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ANSCO

ANSCO
SPEEDEX FILM

ANSCO COMPANY BINGHAMTON, NEW YORK

Ansco

Speedex Film

The Negative *of* Photography

Ansco Company

Binghamton, N. Y.

~ Ansco ~

ANSCO COMPANY
BINGHAMTON, N. Y.

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325 W. Jackson Boulevard
CHICAGO, ILL.

ANSCO LIMITED
143-149 Great Portland Street,
LONDON, W., ENGLAND

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"IT'S THE FILM THAT MAKES THE PICTURE"

THIS is true, provided the proper camera is used, which includes the right kind of lens and shutter. If the camera is an Ansco no further comment is necessary, inasmuch as the Ansco is made by the manufacturers of ninety-eight per cent. of all professional cameras that have been used in this country during the last sixty years. A professional photographer can not afford to make failures, and that tells the whole story. The Ansco amateur camera is the Ansco professional camera simplified for the amateur without sacrificing perfect results.

The next step to consider is the brand of film to use, and what that brand stands for.

Nature is a riot of color. To portray nature faithfully by photography, colors must be reproduced in fine nuances of black and white, corresponding to each tone in its correct value.

This is what Ansco Film will do, because its chromatic values are correctly balanced. They are sensitive to the right colors, and in the proper degree, so as

to produce the various tints of black and white necessary to create the correct impression.

ANSCO FILM GIVES HARMONIOUS COLOR VALUES

In view work where there are clouds and foliage, or work embracing great distance, the finer details are retained, and a harmony of light and shade is secured. In portrait work, the draperies and dresses are reproduced in their true color values. Auburn hair will be shown in a different tone from black hair, and blue eyes will not be represented as almost white. If it is a photograph of flowers, ANSCO FILM will reproduce the natural colors in different tones instead of in one monotonous tone. This is what gives ANSCO photographs such an exceptionally natural appearance.

ANSCO FILM POSSESSES HIGH SPEED

The element of speed is of the utmost importance, as the film must act with lightning-like rapidity in order to catch all the light which passes through the shutter at the instant of exposure. In a space of time varying from one twenty-fifth to one three-hundredth part of a second the image must be faithfully and

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faultlessly reproduced. ANSCO FILM possesses speed sufficient to catch and record all that can be demanded of it under all sorts of light conditions. Underexposures (weak, unprintable negatives) are minimized when you load your camera with ANSCO FILM.

For practical purposes, to give speed and safety, ANSCO film is made very sensitive to green and yellow, because of the green foliage, and in order to make instantaneous photographs possible on hazy days and late in the afternoon when the yellow light prevails. It is made only moderately sensitive to red, so as to prevent fog in developing by ruby light. The excessive sensitiveness to blue and violet, which all films are likely to possess, has been decreased in relative proportion to the sensitiveness of red, yellow and green.

ANSCO NON-HALATION PROPERTIES ARE ESSENTIAL

Non-halation means that the strong rays of light penetrating the emulsion (that is, the face of the film) are not reflected back in a way to spread over the sensitive surface in conflict with the middle tints of the picture, destroying details. If you have ever made a photograph of an interior, you know

how the strong light from windows mars your picture. This is avoided with ANSCO film, because it is practically non-halation.

IN A FILM, KEEPING QUALITY IS ALSO VERY IMPORTANT

ANSCO FILM keep well under all climatic conditions.

Keeping quality depends on—first, the cellulose support. This is made of photographic cotton dissolved in the proper solvents, the same kind of cotton that has been employed for fifty years or more in making collodion with which to sensitize glass plates needed for wet plate photography. The makers of ANSCO film are the only manufacturers who were successful in making a cotton absolutely satisfactory for that purpose. When wet plate photography was the only means of making pictures, only Anthony Cotton was used. It is used by the best photo-engravers today. Second, the stability of the sensitive emulsion. Third, black paper and proper kind of ink for printing the numbers thereon. ANSCO black paper is absolutely chemically pure. Others have attempted to get the same result by using other colors than black for the paper. To prevent the paper and ink from coming into contact with the film

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while rolled, the ANSCO black paper is first printed, then coated with several layers of gelatin, and then calendered to reduce its thickness. This accounts for the better keeping qualities of ANSCO film, and for their being entirely free from offsetting or number marking.

ANSCO FILM are guaranteed to be perfect keeping for one year from the time they leave the factory. Many instances are recorded of ANSCO FILM that have developed perfectly two, three and even four years after the expiration of the guarantee. These are exceptional instances, but offer good proof of the extreme care and high quality materials that enter into the manufacture of ANSCO FILM.

To eliminate the possibility of failures, and to be sure that the results are permanent, the simple thing to do is to stick to the three strong links in the chain of photographic success: ANSCO CAMERA, ANSCO FILM and CYKO PAPER. It is not always possible to make a second trial.

Follow with reasonable care the instructions and advice contained in this book, and everything will be easy.

"Faces fade, and the people we once knew, some of them, are gone forever. Children grow up and go away. The old house is torn down. The pets die or disappear. The time to take the picture is when you see it. The historic value of things, fixed in the form of a photograph, is beyond price."—Elbert Hubbard.

A BIT OF HISTORY

A little knowledge of the history of any process, however simple, is desirable in mastering the details of its practical workings, and, indeed, no photographic process is so simple as film photography, now that the problem involved in its manufacture has been reduced, as far as the user is concerned, to "pressing the button" and allowing a few properly compounded chemicals to do the rest. Yet the production of a film was considered, at one time, and until the advent of the Goodwin-Ansco film, one of the dreams to be realized—not unlike the flying machine of the present day. So much so that the Société Française de Photographie offered a substantial prize in a competition that closed unsuccessfully in Paris, on December 31, 1880. The credit of successful accomplishment was thus left to America, and the world wondered when the Rev. Hannibal Goodwin, that painstaking, unassuming American, announced his discovery of film photography. Dr. Goodwin's patent was applied for in 1887, but, owing to interference proceedings in the United States Patent Office, it was not issued until 1898.

The Goodwin Film and Camera Company, whose sole trade agent is the Ansco Company, brought suit for infringement of the Goodwin patent, and on August 14, 1913, after eleven years of litigation, Judge Hazel in the United States District Court at Buffalo, N. Y., rendered a decision finding the Eastman Kodak Company guilty of infringement of the patent for the original and genuine Goodwin-Ansco film.

The court's decree was unqualifiedly affirmed in March, 1914, by the United States Circuit Court of Appeals, and the patent is given, under

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this decision, a broad and controlling construction, covering the universally used, modern photographic film in all forms, including cartridge film, film packs, and cinematograph or moving picture film.

ANSCO FILM, therefore, has behind it years of experience of the highest order.

Now that the facts in regard to ANSCO film are properly understood, we will proceed to give the few instructions necessary for its proper manipulation, and in doing so we must take for granted that the worker has a reliable camera to take pictures with, and that he will follow the instructions given by the manufacturer of his camera, in order to successfully expose the film. No result can be expected on any dry plate or film if the camera does not do its part. If the camera is of a cheap order, equipped with Single Meniscus lens with working aperture of U. S. 16, it should be used with proper regard to its limitations. That is, it would be impossible to expect good results if used under conditions that only a high-grade Anastigmat working at U. S. 4 will warrant. There are a few points in connection with the camera exposure which, while found in most instruction books, we desire to emphasize here.

The subject to be photographed should be in the broad open sunlight, but the camera should not. The sun should be behind the back or over the shoulder of the user and not shining upon the lens.

When ready for making exposures, observe:

First. That the shutter of the camera is set properly.

Second. That the diaphragm stop is set at the proper opening.

Third. That the camera is properly focused.

Fourth. That the unexposed section of the film is turned into position. After making the exposure turn the winding key in the proper direction until the next number registers, showing that the film is in position for the next exposure.

Instantaneous exposures (snapshots) are easier to make than any others and, if the object to be photographed is in the bright sunlight, are usually successful if directions are followed. However, the best results are generally obtained when it is slightly cloudy or hazy, giving longer exposure.

In fact, in taking groups and portraits in the open air, a cloudy day is preferable if a good likeness is to be secured. The main point in outdoor portraiture is to have a great deal of light without actually placing the subjects in the sun. Very pretty results are obtained on a bright sunny day by placing the subject in the shade.

TIME EXPOSURES—INTERIORS

Set the camera in such a position that the finder will embrace the view desired. The camera should not be pointed directly at a window, as the glare of light will blur the picture. If all the windows cannot be avoided, pull down the shades of such as come within the range of the camera. The camera should be placed on a tripod, table, or other firm support. The length of exposure is largely a matter of practice and judgment, and is governed by the amount of light on the object to be photographed. The length of exposure is controlled by the size of the lens opening, or diaphragm, used.

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TIME NEEDED FOR INTERIOR EXPOSURES

The following table is figured for exposures made between the hours of 10 A. M. and 3 P.M., using diaphragm No. 16. If the stop No. 8 is used, give one half the time. If the stop or diaphragm No. 128 is used, give eight times longer exposure. The smaller the stop, the sharper the picture. The No. 16 gives the best results for interiors.

WHITE WALLS

AND MORE THAN ONE WINDOW

Bright sunlight outside	4 seconds
Hazy sun	10 "
Cloudy bright	20 "
Cloudy dull	40 "

WHITE WALLS

AND ONLY ONE WINDOW

Bright sunlight outside	6 seconds
Hazy sun	15 "
Cloudy bright	30 "
Cloudy dull	60 "

MEDIUM-COLORED WALLS AND HANGINGS

AND MORE THAN ONE WINDOW

Bright sunlight outside	8 seconds
Hazy sun	20 "
Cloudy bright	40 "
Cloudy dull	80 "

MEDIUM-COLORED WALLS AND HANGINGS

AND ONLY ONE WINDOW

Bright sunlight outside	12 seconds
Hazy sun	30 "
Cloudy bright	60 "
Cloudy dull	120 "

DARK-COLORED WALLS AND HANGINGS
AND MORE THAN ONE WINDOW

Bright sunlight outside	20	seconds
Hazy sun	40	"
Cloudy bright	80	"
Cloudy dull	2 minutes 40	"

DARK-COLORED WALLS AND HANGINGS
AND ONLY ONE WINDOW

Bright sunlight outside	40	seconds
Hazy sun	80	"
Cloudy bright	2 minutes 40	"
Cloudy dull	5 " 20	"

The instructions in this book are based upon the U. S. system, hence the appended table is given to show the F value of each of the uniform system openings:

U. S. 3.5	equivalent to	F 7.5
U. S. 4	"	F 8
U. S. 8	"	F 11.3
U. S. 16	"	F 16
U. S. 32	"	F 22.6
U. S. 64	"	F 32
U. S. 128	"	F 45.2

TO MAKE A PORTRAIT

Place the sitter in a chair partly facing the light, and turn the face slightly toward the camera, which should be at the height of an ordinary table. Center the image in the finder. For a three-quarter figure the camera should be from 6 to 8 feet from the figure; and for a full figure from 8 to 10 feet. The background should form a contrast with the sitter. It is desirable to soften the shadows on the opposite side of the face by means of a white reflecting surface, such as a sheet, thrown over a chair about 3 or 4 feet from the subject.

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TIME EXPOSURES IN THE OPEN AIR

Time exposures in the open may be made, provided diaphragm No. 128 is used, but the exposures must be a great deal shorter than for interiors, as follows:

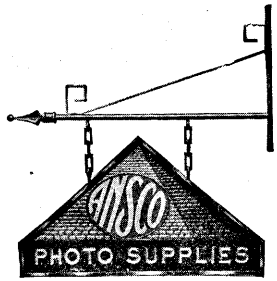
With sunshine	1-5 of a second
With light clouds	from ½ to 1 second
With heavy clouds	from 2 to 5 seconds

The foregoing figures are for objects placed in the open, and with no trees overhead.

No accurate directions can be given for objects in the shadow, under porches, or under trees. Experience only can teach the proper exposure to give.

DARKROOM DEVELOPMENT

Films may be taken to the nearest Ansco dealer to be developed, and Ansco dealers may be quickly identified by the sign of quality, a facsimile of which follows.



This work is done by the dealer at a comparatively small cost. We recommend, however, that the amateur do his own work, as it

will be found very interesting and simple. The most successful and least expensive way of developing is by using trays in a room lighted by ruby light, and from which all white light has been excluded. The few articles needed for the purpose are as follows:

A ruby lamp.
A glass stirring rod.
Three developing trays.
One 4-ounce tumbler graduate.
A printing-frame and glass.
A box of ANSCO M-H Developer.
A box of CYKO Acid Hypo.
Two ANSCO Metal Film Clips.

Secure a room or closet, where, when the door is closed, no white light can be seen. Such a room can be easily secured at night almost anywhere. The reason a dark room is required is that the film is extremely sensitive to white light, whether daylight or lamplight, and would be spoiled if exposed to it, even for the smallest fraction of a second. Having provided such a room or closet and supplied it with the articles before mentioned, also with a pair of shears, a pitcher of water (preferably ice-water), and a pail for waste, proceed as follows:

Set up on a shelf or table the ruby lamp and light it. The lamp gives a subdued red light, which will not injure the film unless it is held too close to it. The lamp should be at least 18 inches away, and with the light reflecting toward the operator.

First. Fill one of the trays (the first tray) nearly full of water.

Second. Open one of the ANSCO M-H Developing tubes, then put the contents (two chemicals) into a graduate and fill it to the four-ounce mark with water; stir until dissolved, pour into the second tray, and then add eight ounces of water.

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Third. Prepare the fixing bath by dissolving the CYKO Acid Hypo, as directed on the package, and put into the third tray.

Fourth. To develop the film, unroll and detach the entire strip from the black paper, allowing the film to roll up loosely.

Fifth. Hold this roll by the end with thumb and second finger of the left hand, and taking hold of the free end with the right, fasten one of the film clips to the end of the strip. Place the film in the tray of water and at once begin to unroll it, holding the film face down in the water with the index finger of the left hand. When the whole length has been unrolled, take hold of the last end of the film with the left hand, affix the second clip and, using

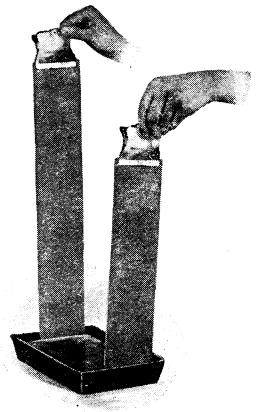

Fig. 1

both hands, pass the film back and forth through the water until it has become thoroughly wet and no air bubbles cling to the surface. Now pass the film through the developer in the same manner. (See Fig. 1.) Keep it constantly in motion, and in about one minute the high lights will begin to darken and you will readily be able to distinguish the unexposed sections between the negatives; in about two minutes you will be able to distinguish objects in the picture. Complete development in the strip by giving sufficient time to bring out what detail you can in the thinnest negatives.

There is no harm in having your negatives of different density. This can be corrected in printing. The difference in density does not affect difference in contrast.

Keep the strip which is being developed constantly in motion, allowing developer to act from five to ten minutes.

The progress of development may be watched by holding the negatives up to the lamp from time to time.

Sixth. To avoid transparent spots, after having passed the film through the developer the first time face down, reverse it and pass it through face up, holding the film down in the tray, and drawing the film through the developer under the hand. This will break all the air bubbles. Transparent spots are caused by air bubbles adhering to the film during development.

Seventh. After complete development cut the negatives apart with a pair of shears, rinse two or three times with clear cold water, and transfer to the third tray, which contains the acid fixing solution.

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INDIVIDUAL TREATMENT

Some amateurs prefer to develop their exposures singly rather than in the strip, so that special treatment may be given such negatives as seem to require it. The negatives may be cut apart before development is commenced, by the following method:

(A) Cut the exposures apart as shown in Fig. 2.

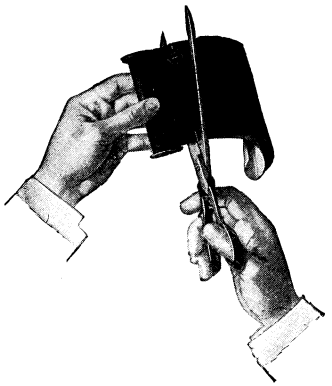

Fig. 2

In unrolling the film preparatory to development, care must be taken that the end be not allowed to roll up over the paper. The exposures should be cut apart with the paper on top. Do not let the fingers touch the face—the dull side—of the film.

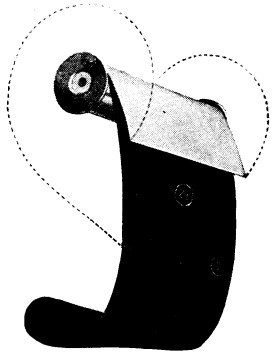

Fig. 3

Fig. 3 shows a cartridge unrolled, with the film on top. To correct this, simply turn back the film as indicated by the dotted lines, thus bringing the film under the paper.

(B) Place the exposures in the first tray, one by one, face down. Put them in edgeways to avoid air bubbles, and immerse them fully. Cover the tray with a bit of brown paper to keep out the light from the lamp.

(C) Take one of the exposures from the water and immerse it face down in the tray of developer (second tray). Rock it back and forth to prevent streaks and air bubbles. In about one minute the film will begin to darken in spots, representing the high lights, and in about two minutes you will be able to distinguish objects in the picture. A common way of determining when a film has been developed enough is to look on the back and ascertain whether the picture begins to show through.

(D) Transfer the developed film to a basin or dish of clean cold water. Rinse two or three times in the water, and leave it to soak while the next film is being developed.

A dozen negatives can be developed one after another in one portion of developer. Then it should be thrown away and a fresh portion mixed.

Six or more negatives may be developed at one time by placing the films in the developer face down, alternating each negative in the developer, so as to prevent air bubbles; but we recommend that the beginner develop only one at a time until the necessary experience is gained.

As each successive negative is developed it should be put with the preceding negatives into the washing water, and the water changed twice to prevent the developer which remains in the films from staining them.

From this stage the treatment of negatives is the same whether they have been developed singly or in the strip.

Those who desire to prepare their own solutions should be provided with a pair of scales or balances with proper weights.

All photographic chemicals are bought and sold by avoirdupois weight, and the avoirdupois system is indicated for use in making up the formulas in this book. Apothecaries' weight is a different system, and an ounce apothecaries' is not the same as an ounce avoirdupois. The grain is the unit and the same in both systems. The only subdivision of an ounce avoirdupois is the grain. The subdivisions of an ounce apothecaries' weight are drams and scruples. Therefore, for convenience a combination of weights is desirable, using drams and scruples as equivalents for grains.

AVOIRDUPOIS WEIGHT

437½ grains.....1 ounce
16 ounces.....1 pound

APOTHECARIES' WEIGHT

20 grains.....1 scruple
3 scruples or 60 grains.....1 dram
8 drams or 480 grains.....1 ounce
12 ounces.....1 pound

Scales should be furnished with the following weights: 1, 2 and 5 grains, ½, 1 and 2 scruples, 1, 2 and 3 drams, apothecaries' weight; and ½, 1 and 2 ounce weights avoirdupois.

The ½ scruple weight equals			10 grains
The scruple	"	"	20 "
The 2 scruple	"	"	40 "
The dram	"	"	60 "
The 2 dram	"	"	120 "
The 3 dram	"	"	180 "

FLUID MEASURE

(Our formulas are based on this table)

60 minims ... 1 fluid dram — 16 ounces ... 1 pint
8 drams ... 1 fluid ounce — 8 pints ... 1 gallon

FORMULAS

For those who desire to compound their own developer, we recommend the following formulas for ANSCO film:

PYRO-SODA FORMULA

AVOIRDUPOIS WEIGHT

Solution No. 1

Water	32 ounces
Potassium metabisulphite	250 grains
Sodium sulphite (dried powdered)	2 ounces
Pyro	250 grains

Solution No. 2

Water	32 ounces
Sodium carbonate (dried powd.)	2¼ ounces

Add chemicals in the order given and dissolve each one thoroughly before adding the next.

For use take No. 1 ..... 1 part
No. 2 ..... 1 part
Water ..... 2 parts

Time of development 5 minutes at 65° Fahrenheit.

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Those who prefer a metol-hydro formula may use the following:

METOL-HYDROCHINON FORMULA

AVOIRDUPOIS WEIGHT

Water	64 ounces
Metol	50 grains
Hydrochinon	50 grains
Sodium sulphite (dried powd.)	325 grains
Sodium carbonate (dried powd.)	325 grains
Potassium bromide	30 grains

Add and thoroughly dissolve chemicals in order given. Time of development for average negatives five to six minutes, at 65° Fahrenheit.

For use, enough stock solution is taken to fill the tray. The stock solution will keep indefinitely in *full* bottles *tightly* stoppered.

TANK DEVELOPMENT

The manufacturers of the film tank supply with each tank full directions which should be strictly followed in so far as the operation of the tank is concerned. Use ANSCO P-S Developer in accordance with directions, or the Pyro-Soda formula given above, changing the proportions as follows:

Solution No. 1 ..... 1 part
" " 2 ..... 1 "
Water ..... 4 "

Time of development 20 minutes at 65° Fahrenheit.

Or, the following formula may be used:

METOL-HYDRO-PYRO FORMULA

AVOIRDUPOIS WEIGHT

Time of development 20 minutes at 65° Fahrenheit.

Dissolve the chemicals in order named in half the quantity of water (lukewarm), then add cold water to the full amount.

SMALL SIZE TANK

Water	16 ounces
Metol	1½ grains
Hydrochinon	5½ grains

Sodium sulphite (dried powdered.)	65	grains
Sodium carbonate(dried powdered)	35	grains
Oxalic acid	1	grain
Pyro	7	grains
Potassium bromide (10% solution)	8	drops

THREE-AND-ONE-HALF-INCH TANK

Water	34	ounces
Metol	3	grains
Hydrochinon	12½	grains
Sodium sulphite (dried powd.)	138	grains
Sodium carbonate (dried powd.)	74	grains
Oxalic acid	2	grains
Pyro	14½	grains
Potassium bromide (10% solution)	15	drops

FIVE-INCH TANK

Water	46	ounces
Metol	4	grains
Hydrochinon	15½	grains
Sodium sulphite (dried powd.)	186	grains
Sodium carbonate (dried powd.)	100	grains
Oxalic acid	3	grains
Pyro	19½	grains
Potassium bromide (10% solution)	22	drops

NOTE:—To prepare a 10% solution of potassium bromide, dissolve one ounce of potassium bromide in nine ounces of water.

DEVELOPING ANSCO FILM IN LARGE QUANTITIES AT A TIME

Full instructions as to equipment and method will be furnished on request. Address ANSCO COMPANY, Binghamton, N. Y.

FIXING

Prepare your fixing solution with a package of CYKO Acid Hypo, as directed on the package, and take from it as much as will fill your tray; or, you may compound your own acid fixing solution, as follows:

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ACID FIXING BATH

AVOIRDUPOIS WEIGHT

SOLUTION A

Water	64	ounces
Hypo	16	ounces

Dissolve and then add

SOLUTION B (Hardener)

Water	5	ounces
Sodium sulphite (dried powd.)	½	ounce
Acetic acid No. 8	3	ounces
Alum (powdered)	½	ounce

Dissolve chemicals in the order given

This bath may be made up at any time in advance and may be used as long as it retains its strength or is not so discolored by developer carried into it as to stain the negatives.

Pass the film, face down, through the fixing solution, holding one end in each hand. Do this three or four times, and then place one end of the film in the tray, still face down, and lower the strip into the solution in folds. If the negatives have been cut apart immerse them singly. Gently press the film, where the folds occur, down into the solution a few times during the course of fixing. Allow the film to remain in the solution eight or ten minutes *after* it has cleared, and the milky appearance has disappeared; then remove for washing. Be sure that the films are completely submerged during fixing.

WASHING AND DRYING

There are several ways of washing film. It may be placed in a tray or a wash-bowl of cold water and left for five minutes in each of five changes of water, alternating occasionally the different strips or pieces of film, to insure even action of the water upon it; or it may be given two changes of water, and then left for an hour

in a tray or in a bowl with a very gentle stream of water running in and out.

Attach a film clip to each end of the film and hang it up on a line, being careful that neither side comes in contact with anything.

For drying, non-curling films should be cut into lengths of not more than six exposures. If the film has been cut up, pin each negative by one corner to the edge of a shelf or hang the negatives on a stretched string by means of a bent pin, running the pin through the corner of the film to the head, and hooking it over the string.

Always keep finished negatives flat. Do not roll them up.

ANSCO FILMS FOR THE TROPICS

The films will be packed in sealed tin cans, provided the order states that they are intended for use in the tropics, each spool in a separate can. After exposure they must be promptly developed. There is no object in returning them to the can after exposure. In fact, it is inadvisable to do so, as they are likely to have absorbed sufficient moisture during exposure to ruin them, unless they are promptly developed. If put back into the can, it will simply serve to seal in the moisture.

WARNING

Ansco films are non-curling, and in order to make them so the only possible method is used—that of coating the back with gelatin, in order to counteract the curling propensity of the gelatin used in the sensitized emulsion on the face of the film. Do not let either surface

of Ansco film come into contact with anything while drying.

If the black paper sticks to back of machine-developed film and does not come off in the fixing bath, rub gently with the end of the finger *while the film is immersed.*

NON-SUCCESS IS INVARIABLY DUE TO HAVING OMITTED SOME SIMPLE DETAIL

For those who use tray development instead of relying on the *average* good results of the tank we will mention the common causes of failure.

UNDER-EXPOSURES

are caused by making instantaneous pictures in places where the light is not sufficiently strong to impress the object or view upon the sensitive surface It is detected in development by the image appearing very slowly and by the lack of detail in the shadows. In such an event it is desirable to transfer the film to a weak developer, and thus prolong development as much as possible.

OVER-TIMED NEGATIVES

These are easily detected by the film darkening evenly as soon as placed in the developer; they are lacking in contrast or deep shadows. By acting promptly the negatives can be saved by adding a few drops of a ten per cent. solution of bromide of potassium (see page 22). Bromide having been added to the developer, it will not do for any other negative unless it be known to be over-exposed.

OVER-DEVELOPMENT

is caused by leaving the negative too long in the developer. In this case the negative is very strong and intense by transmitted light, and requires a very long time to print. To remedy this, do not leave it in the developer too long.

UNDER-DEVELOPMENT

is caused by removing the film from the developer too soon. An under-developed negative differs from an under-exposed negative in that it is apt to be thin and full of detail, instead of harsh and lacking in detail.

FOGGED NEGATIVES

are caused by white light reaching the dark-room; or by holding the negative too long and too near to the ruby lamp.

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ANSCO SPEEDEX FILM

Look for the number on the carton

1B—1½ x 2—12 Ex. Adapted to Pocket Kodak	$ .25
2A—1⅝ x 2½—6 Ex. Adapted to No. 0 Folding Pocket Kodak and No. 0 Graphic	.15
2B—1⅝ x 2½—12 Ex. Adapted to the same cameras as the 2A	.25
2C—1⅝ x 2½—8 Ex. For Ansco V-P No. 0 Adapted to Vest Pocket Kodak and No. 0 Brownie	.20
3A—2¼ x 2¼—6 Ex. For No. 1 Buster Brown, adapted to No. 1 Brownie	.15
4A—2¼ x 3¼—6 Ex. For No. 2 Buster Brown, No. 1 Folding Buster Brown, No. 2 Folding Buster Brown, and Ansco Vest Pocket Nos. 1, 2 and 3; adapted to No. 2 Brownie, No. 2 Folding Pocket Brownie and No. 1 Kodak Jr.	.20
5A—2¼ x 3¼—6 Ex. Adapted to No. 1 Folding Pocket Kodak and No. 1 Panoram Kodak.	.20
5B—2¼ x 3¼—12 Ex. Adapted to the same cameras as the 5A	.40
6A—2½ x 4¼—6 Ex. For No. 2A Buster Brown, No. 2A Folding Buster Brown, No. 1A Ansco Junior, No. 1A Folding Ansco, and No. 1A Ansco Speedex; adapted to No. 1A Folding Pocket Kodak, No. 1A F. P. K. Special, No. 1A Speed Kodak, No. 2A Brownie and No. 1A Kodak Jr.	.25
6B—2½ x 4¼—12 Ex. Adapted to the same cameras as the 6A	.50
7A—3¼ x 4¼—6 Ex. For No. 3 Buster Brown, No. 3 Folding Buster Brown, Nos. 2, 4 and 6 Folding Ansco, No. 3 Folding Ansco and No. 3 Ansco Speedex; adapted to No. 3 Folding Pocket Kodak, No. 3 Folding Pocket Kodak Special, No. 5 Weno Hawk-Eye, No. 3 Buck-Eye, No. 3 Folding Hawk-Eye, Models Nos. 1, 2 and 3 Combination Hawk-Eye and No. 3 Focusing Hawk-Eye	.35

7B—3¼ x 4¼—12 Ex. Adapted to the same cameras as the 7A..... $ .70

7C—3¼ x 4¼—6 Ex. Adapted to No. 3 Folding Brownie, No. 3 Brownie, and No. 3 Bull's Eye Kodak..... .35

7D—3¼ x 4¼—12 Ex. Adapted to the same cameras as the 7C..... .70

8A—3½ x 3½—6 Ex. For No. 1 Ansco; adapted to No. 2 Bullet, No. 2 Bull's Eye, No. 2 Flexo Kodak, No. 2 Stereo Kodak, No. 2 Folding Pocket Kodak, Tourist Buck-Eye, Stereo Hawk-Eye and No. 3B Al-Vista..... .30

8B—3½ x 3½—12 Ex. Adapted to the same cameras as the 8A..... .60

10A—4 x 5—6 Ex. For Nos. 3, 5, 7 and 8 Ansco; adapted to No. 4 Bullet, No. 4 Bull's-Eye, No. 4 Panoram Kodak, No. 4 Folding Buck-Eye, No. 4 Weno Hawk-Eye, No. 4 Folding Hawk-Eye, No. 4 Bullet Special, Model C, No. 4 Folding Hawk-Eye Special, No. 4B Al-Vista and No. 4G Al-Vista..... .45

10B—4 x 5—10 Ex. Adapted to the same cameras as the 10A..... .75

10C—4 x 5—6 Ex. Adapted to No. 4 Folding Pocket Kodak, No. 4 Screen Focus Kodak, and No. 4 Folding Hawk-Eye, Models 3 and 4. .45

10D—4 x 5—10 Ex. Adapted to the same cameras as the 10C..... .75

11A—4¼ x 3¼—6 Ex. Adapted to No. 3 Cartridge Kodak..... .35

11B—4¼ x 3¼—12 Ex. Adapted to No. 3 Cartridge Kodak..... .70

12A—5 x 4—6 Ex. Adapted to No. 4 Cartridge Kodak and Nos. 5B, 5C, 5D and 5F Al-Vista. .45

12B—5 x 4—12 Ex. Adapted to the same cameras as the 12A..... .90

13A—7 x 5—6 Ex. Adapted to No. 5 Cartridge Kodak and Nos. 7D, 7E and 7F Al-Vista.... .80

13B—7 x 5—12 Ex. Adapted to the same cameras as the 13A..... 1.60

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18A—3¼ x 5½—6 Ex. For No. 3A Buster Brown, No. 3A Folding Buster Brown, No. 3A Ansco Junior, Nos. 3A, 9 and 10 Folding Ansco, No. 10 Ansco Special and No. 3A Ansco Speedex; adapted to No. 3A Folding Pocket Kodak, No. 3A Folding Pocket Kodak Special, No. 7 Weno Hawk-Eye, No. 3A Folding Hawk-Eye, No. 3A Folding Brownie and No. 3A Graflex..... $ .40

18B—3¼ x 5½—10 Ex. Adapted to the same cameras as the 18A..... .70

18C—3¼ x 5½—6 Ex. For No. 3A Ansco; adapted to No. 2 Stereo Brownie, No. 3B Quick Focus Kodak, No. 3B Folding Hawk-Eye and No. 6 Weno Hawk-Eye ..... .40

18D—3¼ x 5½—10 Ex. Adapted to the same cameras as the 18C..... .70

19A—4¼ x 6½—6 Ex. Adapted to No. 4A Folding Kodak and No. 4A Speed Kodak. .65

CARTRIDGE ROLL HOLDER FILM

14A—4 x 5—6 Ex. Adapted to No. 4 Horizontal Roll Holder..... .45

15A—4¼ x 3¼—6 Ex. Adapted to No. 3 Vertical Roll Holder..... .35

16A—5 x 4—6 Ex. Adapted to No. 4 Vertical Roll Holder and Auto Graflex..... .45

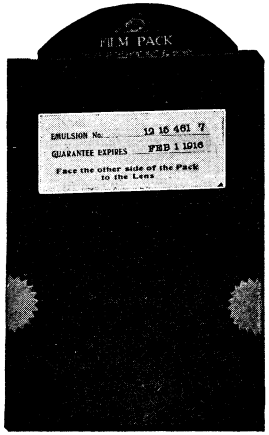
17A—7 x 5—6 Ex. Adapted to No. 5 Vertical Roll Holder..... .80

ANSCO FILM ADAPTED TO CIRKUT

Width Inches	Length Feet	Price Roll	Width Inches	Length Feet	Price Roll
6	10	$2.40	8	20	$6.40
6	20	4.80	10	10	4.00
6½	3	.80	10	20	8.00
6½	6	1.60	12	10	4.80
8	4	1.30	12	20	9.60
8	8	2.60	16	10	6.40
8	10	3.20	16	20	12.80

THE ANSCO FILM PACK

The ANSCO Film Pack is the outcome of a demand for a pack which would be free from the faults so apparent in packs of other makes.



The ANSCO Film Pack permits the owners of dry plate cameras to use daylight loading film, and those owning film cameras to focus between exposures when they so desire. It also affords the decided advantage of instant loading and instant changing of the film for successive exposures. By simply pulling out the tab and

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tearing off the black paper, each successive film is brought to the exposing position. In that respect it permits quicker action than roll film, which requires several turns of the winding key to bring the film into proper position. Neither is it necessary to change the position of the camera or shift the eye from the object to be photographed when changing the film.

The ANSCO Film Pack is not, however, merely an improvement over existing packs. It is essentially different in principle from the others and marks a distinct advance in film photography. It may be used in any film pack camera, or with a suitable adapter in any plate or film camera.

The characteristic features of the ANSCO Film Pack are:

1. *Single Tab.* There is but a single tab projecting from the camera at any time. This prevents the error of drawing more than one tab at once and thus wasting an exposure, or the pulling out of a tab other than that of the film that is in position for exposure. To bring a fresh or unexposed film to the exposing position, the tab is drawn out and the black paper torn off, thus leaving the next tab in position for manipulation in the same manner.

2. *Central Chamber.* The unexposed films are stored in a central chamber from which they are drawn one by one to the front of the pack for exposure, the exposed films passing to a rear chamber, from which they may be removed at any time for development.

3. *Stationary Septum.* The film always lies flat when in the exposing position. There is no buckling nor tendency to wrinkle, which occurs frequently in other packs causing the

picture to be blurred and out of focus. This is due to the fact that the film which is in the exposing position at the front of the pack, is backed by a rigid, stationary septum which holds it flat in the focal plane, thus preventing the film from buckling inward at the center and throwing the picture out of focus.

4. *Rigid Metal Holder.* The metal skeleton of the ANSCO Film Pack is deeper and more rigid than that of any other pack, thus preventing the crushing and jamming of packs when in the pocket or traveling bag. With other makes if the pack is crushed in such a manner the manipulation is interfered with and often made impossible.

5. *No Tearing.* The films are affixed to the black paper leading strip by carefully adjusted machinery, not by hand, and will not break loose from the sticker and cause trouble when the pack is in the camera and the tab is being drawn out.

6. *Light-tight.* The possibility of having light strike the film and ruin the exposure is removed in the ANSCO Film Pack. The utmost care has been exercised in the mechanical construction of this pack to make it absolutely light-tight. Edge fog, a cause of frequent annoyance in other packs, is impossible.

7. *Non-Abrading.* There is no danger of scratching or abrading the film in manipulating the pack. This danger is present in other film packs.

8. *Non-Curling.* The film is absolutely non-curling, either before or after development, drying perfectly flat and straight, ready for printing.

~ ANSCO ~

9. *Easily Manipulated.* A firm, steady pull upon the tab is required, but there is no sticking. Each film is drawn into position straight and true.

10. *Films Easily Removed.* Removal of the exposed films for development is very simple. When the back is raised the exposed films are found lying together in a compartment at the rear of the pack. The back does not require resealing before replacing the pack in the camera or adapter if there are unexposed films left in the pack.

Development may be carried out in any of the film pack or cut film tanks on the market.

Each pack contains film for twelve exposures:

	Price
2¼ x 3¼	$ .40
2½ x 4¼	.50
3¼ x 4¼	.70
3 x 5¼	.75
3¼ x 5½	.80
4 x 5	.90

ANSCO STANDARD CHEMICALS

E. & H. T. Anthony & Company, The Scovill & Adams Company, and The Anthony & Scovill Company, predecessors of Ansco Company, whence the name Ansco is derived, were the pioneer manufacturers of Standard chemicals for photography and the earliest compounders of ready prepared developers. This should be borne in mind in buying Ansco chemicals. The package so labeled not only contains the product of scientifically tested chemicals of the highest degree of purity, but also the photographic experience regarding the proper proportions and the best manner of compounding them to secure photographically the best results. The mere fact of being a registered chemist does not give one the entire knowledge necessary to make the same claims. One may be a painter and a true artist, but that is not sufficient to paint a satisfactory photographic background, a background which will produce a photographic negative from which a print can be made, yielding the results intended by the artist. Another factor to be taken into consideration is that we are manufacturers of paper, films, and other staples, and that our principal aim is not to sell chemicals, but we do sell them to insure our customers' obtaining the very best results with our photographic supplies.

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ANSCO M-H DEVELOPER

(Metol-Hydrochinon)

Prepared especially for the development of Ansco and other film, dry plates and bromide papers, but may be used with excellent results for Cyko or other developing papers. Each tube makes 8 ounces of solution for developing paper, film, plates and bromide paper.

Price per box of 5 tubes.....$ .50

ANSCO P-S DEVELOPER

(Pyro-Soda)

For the development of Ansco and other film and dry plates; it is suitable for both tray and tank development. Each tube makes 8 ounces for tray, or 30 ounces for tank at 65° Fahrenheit and 20 minutes development.

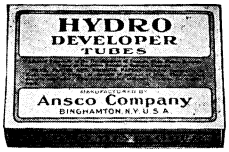
Price per box of 5 tubes.....$ .50

E-H DEVELOPER TUBES

(Eikonogen-Hydrochinon)

Especially adapted to the development of negatives of outdoor views, but may also be used for paper. Each tube makes 5 ounces of developing solution.

Price per box of 6 tubes.....$ .25



HYDRO DEVELOPER TUBES

(Hydrochinon)

Recommended for the development of lantern-slide plates, bromide papers, or negatives of subjects requiring extreme contrasts while maintaining the transparency of the shadows. Each tube makes 5 ounces.

Price per box of 6 tubes.....$ .25

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M-Q DEVELOPER TUBES

(Metol-Quinol)

An ideal "all-round" developer having a wide range of adaptability, and equally good for all makes of film, plates and paper. Each tube makes 5 ounces of developing solution.

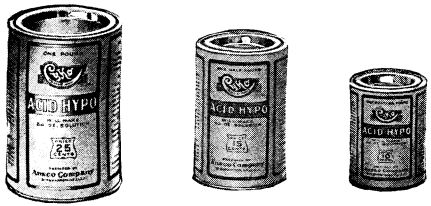
Price per box of 6 tubes.....$ .25

PYRO DEVELOPER TUBES

(Pyro-Soda)

A most reliable developer for film and plates, preserving all the harmonious details of the negative. Each tube makes 5 ounces of solution.

Price per box of 6 tubes.....$ .25



CYKO ACID HYPO

Carefully prepared for the complete and rapid fixing of ANSCO and other film, plates and papers. The half-pound size makes 32 ounces of solution, and the one-pound size double that quantity.

Price per ¼ lb. container.....$ .10
" " ½ " " ..... .15
" " 1 " " ..... .25

ANSCO SODIUM SULPHITE

(Dried powdered)

Put up by us especially for the photographic trade, we guarantee its purity and uniformity. Double the strength of crystals.

Price per 1 lb. container.....$ .30
" " 5 " can..... 1.25

ANSCO SODIUM CARBONATE

(Dried powdered)

Manufactured especially for the photographic processes, its purity and uniformity are assured by the careful testing in our laboratory. It has nearly three times the strength of the ordinary crystals.

Price per 1 lb. container.....$ .20
" " 5 " can..... .90

March 1, 1916