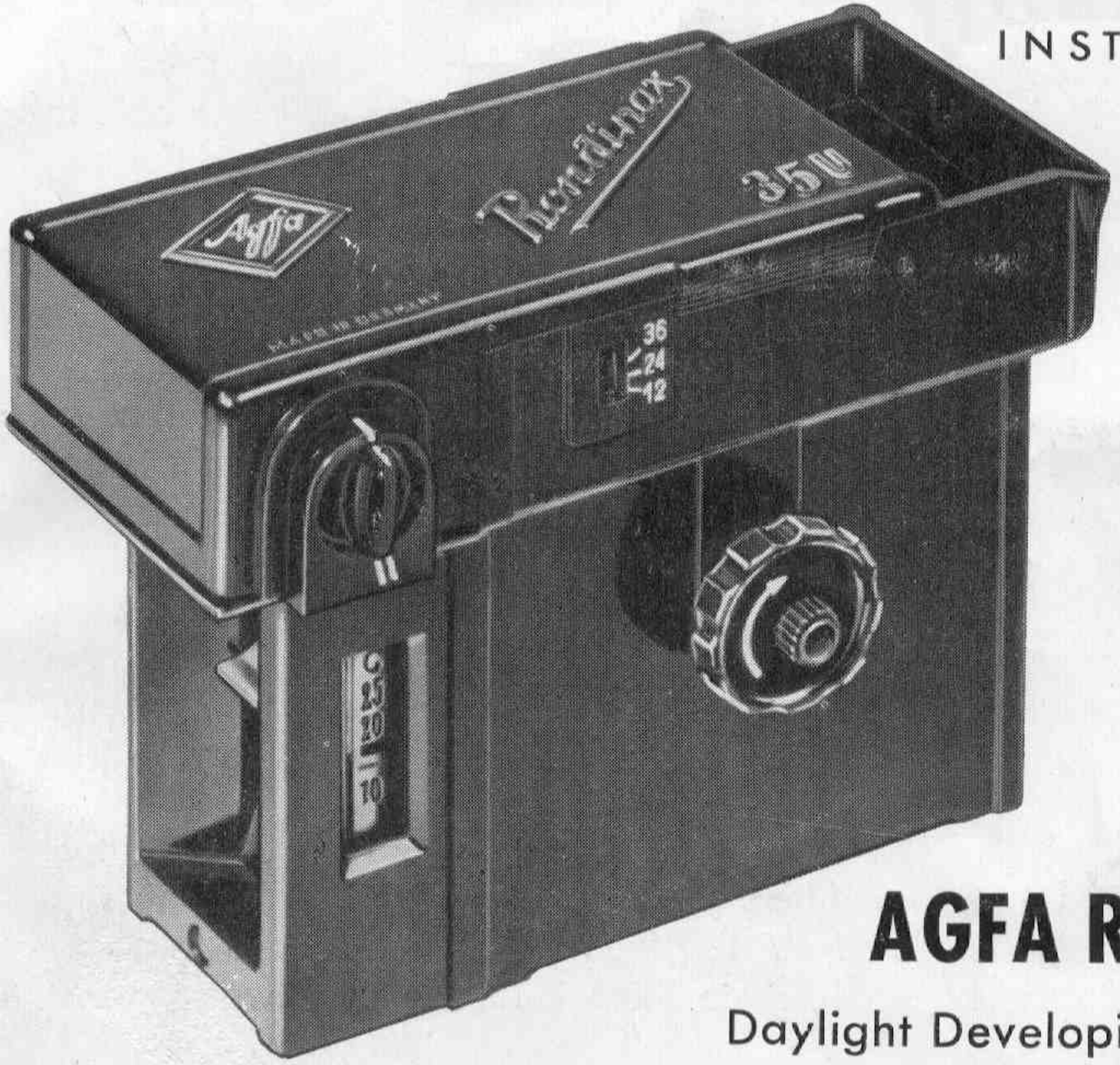
INSTRUCTIONS FOR USE



Agfa

MADE IN GERMANY

AGFA RONDINAX 35 U

Daylight Developing Tank for 35 mm. Films

Type No. 8617

CONTENTS IN ALPHABETICAL ORDER

Fold back this flap when reading the instructions

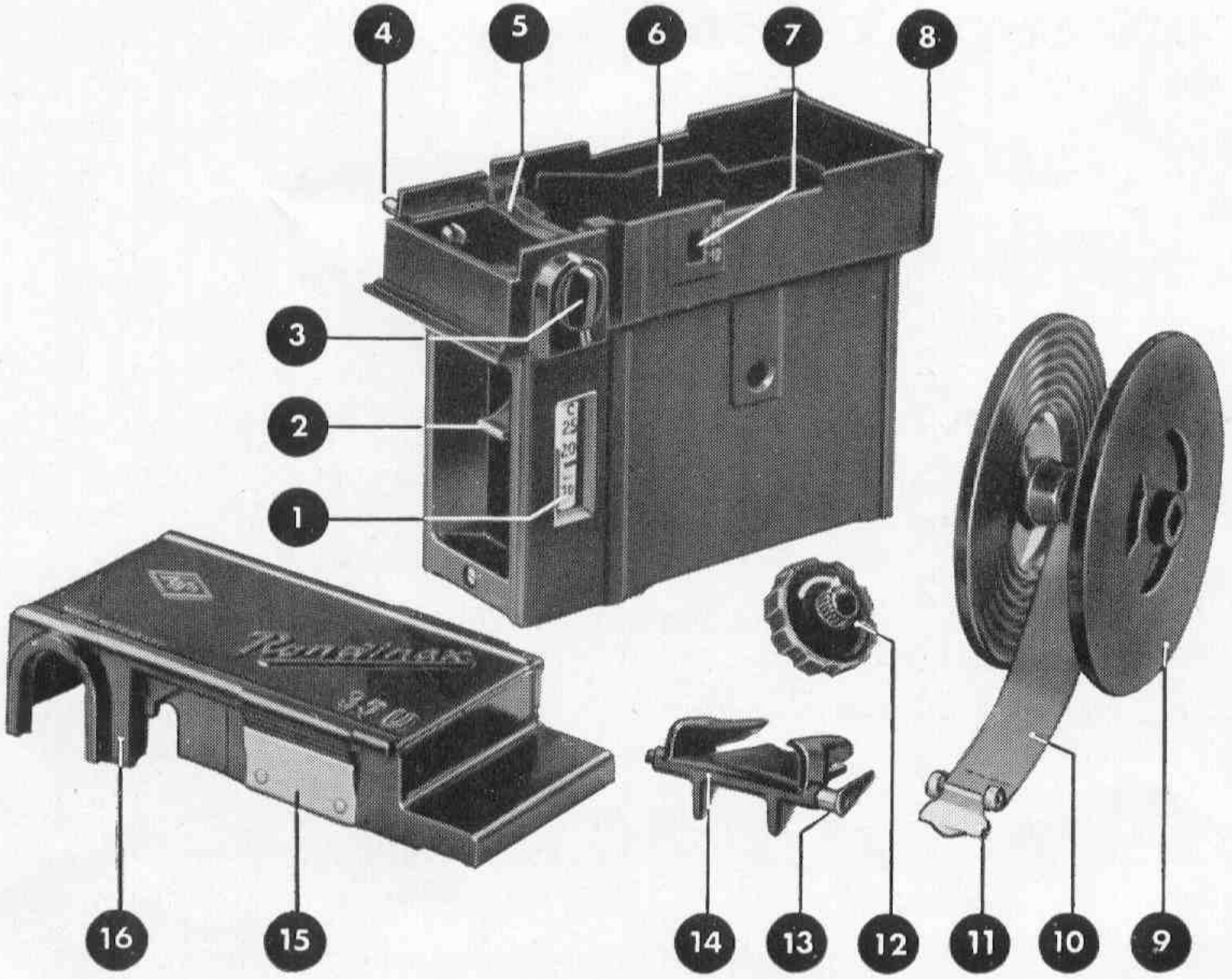


Fig. 1

① = Thermometer
② = Cutting lever
③ = Cassette opening key
④ = Cassette locating peg
⑤ = Guide slot for cutting knife
⑥ = Developing chamber
⑦ = Scale indicating length of film on spiral drum
⑧ = Lip for emptying tank
⑨ = Spiral drum
⑩ = Tension band
⑪ = Film clip
⑫ = Winding knob and sealing knob
⑬ = Locating pin
⑭ = Film guide
⑮ = Spring plate with serrated grip
⑯ = Lid

DEAR READER,

The Agfa Daylight Developing Tank 35 U puts you in the happy position of being able to develop your films yourself without the necessity for a dark room. It makes no difference whether the film you want to develop is a full length 36 exposure or a shorter length: any type of commercial miniature 35 mm. cassettes can be accommodated.

Do not allow yourself to be deterred by the fact that we describe the whole procedure down to the last detail: read the instructions through carefully before attempting to develop a film. The manipulation of the tank is so practical and ingeniously devised that once the first film has been developed in it there is no need to refer again to the instructions. The summarised instructions on page 19 will provide sufficient reminder of the correct sequence of operations and the composition of the chemical solutions required.

PRELIMINARY PREPARATIONS

It is a good plan, before actually developing a film in the tank, to familiarise yourself with the procedure by carrying it through with the tank empty, preferably with a waste film.

The following solutions should be placed ready to hand: 7 fluid oz (200 cc.) developer working strength, at 68° F. (20° C.)—3 x 7 fluid oz (200 cc.) water (for intermediate rinsing)—7 fluid oz (200 cc.) fixing solution at 64–68° F. (18–20° C.). You will also require a bowl, a pair of scissors, a thermometer, a soft, clean chamois leather, and two film clips.

WARMING THE TANK

The correct temperature for development is 68° F. (20° C.), and **both** the developing solution and the tank itself must be brought **separately** to this temperature before winding in the film. The best way to ensure that the tank reaches this temperature with the least possible delay is to keep it at room temperature when not in use; for an empty tank at, say, 50° F. (10° C.) when brought into a warm room takes about an hour and a half to reach a temperature of 68° F. (20° C.). The temperature of the empty tank can be read, with the lid closed, from the built-in thermometer.

The practice of compensating for developing temperatures above or below normal by varying the time of development is liable to lead to incorrect results and should therefore be avoided.

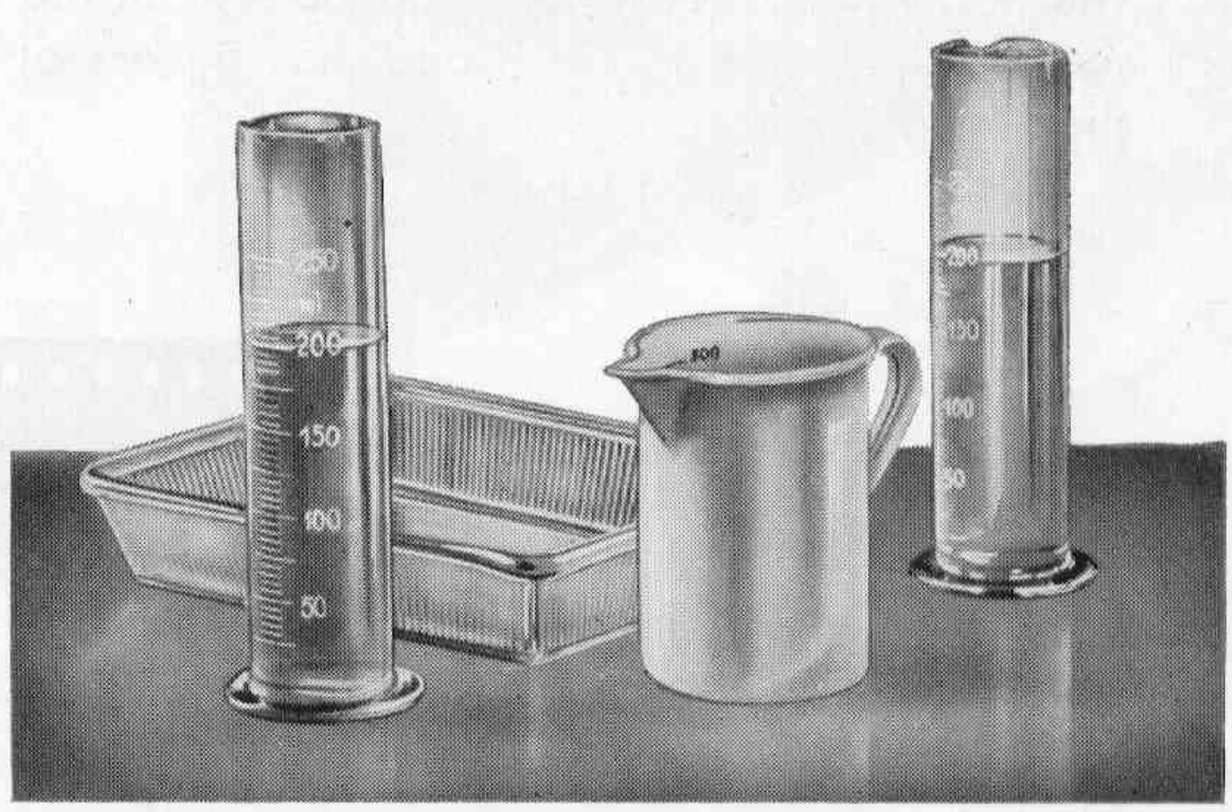


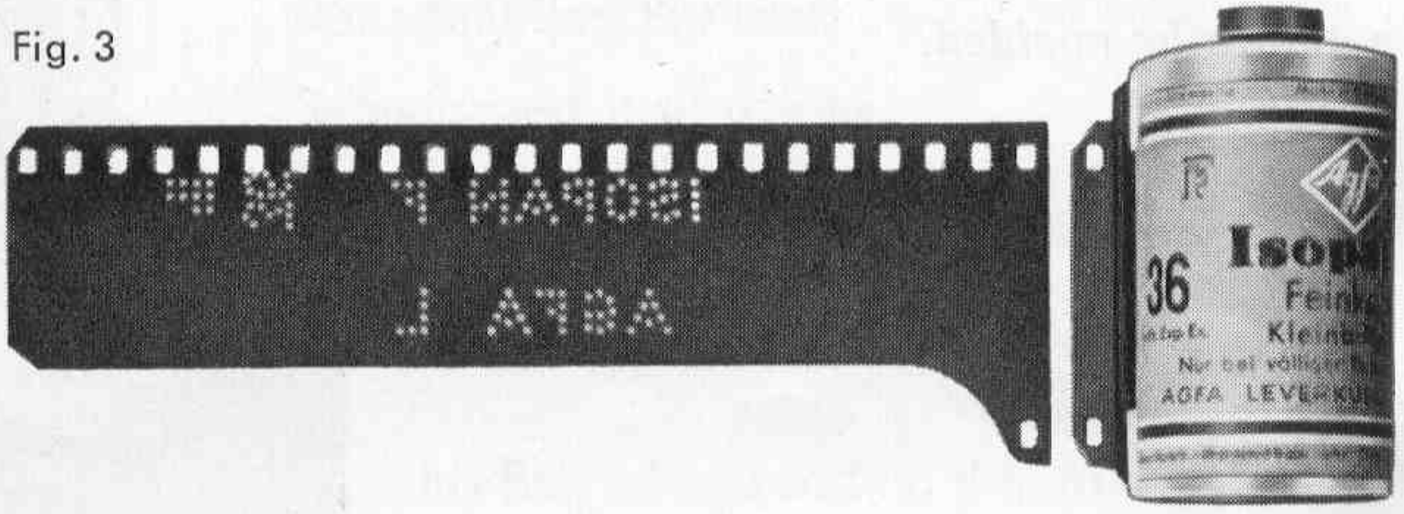
Fig. 2

CUTTING OFF THE FILM TONGUE

Films to be developed in the Rondinax 35 U should **not be completely rewound** into the cassette (the film tongue should protrude a little), and care should always be taken **when rewinding** to ensure that this does not happen. After a little practice you will quickly learn to detect the sound of the film leaving the take-up spool in the closed camera. If by accident the film tongue has been wound right back into the cassette it must be brought out again in the darkroom. If necessary your photographic dealer will gladly perform this small service for you.

The narrowed film tongue projecting from the cassette must now be cut off with a pair of scissors as shown in Fig. 3 and the corners of the leading edge rounded off, and turned slightly under.

Fig. 3



OPENING THE TANK

To open the Rondinax 35 U grip the lid by its two serrated grips (17) and pull it off vertically from the tank body; in doing so a certain amount of spring pressure has to be overcome.

Make sure that when the tank was last cleaned and reassembled the sealing knob (18) was not screwed up too tight, and that the winding knob (19) turns easily, and also ensure that the cassette chamber, film guide (14), spiral drum (9) and tension band (10) (see Fig. 1) **are completely dry.**

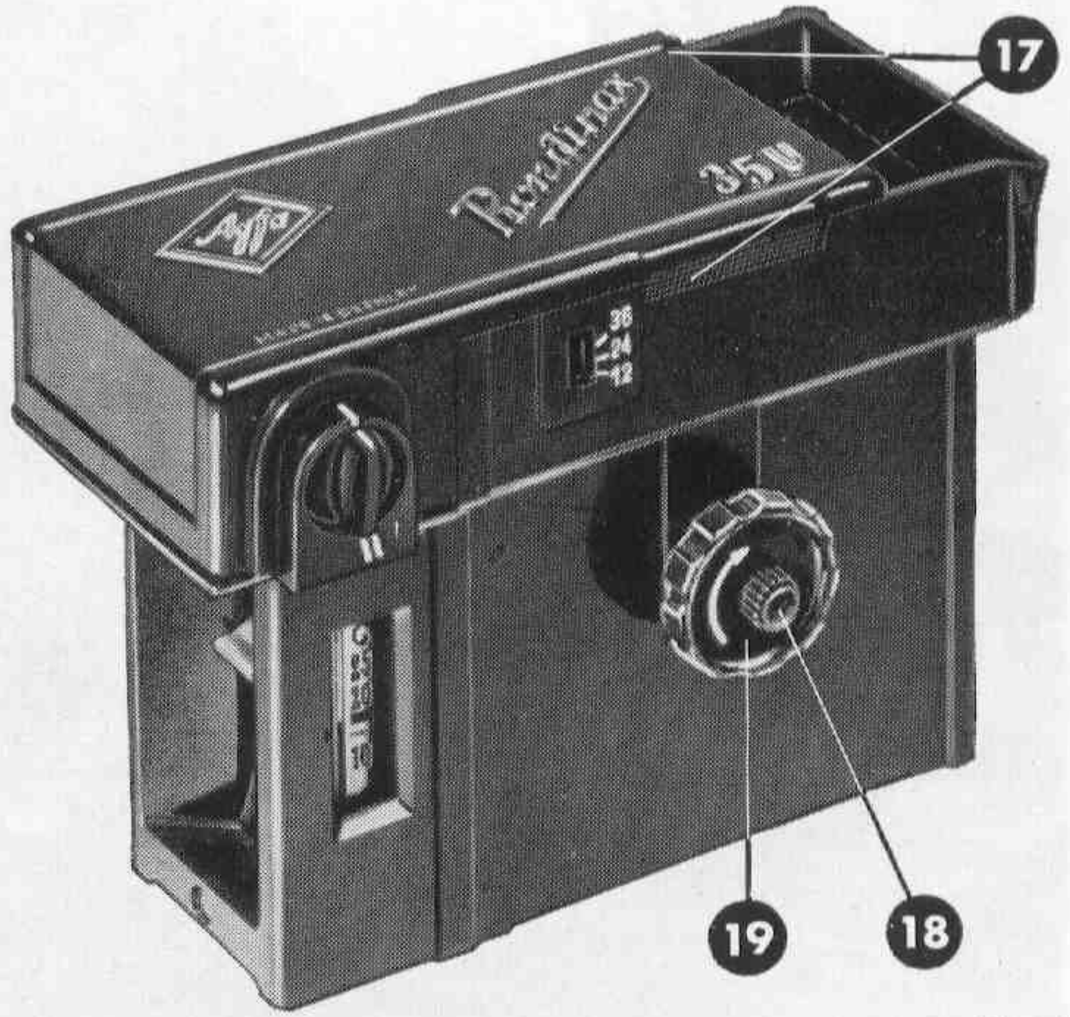
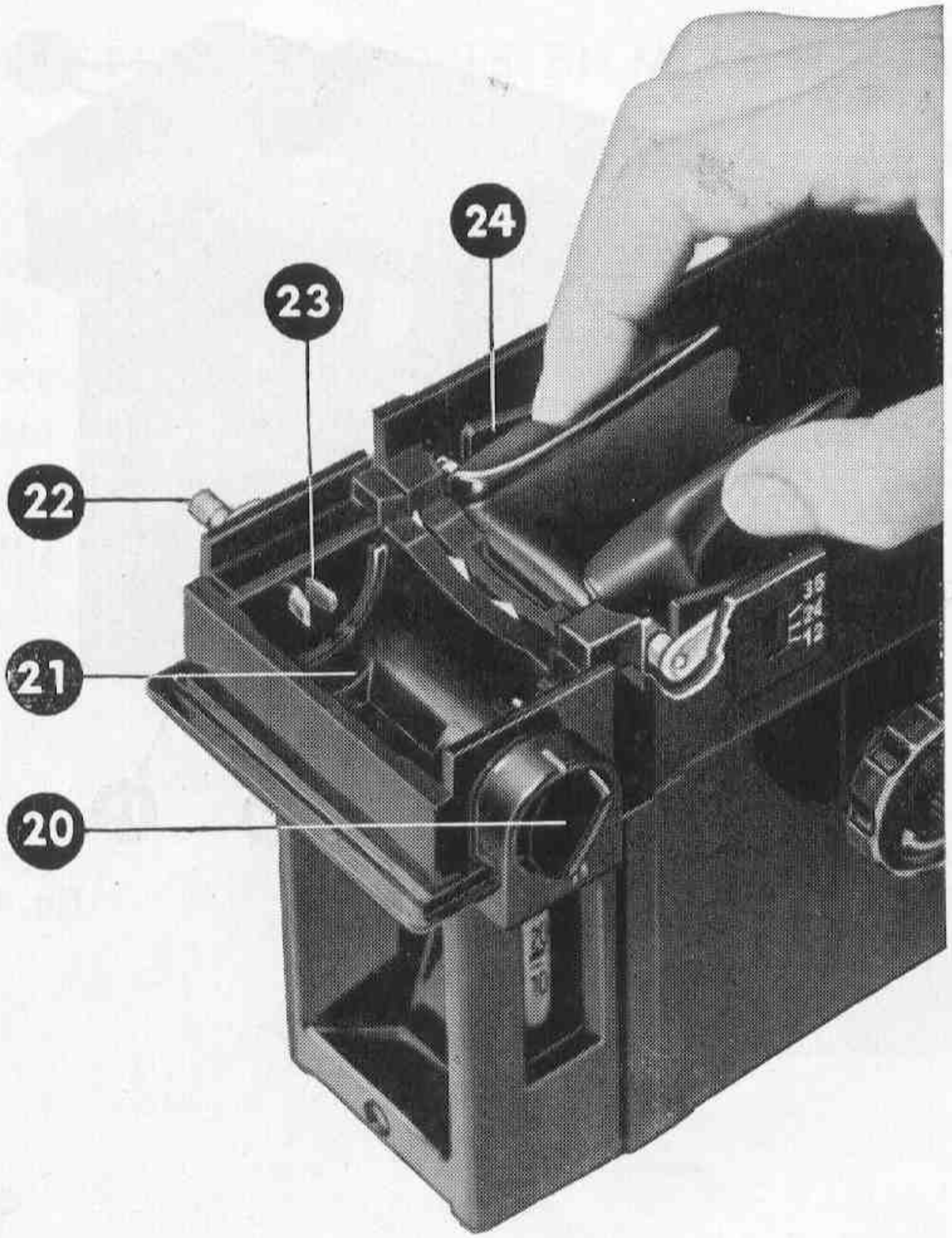


Fig. 4



LOADING THE FILM INTO THE TANK

Loading and developing may be carried out in daylight, but direct sunlight should be avoided.

Before loading any kind of cassette into the tank, the cassette key (20) must first be turned so that its index mark is opposite "I"; the peg (22) and the cassette key must then be pulled outwards. Now lower the cassette vertically into the chamber (21), with the **open end of the cassette** towards the **driving prongs (23)** and the **knob of the spool** facing the **cassette key (20). Finally push the peg (22) and cassette key (20) back home again.**

Before using your Rondinax 35 U to develop films in **special cassettes** (such as the Leica, Contax, Robot, Photavit or Karat) read carefully the explanation relating to the particular cassette involved which will be found on the **Appendix** on pages 16–18.

Fig. 5

ATTACHING THE FILM CLIP

To enable the tension band with its attached film clip to be more easily withdrawn the film guide (24) can be removed (see Fig. 5); however, do not on any account forget to replace it immediately as shown in Fig. 5. Open the film clip (26) attached to the tension band and lay it in the recess (25) (see Fig. 6) provided in the centre partition of the tank. With the left hand place the leading edge of the film up against the hinge of the open clip, holding the clip in the right hand. In closing the clip press the jaws firmly together to ensure that the end of the film is perforated and so held securely. Take care that the film is central in the clip, projecting an equal amount on both sides.

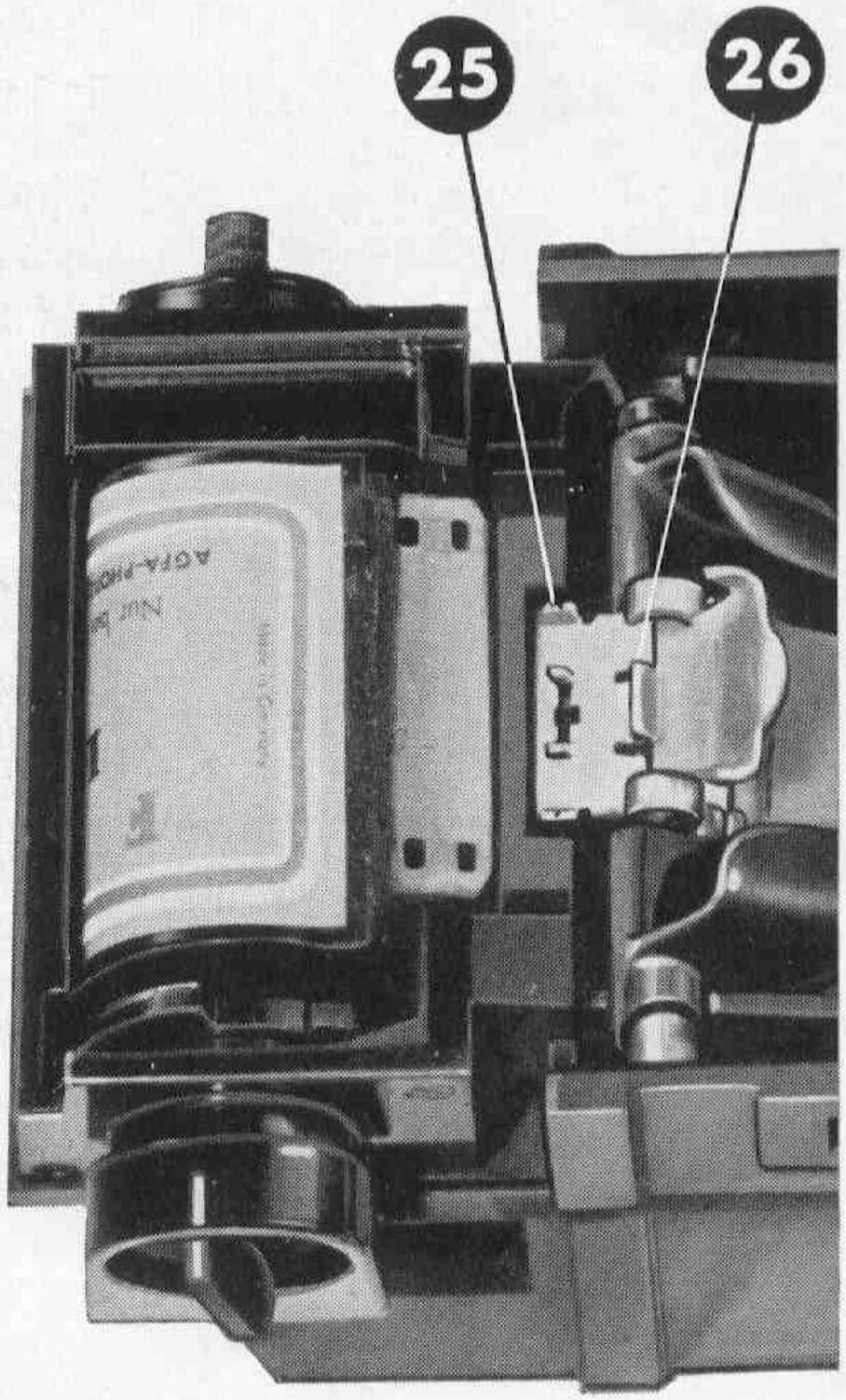


Fig. 6

WINDING THE FILM ON TO THE SPIRAL DRUM

With the lid still off, wind about 2 inches (5 cm.) of the film on to the film guide by turning the winding knob (19) (see Fig. 4) slowly in the direction of the arrow. This length of film is ample to ensure that the end of the film is threaded cleanly into the film guide. No exposed frames will be lost in this way at the beginning of the film, because in loading the camera at least one frame is wound on after the tongue is entirely on the take-up spool before the first exposure is made. Should resistance be felt even when only this short length of film has been wound in, this indicates either that the corners of the film have not been turned under or that the leading edge of the film is not gripped centrally in the film clip, or maybe even that you have forgotten to replace the film guide (14) (Fig. 1).

Replace the lid on the tank and by turning the knob (19) (Fig. 4) wind the film into the spiral grooves of the drum, which will fill outwards from the centre. As winding proceeds, the film length indicator will show approximately the number of exposures which have been wound from the cassette into the tank.

CUTTING OFF THE FILM

As soon as a considerable resistance to winding is felt, **stop turning the knob immediately,** as this indicates that the complete film has been wound on to the drum. In the case of a 36-exposure miniature film this indicator (7) (see Fig. 1) will read 36. The film must then be severed from the empty cassette by pressing the cutting lever hard upwards to a definite stop (see Fig. 7).

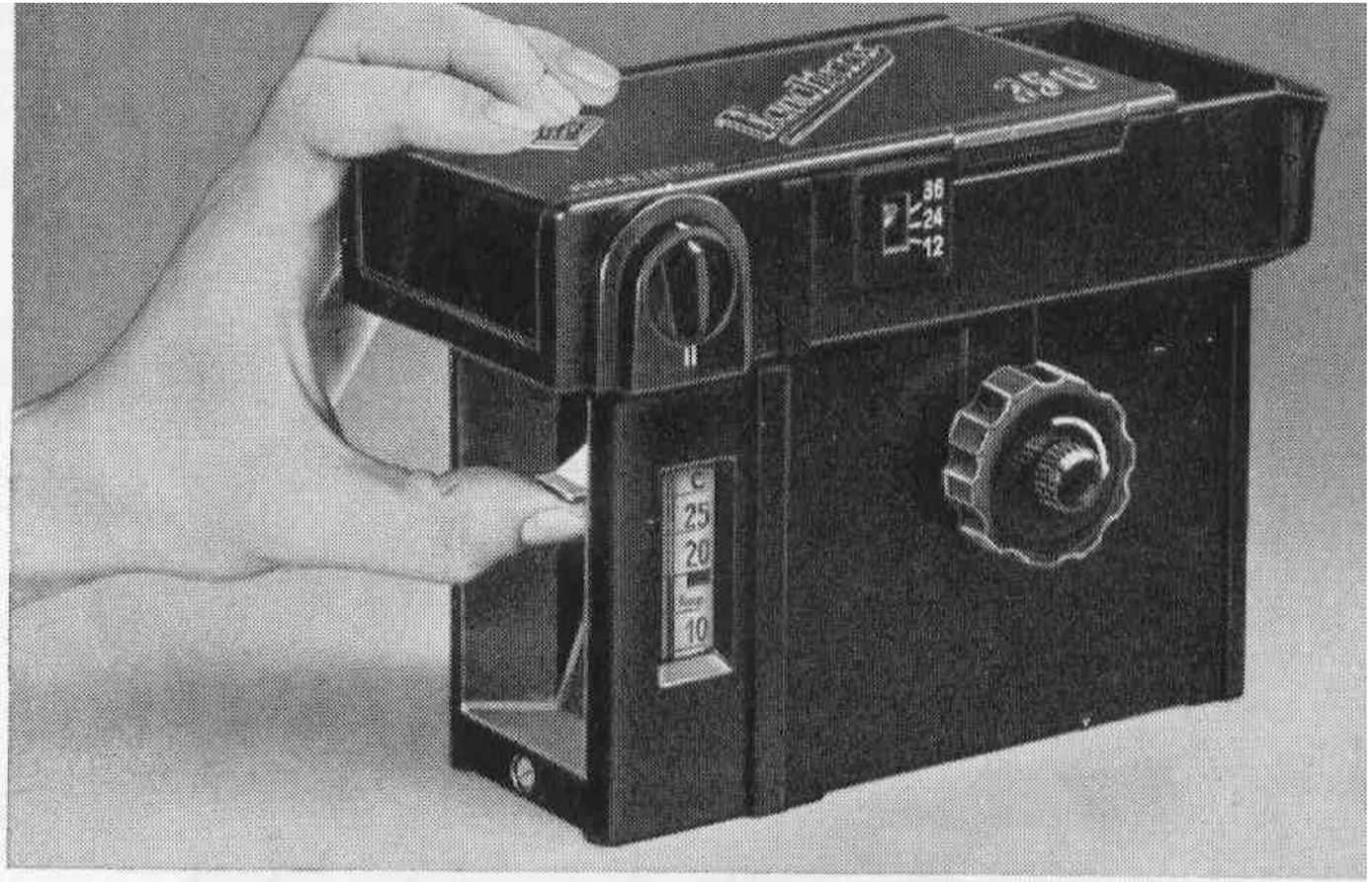


Fig. 7

If only part of the film has been exposed—say, 24 frames—there is no need to develop the whole film: wind the film on to the drum until the indicator (7) (see Fig. 1) points to 24, then with the knife cut off the part to be developed; there will then be wound on the drum 24 exposed frames together with about 2 inches (5 cm.) of unexposed film.

Leica and Contax all-metal cassettes must be closed **before** the film is cut.

DEVELOPMENT

The following procedure must be carried through continuously without a break, and it is therefore essential to be familiar **in advance** with the details and sequence of the operations. It is also advisable to read carefully through beforehand the section headed "Developers — Types of Film — Temperature — Development Time" (pages 12–13).

Check the temperatures of tank and developer and look up the "correct" developing time from the Table on page 20.

Pour the 7 fluid ounces (200 cc.) of developer into the filling funnel aperture in the lid and **turn the winding knob continuously in a series of jerks.** During the whole period of development **this rotation of the spiral drum must be continued,** the knob being given a half turn every two seconds in the direction of the arrow.

It is strongly recommended that the developing solution should be used once only.

Fig. 8

INTERMEDIATE RINSING

When the developing time has elapsed pour off the developer by tilting the tank, still **continuing to turn the knob,** and give the film three successive rinses, turning the knob all the time. Throughout each rinse the film must be kept continuously in motion. **The tank must however still not be opened** because the film remains sensitive to light until after it has been fixed which is carried out in the next stage of the procedure.

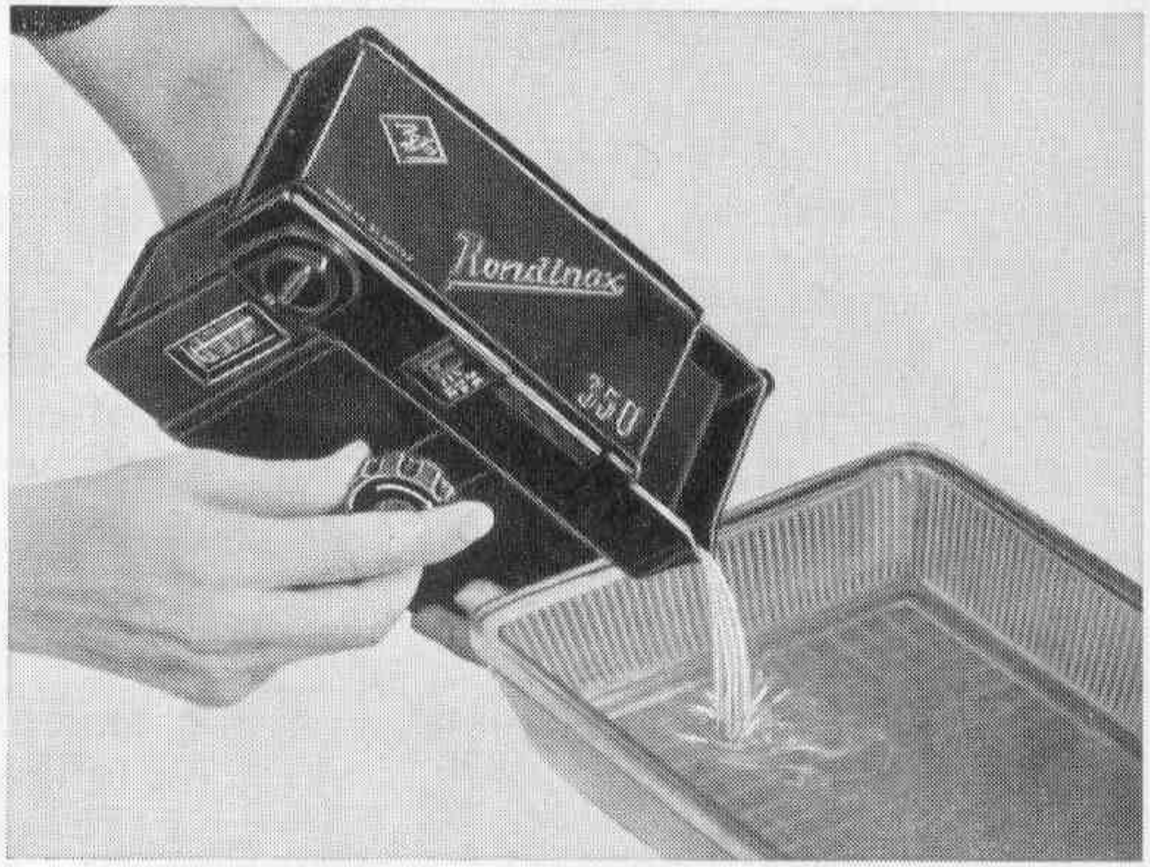


Fig. 9

FIXING

After emptying the last rinse water slowly pour 7 fluid ozs. (200 cc.) of the already prepared fixing solution into the filling aperture in the tank lid and immediately resume rotation of the spiral drum. After about two minutes the rate can be slowed up, and for the rest of the fixing time it will suffice to give the drum about three quarters of a turn every minute.

For films with a speed rating of 18° DIN or less the fixing time is about 5–8 minutes; higher speed films, such as Agfa ISS and Agfa Isopan Ultra require 8–10 minutes. The tank may now be opened. Should the film, notwithstanding having been fixed for the full specified time, still appear milky in places, the lid should be replaced and rotation of the knob continued. After another 1–2 minutes the film should be completely fixed. The fixing bath can be safely used twice, but we do not advise its use for more than two films. Details of the preparation of the fixing solution will be found on page 13.

FINAL WASHING

To free the film completely from chemicals, fixing must be followed by thorough and systematic washing. Continuing to rotate the knob, pour the fixing solution out of the tank. If you intend to use the solution again for a second film it must be poured into a separate bottle. The final washing operation can be carried out either in the tank or in a basin.

If the tank is to be used for washing, first remove the lid and take out the film guide.

Fill the tank with water until the drum is completely covered. To remove any air bubbles which may have been trapped between the turns of film, give the winding knob a few turns. Leave the film soaking in the tank full of water for about 5 minutes, rotating the knob a few times. Repeat this process five or six times.

If the film is to be washed outside the tank, the sealing knob must first be unscrewed and the winding knob removed. The spiral drum can then easily be taken out of the tank and may be placed in a deep bowl or washbasin and washed in running water for about 30 minutes.

When Agfa Atomal has been used for development, washing must be particularly thorough: about 8 to 10 changes of 5 minutes each in the tank or 45 minutes in running water. Only by meticulously observing all these times can it be guaranteed that even after a number of years the film will yield perfect enlargements.

DRYING

Wet films are very susceptible to damage, and must therefore be handled with the utmost care. It is therefore advisable to remove the film from the spiral drum for drying in manner shown in Fig. 10. The spiral drum can of course be left in the tank, but in that case to ensure frictionless unrolling of the film the sealing knob must be loosened. A film clip is then attached to the free end of the film and the film hung free from a line stretched at about 75 inches (190 cm.) from the ground. Holding the spiral drum or Rondinax tank

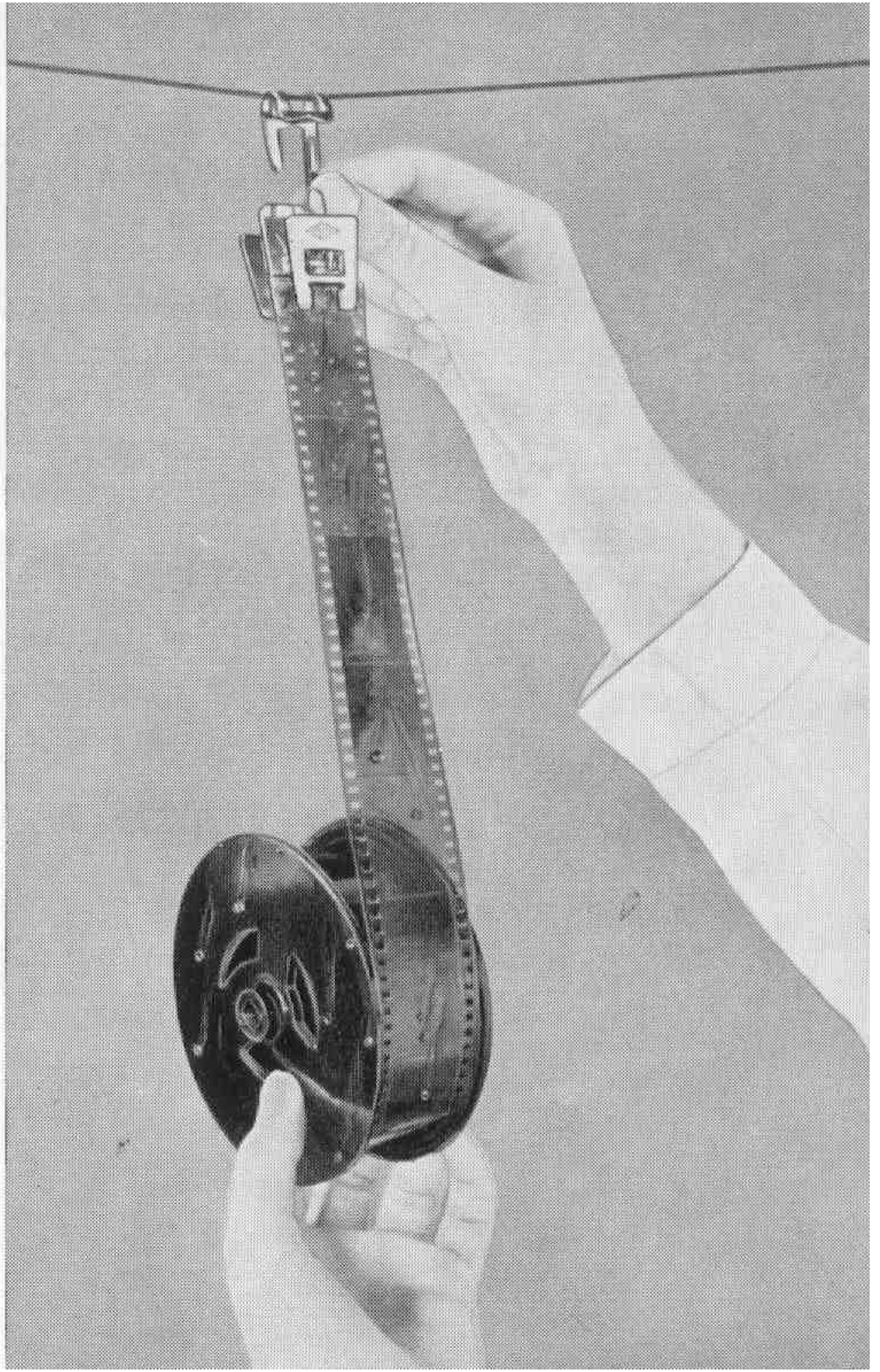


Fig. 10

beneath the stretched line lower it gradually to the ground; this causes the film to unroll from the grooves of the drum without any need to touch it at any point. When the whole film has unrolled, release the end from the clip on the tension band and replace it by another clip to weight the end down.

Do not use the spiral drum itself as a weight.

Surface water and water drops should be removed from the film. To do this pull the film taut by pulling on the free end and wipe it down carefully on both sides with a clean, moist, very soft chamois leather. Do not use any kind of makeshift rag for the purpose, because the emulsion in the wet condition is extremely tender and very susceptible to damage by scratching. Take care, too, that the top end of the film is securely held in the clip so that it does not become detached by the pull on the bottom clip. Never dry films in the sun or near a radiator. Dust is the greatest enemy in miniature photography, every speck on the negative making itself unpleasantly obvious in the enlargement. Always dry them, therefore, in a room free from dust.

DEVELOPERS — TYPES OF FILM — TEMPERATURE — DEVELOPMENT TIME

The developing solution must always be made up with the greatest care. If a number of films are to be developed in succession, have sufficient developer solution ready made up in advance.

Films should be developed in accordance with the instructions issued with them, and the development temperatures and times stated rigidly adhered to.

Always work under the same conditions—the same strength developer and the same temperature—in this way you will quickly get to know the characteristics of the types of film you use and the most suitable developing time.

The Table on page 20 gives details of the developing times which experience has shown to be most suitable for correctly exposed Agfa miniature films using Agfa developers; these will serve as a useful guide.

IMPORTANT

Once having found the best developing time as the result of experience, it should be strictly adhered to in order to obtain consistently good results.

Water straight from the tap is usually too cold, and solutions should therefore be made up well in advance. They should be stored in well sealed, dark glass bottles, and in winter kept in a warm room.

THE FIXING SOLUTION

For fixing a single film dissolve 1½ oz (40 gm.) of Agfa Fixing Salt in 7 fluid oz (200 cc.) of water. For a stock working solution dissolve a 7½ oz (200 gm.) package in 35 fluid oz (1 litre) of water. The solution cools rapidly as the salt dissolves; it should therefore be prepared well in advance and brought to 64–68° F. (18–20° C.).

CLEANING THE RONDINAX 35 U

After use, the Rondinax 35 U must be dismantled, and all its component parts—tank body, lid, winding knob, sealing ring, film guide, and more especially the spiral drum with its tension band—thoroughly washed in running water. If necessary, the grooves of the spiral drum should be cleaned of traces of gelatine etc. with a brush. When cleaning the body of the tank take care that no liquids penetrate into the loading chamber (27, Fig. 11) or into the guide slot of the cutting knife (28); otherwise the next film to be wound into the tank may pick up impurities. If need be, however, the knife and its guide slot can be cleaned by undoing the three screws (33, Fig. 11) on the front of the tank and lifting the loading chamber out of the tank, whereupon the knife will fall out. After cleaning, the retaining ring of the tension spring must be pressed on to the small bolt, the other bolt engaging with the driving pin of the lower part of the knife. The knife must be held in place while the loading chamber is being replaced on the tank. The two parts are then reunited with the three screws (33).

REASSEMBLING THE RONDINAX 35 U

The procedure for reassembling the tank is as follows:

Insert the spiral drum so that the square hole faces the hole in the tank wall. The sealing knob (30) with its spacing washer (32) and rubber washer (31) connects the winding knob (29) with the spiral drum. Tighten up the sealing knob only just sufficiently to seal the tank effectively while still allowing the winding knob to be easily turned. When inserting the film guide take care that the locating pins are lying correctly in their slots. Fig. 5 shows the correct position.

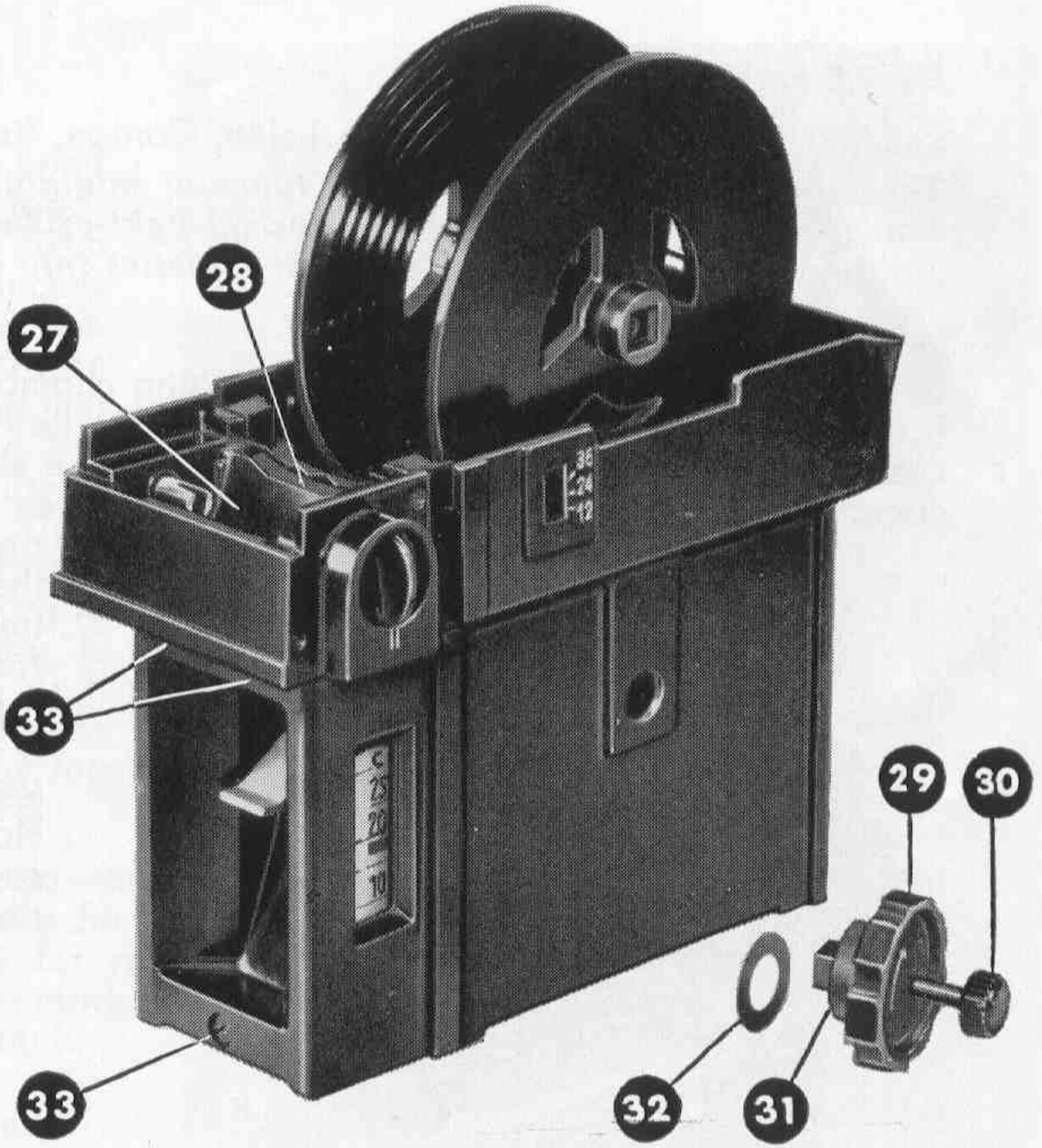


Fig. 11

APPENDIX

Special procedure when loading Leica, Contax, Robot, Photavit, and Karat cassettes.

The all-metal cassettes of various types of miniature cameras differ in construction and in dimensions, some of them having special light-excluding closing devices. Special instructions are therefore needed for loading such cassettes into the tank.

Leica Cassettes:

In placing the Leica cassette in the loading chamber take care that the cassette spring is **facing downwards** and that when the cassette key (3) is pressed inwards the recess of the cassette opening mechanism beside "C" can be slid over the operating knob "K" of the cassette. Press in the peg (4) and the cassette key (3), attach clip to the film as explained on page 5 and close the tank by replacing the light-tight lid. Open the cassette by turning the key (3) to the position II. All further procedure is as already described for standard cassettes.

If only **part of the film** is to be developed (see also page 7), the cassette must be closed **before cutting off the film,** i. e. **the cassette key** (3) must be turned **to the position "I".**

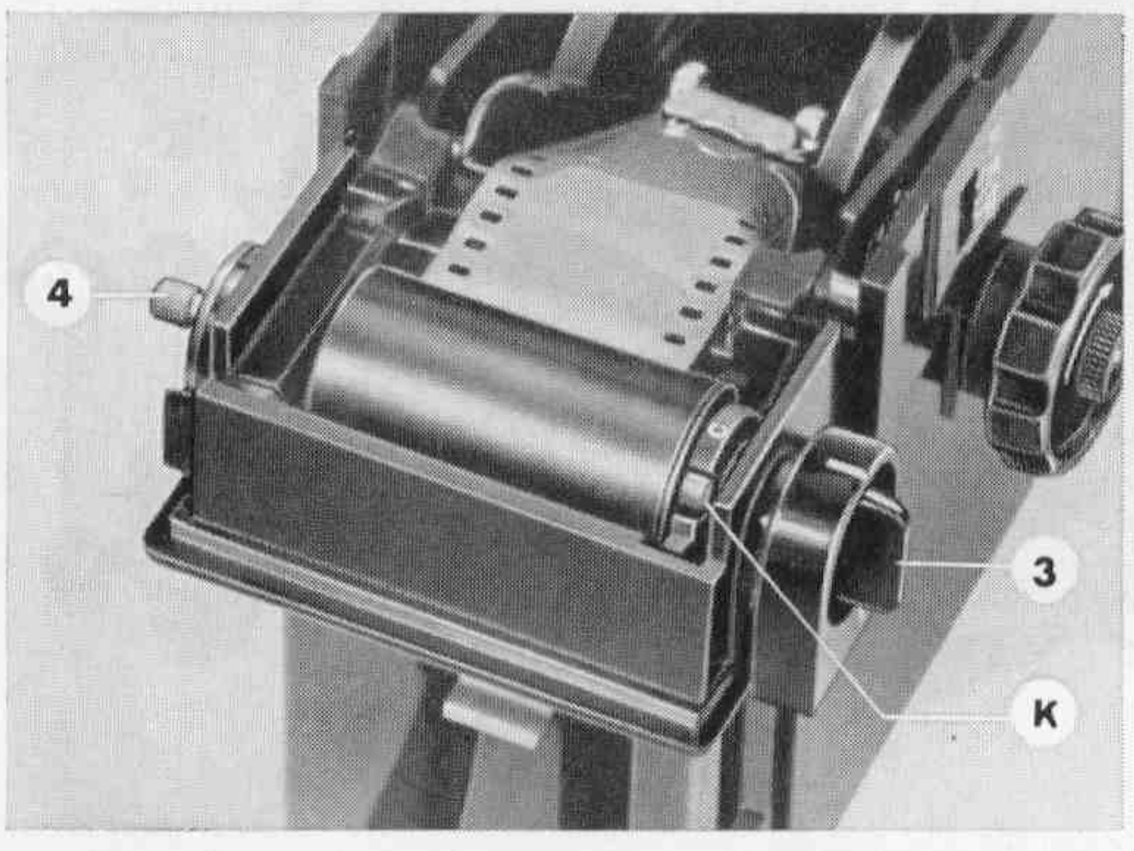


Fig. 12

Contax Cassettes:

In the case of Contax cassettes the end of the film must be attached to the tension band clip **before** the cassette is placed in the loading chamber. The procedure differs also from standard procedure in that about 2 inches (5 cm.) of film must be withdrawn from the cassette before clipping it up to the tension band. Thread the end of the film into the film guide by turning the winding knob in the direction of the arrow, and **only then** lower the cassette into the loading chamber. Then pull the film taut with the winding knob and turn the latter until the operating pin S of the cassette is exactly opposite the letter C (Contax). Push in the cassette locating peg, and close the tank by replacing the light-tight lid. The cassette may now be opened by turning the cassette key to the position "II". All further procedure is as already described.

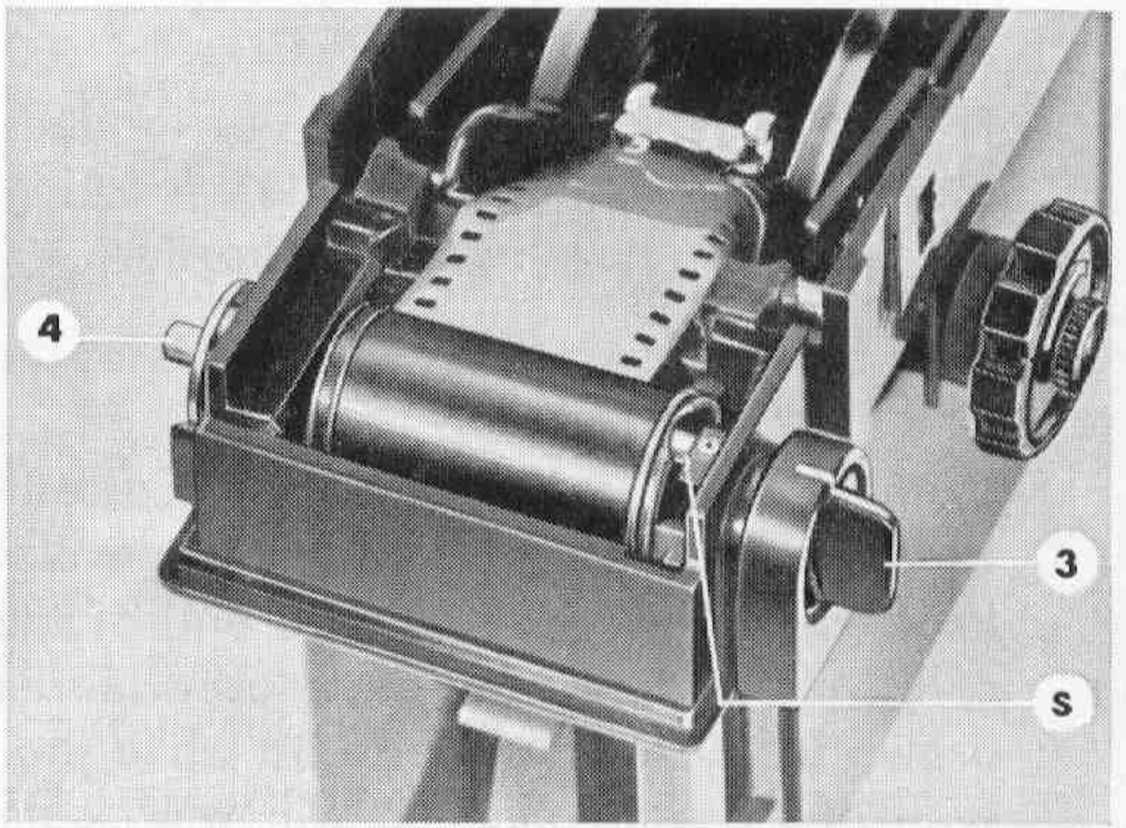


Fig. 13

If only **part of the film** is to be developed—see page 7—the cassette must be closed and rendered light-tight **before cutting off** the film by **turning the cassette key to "I".** When the cassette is removed from the tank for replacement in the camera, a small further movement of the closing shutter must be made by hand to bring the word "zu" (= closed) exactly to the middle of the cassette mouth.

Robot and Photavit Cassettes:

These two types of cassette are loaded in exactly the same way as manufacturers' film cassettes except that **the cassette locating peg and cassette key remain pulled out throughout the whole development procedure.**

Karat Cassettes:

With the 12-exposure Agfa Karat Cassettes, likewise, the cassette locating peg and cassette key remain pulled out throughout development. After clipping in the film turn the winding knob very slowly to feed the end of the film into the film guide. On account, however, of the shortness of the unexposed leader, **not more than five perforations** must be withdrawn from the Karat cassette while the tank remains open. There being no spool in this type of Cassette the film will wind completely out into the tank spiral as soon as the indicator reaches 12. For the same reason it is not possible to cut off for development a still shorter length of film by means of the cutting knife.

SUMMARISED INSTRUCTIONS

1. Prepare solutions (7 oz = 200 cc., see Introduction). Bring them and the tank to 68° F. (20° C.).
2. Open the tank by removing lid and hang tension band over edge of tank.
3. Cut off film tongue (not necessary with Karat cassettes) and pull about ¾" (2 cm.) of film out of cassette.
4. Place cassette in loading chamber (see page 4).
5. Place opened film clip (fixed to tension band) in recess in dividing wall of tank, insert end of film in clip and press the clip so that its teeth penetrate the film (see p. 5).
6. Thread about 2 inches (5 cm.) of film (for Karat films see p. 18) into film guide by turning winding knob (corners of film must be bent under); replace lid on tank.
7. Wind film into spiral drum by turning winding head. Finally cut off film from spool with cutting knife.
8. Carefully pour 7 oz (200 cc.) of developer into tank, i. e. into opening in lid, turning winding knob in direction of arrow, with short jerky movements, half a revolution every two seconds. Developing time 5–18 minutes—see Table, page 20.
9. Pour off developer while continuing to turn knob. Rinse for about 1 minute.
10. Pour 7 oz (200 cc.) of fixing solution into tank, and fix for 10 minutes continuing to turn knob.
11. Wash thoroughly: 20–30 minutes (see page 10). Finally hang up film to dry.
12. Take tank to pieces, thoroughly clean, and reassemble.

Agfa Films and Agfa Developers

Development times at temperature of 68° F. (20° C.)

The table gives times of development in minutes for correctly exposed negatives.	Isopan FF	Isopan F	Isopan ISS	Isopan Ultra	Isopan Record
DIN °	13°	17°	21°	25°	29°
Agfa Atomal New Ultrafine grain developer	9–10	11–12	12–14	12–14	10–12
Agfa Final Fine-grain developer	5–6	8–9	10–11	10–11	—
Agfa Rodinal Universal developer 1:50 dilution	—	—	—	—	15–20
1:75 dilution	12–14	14–18	14–18	—	—
1:100 dilution	16–20	—	—	—	—

Hints on Developing Agfa Isopan Record Film

For films exposed under very poor lighting conditions use Rodinal (1 : 50) or Atomal and increase developing time by 50–100% in order to make the most of the high speed of this film. The same applies to subjects of weak contrast.

Fix from 6 to 7 minutes in an acid fixing bath.

For very urgent cases:

Rapid developing: Rodinal diluted 1 : 10, developing time 2–2½ minutes (68° F. = 20° C.); rotate spiral drum continuously. The grain of the negative will then become slightly coarser.

Rapid fixing: When using a rapid fixing bath (e. g. Agfa 304) the fixing time will be from 2 to 3 minutes.

Agfa 304:

Sodium thiosulphate	4 ounces	(200 grams)
Ammonium chloride	1 ounce	(50 grams)
Potassium metabisulphite	175 grains	(20 grams)
Dissolve in water and make up to 1 pint		(1 litre)

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