

FUJI DENKI'S ELECTRICAL HOUSEHOLD APPLIANCES

I. INTRODUCTION

The influence of Fuji Denki's technical tie-up with a German Company can be seen in our manufactured products. For more than twenty years we have assiduously conducted research on electrical appliances for household use as well as on heavy electrical equipment, and we are now manufacturing superior products of unique design. The several electrical appliances for household use which we introduce here, have given complete satisfaction and gained good reputation among the customers who have actually used our products. It is anticipated that more developments of them will be made in future.

II. ELECTRIC FANS—Fuji Silent Fans—

Since many years ago Fuji Silent Fans have been very popular with not only domestic customers but also South East Asian and other oversea customers.

The Fuji Silent Fan, as the name indicates, operates smoothly and noiselessly and, at this characteristics, no other fan can surpass Fuji Silent Fan. Moreover, its graceful design and variety of style which instantly attract the attention of all buyers from whole world and give the full satisfaction of our customers. The following fans were manufactured on the basis of our wide experience in exports. Their oscillating flower-like appearance and their long life will never fail to make the hot season cool and comfortable to live to our customers.

1. Technical features of Fuji Denki Fans

1) Motors by specialized maker

Fuji Denki Seizo K.K. is a leading maker of various electric machines and apparatuses for electric power and industries in which motors are widely used. We have firm confidence of having high technical level in manufacturing motors. Because condenser motors are attached to Fuji Silent Fan, power factor is improved to more than 90%. That

is, required starting current as well as power consumption is very small.

2) Noiseless operation

Fuji Silent Fan has three blades of rational type and revolution of them has been reduced but the adoption of most effective angle for widened blades increases the air quantity.

In this unique design we succeeded in increasing the air quantity and reducing the noise. Another remarkable feature is that the slow and powerful breeze of Fuji Silent Fan bears a close resemblance to natural breezes.

3) Without any trouble

If you try to compare all fan motors in the whole world with our motors, you can immediately distinguish the excellence of Fuji Silent Fan from any other type of fan. Fuji Silent Fans are the only one which have no holes for prevention of overheating. Being enclosed type, it is free from dust, no oiling is required so its maintenance is very simple. If you doubt whether the motor is overheated or not, please touch it with your hand after its continuous running for a whole day. You will then find that it is not overheated.

2. Right type for right place

1) Standard Fans (Table Fans)

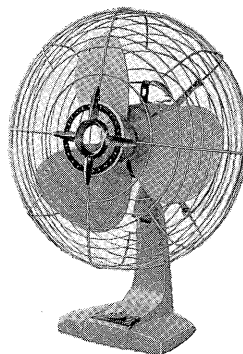


Fig. 1. 16" Standard fan

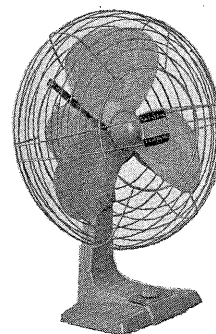


Fig. 2. 12" Standard fan

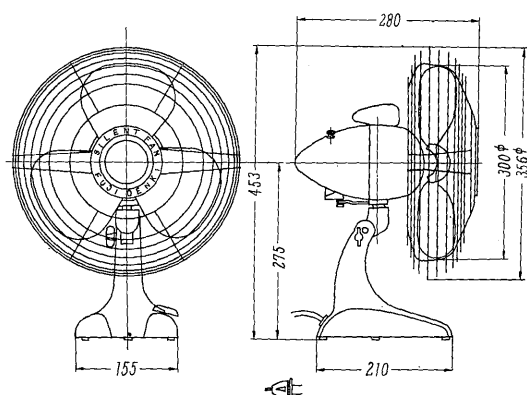


Fig. 3. 12" Standard fan

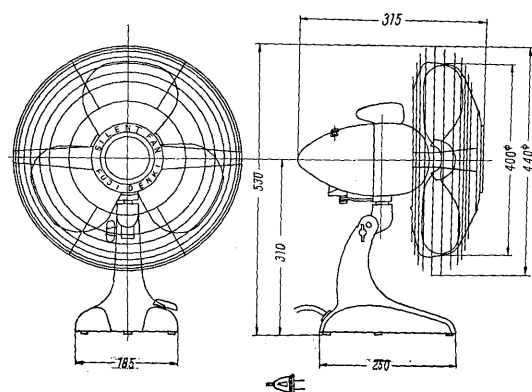


Fig. 4. 16" Fan

The 12-inch type is fitting for an appliance in the home and the 16-inch type is suitable for the large family or the office.

The beautiful finish of these fans makes them most fitting for a refined home appliance.

2) Δ Fans (Delta Fans)

Delta Fans are full of new design with modern sense. The oscillating angle can easily be changed and by turning the fan 180 degree, it will be changed to of a wall mounting type. From 8-inch baby fan to 16-inch large type fan, every type of fan will harmonize in the condition of practical utility and of a refined home appliance to the fullest extent.

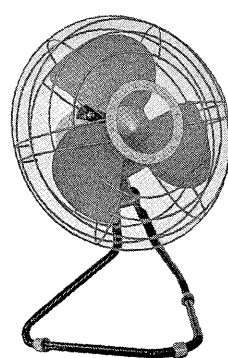


Fig. 5. 8" Baby fan

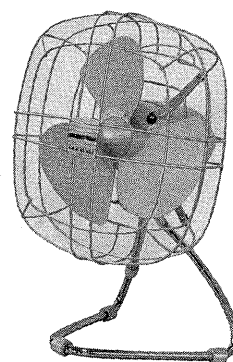


Fig. 6. 10" Δ fan

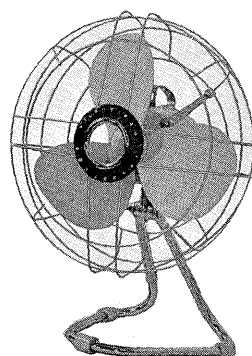


Fig. 7. 12" Δ fan

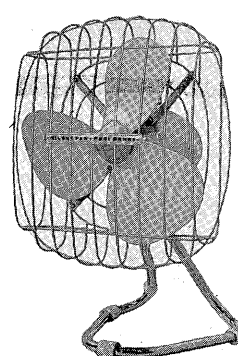


Fig. 8. 12" Δ fan

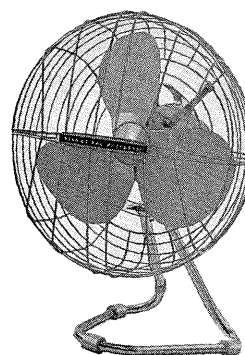


Fig. 9. 12" Δ fan

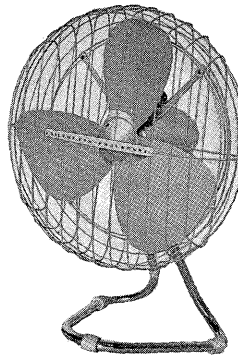


Fig. 10. 16" Δ fan

The stand is made of bending chrome plated metal rod which makes graceful harmony with the plastic of the blade.

3) Special Fans (Rocket type)

The Rocket Fan is freely adjustable from 18-inch to

Table 1. Characteristic Table—Fuji Silent Fans—

| | Frequency | Starting voltage | Input | P.F. | R.P.M. | Air velocity | Air delivery | Temperature rise |
|-----|-----------|------------------|--------------|------|--------|--------------|----------------|------------------|
| 12" | 50 | 40 V | 23 W (25 VA) | 88% | 940 | 195 M/Min. | 39 Cu.M/Min. | 8°C |
| | 60 | 45 V | 29 W (30 VA) | 93% | 1,030 | 215 M/Min. | 50 Cu.M/Min. | 9°C |
| | JISC 9601 | | < (75 VA) | | | > 160 M/Min. | > 30 Cu.M/Min. | < 25°C |
| 16" | 50 | 40 V | 40 W (46 VA) | 86% | 870 | 245 M/Min. | 60 Cu.M/Min. | 10°C |
| | 60 | 43 V | 51 W (56 VA) | 90% | 910 | 255 M/Min. | 72 Cu.M/Min. | 13°C |
| | JISC 9601 | | < (115 VA) | | | > 220 M/Min. | > 53 Cu.M/Min. | < 25°C |

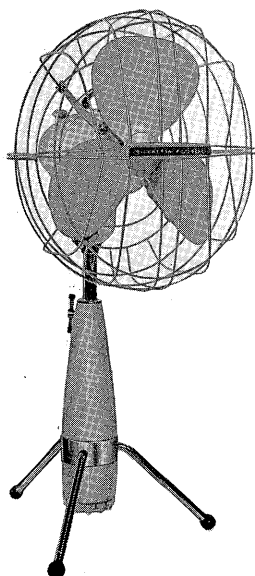


Fig. 11.
Rocket fan

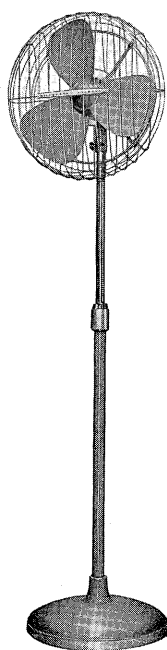


Fig. 12.
Pedestal fan

24-inch in height and can be used on a table as well as on the floor. Moreover a wonderful secret point is that a time switch is provided at the bottom. By setting the dial to the desired scale of time before you go to bed, the fan will stop automatically when you fell into sound sleep.

4) Pedestal Fans (Stand Fans)

This fan, which is set on the floor, is most fitting for appliance in the drawing room and in the office. Its height is adjustable from 44-inch to 56-inch, moreover it can be moved very easily.

5) Ventilating Fans

Recently in order to plan the new buildings, the Ventilating Fan is indispensable for them. Our Ventilating Fan has an automatic shutter in front which operates smoothly and reliably, i.e., automatically close by its own weight when fan is not in operation whereby it is protected against rain, dew or back air current. A characteristic of this fan is its almost noiseless operation so the noiseless Fuji Ventilating Fan will be recommended as the most suitable ideal Ventilating Fan for its purpose.

Our Ventilating Fan will surely guarantee a comfortable life.

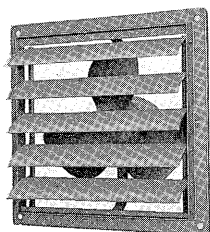


Fig. 13. Ventilating fan

III. ELECTRIC WASHING MACHINE

Fuji Electric Washing Machine takes pride in its two unique systems. These are the Double Effusion System and the Double Flow System. We shall introduce here some key points which are unmatched either within or outside Japan.

(1) Both W 364 and WP 364 are of the double effusion type. What is the weak point of a common effusion system? It is the fact that the laundry is damaged by the distorted stream agitated by the single pulsator. This defect was solved by our double effusion system. By adopting two rotating vanes, it is possible to wash laundry swiftly and without damaging it by strong and soft agitation of the water. W 364 and WP 364 type Washing Machines adopting the Double Effusion System also have following excellent features.

(2) Remarkable merits of double effusion type washing machine

- ① Double pulsators
- ② Special bearings

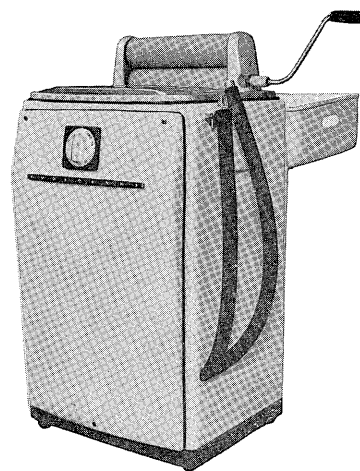


Fig. 14. Type W 364

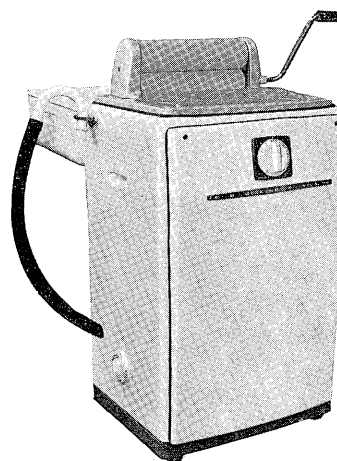


Fig. 15. Type WP 364

Table 2. Dimensions of Type W 364 and WP 364

| | | |
|-----------------|---|---|
| Measurement | Outer dimension | width×depth×height 456 × 450 × 876mm |
| | Tub dimension | width×depth×height 380 × 290 × 410mm |
| Washing method | | Double effusion system |
| Motor | Totally enclosed split phase starting single phase induction motor, 100 W | |
| Electric source | 100 or 200 V 50 or 60 c/s | |

The efficiency and life of the washer is dependent upon the compactness of the pulsator bearings. For type W 364 and WP 364, special ball bearings are adopted and sealed off with water-resisting and alkali-resisting grease of superior quality. Ball bearing is used inner. Also by using bellows in the watertight parts, water leakage is completely prevented. Consequently continuous operation is possible, there will be no fear of wear of bearings and no necessity to oil them, and the washer will withstand a long period of usage.

③ Enamel Washpool

As the washer tank is enamelled in pure white, it looks neat. Moreover, there is no fear of corrosion. To test its robust construction, try to strike the interior with a mallet, then you will be fully satisfied with the results.

④ Large Wringer

Large wringer which easily wring out a blanket is one that cannot be seen throughout the world. Two large rollers of special rubber and of different sized diameter easilly press out the water.

⑤ Time Switch

The time switch which has scale for time enables one to do other work while the washer is in operation.

⑥ Merits of the WP 364

WP 364 has the same appearance and efficiency with W 364 type. But WP 364 type washing machine is provided with a pump to exhaust water and so it is possible to exhaust automatically waste water to a place higher than the water surface.

(3) Both W 261 and WP 261 adopt the Double Flow System.

The Double Flow type was produced as a companion product of the Double Effusion type. We have payed great effort to cause double effusion with one pulsator.

The single pulsator is installed at the bottom with effective angle, so that both vibration of water and jet flow can wash laundry clean without soiling

Table 3. Quantity of clothing to be washed at one time (3 1/2 lbs.)

| Kind | Material | Weight | Quantity |
|-----------------|--------------|-----------|------------|
| White shirts | Calico | 7 OZS | 7-8 pcs. |
| Under shirts | Cotton crepe | 5 OZS | 12-13 pcs. |
| Sheet | Cotton | 13-15 OZS | 3-4 pcs. |
| Children's suit | Calico | 3 OZS | 18-20 pcs. |
| Socks | Various | 1 OZS | 45-50 pcs. |
| Handkerchief | Various | — | 60-70 pcs. |
| Winter shirts | Hosiery | 13 OZS | 3-4 pcs. |
| Summer suit | Linen | 21 OZS | 2-3 pcs. |

Table 4. Time for one washing operation, selection of detergent

| Cloth | Q'ty of laundry lb. | Time for washing | Suitable temperature | Detergent |
|---|---------------------|--|----------------------|--|
| Cotton and Linen | 56 OZS. | 5-7 min. | About 50-60°C | Ordinary soap Neutral detergent |
| | 33 OZS. | 4-5 min. | | |
| | 16 OZS. | 3 min. | | |
| Silk, Woolen, Artificial silk | 56 OZS. | 4-5 min. | About 30°C | Be sure that neutral detergent is used |
| | 33 OZS. | 3-4 min. | | |
| | 16 OZS. | 1-2 min. | | |
| Cotton and Artificial silk interwoven | 33 OZS. | 4 min. | About 30°C | Ordinary soap Neutral detergent |
| Things like working-clothes or made of canvas | 56 OZS. | 10-15 min. | About 50-60°C | Ordinary soap Neutral detergent |
| Woolen yarn, lace, Nylon stockings, Nylon blouse and such thin under wear | 33 OZS. | 2-3 min. Always put into calico bag and wash | About 30°C | Be sure that neutral detergent is used |

the cloth material. Both W 261 and WP 261 type Washing Machines have been improved not only in their washing method employing Double Flow System, but also in their design. Following changes in design differ greatly from those of past washers.

① Possible to conveniently operate all functions by using one front side.

The hose, wringer handle and time switch are all mounted on front side. Consequently, the washer can be placed in a small space in the kitchen and be used as a unit of kitchen.

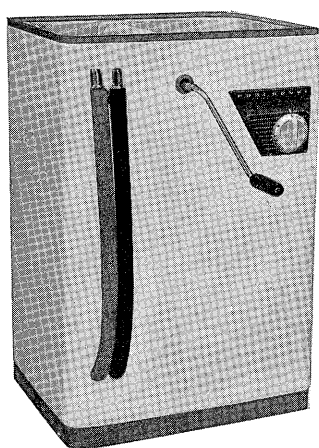


Fig. 16.
Type W 261

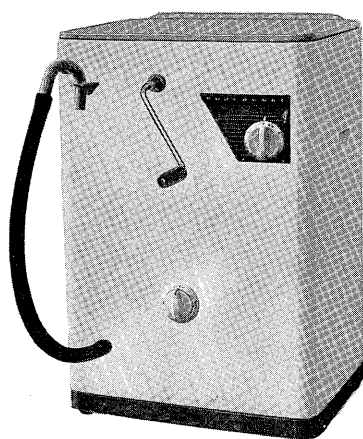


Fig. 17.
Type WP 261

② A practical cover is provided.

The washer lid is covered by a beautifully finished board, which is highly heat resistant and can be used as a simple cooking stand.

③ Wringer and receiving dish are contained inside.

The wringer is provided inside, and the wringer handle can easily be removed and can be kept inside the case when not in use.

Table 5. Specification of W 261 & WP 261

| | | |
|-------------------------|--------------------|--|
| Size | Outline dimensions | Width×depth×height 513 × 405 × 762 mm |
| | Tank dimensions | Width×depth×height 470 × 360 × 420 mm |
| Washing system | | Double water flow system |
| Washing capacity | | 1.5 kg |
| Standard water quantity | | 30 l |
| Motor | | 90 W |
| Power source | | 100, 200 or 220 V 50/60 c/s |
| Switch | | Automatic time adjusting type, continuous, stop, 0-15 min. |
| Weight of product | | 29 kg |

IV. CENTRIFUGAL DEHYDRATING MACHINES

—Fuji Home Dryer—

There are various ways to dry washings. It is old-fashioned to depend on the sun and the wind, though both have been used for a long time. In these days people search for heat resources to replace the sun and use fans in place of the wind. We now know that it is possible to remove the moisture out of clothes without damaging them by employing a very simple and well-known physical theorem—that is, centrifugal force. This Centrifugal Dehydrating Machine is the result of our overcoming numerous technical difficulties. It is operated as follows:

1) Start the dryer after putting the clothes in (not more than 2.5 kg of dried weight).

2) 3 minutes later 95% of the moisture will be removed from the clothes.

3) Accordingly, the clothes will now be ready for ironing. A safety feature is that the dryer will not start until the lid has been closed. Three springs eliminate the vibration caused by the rotating filter cage. Operation can be immediately stopped by means of a magnetic brake.



Fig. 18. Centrifugal dehydrating machine

Table 6. Specification

| | |
|---------------------|--|
| Type | C 253 |
| Outline dimensions | Width×height 430×745 mm |
| Quantity | 2.5 kg (dry clothes) |
| Motor | Totally enclosed capacitor start type single phase induction motor |
| Weight of product | 36.5 kg |
| Rate of dehydrating | 90 ~ 95 % |

V. REFRIGERATORS

—Fuji Electric Refrigerators—

We have been continued to research the electric refrigerator since before the II war. The FA-90 and FC-110 are the fruits of our efforts. Their common merits are as follows:

1) Small size, large capacity

Effective heat insulation, and small but powerful refrigerating mechanism are the causes of these merits.

2) Excellent refrigerating ability

However warm the air outside may be, the temperature inside the refrigerator will be kept below 12°C.

Further, the temperature may be adjusted quite freely by means of a switch.

3) Excellent electrical characteristics

Since the starting current of motor is designed small, radio and television sets are not interfered with. Normal operation is possible even if there is a considerable drop in voltage.

4) Enamelled inside box

The interior, being finished with enamel, is sanitary and acid-resistant, and so there is no fear

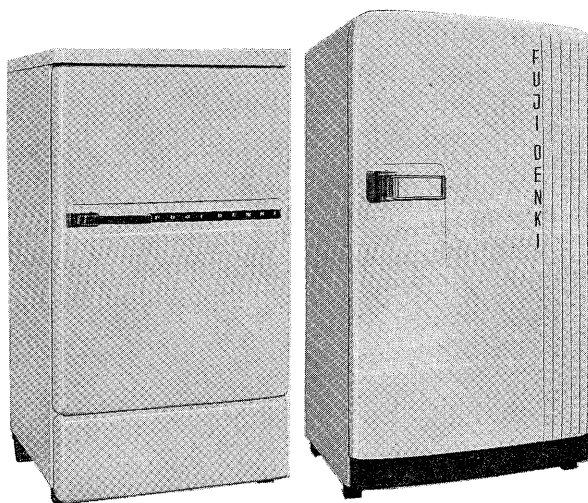


Fig. 19.
FA-90

Fig. 20.
FC-110

of it being tainted by stored food or its juice.

5) Adjustable shelf

The shelf can be adjusted to allow extra space for large food items and tall bottles.

VI. JUICER—Fuji Denki Juicer—

There is need to differentiate between a mixer and a juicer. The mixer makes juice by adding water to fruits and vegetables. The juicer extracts out pure juice without the addition of water. The juicer may be called the most developed appliance for making juice at home. We are confident that our juicer will serve you faithfully in preparing good meals for your family. Pure juice is made as follows:

1) Put fruits or vegetables into the juicer and press with the piston.

2) A cutter at the bottom of the juicer crushes the fruits or vegetables.

3) The crushed fruits or vegetables are agitated by centrifugal force, and then the juice is filtered.

4) The juice flows from the juicer through a spout. You may be aware that the mechanism of the juicer closely resembles that of the above-mentioned Centrifugal Dehydrating Machine. The success obtained in controlling centrifugal force is successively contributing to the improvement of living.

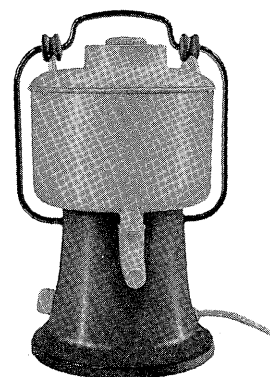


Fig. 21. Fuji Denki juicer

Table 7. Specification of Fuji electric refrigerator

| | | FA 90 | FC 110 |
|-----------------------|--------------|--|---|
| Inside volume | | 85 L (3 cubic feet) | 110 L (4 cubic feet) |
| Cabinet | | High class finished steel plate MEL-AMIN-RESIN paint special enamel finish | |
| Inside box | | White enamel finish | |
| Outline dimensions | Height | 950 mm | 1,075 |
| | Width | 524 | 612 |
| | Depth | 524 | 620 |
| Inside box dimensions | Height | 615 | 685 |
| | Width | 420 | 450 |
| | Depth | 343 | 350 |
| Weight of product | Net | 59 kg | 105 kg |
| | With packing | about 100 kg | about 160 kg |
| Freezing unit | | Direct coupled to totally enclosed motor type 85 W 100V 50/60 c/s with automatic temperature regulator | Direct coupled to totally enclosed motor type 100W 100 V 50 / 60 C with automatic temperature regulator |
| Freezing agent | | Freon 12 | Freon 12 |
| Signal lamp | | | 0.1 W neon lamp |
| Inside temperature | | 5°C ± 1.5°C | 5°C ± 1.5°C |
| Cooler temperature | | - 12°C | |

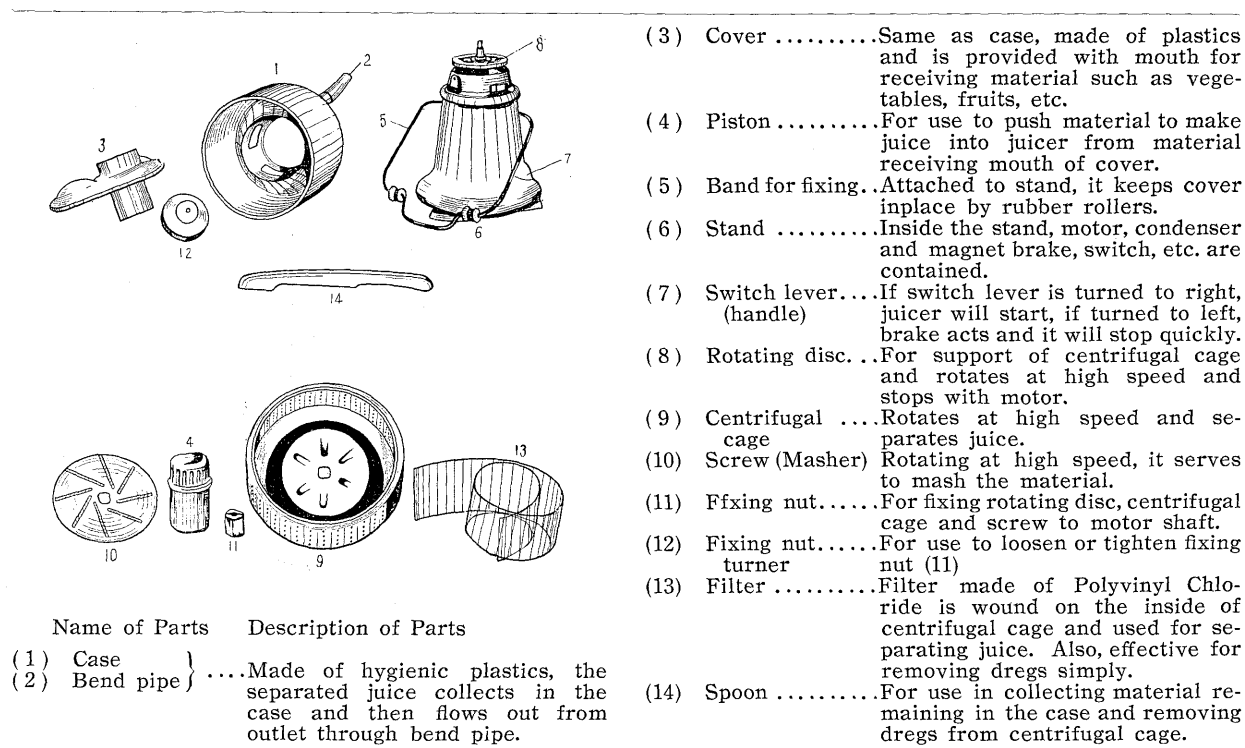


Fig. 22. Name of juicer's parts

Table 8. Kinds of juice

Standard quantity of juice that can be obtained from fruits or vegetables by using the juicer will be given below.

| Name of fruits and vegetables | Quantity of material (g) | Standard quantity of juice (cc) | Remarks |
|-------------------------------|--------------------------|---------------------------------|----------------------------------|
| Carrot | 200 | 120 | 2 European carrots unpeeled |
| Tsuruna (Kind of spinach) | 200 | 150 | |
| Cabbage | 200 | 130 | 2 large leaves or 4 inner leaves |
| Cucumber | 200 | 130 | 2 medium sized |
| Tomato | 200 | 150 | 1 medium sized |
| Water melon | 1,000 | 400 | 1/4 medium sized pared |
| Sweet melon | 400 | 270 | 1 medium sized |
| Chinese grape-fruit | 200 | 160 | 1 large sized pared |
| Apple | 200 | 130 | 1 large sized |
| Plum | 150 | 100 | 3 plums |
| Peach | 150 | 100 | 1 peach |

VII. FUJI DENKI DRY BATTERY

Fuji Denki Seizo K.K. keeps Japan's leading engineering standard on dry-battery manufacturing, particularly distinguished in layer-type batteries for radios and electronic equipments.

The outstanding quality of our dry batteries is mainly due to the use of Electrolytic Manganese Dioxide, substantial material for dry batteries, ex-

Table 9. Fuji flashlight batteries

| Type designation | Nominal voltage | Size | | Standard initial current | Weight |
|------------------|-----------------|------------|--------|--------------------------|--------|
| | | Width | Length | | |
| UM-1 | 1.5 | 33 | 60 | 300 | 80 |
| UM-2 | 1.5 | 25 | 48 | 150 | 40 |
| UM-3 | 1.5 | 14 | 48 | 150 | 15 |
| HM-1 | 3 | 33×61.5×80 | | 300 | 200 |
| HM-2 | 4.5 | 55×61.5×80 | | 300 | 300 |

Table 10. Fuji photoflash batteries

| Type designation | Nominal voltage | Size | | Short circuit current | Weight |
|------------------|-----------------|----------|--------|-----------------------|--------|
| | | Width | Length | | |
| UM-1A A | 1.5 | 33 | 60 | 15 | 80 |
| UM-2A | 1.5 | 25 | 48 | 6 | 40 |
| UM-3A | 1.5 | 14 | 48 | 4 | 15 |
| B L-015 | 22.5 | 16×25×50 | | 2 | 35 |

Table 11. Fuji radio "A" batteries

| Type designation | Nominal voltage | Size | | Standard initial current | Weight |
|------------------|-----------------|-------|--------|--------------------------|--------|
| | | Width | Length | | |
| UM-1A | 1.5 | 33 | 60 | 300 | 80 |
| UM-2A | 1.5 | 25 | 48 | 150 | 40 |
| UM-3A | 1.5 | 14 | 48 | 150 | 15 |

Table 12. Fuji radio "B" batteries

Fig. 23.
Fuji flash light
batteryFig. 24.
Fuji radio "A."
battery

| Type designation | Nominal voltage | Size | Standard initial current | Weight | Terminal arrangement |
|------------------|-----------------|-------------|--------------------------|--------|----------------------|
| B L-015 | 22.5 V | 16×25×50 mm | 3 mA | 35 g | Flat Contact |
| B L-V30 | 45.0 | 18×27×58 | 3 | 60 | " |
| B L-030 | 45.0 | 23.5×34×60 | 3 | 65 | " |
| B L-145 | 67.5 | 33×68×90/93 | 9 | 300 | Snap |
| B L-145 B | 67.5 | 33×68×65 | 9 | 220 | " |
| B L-160 | 90.0 | 33×90×90/93 | 9 | 400 | " |
| B L-160 B | 90.0 | 33×68×90/93 | 9 | 330 | " |

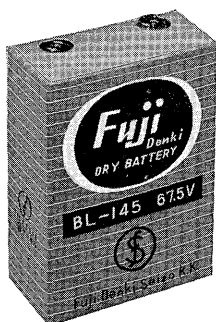
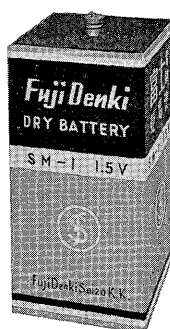
Fig. 25.
Fuji radio
"A"
batteryFig. 26.
Fuji radio "B"
batteryFig. 27.
General use
battery

Table 13. General use batteries

| Type designation | Nominal voltage | Size | Standard initial current | Weight |
|------------------|-----------------|------------------|--------------------------|--------|
| FM-3 | 1.5 V | 48×88×188/135 mm | 560 mA | 900 g |
| FM-4 | 1.5 | 35×65×92/104 | 300 | 400 |
| FM-5 | 3.0 | 48×88×108/135 | 300 | 700 |
| SM-1 | 1.5 | 75×75×145/160 | 560 | 1,700 |
| SM-2 | 1.5 | 35×35×85/95 | 150 | 200 |
| RM-1 | 1.5 | 75×45/160 | 560 | 1,200 |
| RM-6 | 1.5 | 65×155/170 | 560 | 900 |

Table 14. Fuji radio "A-B" packs

| Stock No. | Type designation | Nominal voltage (V) | | Size in (mm) | Weight (g) | Terminal arrangement | Standard initial current drain (mA) | | Estimated output in hours |
|-----------|------------------|---------------------|----|--------------|------------|----------------------|-------------------------------------|---|---------------------------|
| | | A | B | | | | A | B | |
| F 601 | 50 A A-5 C D | 7.5 (6) | 75 | 58×210×90 | 1,400 | Socket | 60 | 9 | 80 |
| F 602 | 60 A A-5 C D | 7.5 | 90 | 55×225×98 | 1,500 | " | 60 | 9 | 80 |
| F 603 | 60 A A-6 C D | 9 (7.5) | 90 | 55×225×98 | 1,600 | " | 60 | 9 | 80 |
| F 604 | 60 A A-6 C D-P | 9 | 90 | 55×225×98 | 1,600 | Recessed plug | 60 | 9 | 80 |
| F 605 | 60 A A-C D 4 | 1.5 | 90 | 55×200×95 | 1,300 | Socket | 300 | 9 | 60 |
| F 606 | 60 A-6 F | 9 (7.5) | 90 | 68×230×110 | 2,200 | " | 60 | 9 | 140 |
| F 607 | 60 A-6 F-P | 9 | 90 | 68×230×110 | 2,200 | Recessed plug | 60 | 9 | 140 |
| F 608 | 60 B R-6 G | 9 (7.5) | 90 | 83×260×105 | 3,200 | Socket | 60 | 9 | 180 |
| F 609 | 60 B-6 G | 9 | 90 | 68×345×112 | 3,200 | " | 60 | 9 | 180 |
| F 610 | 60 B-6 G-P | 9 | 90 | 68×345×112 | 3,200 | Recessed plug | 60 | 9 | 180 |
| F 611 | 60 D-F 18 | 1.5 | 90 | 110×400×170 | 10,000 | Socket | 300 | 9 | 600 |
| F 613 | 60 A-G 6 | 1.5 | 90 | 78×203×135 | 3,100 | " | 60 | 9 | 220 |
| F 614 | 60 B-D 12 | 1.5 | 90 | 68×280×146 | 3,100 | " | 60 | 9 | 200 |

tremely pure, active, and uniform manufactured by us under long experienced engineering. Fuji Denki Seizo K.K. is the only dry battery manufacturer in Japan who has its own Electrolytic Manganese Dioxide Plant.



Fig. 28. Fuji radio "A-B" pack battery



Fig. 29.



Fig. 30.

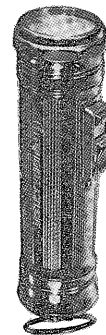


Fig. 31.

Fuji Denki flash light

VIII. OTHER ELECTRICAL APPLIANCES

1. Flashlight

Table 15. Specification of Fuji Denki Flashlight

| Type | Method | Frame Material & Manufacturing | Reference |
|---------|---|--------------------------------|-----------------------------|
| B 131 F | Maximum focus distance 800ft uses 3 cells UM-1 dry batteries | Chrome plates brass | Spare bulb contained inside |
| B 121 F | Maximum focus distance 300 ft uses 2 cells UM-1 dry batteries | Chrome plates brass | Spare bulb contained inside |
| B 121 | Uses 2 cells UM-1 dry batteries | Chrome plates brass | Tripple switch |
| S 121 | Uses 2 cells UM-1 dry batteries | Chrome plates steel | |
| B 221 | Uses 2 cells UM-2 dry batteries | Chrome plates brass | |
| S 221 | Uses 2 cells UM-2 dry batteries | Chrome plates steel | |

2. Decorator lantern

Table 16. Specification of Fuji Denki Lantern

| | |
|-------------|---|
| Uses | Most useful for Mountineering, Skiing, Camping & Toys for children etc. |
| Glass Color | Contains Red, Green |
| Dry Battery | Uses 2 cells UM-2 dry batteries |
| Moreover | Fuji Denki Lanterns have a significant Idea, so you can hang it on ceiling, and wall, and put it on the floor |



Fig. 32. Decorator lantern

(By Osamu Ishihara,
Investigating Div.,
Merchandise Dep't.)