

(No Model.)

J. T. CLARKE.
PACK OF PHOTOGRAPHIC FILMS.

No. 571,470.

Patented Nov. 17, 1896.

Fig. 1.

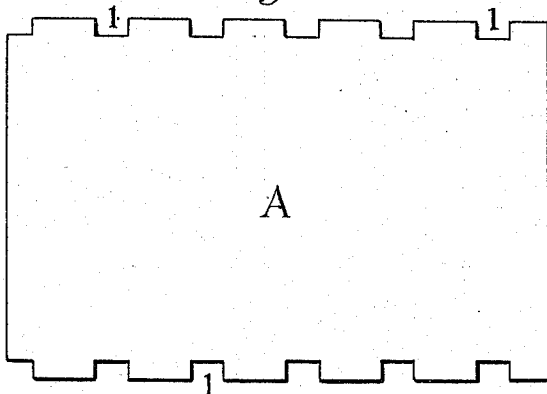


Fig. 2.

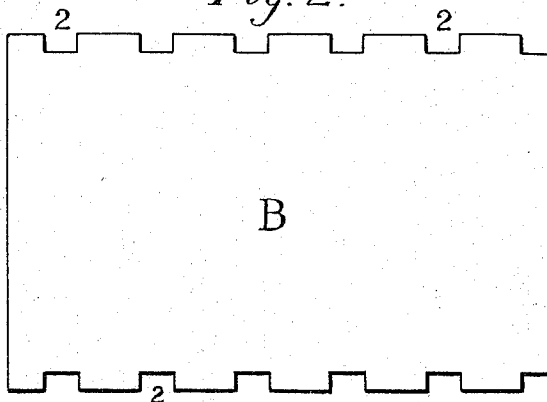


Fig. 3.



Witnesses:

Walt.
H. S. Allen

Inventor:

Joseph Thacher Clarke

UNITED STATES PATENT OFFICE.

JOSEPH THACHER CLARKE, OF BOSTON, MASSACHUSETTS.

PACK OF PHOTOGRAPHIC FILMS.

SPECIFICATION forming part of Letters Patent No. 571,470, dated November 17, 1896.

Application filed December 29, 1890. Serial No. 376,162. (No model.) Patented in England July 29, 1890, No. 11,891.

To all whom it may concern:

Be it known that I, JOSEPH THACHER CLARKE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, but temporarily residing at Harrow, London, in the county of Middlesex, England, have invented new and useful Improvements in Packs of Photographic Films, (for which I have obtained Letters Patent in Great Britain, No. 11,891, bearing date July 29, 1890,) of which the following is a specification.

This invention relates to packs or series of photographic films with notched edges formed of two types as regards the position of the notches and so packed in alternate sequence that they are capable of being separated or changed *seriatim* by means of sliding stops or selecting devices working in connection with a suitable holder, from which they are discharged one by one after exposure.

I form these separate sheets of which the pack is constituted and I arrange the sheets in series in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a face view of a notched film of the first or odd-number type. Fig. 2 is a face view of a notched film of the second or even-number type. Fig. 3 is a side view of the pack or series formed in accordance with my invention by combining a number of films of the first and second type in alternate sequence.

Two opposite edges of the film A of the first type are serrated by notches 1 1 1, while the corresponding edges of the film B of the second type are serrated by notches 2 2 2. The position of the notches 1 1 1 in the film A is so determined that when the film A is superposed upon the film B the notches in the former film do not coincide with, but, on the contrary, occur midway between the notches 2 2 2 in the latter film, the notches in the film of the one type thus corresponding to the projections between the notches of the film of the other type.

In both types of film the width of the notches, as measured along the edge of the film, is of less extent than the width of the projections between the notches. Herefrom it results that when a film of the one type is

laid upon a film of the other type the projections between the notches of the film of the first or upper type will completely cover and overlap on both sides for a certain distance the notches in the film of the second or lower type. The distance between the notches may be advantageously made, whatever the actual size of the film itself, about three-quarters of an inch from center to center. This will allow the notch to be about one-quarter of an inch in width—that is to say, amply large enough to allow the passage through it of a pin or stop, say, one-tenth of an inch in diameter. The width of the projections between these notches will hence be about one-half an inch, and the overlap on each side will be about one-eighth of an inch. In other words, when the films of different types are arranged in alternate sequence, the edges of the adjacent notches in the alternate sheets will not be nearer to each other than one-eighth of an inch. In accordance herewith a film three inches and a quarter long is preferably formed with four notches on each side, a film four inches long is formed with five notches on each side, a film four inches and three-quarters long with six, and so on.

The depth of the notches may advantageously be made about one-eighth of an inch, corresponding to a stop or pin having a projection into the exposure-aperture of, say, one-tenth of an inch.

The position of the notches in the edges of the film in both the types is preferably so arranged that the outermost notches are situated at equal distances from the respective ends nearest to them. The notching of the films is thus in both types symmetrical as regards that axis in the face of the film which is at right angles to the notched edges. The advantage of this symmetrical arrangement is that the pack of films may on being introduced into the holder for which it is intended be reversed as regards the position of its ends. For like reasons the notches in each film are exactly opposite to each other, corresponding in this respect to the relative positions of the selecting devices or stops of the holder presently to be referred to.

In forming a pack or series of such notched films in accordance with my invention the films of the first type A are alternated with

the films of the second type B, the films of the first type thus occupying the first, third, fifth, &c., positions, in short, those of odd number, in the pack, while the films of the second type B occupy the second, fourth, sixth, &c., positions, in short, those of even number, in the pack. In this manner the notches of each film in the pack will correspond with the projections of the films preceding and following it, and vice versa. If such a pack of notched films be introduced into a holder having selecting devices or stops smaller than and capable of passing through the notches in the films, and if these stops be so moved as to correspond in position with the notches 1 1 1 of the film of the first type A, the foremost film will be released from the support of the stops and from retention in the holder and will fall from the holder when it is inverted for this purpose. The said stops, however, being thereupon in the position of the notches 1 1 1 will bear upon the projections between the notches 2 2 2 of the succeeding film of the second type B, which will thus be retained in the holder, in the focus of the lens and ready for exposure until such time as the stops are again shifted, so as to correspond with and to pass through the notches 2 2 2. For usage in photographic cameras packs of such notched sheets in alternate sequence are made up of thin and flexible sensitized films, commonly formed of celluloid, gelatin, or paper, which are customarily employed to replace glass as negative supports. Such sensitized films are supplied by the manufacturers both with and without an opaque or non-actinic backing intended to prevent the passage through the film to the sensitive surface following it of the actinic rays admitted during exposure.

When such non-actinic backing forms no part of the sensitized film, but is constituted as a separate opaque sheet or film, this backing film may be either notched like the sensitized film preceding it, and thus be discharged from the holder, together with this, by one movement of the beforementioned stops, or the backing film may, on the other hand, be notched differently from the sensitized film which precedes it, and thus require to be discharged by a second movement of the stops for each exposure. In the latter case it is convenient to cut all the sensitized films of one pattern, say of the first type A, and all the backing films of the other pattern, say, of the second type B, the pack being thus formed of sensitized and of opaque films of different pattern in alternate sequence.

Packs of sensitized films intended for photographic negative-making, such as that described, are supplied to the operator in light tight packages, as is well understood by those skilled in the art.

What I claim as my invention is—

As a new article of manufacture, a pack or series of photographic films of two patterns, having their opposite edges notched, and being so formed and arranged in alternate sequence that the notches of the films of odd number in the pack correspond to the projections between the notches of the films of even number, and vice versa, substantially as and for the purpose described.

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

JOSEPH THACHER CLARKE.

Witnesses:

WILLIAM F. UPTON,
WM. JOHN WEEKS.