and to admit of both movements of the slide being expeditiously and conveniently accomplished.

A further purpose of the invention is to provide a spring or tension controlled sealing device for the slide of the plate-holder which may be applied without necessarily weakening the holder and which will be expansive at all times without the liability of light being admitted to the plates in the holder.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional plan view of the improved plate-holder. Fig. 2 is an enlarged longitudinal section taken practically on the line 2 2 of Fig. 1, and Fig. 3 is a perspective view of a portion of a spring-retaining device for a slide of the holder.

The holder in many respects is practically the same as the conventional plate-holder, comprising a front end section A, a rear end section C, and side sections B, together with opposing slides C′, which latter, as usual, are received in grooves 10, extending through the front section A and produced in the inner faces of the side and rear sections B and C.

As is also customary, the holder is provided with a central partition 11, at each side of which the plates 12 are located, as is shown in Fig. 2, the said plates being held in position by retaining devices E. The retaining devices consist of opposing locking-slides 12^a, movable to and from each other, but limited and guided in their movement by producing slots 12^b in the slides, through which slots screws or pins 12^c are passed into the holder, and at the outer end of each locking-slide 12^a an offset 12^d is formed, extending in direction of the entrance-openings for the holders, and at the opposite end of each locking-slide 12^a a small lug 12^e or its equivalent is produced whereby to readily operate the said locking-slides. In the operation of the said slides after a plate has been placed in position in the holder it is held in position at what may be termed the "rear" end of the said holder by the said retaining devices E, located at such point, and before the plate is introduced into the holder the offsets 12^d are made to enter recesses 12^f, produced in the sides of the holder, as is shown in Fig. 1. After a plate has been seated in the holder the lugs 12^e are grasped and the locking-slides drawn in direction of each other, thereby bringing the offsets 12^d over the corner portions of the plate, as is shown in Fig. 1, thus securely holding the plate in position, and it may be here remarked that the forward ends of the offsets 12^d are more or less beveled, so that the said offsets will pass over the edges of the plate freely and without a tendency to mar or scratch the same. The said front end section A of the plate-holder is provided with what may be termed a "central member" 13, separated from the outer members at that end by the grooves 10, through which the slides C′ enter the holder. At opposite sides of the said central member 13 at the front end of the plate-holder opposing recesses 14 are made. The inner end walls 15 of these recesses 14 are preferably convexed more or less, and the outer end walls 16 of the said recesses are more or less undercut, as is clearly shown in Fig. 2. Opposite each recess 14 at what may be termed the "inner" faces of the outer members of the front end section A concaved recesses 17 are formed, and in order that the slides when they are placed in the holder may be accurately entered and withdrawn and entered and withdrawn without a tendency to cause light to enter the holder a handpiece 18 is secured to or is integral with the outer face of the said

front end section A of the holder, as is shown in Figs. 1 and 2.

In each of the recesses 14 a slide-retainer D is located, and each slide-retainer D is constructed of spring metal, usually brass. These slide-retainers extend into the side sections B of the holder, as is shown in Fig. 1, so that the said slide-retainers are of greater length than the width of the slides C', adapted to be forced over them. These slide-retainers, one of which is shown in detail in Fig. 3, each comprise what may be termed a "flat base-section" 19 and a more or less arched outer section 19^a. The arched outer section 19^a of each slide-retainer preferably stops short at its free end from the free end of the base-section.

The base-section of each slide-retainer is made to fit closely to the inner wall of a recess 14 in the front section of the plate-holder, as is shown in Fig. 2, and when a slide C' has been removed from the holder the arched portion of the retainer D, over which such slide would pass, enters a recess 17 in the adjacent outer member of the end section A, conforming to the curvature of the said recess, as is shown in Fig. 2, thus acting to block the groove 10, from which the slide was removed, and to prevent light from entering the plate-holder. At the same time a slide may be readily placed in position in the holder, and if the slide is by chance entered at an angle instead of being entered straight the slide-retainer will respond at the point where it is compressed, remaining entirely sealed at other points in its length, since the upper arched member 19^a of each slide-retainer is provided with a series of transverse cuts or slots 20, thereby forming at its arched portion on each retainer a series of spring-tongues 20^a, each independent of the other in action.

In order to absolutely prevent any light from entering the plate-holder, I secure a covering 21, of opaque felt or other suitable fabric, to the outer or arched spring-sections 19^a of the slide-retainer, and usually I carry this covering at the outside of the front end section A of the plate-holder, securing it thereto by a cement of any suitable character. Under this construction I obtain a plate-holder which is practically absolutely light-tight and in which the slides may be quickly and conveniently entered or removed from the holder, as desired. It is not absolutely necessary that the slides shall be accurately or straightly entered, as has been set forth, since the various spring tongues or fingers on the slide-retainers act one after the other as the slide is entered.

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

1. In a plate-holder, a spring-actuated light cut-off for the slide, the member of the cut-off adapted for engagement with the slide consisting of a series of independently-operating factors, and a support integral with said factors, as described.

2. In a photographic-plate holder, a cut-off spring for the slides having a series of tongues arranged for engagement with the slides, and anchoring-sections adapted to be seated in the body of the holder, as set forth.

3. In a photographic-plate holder, a cut-off spring for a slide of the holder, comprising an anchoring-section adapted to be fitted in the body of the holder, and a connected arch-section divided into a series of tongues, as set forth.

4. In a photographic-plate holder, a frame, slides for the frame, having recesses in the entrance portion of the frame for the slides, which recesses extend in the slide portions of the frame, each comprising an anchoring member and a curved binding member divided into a series of independent tongues, as described.

5. In a photographic-plate holder, a frame, slides for the frame, having recesses in the slide-receiving portion of the frame, extending into its sides, which recesses have beveled inner longitudinal walls and undercut outer longitudinal walls, and binding-springs fitted to the recesses of the body of the holder, each binding-spring consisting of an anchoring-section extending from one longitudinal edge of a recess to the other, and an outwardly-arched retaining-section terminating short of the inner longitudinal edge of the anchoring-section, the said retaining-section being provided with a series of transverse slots, for the purpose described.

6. In a photographic-plate holder, a frame, slides for the frame, having recesses in the slide-receiving portion of the frame, extending into its sides, which recesses have beveled inner longitudinal walls and undercut outer longitudinal walls, and binding-springs fitted to the recesses of the body of the holder, each binding-spring consisting of an anchoring-section extending from one longitudinal edge of a recess to the other, and an outwardly-arched retaining-section terminating short of the inner longitudinal edge of the anchoring-section, the said retaining-section being provided with a series of transverse slots, the said frame having additional recesses for the expansion of the retaining-sections of the binding-springs, as set forth.

7. In a photographic-plate holder, a frame, slides for the frame, having recesses in the slide-receiving portion of the frame, extending into its sides, which recesses have beveled inner longitudinal walls and undercut outer longitudinal walls, binding-springs fitted to the recesses of the body of the holder, each binding-spring consisting of an anchoring-section extending from one longitudinal edge of a recess to the other, and an outwardly-arched retaining-section terminating short of

the inner longitudinal edge of the anchoring-section, the said retaining-section being provided with a series of transverse slots, the said frame having additional recesses for the expansion of the retaining-sections of the binding-springs, and light-proof material secured to the outer faces of the retaining-sections of the binding-springs, which light-proof material is carried out through the entrance-passages for the slides of the holder, as set forth.

8. In plate-holders, a plate-retainer, consisting of opposing sliding members mounted to move to and from each other and provided at their opposing ends with projections to be engaged by the finger of the operator, offsets arranged to extend from the opposite ends of the said sliding members, which offsets, as the said members are operated, are adapted to be carried over a plate or away from the plate, the two slides being simultaneously operated, and means for limiting the movement of the sliding members, as described.

9. A plate-holder comprising a frame, a removable slide and a plate in the head of the frame and having a wing extending into the range of action of the slide, said wing being formed with a series of independent narrow spring-fingers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. FOLMER.

Witnesses:

J. FRED. ACKER,

M. H. LEGGETT.