

cation for a short time to avoid the burning of bearings. A dial type thermometer is used for the watch of bearing temperature with a temperature feeling element embedded inside the lower bearing metal. Dials of both bearings are mounted together at the base to facilitate readings.

#### IV. SLIP RINGS AND ACCESSORIES

In such large capacity high speed unit as this motor and still equipped with a speed control device, the construction and materials of slip rings, brush holders and brushes are hard to make proper selection. Any mistake in the selection is liable to cause overheating and sparking which may lead to the failure of continuous operation. Hence, the design must be made with careful consideration. We have paid every special attention in the design and conducted varied tests before starting the design. From the results, the most fitting construction and cooling system have been made available to our great satisfaction.

#### V. OTHER REMARKS

A permanent magnet generator type tachometer is directly coupled to the shaft end of slip ring side and the speed of motor is readable on the switch-board. If necessary, a **Hasler type** tachometer can be attached to the shaft end by removing the

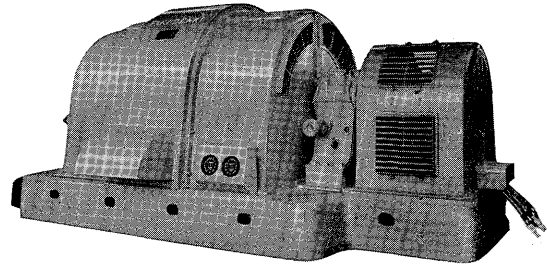


Fig. 1. 1800 H. P. 2p Induction motor

generator type tachometer. The base is of cast iron specially built strong to avoid vibration due to high speed.

The coupling to the pump base is made by means of flange. Both bases are tightened together with bolts to avoid the shaft center going wrong on account of sinking foundation.

We have had experience of building many high speed, large capacity units for blowers.

The success in the manufacture of such a unit having a speed control added to high speed and large capacity has given us further confidence in the design and manufacture of this kind of equipment.

## FUJI CENTRIFUGAL DEHYDRATING MACHINES

Electric washing machines are now spreading vigorously because of their feature of rationalizing the living. Dehydration of laundries after the washing is indispensable work but to wring them by hand is a hard work to housewives.

Old method of dehydration is wringing by hand and by rollers at best at home. The method making use of Centrifugal force, in spite of ideal method, has not been very popular for the reason that vibration of the machine due to the unbalance of charged clothing is undesirable, stable operation being technically difficult.

Our company, however, has ingeniously solved these difficulties by dint of hard effort on the part of our engineers, and has succeeded in sending to the market newly developed Fuji centrifugal dehydrating machines. We hope they will be approved by the public as well as our double turbulent flow type washers.

#### I. CONSTRUCTION

Fig. 1 illustrate the machine

Fig. 2 illustrates the outline of construction. The centrifugal basket is directly connected to the motor shaft rotating 1,460 r.p.m. for 50 cycles and 1,750 r.p.m. for 60 cycles. Its powerful centrifugal force dehydrates the laundries about completely. The basket and motor are supported by 3 springs of small stiffness so that they vibrate only momentarily by very low speed of starting, but soon become stable operation. The body of the machine, however, is supported by buffers of rubber and no vibration is transmitted to the floor. Fig. 3 shows its connection diagram.

#### II. SPECIFICATION

Fuji Centrifugal dehydrating machine has the following specification.

Type	C-251
Capacity	2.5kg (weight of dry clothing)
Time required for work	3 min.
Motor	Condenser start single phase induction motor (totally enclosed)

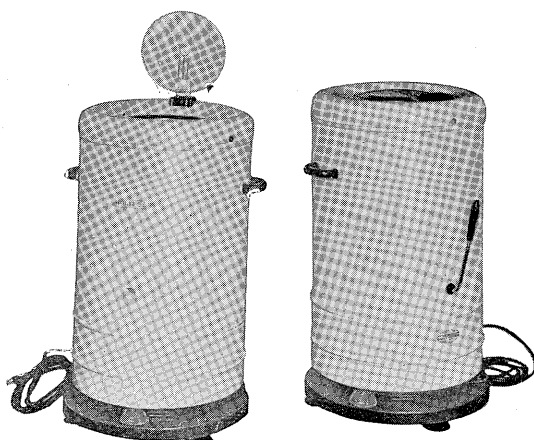


Fig. 1. Outer view of Fuji centrifugal dehydrating machine

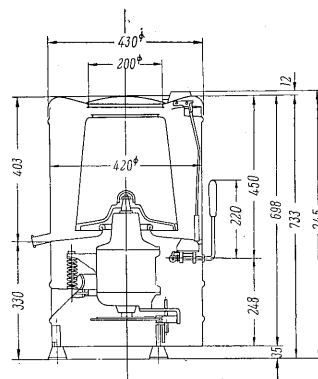


Fig. 2. Outline of Fuji centrifugal dehydrating machine

### III. FEATURES

1. Ironing can be done readily.  
Because of the dehydration rate of more than 90%, handkerchieves and shirts can be ironed immediately after taking out of the machine.  
The comparison of dehydration is as follows:  

Hand wringing	30~50%
Roller wringing	50~60%
Centrifugal dehydration	90~95%
2. Many pieces of laundries can be dehydrated at a time.  
Since the machine makes use of centrifugal force, no damage is effected on the clothing whatever kind it may be and many pieces can be handled at a time.
3. Operation is very simple and easy.  
Operation and stop can be easily controlled with a lever. In case of stop, the brake is applied automatically upon cutting off the power source.
4. Operating is very safe.  
The motor does not start unless the cover is put on, which assures the safety in handling.
5. Perfect vibration proof device is provided to the machine.  
Vibration proof device is so ideal that a slight unbalance of charging the landries gives no harm to the safety operation.

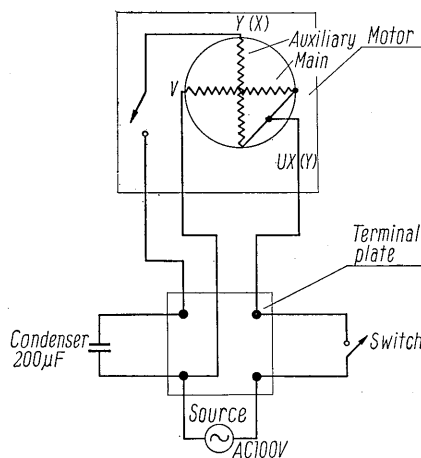


Fig. 3. Connection diagram

6. Dehydration can be completed in a very short time.  
Because of condenser start, the motor has large starting torque and quick starting. In case of stop the brake is applied quickly, so it takes only 3 min. in the total action of start, dehydration and stop.
7. It is durable for long use.  
The motor is equipped with perfectly shielded ball bearings free from the leakage and supply of grease.  
The centrifugal basket is of aluminum with almite treatment, being insured for corrosion.