

Dudgeonnière électrique CLI02280





WARNING

① **Hold the tool securely.**

When the tool is switched on and the flare cone starts rotating, the hand you hold the tool with may be jarred; take care not to hit any objects around you.

② **Always use the exclusive charger.**

Always use the exclusive charger for charging. It is dangerous to charge with any other charger, so never attempt to do so. Do not try to use the charger for charging other tools or batteries, or for any other purpose.

③ **Never use boosters or other transformers for charging.**

This can damage the charger; always use with a 220V supply.

④ **Never charge with an engine generator or DC power source.**

Do not use an engine generator or DC power source for charging. The charger may be damaged.

⑤ **Always charge indoors.**

- When charging, do not let the battery or charger get wet; charge indoors.
- Do not place the charger close to an open flame.
- Keep all inflammable materials away from the charger.
- The battery or the charger may get slightly hot during charging; choose a dry and well-ventilated place that is not exposed to direct sunlight.

⑥ **Moisture can cause accidents.**

Do not try to charge or use this product in the rain or in wet or damp places. Moisture can cause electric shock, in addition to weakening the insulation of the charger or the motor. Always avoid moisture.

⑦ **Unplug the charger after charging is complete.**

Unplug the charger cord from the power source after charging is finished. If there is a power failure, always remove the charger attachment plug from the power source.

⑧ **Charge in a range of 5°C to 40°C.**

This product employs a special charging circuit for fast charging (about 1 hour); always charge within a temperature range of 5 to 40°C. Below 5°C, it may overcharge, shortening the life of the charger. Above 40°C, charging may not be possible. The most suitable range is 20 to 25°C.

⑨ **Do not charge continuously with the same charger.**

- If the same charger is used to charge many tools continuously, it could be damaged due to overheating. Once charging is finished, let the charger rest for about 15 minutes before charging again.
- Normally, at an ambient temperature of about 20°C, the tool will be fully charged in about 1 hour and the pilot lamp will then go out. However, below 20°C, the pilot lamp may stay on even after 1 hour.



WARNING

⑩ Do not immediately recharge a battery that has been used up quickly .

A battery that has been used up quickly due to continuous operation becomes abnormally hot. Therefore, when such a battery is placed in the charger, a red pilot lamp will light up, either preventing a recharge, or resulting in an insufficient charge. Always charge the battery after it has cooled.

⑪ Do not charge for more than 2 hours .

If the pilot lamp stays on even after charging for 2 hours, the product may be faulty. Stop charging and take the product to your nearest sales agent.

⑫ Keep the battery mounting hole clean.

The battery mounting hole on the charger has charging terminals. If this hole is contaminated with metal chips, water or other foreign matter, the terminals may be short-circuited, causing damage to the charger.

⑬ Do not disassemble the battery of the charger.

- The battery houses a special device designed for quick charging (in about 1 hour); never try to disassemble it or it may be damaged.
- The charger houses condensers and electronic parts. Disassembling could result in electric shock or damage to the charger; never try to disassemble it.

⑭ Never short-circuit the charger.

- A battery with extremely low internal resistance is used. If short-circuited, there may be a surge in the current, resulting in overheating, burns or damage to the battery.

⑮ Never put the battery in a fire.

Never put the battery in a fire or an incinerator or it may explode.

⑯ Take care when working in high places.

When working in high places, make sure that there is nobody below you.

⑰ Keep the ventilation hole on the charger clean.

Keep the ventilation hole on the charger clear of metal chips and inflammable materials as they may cause electric shock or damage. Avoid using the charger in dusty places.

⑱ Stop charging if any abnormality is detected.

If you detect abnormal heat or any other abnormality while charging, stop immediately and take the charger for repairs.

⑲ Store the charger properly.

Store the charger in a dry place out of the reach of children and where the temperature does not exceed 40°C. Never store under the eaves etc. where rain might get in. Deterioration of the electrical insulation can result in electric shock.

Names of Parts

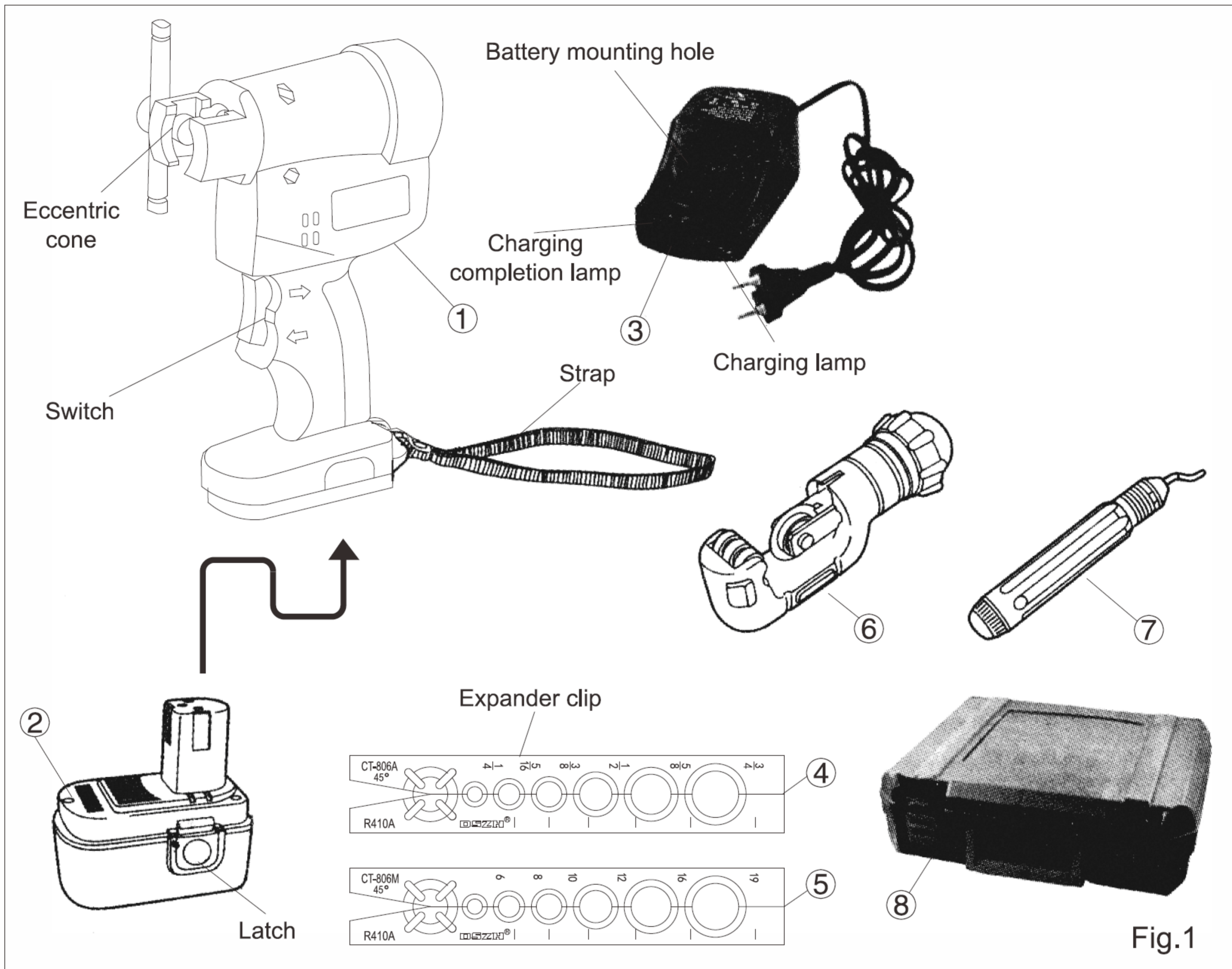


Fig.1

Standard Specifications (Dimensions and Weight)

	Product name	Dimensions (W x D x H mm)	Weight (g)	Quantity
1	Flaring tool (When the battery is attached)	122 x 67.5 x 224 (122 x 67.5 x 274)	1270 (1710)	1
2	Battery	101 x 63 x 96	440	1
3	Charger	166 x 94 x 75	1330	1
4	Expander clip: inch	76 x 33 x 16	530	1
5	Expander clip: metric	76 x 33 x 16	530	1
6	tube cutter (Φ 5 to 32)	150x62x48	350	1
7	Scraper (deburrer)	Φ 24 x 145	40	1
8	Carrying case	495 x 370 x 102	2000	1
Total			6480	

Table 1

■ Standard Specifications

(1) Flaring tool

Applicable pipe	Copper tube (O/OL material)						
Applicable pipe size	Outer diameter	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
	Outer diameter	6mm	8mm	10mm	12mm	16mm	19mm
Flaring shape	Complies with shapes described in JIS B 8607.(To be referred to separately.)						
Processing method	Eccentric cone (constant-pressure plunge rotation)						
Cone speed (rpm)	280rpm						
Power	DC motor						
Battery potential for flaring	Approximately 100 tube ends per fully charged battery. (May vary depending on usage.)						
Processing time	Approximately 5 seconds						

Table 2

(2) Battery

Battery type	Nickel cadmium
Voltage	9.6V
Capacity	1600mAh
Charging time	Approximately 60 minutes (May vary depending on usage.)
Battery rechargeability	Up to 500 times (May vary depending on usage.)
Charging temperature	5 ~ 40°C

Table 3

(3) Charger

Applicable battery	Nickel cadmium 9.6V
Power supply	AC 220 ~ 240V (50/60 Hz)
Charging mode	Temperature control
Charging voltage	11.6V
Charging current	2400 mA
Operating temperature	5 ~ 40°C

Table 4

■ Standard Accessories

	Name	Quantity
1	Flaring tool	1
2	Battery	1
3	Charger	1
4	Expander clip for inch sizes: 1/4" ~ 3/4"	1
5	expander clip for metric sizes: 6mm ~ 19mm	1
6	tube cutter (Φ 5 to 32)	1
7	Scraper (deburrer)	1
8	Carrying case	1

Table 5

Preparations before use

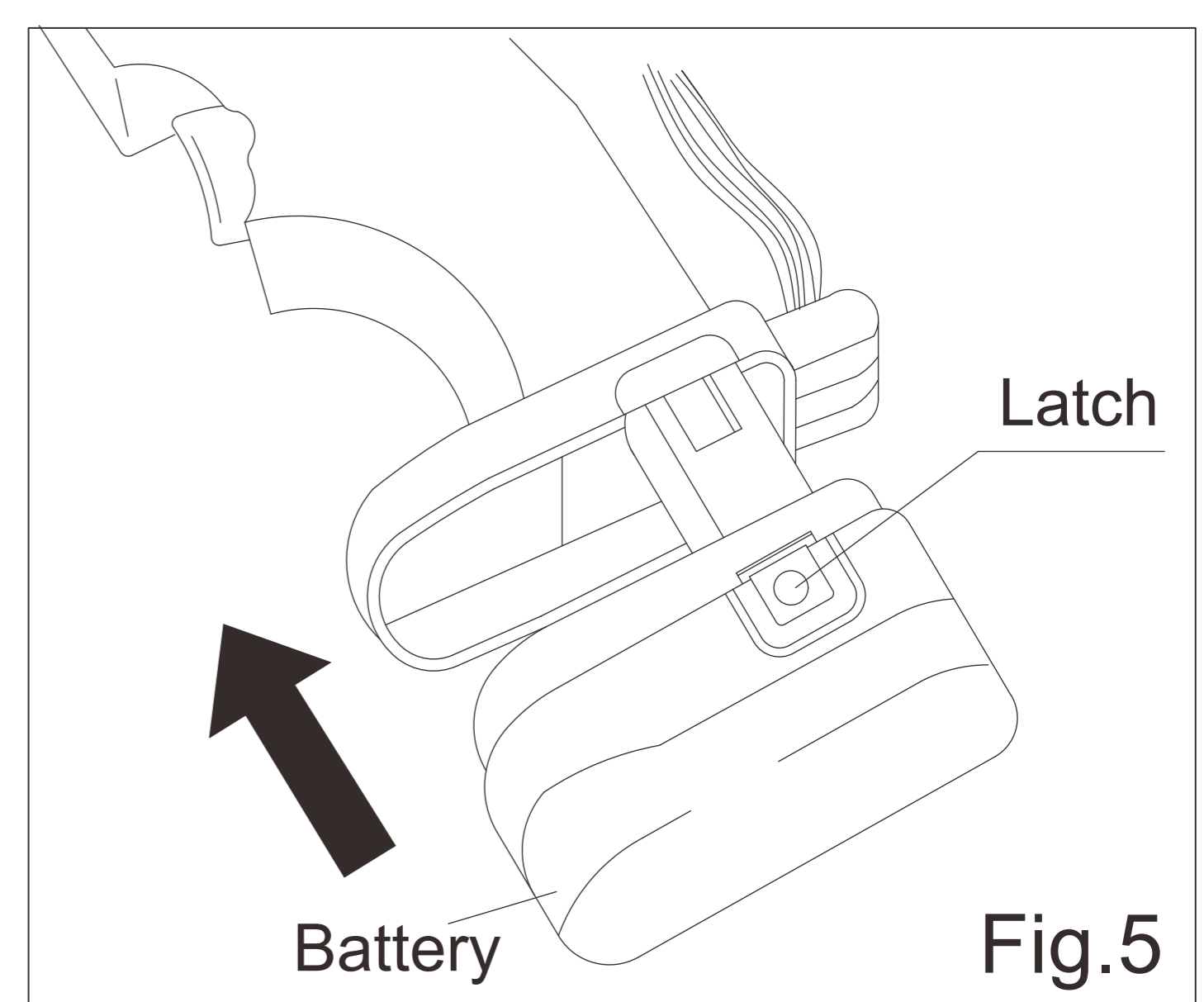
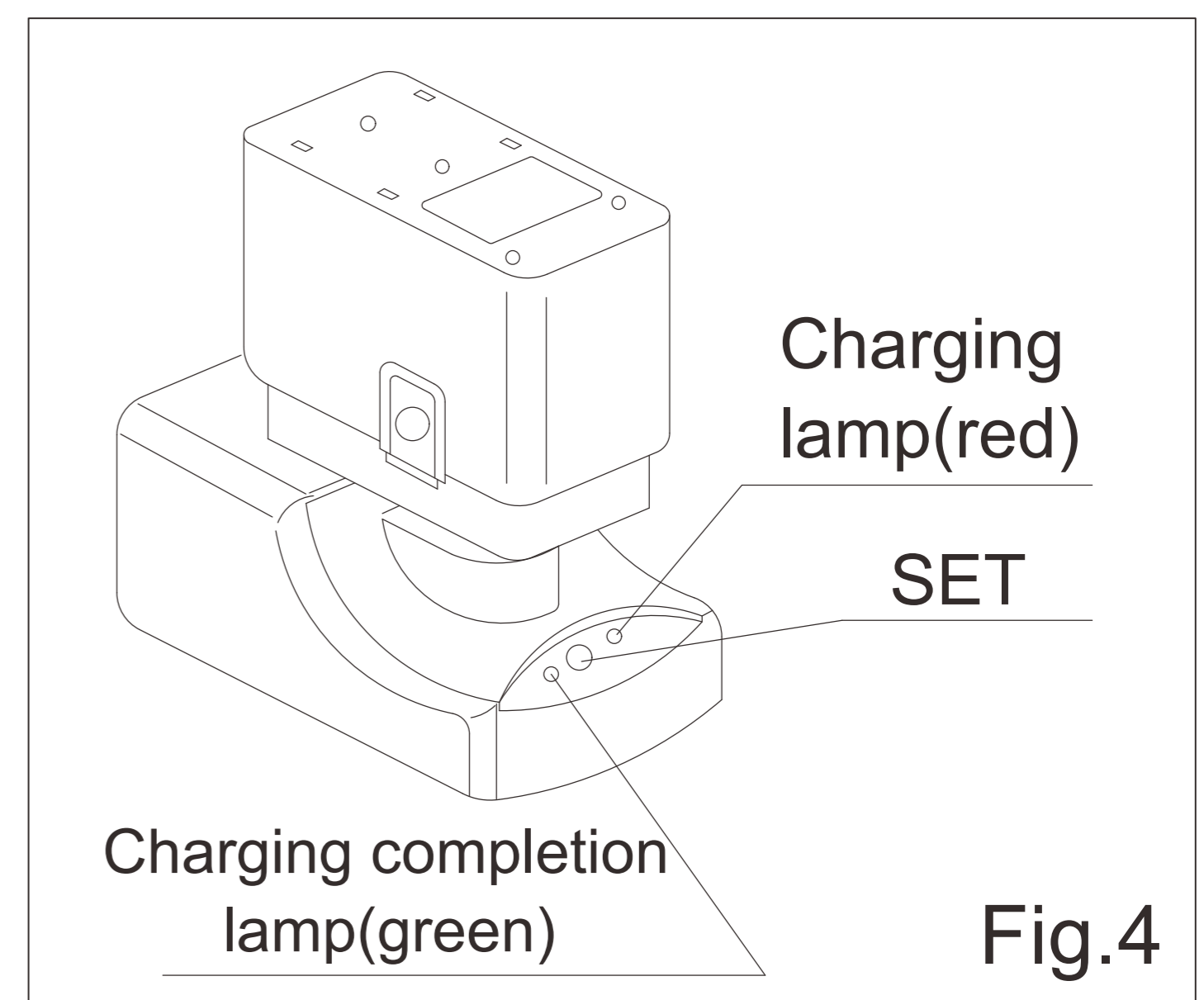
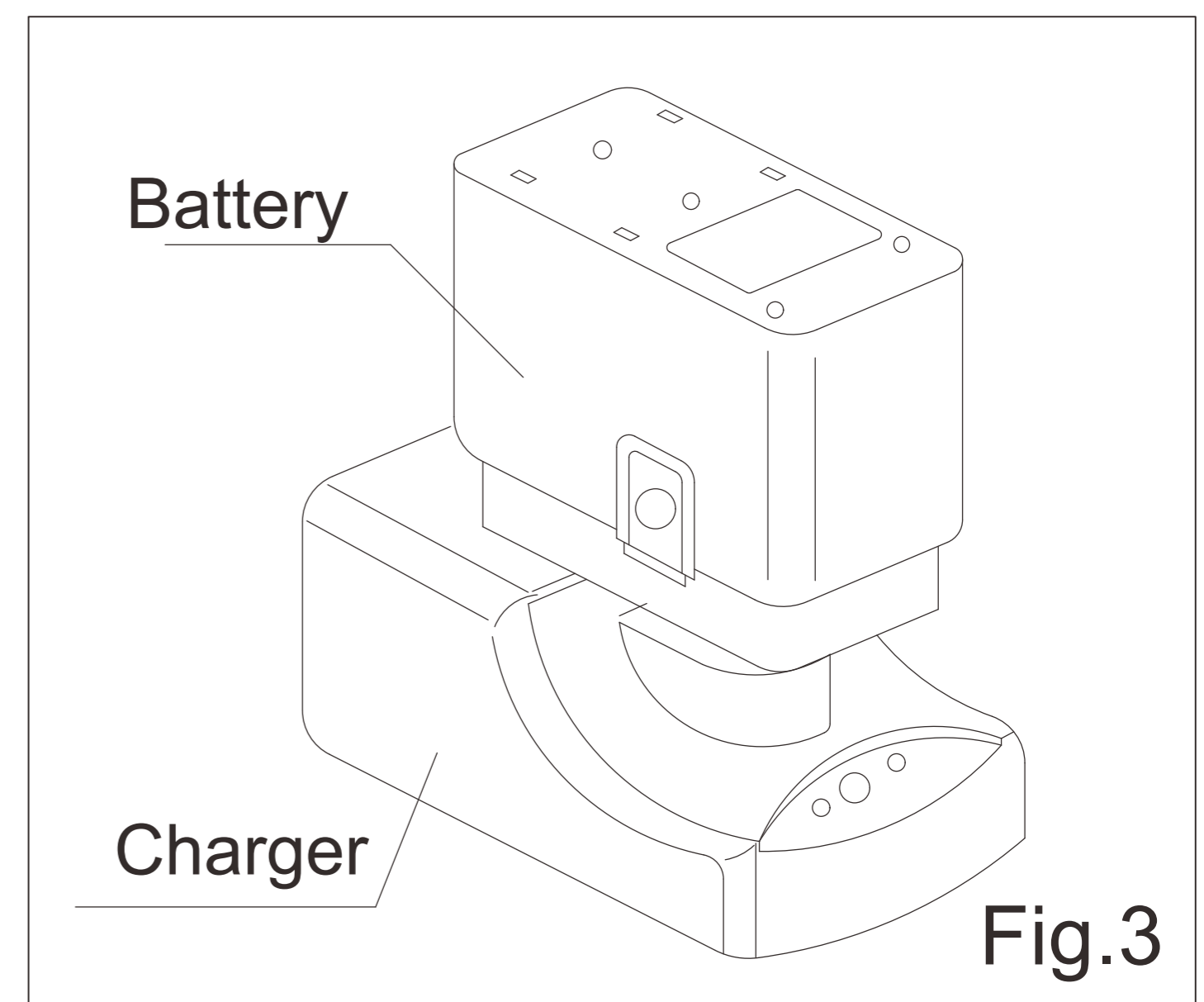
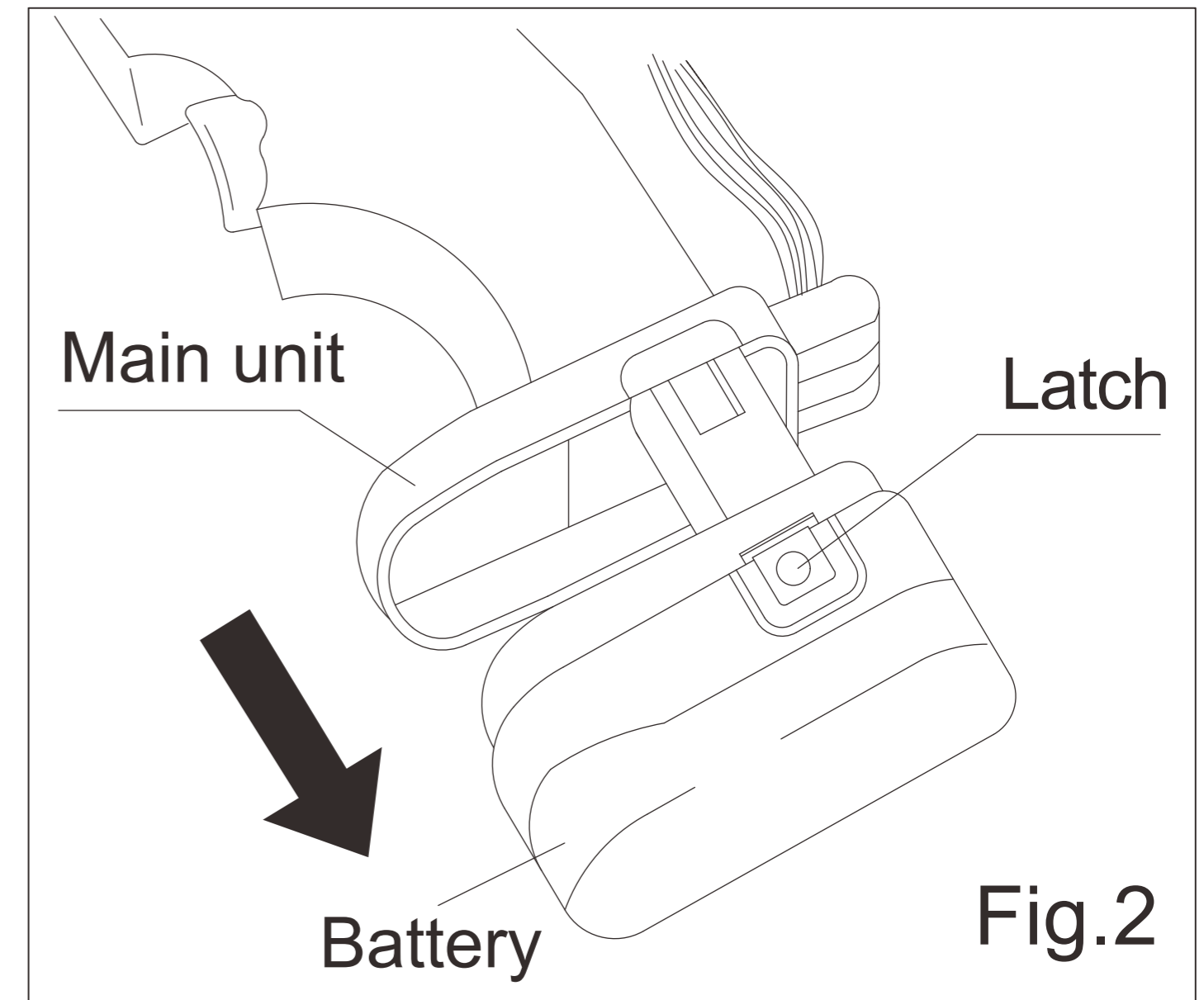
(1) Charging the battery

- ① Remove the battery from the main unit by pressing the latch on the battery. (Fig. 2)
 - Hold the main unit firmly and remove the battery.
 - When the flaring tool loses power, recharge the battery. If the battery is completely drained, it may not be possible to fully-recharge it, resulting in shortened battery life.

- ② Attach the battery to the battery mounting hole of the charger. Be sure to insert the battery fully into the hole. (Fig. 3)
 - Make sure the battery is aligned correctly.
 - Charge the battery within a temperature range of 5 to 40°C. Charging the battery outside this range may cause the battery to leak or become abnormally hot. In addition, the performance and the life of the battery may be adversely affected.

- ③ Plug the charger into the power source. The red charging lamp comes on, and charging starts. When the charge completion green lamp comes on, charging is complete. It takes about 60 minutes to complete charging. (Fig. 4)
 - The input voltage for this charger is AC220V(50/60Hz).
 - If you intend to charge another battery, leave the charger to cool for at least 15 minutes before charging the next one.
 - When the temperature of the battery is too high, recharging is not possible. (The green charge completion lamp will come on erroneously when a battery that is too hot is placed on the charger.)

- ④ Remove the battery from the charger, and then attach it to the main unit. (Fig. 5)
 - If the battery cannot be fully recharged even after following the correct procedure, the battery life may have run out. Charging the same battery as is may damage the charger.



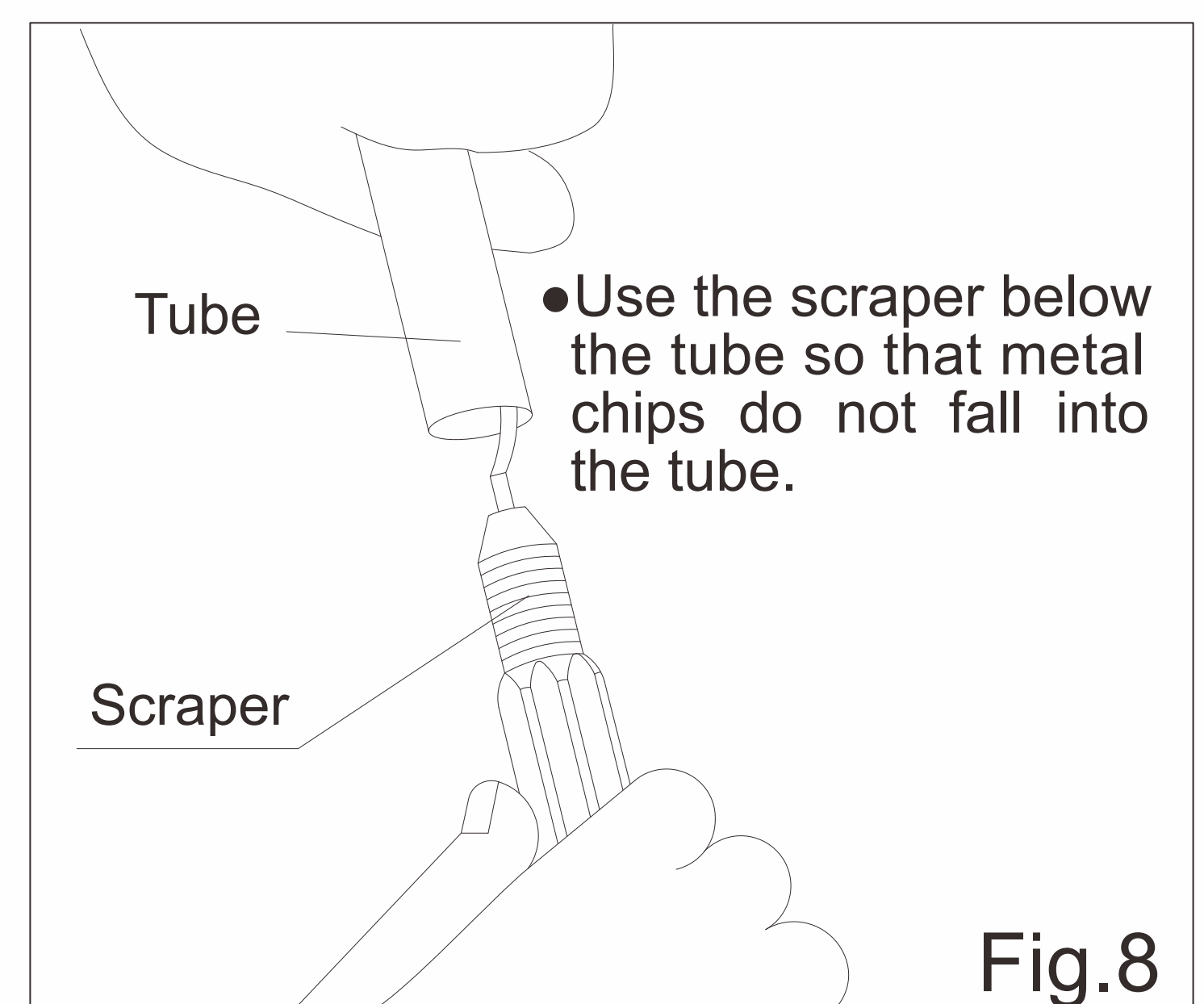
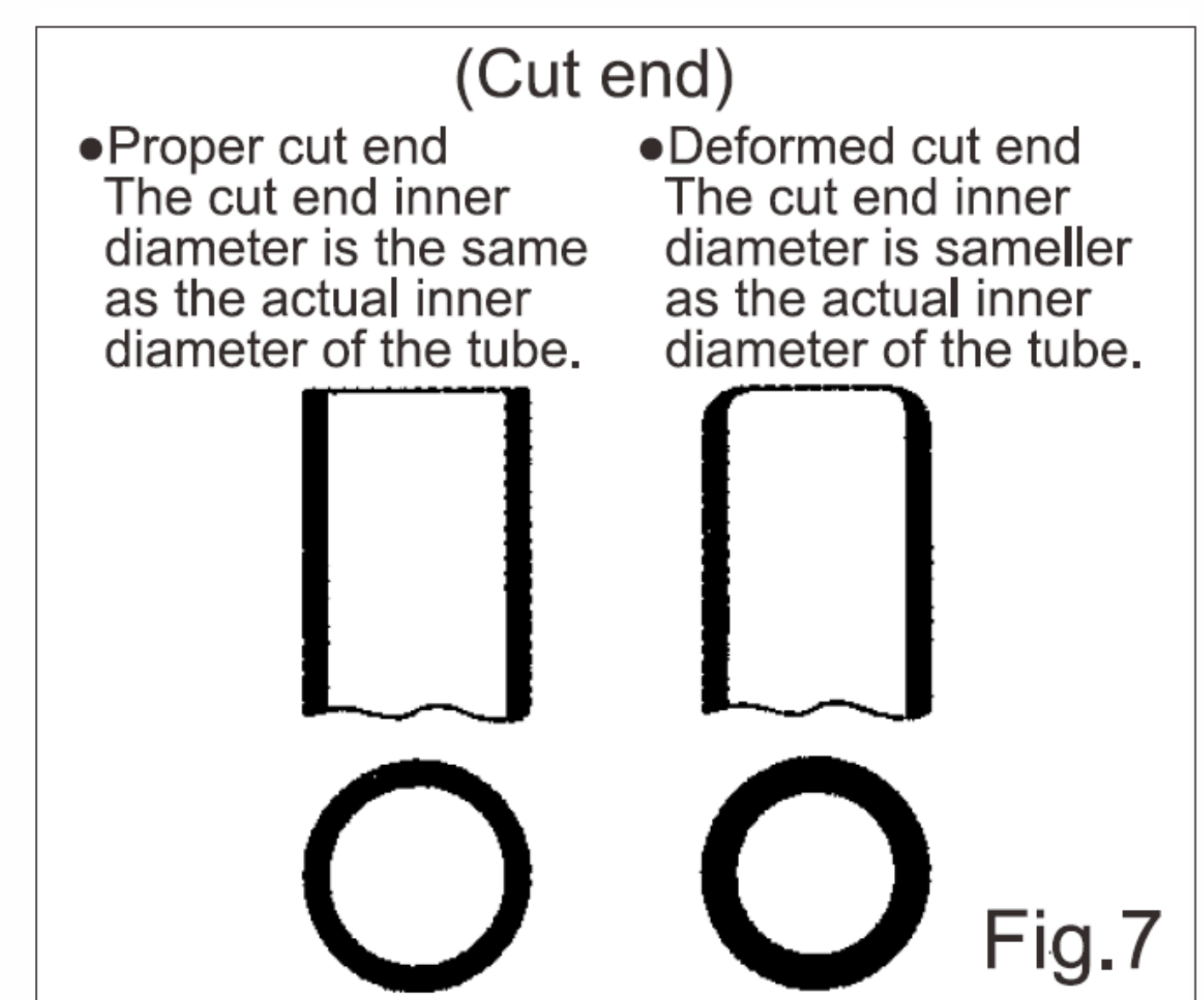
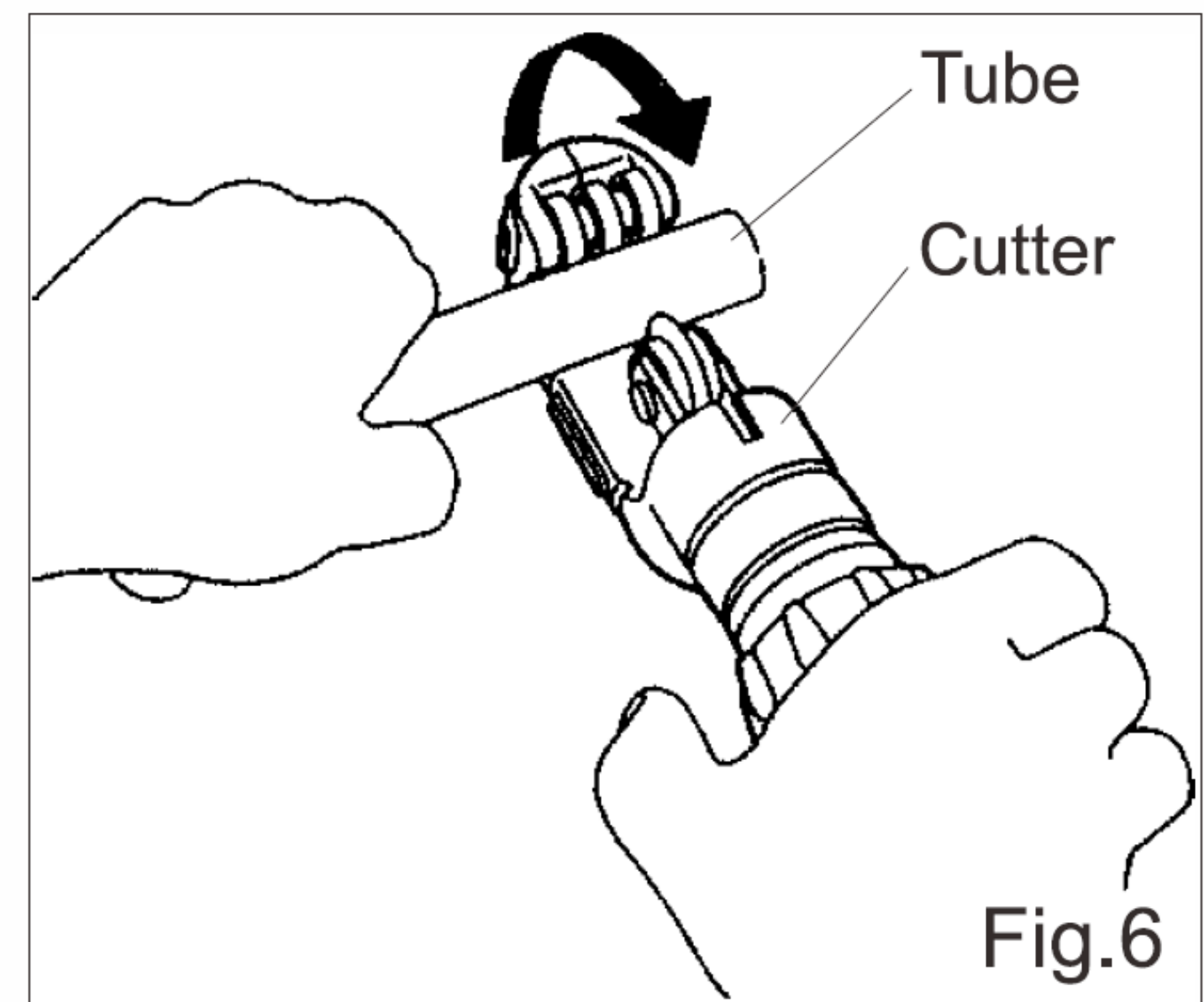
Operating Instructions

(2) Cutting and scraping the tube

- ① Mark a line where you wish to cut the tube, and then place the tube on the cutter.(Fig.6)
 - Tighten the cutter so that the blade lightly presses against the tube.

- ② Rotate the cutter around the tube in the direction of the arrow (Fig. 6) while feeding the blade by turning the knob little by little.
 - When feeding the cutter blade, the knob should be turned at a rate of approximately one eighth of a rotation per one to three rotations of the tube cutter.
 - If you feed the blade too quickly, the tube may be deformed and the tube cannot be flared properly. (Fig. 7)
 - When you use a tube without first cutting it, check that the tube is not deformed. (Fig. 7)

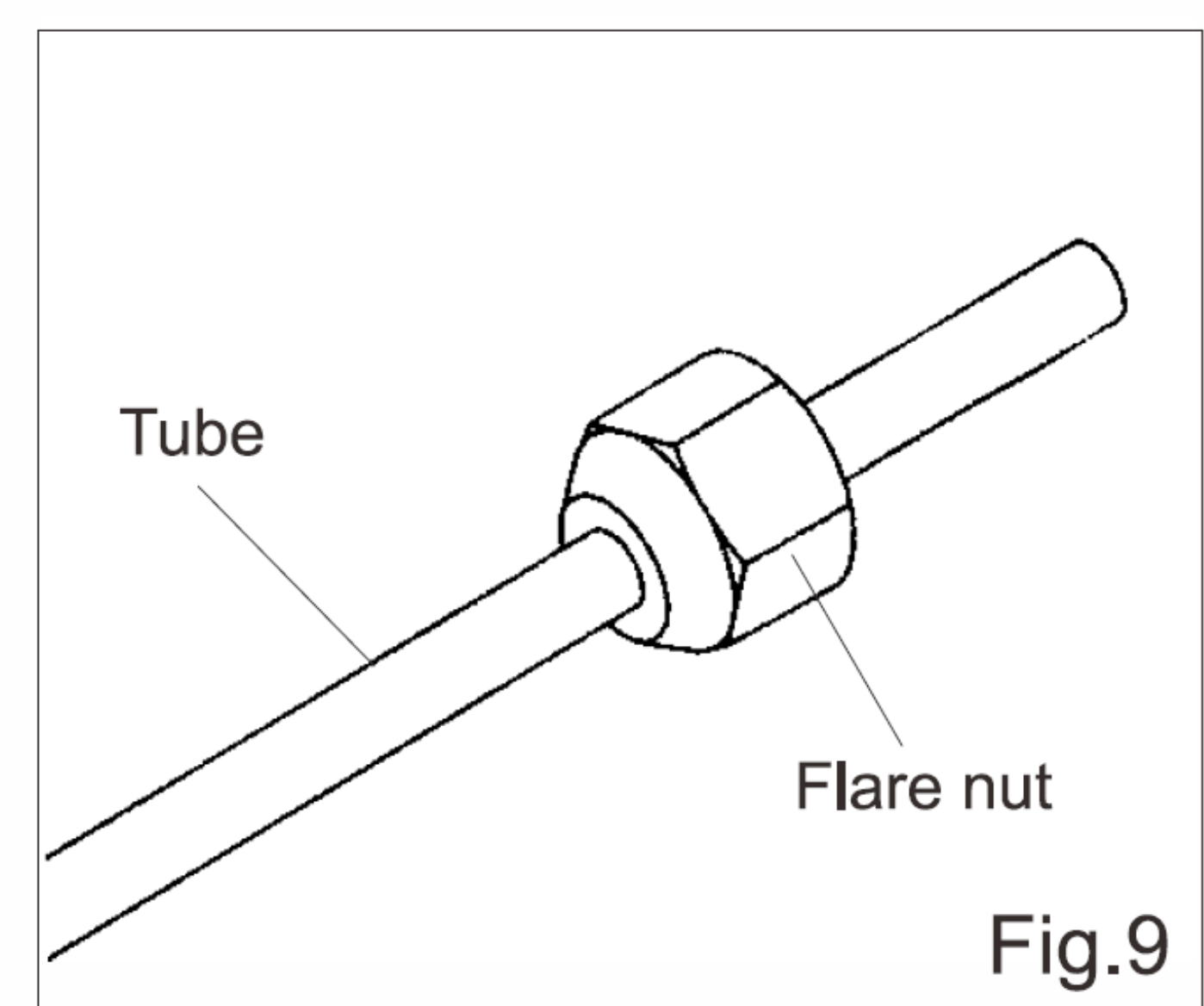
- ③ Remove burrs from the cut end of the tube with a scraper. (Fig. 8)
 - Hold the cut end facing downward so that metal chips do not fall into the tube.
 - If the cut end has not been properly scraped, the tube cannot be flared properly, and a gas leak may result.
 - Do not make any scratches on the inner surface of the tube to be flared.
Damage or scratches may remain even after the tube is flared.



Making a flare

(1) Clamping the tube

- ① Slide a flare nut that is compatible with the tube size over the tube. (Fig. 9)
 - Be careful of the orientation of the nut.
 - Confirm that there are no burrs left on/in the copper tube.
Note that if any burrs remain, the surfaces that are flared may become dented and cause a gas leak.



② Before flaring, backward the "ECCENTRIC CONE" to the end (press right arrow switch R), release "FIXING ROD" and then open "EXPANDER CLIP" and put in required tube.

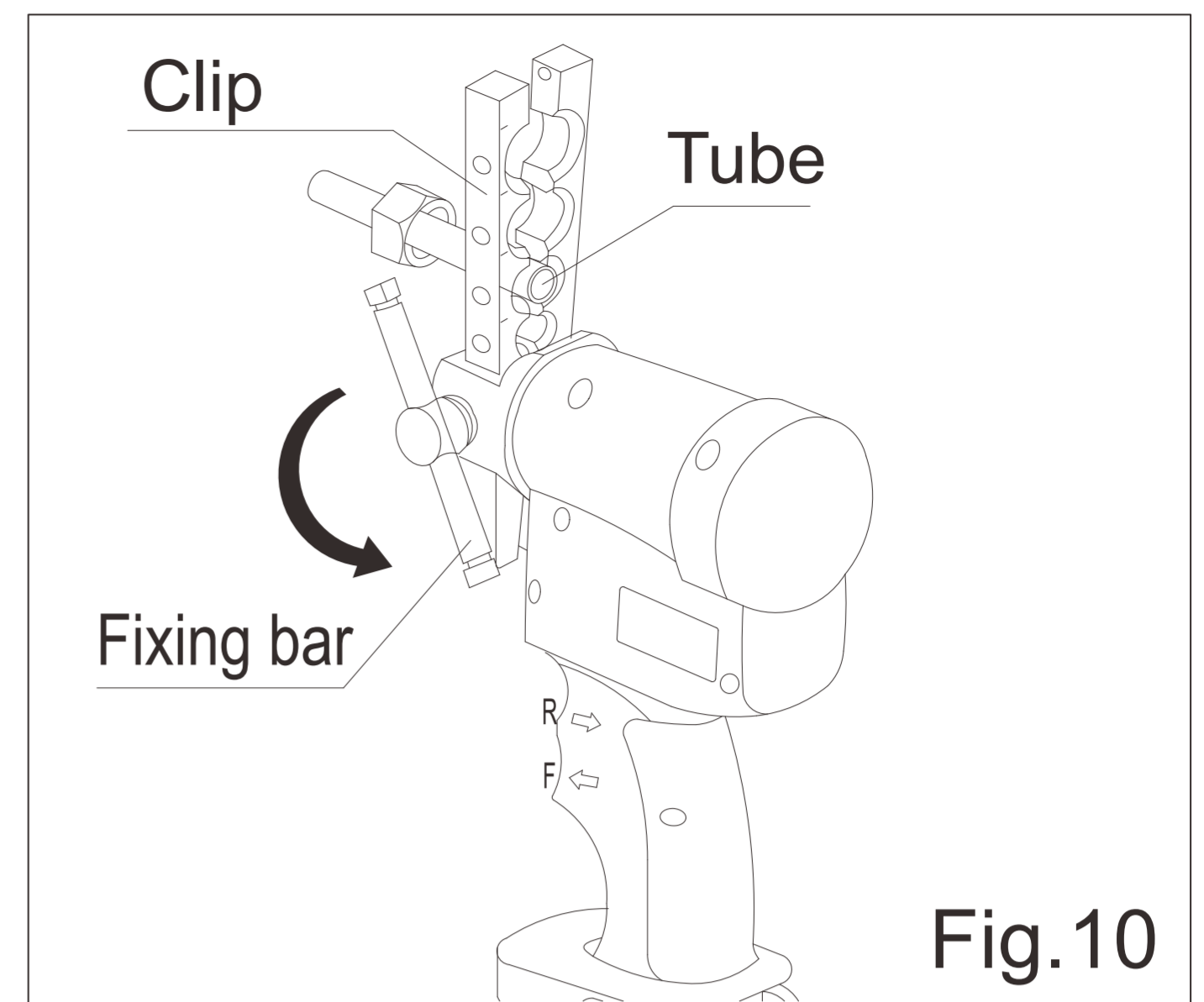


Fig.10

③ The tube which placed in "EXPANDER CLIP" should be 1mm higher than "expander clip". Clean out the tube before operation.

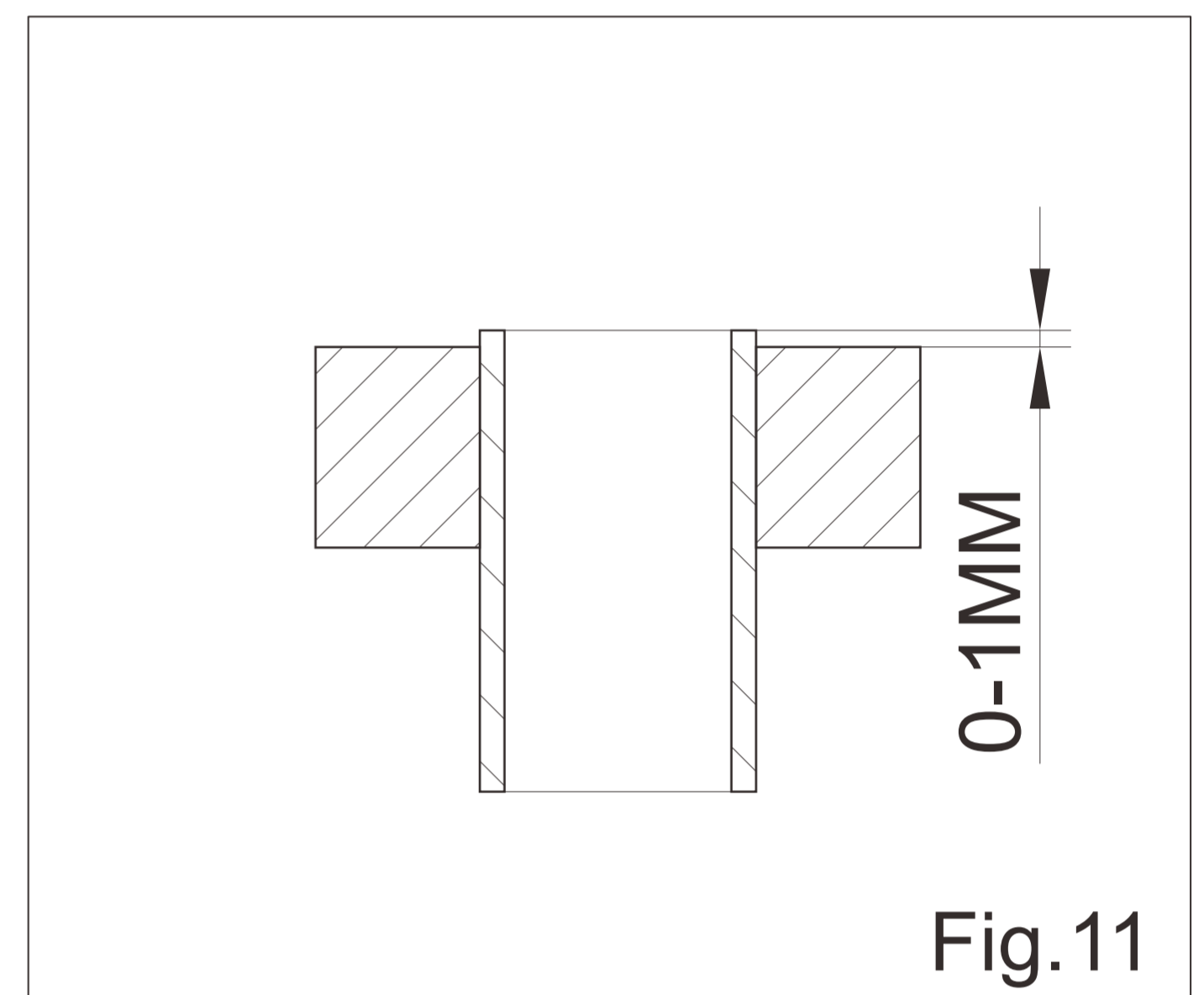


Fig.11

④ Aim the "RED AAROW" to "SPECIFICATION MARK" and lock the "FIXING ROD" tightly.

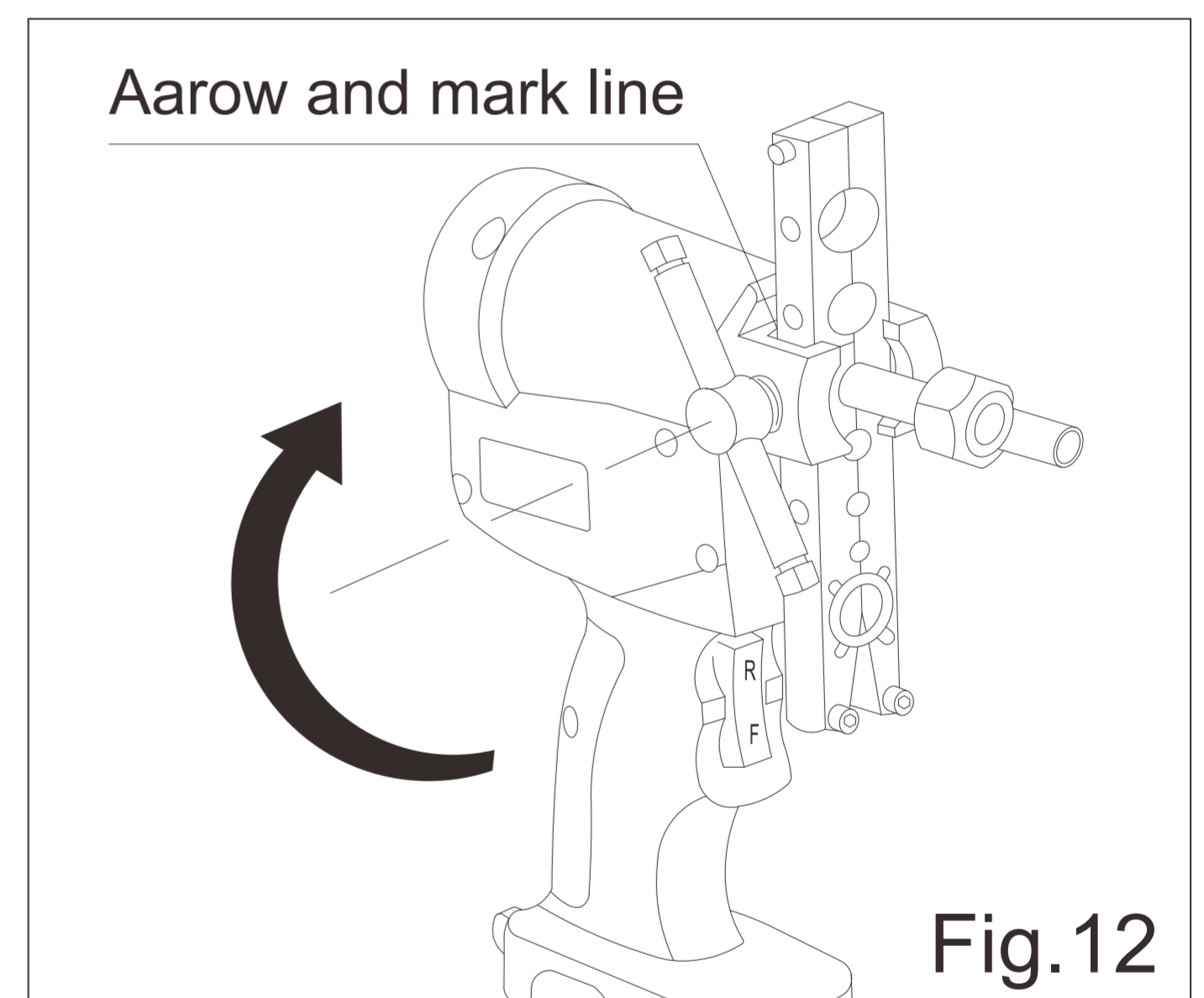


Fig.12

⑤ Press left arrow switch "F", the "ECCENTRIC CONE" will move forward and start making flare. Keep on forwarding 2-3 rounds after you hear clickety-clack(idling) to make smooth flare.

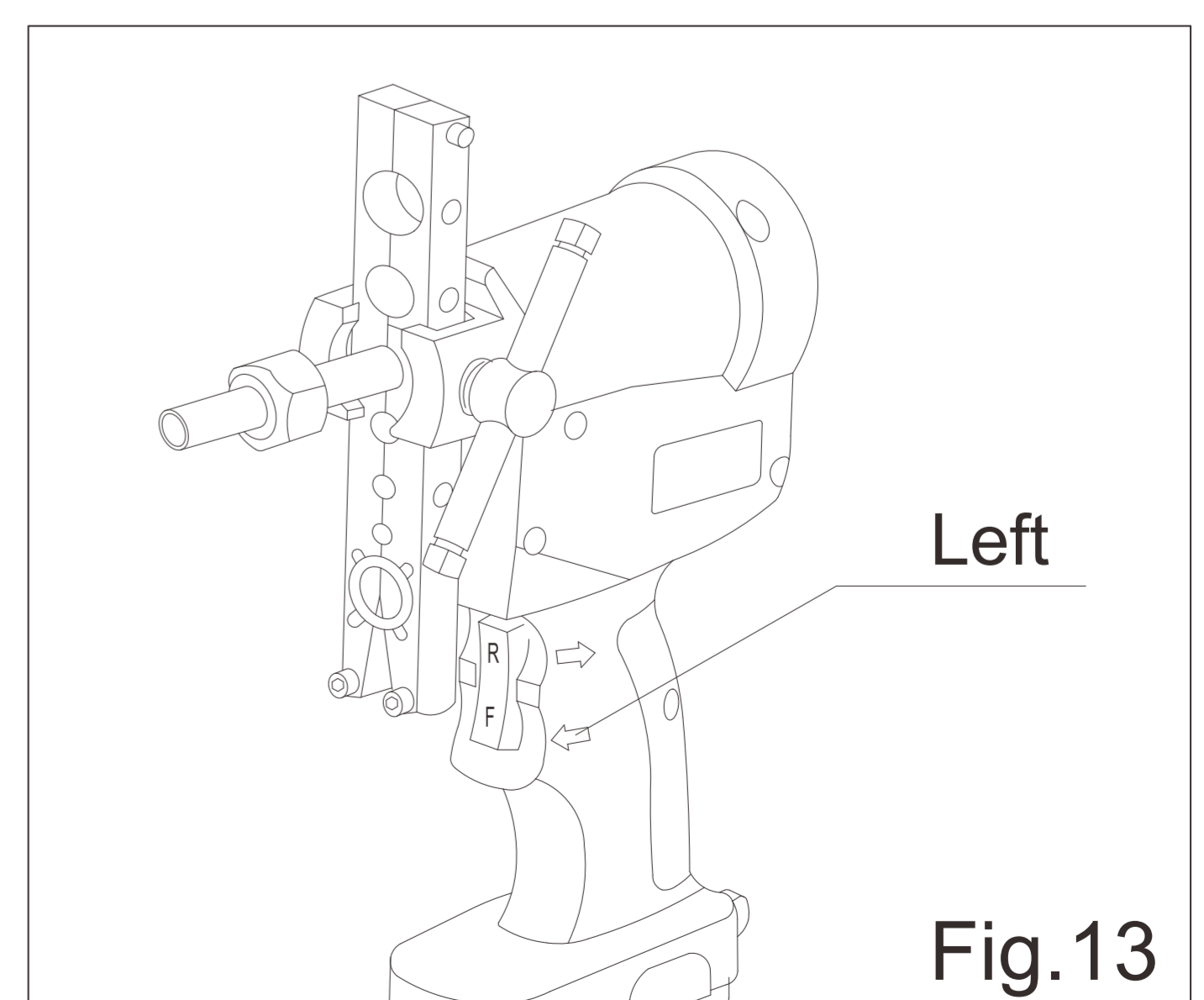
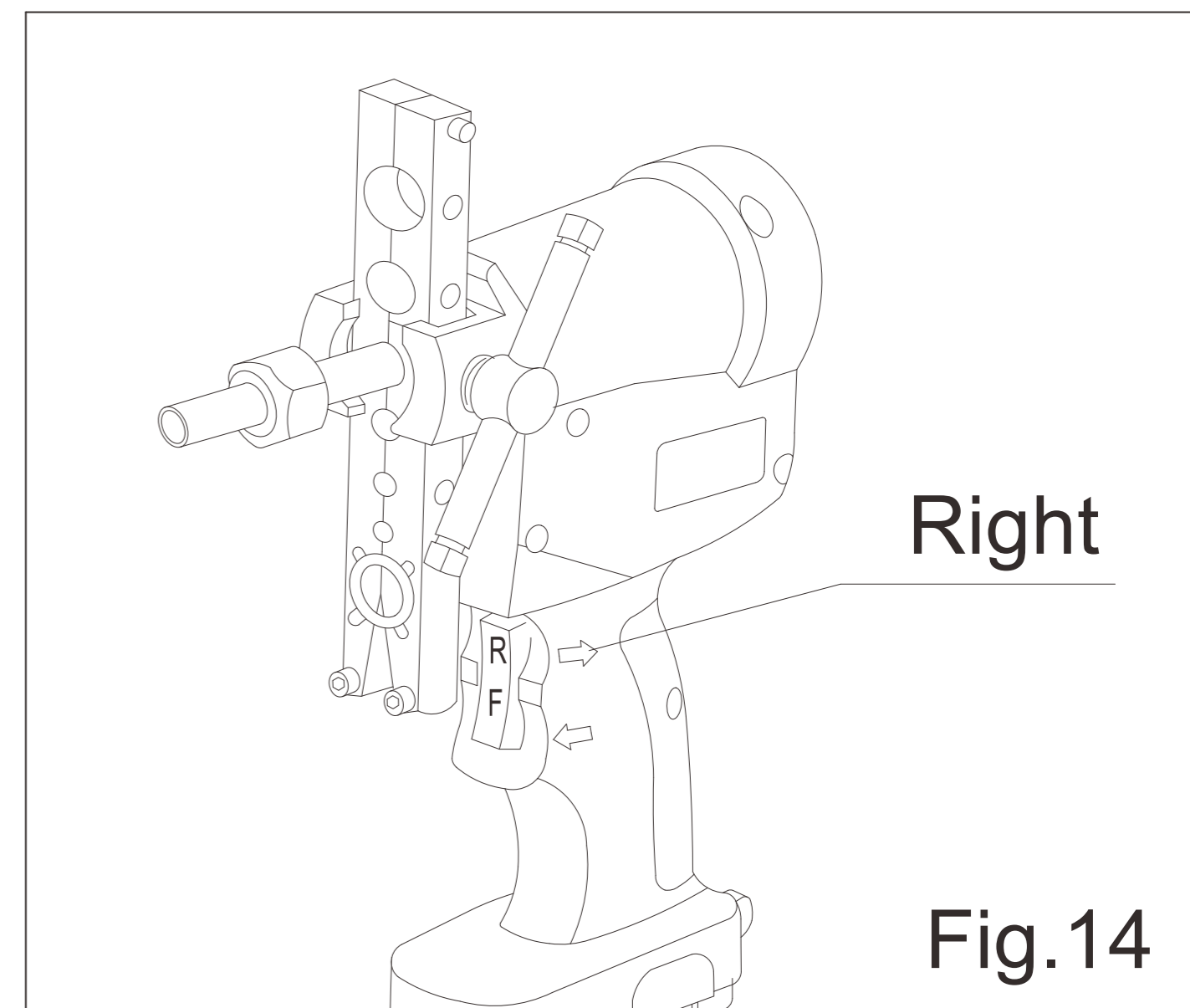


Fig.13

⑥ To finish flaring work, press right arrow, switch R, to backward the "ECCENTRIC CONE" to the end, release "FIXING BAR"



⑦ Open 'expander Clip' And Take The Tube Out.

