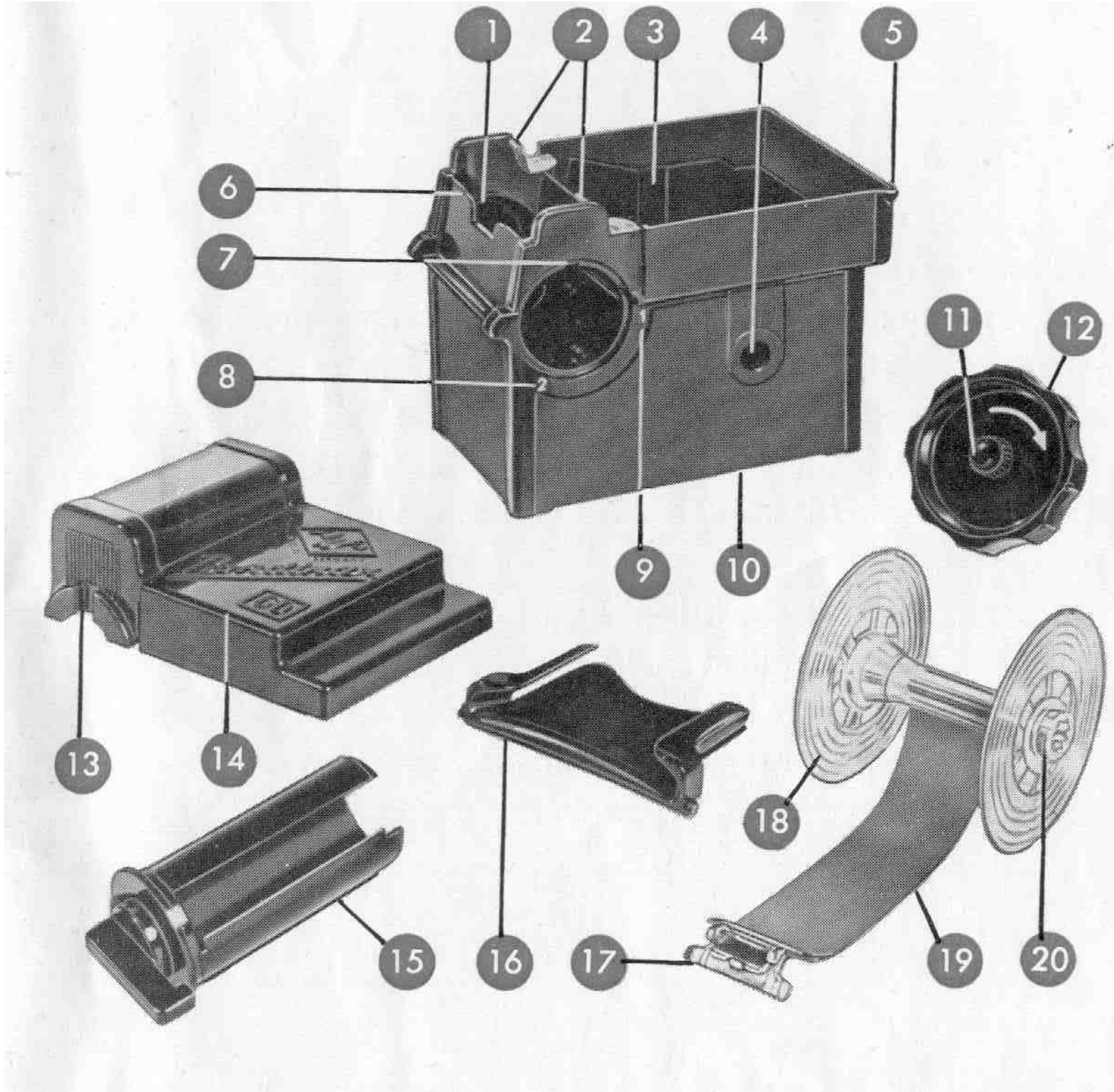


① Spooling chamber
② Clamping springs
③ Developing chamber
④ Guide hole for turning knob
⑤ Pouring lip
⑥ Knife edge
⑦ Cassette guide groove
⑧⑨ Setting marks for cassette handle
⑩ Tank body
⑪ Packing screw
⑫ Turning knob
⑬ Guide groove
⑭ Lid
⑮ Cassette
⑯ Film guide
⑰ Leader strap clip
⑱ Spiral
⑲ Leader strap
⑳ Square spindle end

ALPHABETICAL LIST OF CONTENTS

PREPARATIONS

It is advisable to learn how to handle the tank before using it, and the various operations should therefore be practised on the dry tank without a film.

The following solutions and items should be prepared before starting work:

4–5 ounces (130–150 ml.) ready-for-use developer at 68° F (20° C)
3 x 5½ oz. (150 ml.) water (for intermediate washes)
5 oz. (150 ml.) fixing solution at 64–68° F (18–20° C)
also a dish—scissors—a thermometer—a soft, clean chamois leather, or better still—an Agfa film wiper—two film clips.

Now that you have decided to develop your own films the Agfa Rondinax 60 will help you to achieve the personal touch and will ensure that the developing process can be carried right through to its conclusion without handling the negatives at all. The easy, trouble-free operation of this daylight developing tank is confirmed by its thousands of owners and by the fact that it has remained unchanged in design for many years.

Before using it for the first time it is important to become thoroughly conversant with the sequence of the various operations, because development should proceed without interruptions of any kind. We therefore advise you to pay special attention to the sections dealing with the preparatory work and loading, and wish you every success with your films.

Under no circumstances should higher or lower developing temperatures be compensated by shortening or increasing the development time. This can very easily lead to faulty results and should therefore be avoided.

TEMPERATURE

The correct developing temperature is 68° F (20° C). Both tank and developer must therefore **each** be brought to the prescribed temperature before loading the film. The quickest way of reaching this temperature is to store the empty tank at normal room temperature, because an empty tank cooled, for example, to 50° F (10° C) requires about 1½ hours in a warm room before it reaches 68° F (20° C). The temperature can be determined by placing a thermometer in the empty tank.

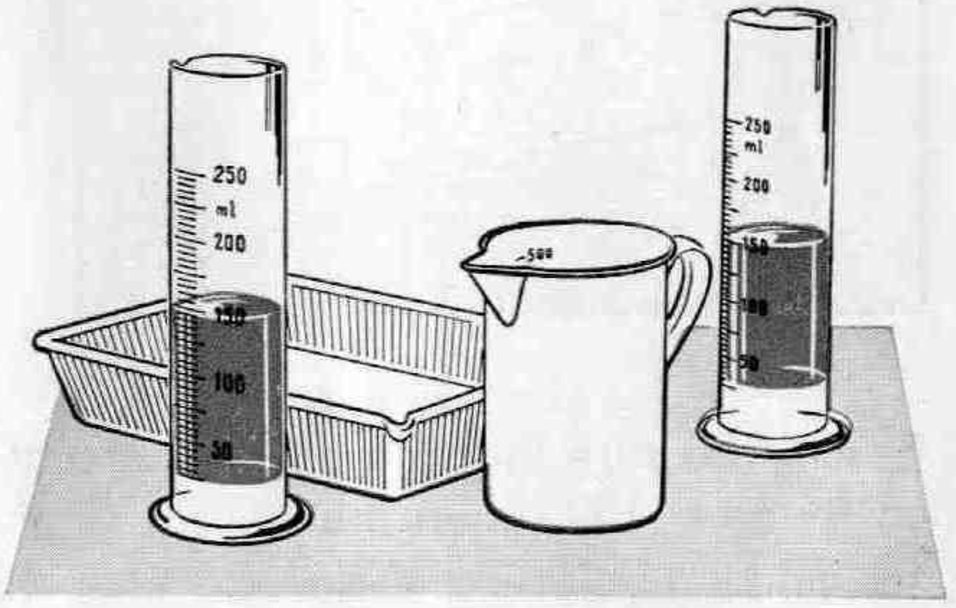


Fig. 2

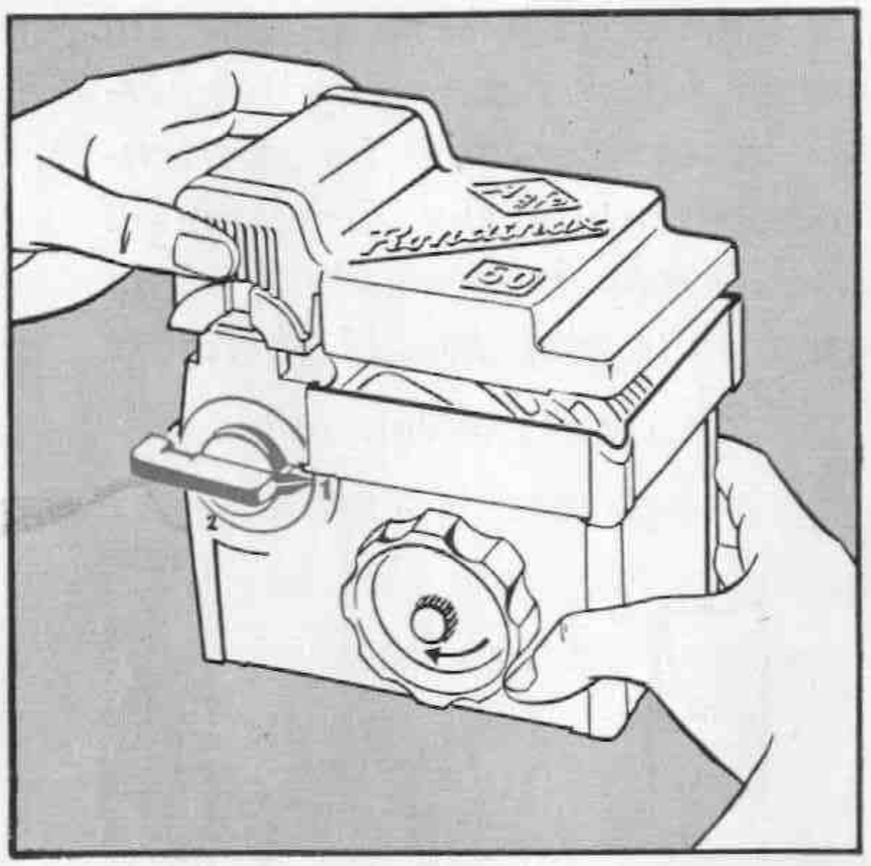


Fig. 3

OPENING THE TANK

To open the Rondinax 60 first turn the cassette handle until the pointer is opposite the mark "1" and then lift off the lid. To keep the film clip quite dry draw the leader strap taut over the edge of the tank. The film guide should also be removed beforehand.

ADDING THE DEVELOPER

First make sure that the packing screw is tight enough to allow the turning knob to revolve; only then the tank is watertight. The developer can now be poured into the developing chamber. You will require 4–5 fluid. oz. (130–150 ml.), just enough to cover the middle of the spiral spindle. *Take care that no liquid spills or splashes on to the cassette, the spooling chamber or the leader strap and clip.*

Check the temperature of the developer with a dish-type thermometer and find the correct development time from the table on page 18.

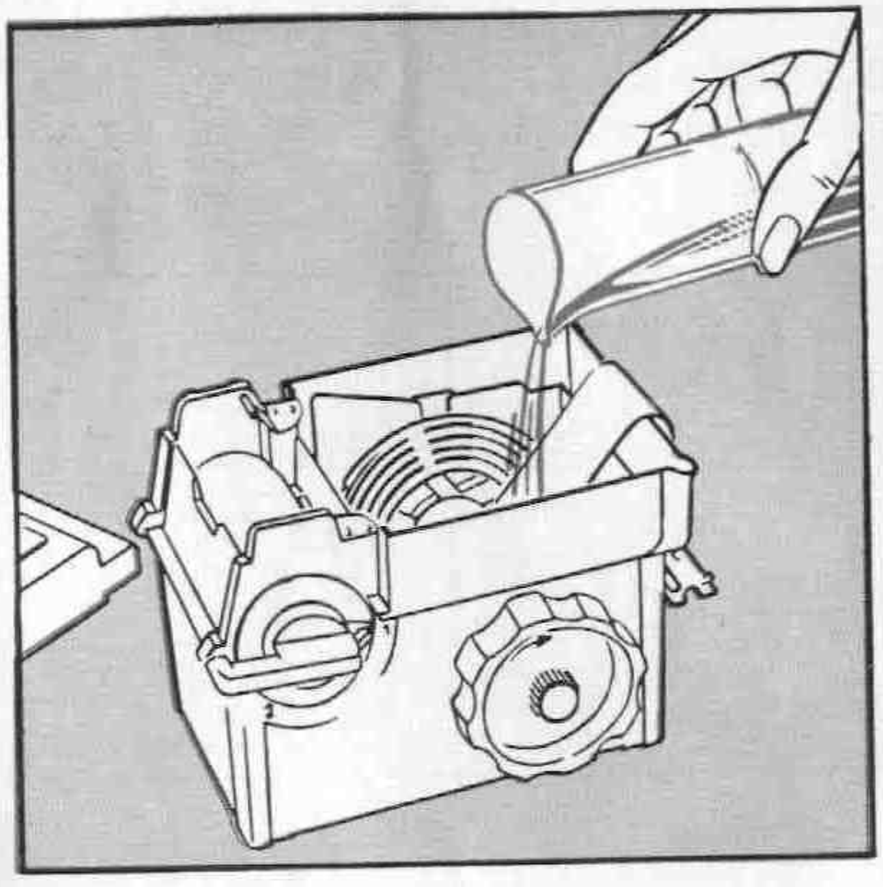
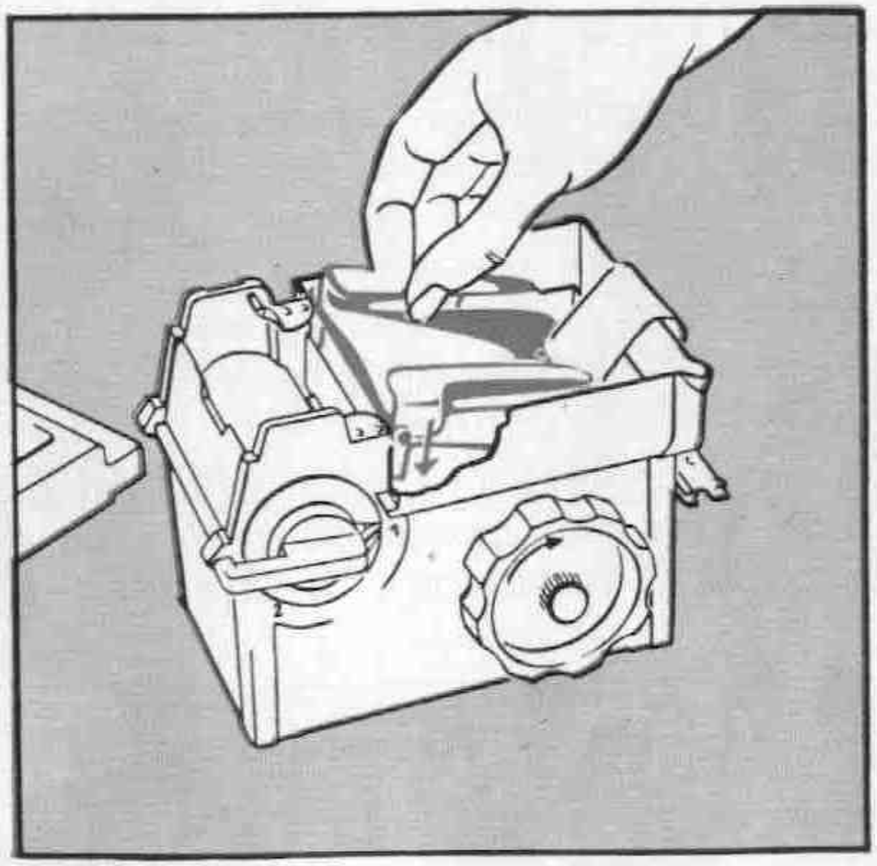


Fig. 4

Fig. 5



INSERTING THE FILM GUIDE

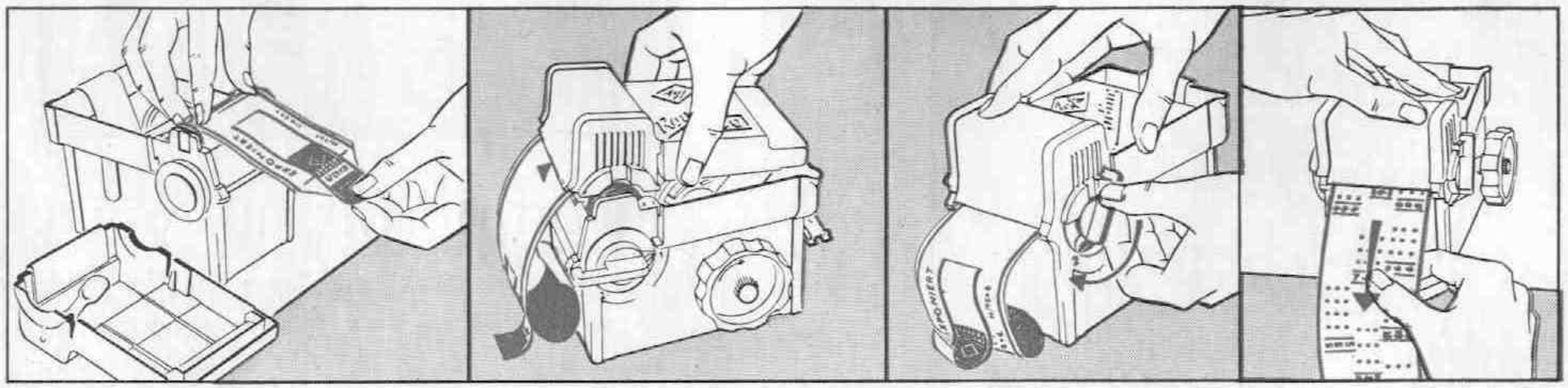
After pouring in the developer the film guide should be inserted with its ribs uppermost. By moving the axis of the film guide gently to and fro its end can be lowered to rest on the spindle of the spiral.

LOADING THE FILM

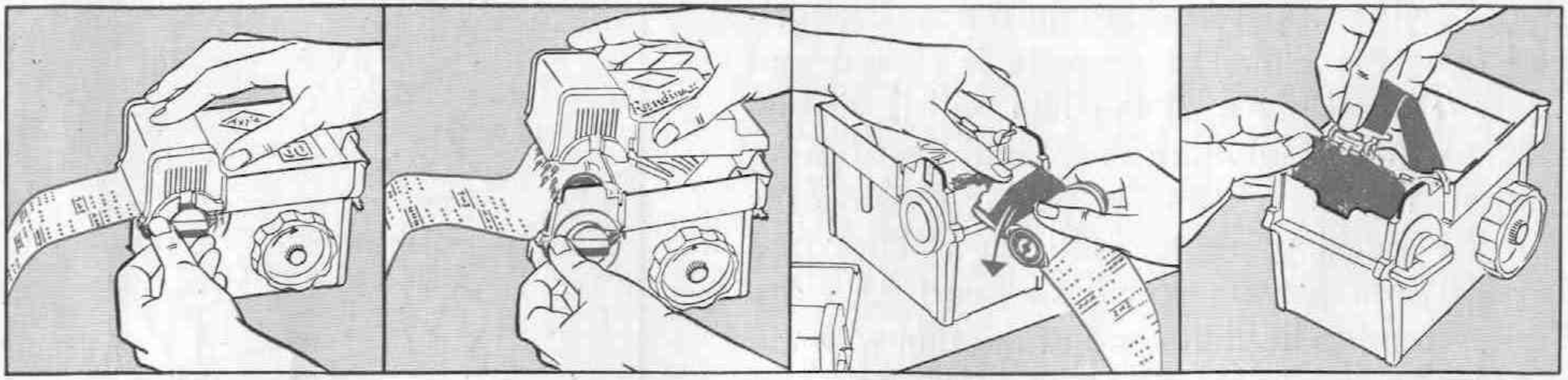
This and all other operations can be carried out in daylight, but direct sunlight should be avoided. Before inserting the film make sure once again that *the spooling chamber, cassette, film guide and leader strap are perfectly dry,* otherwise they must be rubbed dry with a cloth.

Only films which are properly and tightly rolled can be developed in your Rondinax 60. If necessary, the backing paper can be tightened up carefully, but attention must be paid to the risk of electrostatic discharge in hot weather. Please read the special instructions on page 16.

Fig. 6 With your fingernail slit the seal securing the exposed film. Now insert the film so that the paper backing can be drawn out to the rear. By pressing the film against the clamping springs visible in illustration 6 it will be secured firmly in the tank.



6 7 8 9



10 11 12 13

Fig. 7 Now unroll about 4 inches (10 cm.) of the paper backing and put the lid on.

Fig. 8 Then fasten the tank by pressing down the lid firmly and turning the handle so that the pointer is opposite the mark "2".

Fig. 9 Pull out the backing paper slowly and evenly, preferably downwards at an **oblique** angle, until No. "1" on the paper appears and greater resistance is felt. This resistance is caused by the joint between film and backing paper.

Fig. 10 This operation has fed the actual film into the cassette, which is now rendered light-tight by turning the pointer on the handle to "1". **Important!**

Fig. 11 When the cassette is closed this unlocks the tank and the lid can then be removed with safety.

Fig. 12 The paper backing must now be parted from the film. The cassette is closed and only a small piece of the film end is visible. Remove the empty film spool and the backing paper, lay them with the paper downwards on the backing paper used for pulling and grasp **both** papers with one hand. Use the other hand to hold the end of the film with the joint. Lay the joint across the knife edge of the tank and the paper backing can then easily be severed obliquely. To prevent the cassette from opening during this operation it is advisable to hold down the handle to keep it in the locked ("1") position.

Fig. 13 Now open the clip of the leader strap and fasten it to the end of the film exactly **in the middle** of its width, using the cut-out portion of the knife edge as a positioning guide. Fasten the clip firmly so that its point pierces the rather thick joint of the film.

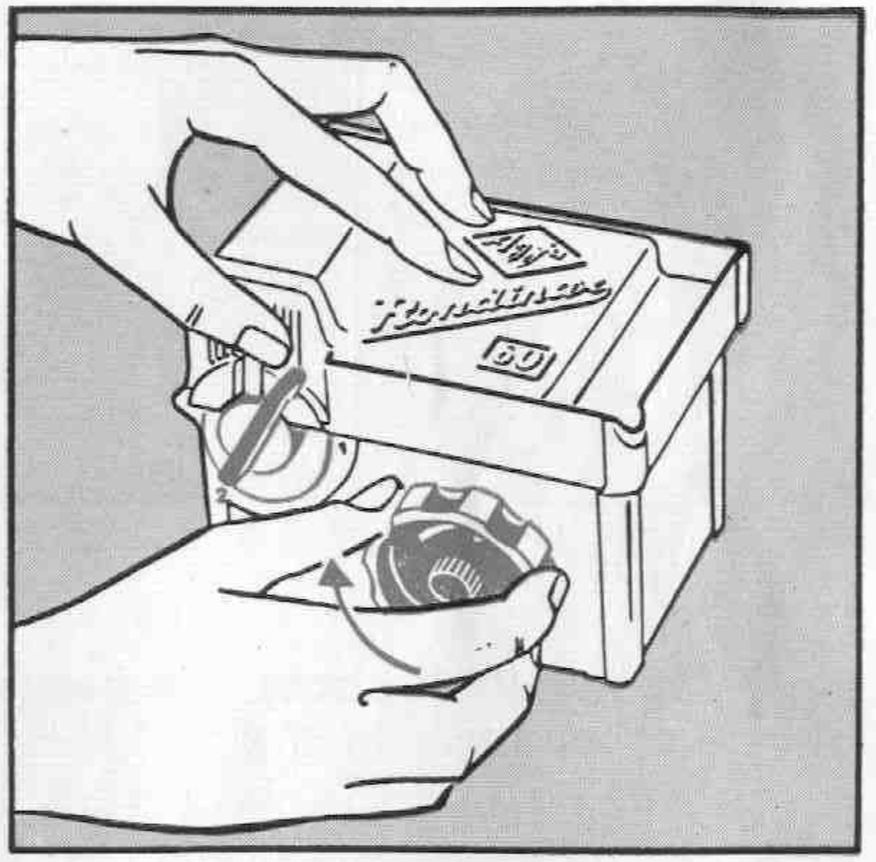


Fig. 14

DEVELOPING

First close the lid in the usual way, turning the handle to **position "2"**. Fig. 14 By turning the knob of the spiral the film is now drawn by the

The following operations must be carried out without a break, and no films should be processed until you are fully conversant with the nature and sequence of them. You are advised to read the section on developers, film types, temperature and times on page 13 carefully beforehand.

leader strap into the developer, wound on to the spiral and slowly agitated in the developer. The knob should be turned in short, jerky movements in the direction of the arrow during the **entire development time,** about half a turn every other second. The development time depends on the developer, type of film and temperature which, as already mentioned, can be seen from the table on page 18.

BRIEF INTERMEDIATE WASH

When development is complete the developer is poured from the tank by tilting it as illustrated and **turning** the spiral **all the time.** This is followed at once by three washing operations, still moving the film by turning

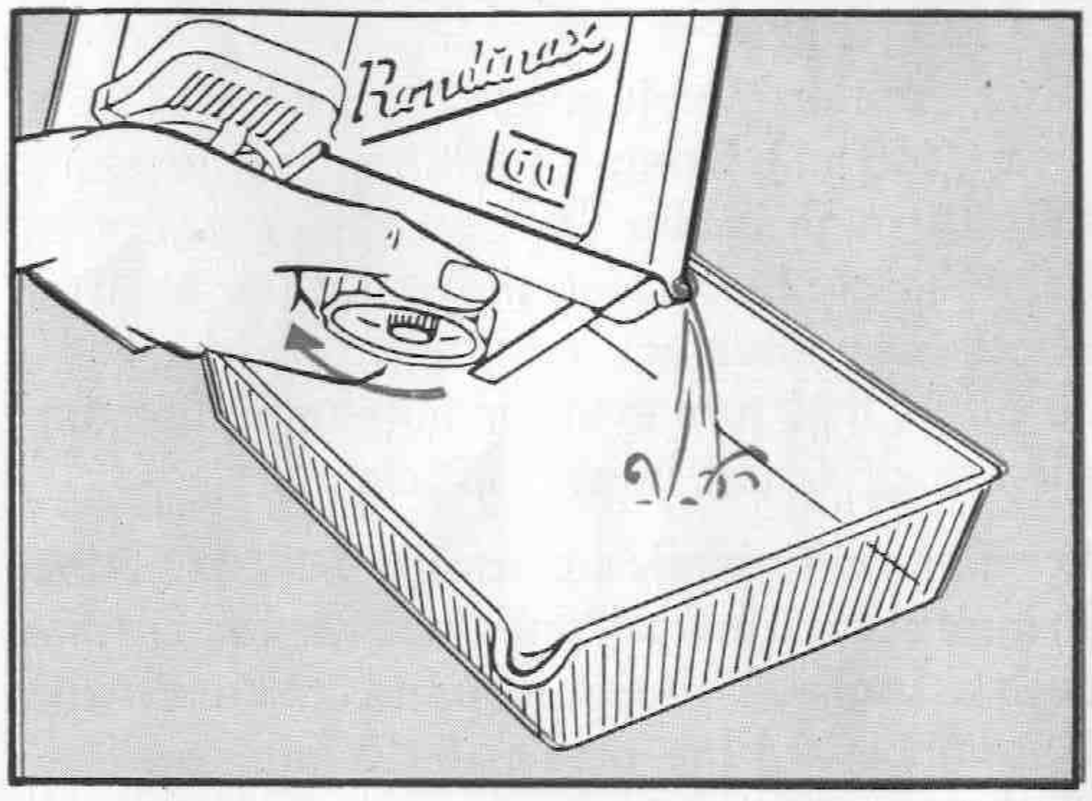


Fig. 15

the knob. **Do not open the Rondinax 60 at this stage,** as the film remains sensitive to light until it has been fixed.

FIXING

After the third wash empty the tank and pour 5 oz. (150 ml.) fixing solution into the small filling trough in the lid. Commence agitation immediately by turning the spiral knob. After about 2 minutes you need not turn the knob so often, a ¾ turn every minute until the completion of fixing being sufficient.

For films of speeds up to 18° DIN (50 ASA) fixing takes about 5–8 minutes, for faster films such as Agfa ISS, Agfa Isopan Ultra and Agfa Isopan Record the time is 8–10 minutes.

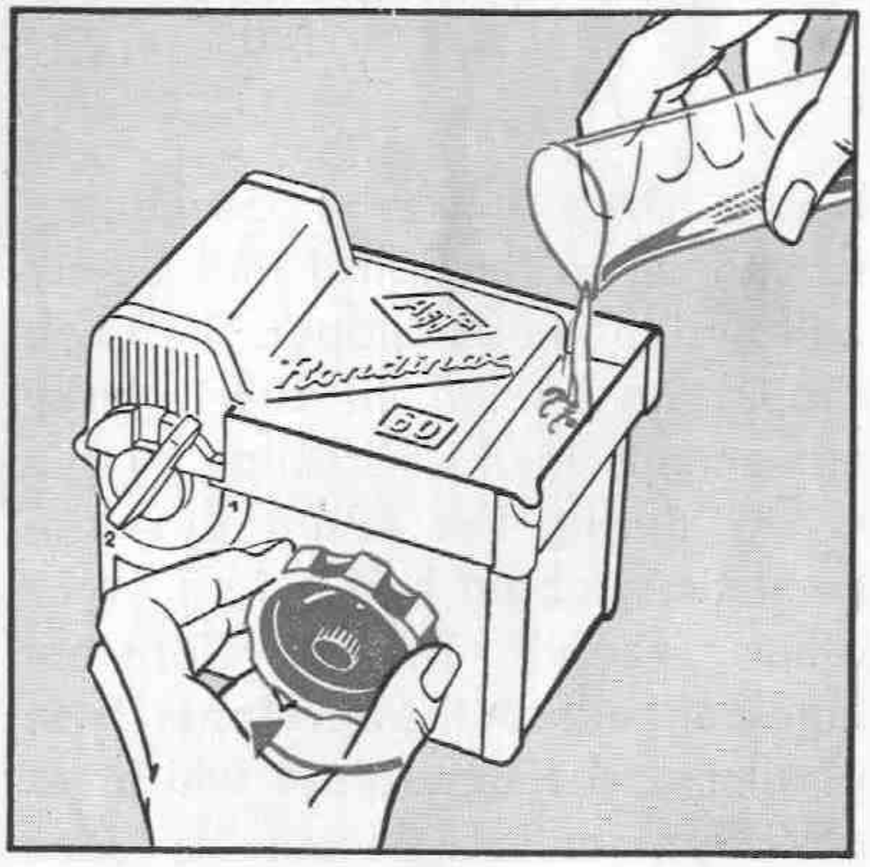


Fig. 16

You can now open the tank. If the film still bears evidence of milkiness in several places, in spite of adhering to the correct fixing time, replace the lid and continue turning the knob for about 1–2 minutes more when the film will be properly fixed. It is quite safe to use the fixing solution twice, but not more than this. See page 16 for instructions on preparing the fixing solution.

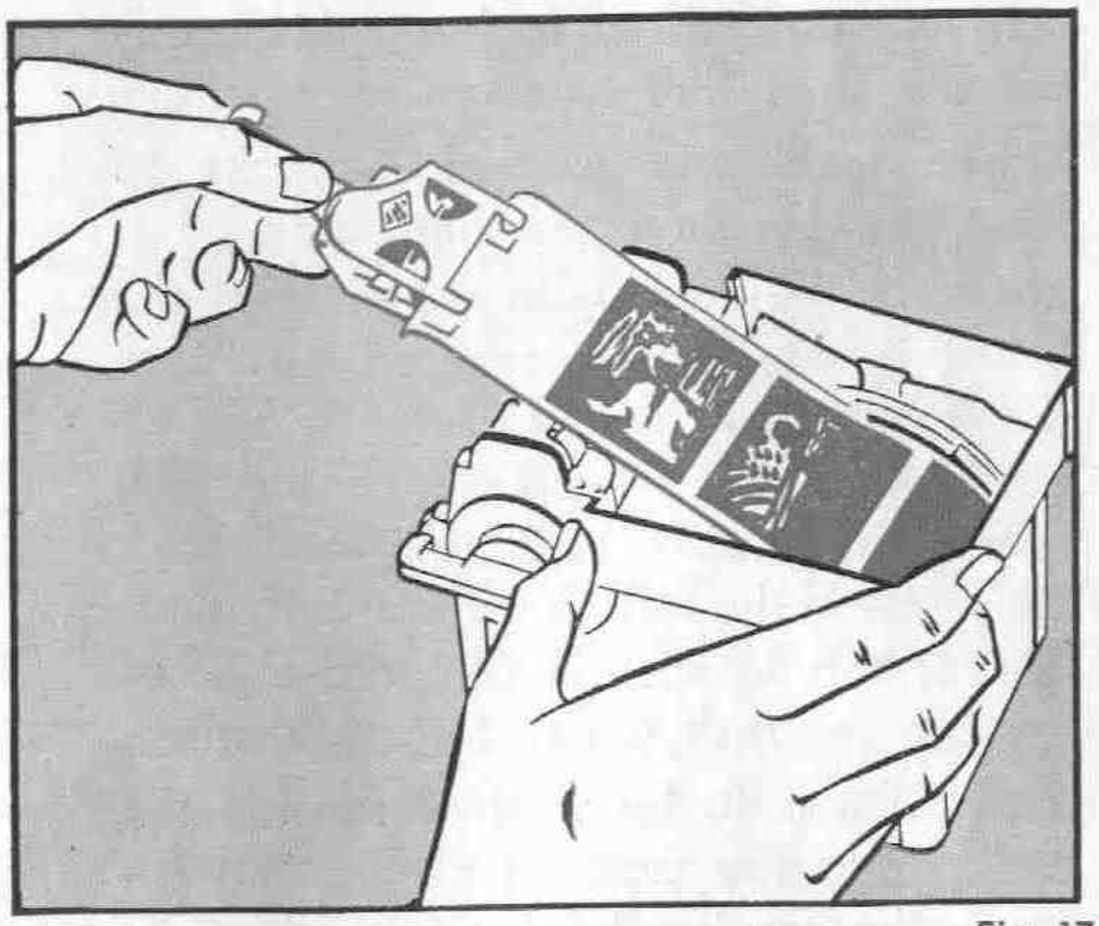


Fig. 17

FINAL WASH

After fixing, the film must be thoroughly washed to remove unwanted chemicals. Pour off the fixing solution, moving the agitation knob continuously. If you wish to use the solution again it should be poured into a separate container. The final wash can be given either in the tank or in a sink. If several films are to be developed in succession it is advisable to wash the film out-

side the tank so as to have this ready for the next film as soon as possible.

When washing in the tank first take off the lid and remove the film guide.

Now fill the tank with water until the spiral is completely covered and turn the knob a few times to release any air bubbles between the coils of the film. Rotate the knob occasionally and leave the water in the tank for about 5 minutes. Repeat this operation about 5–6 times pouring in fresh water for each wash.

If the film is to be washed **outside the tank,** undo the packing screw and remove the turning knob. You can then remove the spiral with ease and place it under running water in a deep basin, sink or similar receptacle. By this method the film should be washed for about 30 minutes.

After developing in Atomal the film should be washed extra thoroughly; in the tank about 8–10 washes each of 5 minutes' duration, or 45 minutes under running water outside the tank. If these instructions are followed rigorously you can be certain of obtaining satisfactory prints and enlargements from the negatives even after many years.

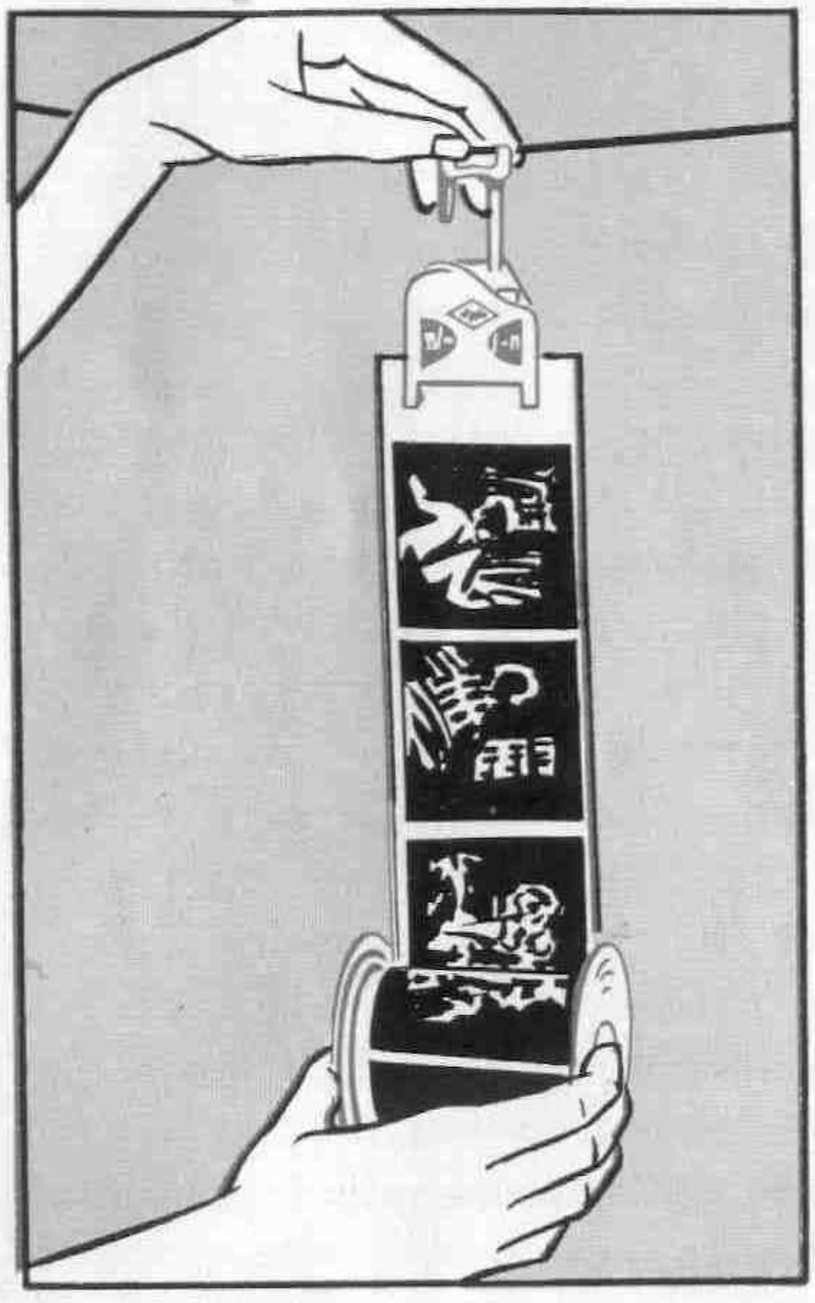


Fig. 18

DRYING THE FILM

Wet films are very susceptible to scratches and should therefore be handled as carefully as possible. When hanging up a film to dry it is best to unroll it from the spiral as shown in fig. 18.

You can also leave the spiral in the tank but then the packing screw will have to be loosened if the film is to unroll satisfactorily. Fasten a film clip to the free end of film and hang this from a taut string or wire about 6 ft. above the floor.

Now hold the spiral or Rondinax tank beneath this string and draw it slowly downwards; in this way the film unwinds from the spiral without being touched by hand. As soon as you have unwound the entire film, release the end from the leader strap clip and attach a second film clip to this end. *Do not use the tank spiral to weight the film.*

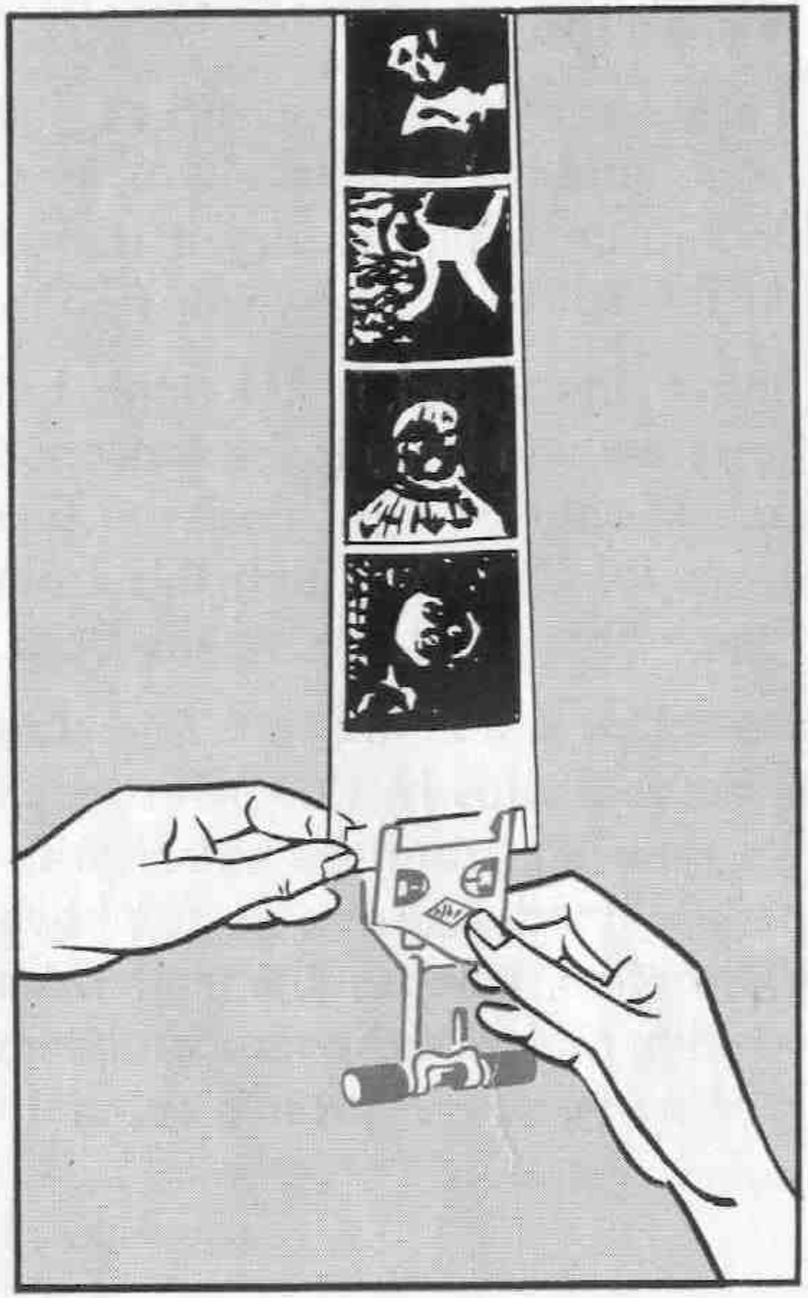


Fig. 19

After this, remove any excess water or drops from the film. To do this, pull the lower free end of the film taut and wipe down both sides carefully with a clean, moist, extra soft chamois leather. Do not use cloth or other materials because the film emulsion is very soft and sensitive to scratches when wet. Be sure to see that the film is held firmly by the top clip so that it does not fall down. Never dry films in the sun or near a stove or fireplace! Dust is the greatest enemy in photography and the slightest particle of dust on a negative is clearly visible in enlargements, so see that your films dry in a dust-free room.

DEVELOPERS • FILM TYPES • TEMPERATURE • TIMES

Developers should be made up in the prescribed manner. If several films are to be developed in succession it is advisable to prepare suitable amounts of stock solution.

Follow the makers' instructions accompanying films and developers and keep exactly to the developing temperature and times given.

If working conditions in development are standardized—always use the same concentration of solution at the same temperature—one will very soon become familiar with the characteristics of the respective type of film and developer, and ascertain the specific times of development.

The table on page 18 contains reliable information about development times with Agfa developers, and this can be used as a standard guide.

IMPORTANT!

Times of development shown by personal experience to be most suitable should be maintained on all future occasions in order to obtain uniform, optimum development.

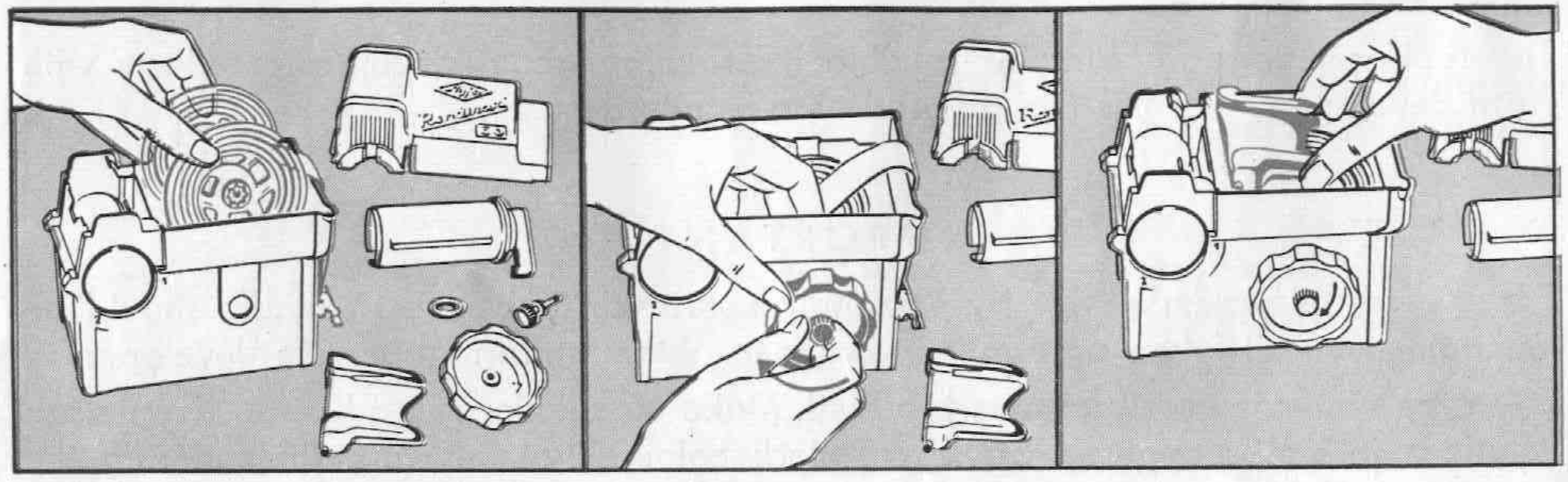
Fresh tap water is nearly always too cold. Make up solutions in advance. Keep stock solutions in well stoppered bottles of dark coloured glass, store them during the winter in heated rooms.

CLEANING

After use the tank must be thoroughly cleaned and should be dismantled for this purpose. Thoroughly wash the tank body, lid, turning knob and packing screw (do not lose the thin washer), film guide, spooling chamber and especially the spiral, leader strap and clip in running water. In some cases it may be necessary to use a brush to free the grooves of the spiral from gelatin residues etc. After cleaning, all parts—particularly the leader strap and clip—should be wiped down until completely dry.

REASSEMBLING THE TANK

Fig. 20 Replace the spiral with its square spindle hole facing the hole in the tank side.



20 21 22

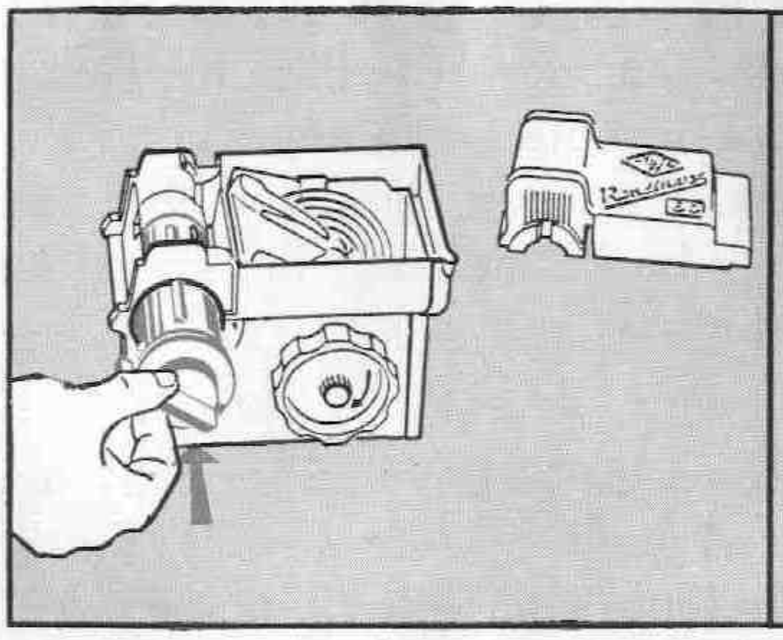
Fig. 21 Secure the turning knob to the spiral with the packing screw and washer. Tighten the packing screw so that the knob rotates readily.

Fig. 22 Insert the film guide with its ribs uppermost and its axis resting in the two guide grooves.

Fig. 23 Replace the spooling chamber so that the guide rib engages with the tank groove, and push right home.

Fig. 24 Place lid on tank

Fig. 25 and press down, at the same time turning the handle to position "2" to lock the tank.
The tank is then ready for further use.



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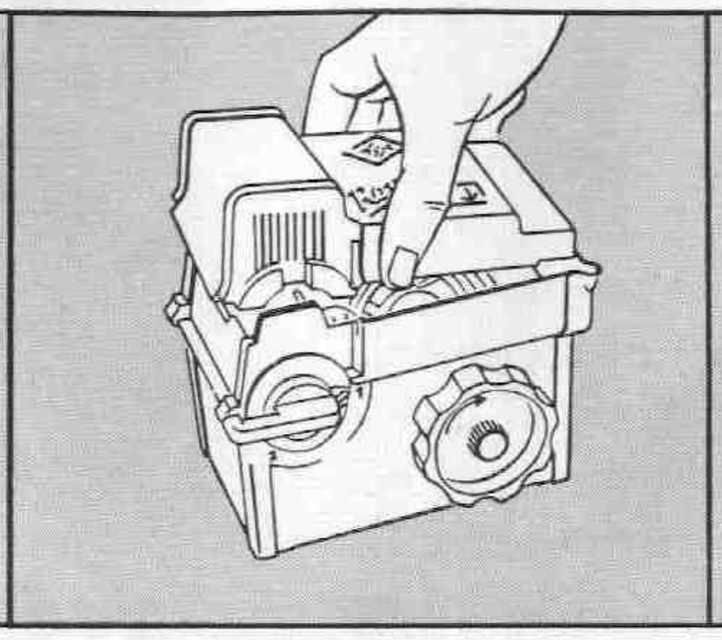

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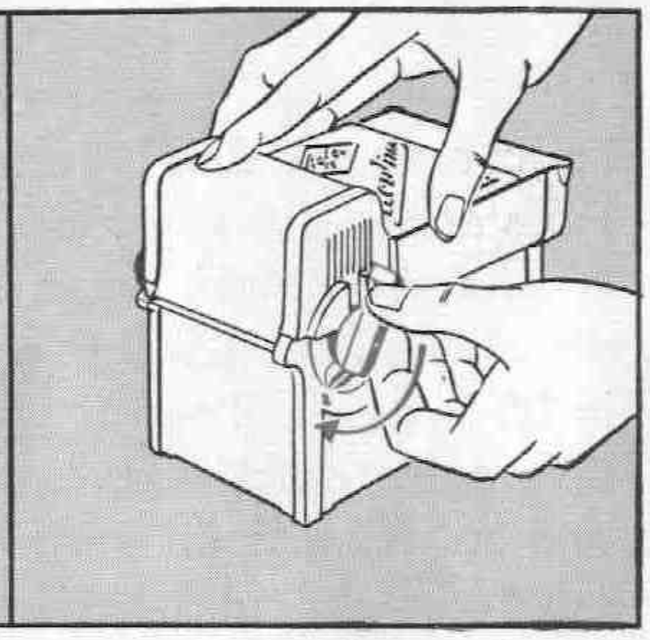

25

MAKING UP THE FIXING SOLUTION

To fix only one film 1½ oz. (40 grams) fixing salt are dissolved in 7 fl. oz. (200 ml.) of water. A stock solution is made by dissolving 7 oz. (200 grams) of fixing salt in 35 fl. oz. (1 litre) of water. The solution cools quickly as the salt dissolves and so fixing baths must be made up in advance and allowed to warm up to 64–68° F (18–20° C).

APPENDIX

Instructions for special cases

1 Films with torn backing paper should not be developed in the Rondinax tank. Damage of this kind can cause trouble when separating the paper from the film, and this can only be remedied in complete darkness.

2 If you wish to develop a partly exposed (and therefore only partly rolled up) film left in the camera for some length of time (2 weeks

or more), it may happen that difficulty will be experienced in feeding it into the spooling chamber. This is due to the fact that the film has lost its curl through being stretched for too long. This applies particularly to films used in Rolleiflex and box type cameras. The curling tendency can be restored by leaving the film rolled up for at least one day.

3 Films used in roll film adapters cannot be developed in the Rondinax 60 because after exposure they are wound on to the take-up spool in the opposite direction to that of the feed spool.

4 If loading difficulties should be experienced when separating the paper backing (possibly caused by faulty camera spooling), do not use force! Open the tank in complete darkness by moving the handle **to the vertical position** and remedy the deficiency. Then close the lid and re-set the handle pointer to "2".

Note! Use the vertical position of the handle only in this particular instance.

Agfa Films and Agfa Developers — Developing times at 68° F (20° C)

The table gives the developing times in minutes for normally exposed negatives	Isopan FF	Isopan F	Isopan ISS	Isopan Ultra	Isopan Record
DIN° (ASA)	13° (16)	17° (40)	21° (100)	25° (250)	
Agfa Atomal new Ultra fine-grain developer	**7–10**	**10–12**	**10–12**	**10–12**	**9–12**
Agfa Final Fine-grain developer	5–6	7–9	7–9	7–9	—
Agfa Rodinal Universal developer 1:75 dilution	15–18	**14–18**	**14–18**	—	—
1:50 dilution	—	—	—	—	15–20
Agfa Rodinal Universal developer 1:100 dilution	**16–20**	—	—	—	—

The times specially recommended are printed in **thick type.**

Records of practical experience

Developer	Development time in minutes	Temperature	Type of film					
	DIN (ASA)							

INSTRUCTIONS IN BRIEF

1. Prepare solutions (each 4 to 5 oz. or 130 to 150 ml.). Adjust temperature of solutions and tank to 68° F (20° C).
2. Set pointer to "1", remove lid, lay out leader strap and film guide.
3. Add 4–5 oz. (130–150 ml.) developer, check temperature, replace film guide.
4. Insert film and press against clamping springs, slit paper backing and draw out about 4 inches.
5. Put lid on, pointer to "2", draw out paper backing obliquely downwards.
6. Stop when exposure number "1" appears. Turn pointer to "1", open tank.
7. Sever paper backing, attach film clip, close tank, set pointer to "2", wind film on to spiral by continuous movement of turning knob.
8. During development (see page 18 for times) turn spiral knob in short, jerky movements.
9. Pour off developer, turning knob continuously.
10. Wash three times by pouring water into trough in lid; turn spiral knob all the time.
11. Pour in about 4–5 oz. (130–150 ml.) fixing solution. Fix for 10–15 minutes, again turning the knob. Afterwards pour off fixing solution.
12. Thorough final wash in tank or sink, at least 20–30 minutes.
13. Hang up film and weight free end, remove excess water.
14. Dismantle tank, clean thoroughly and dry, then reassemble.