FM Form Finisher

Models

FMCD FMFC / FMJC

FMGG FMMM / FMLM

OWNER'S MANUAL

CISSELL MANUFACTURING COMPANY
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THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN58 5/96 Part No. D0102

WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of one (1) year from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than one (1) year due to normal wear and tear, including, but not limited to, cloth goods, valve discs, hoses, and iron cords, and with respect to all new repair or replacement parts for Cissell equipment for which the one (1) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

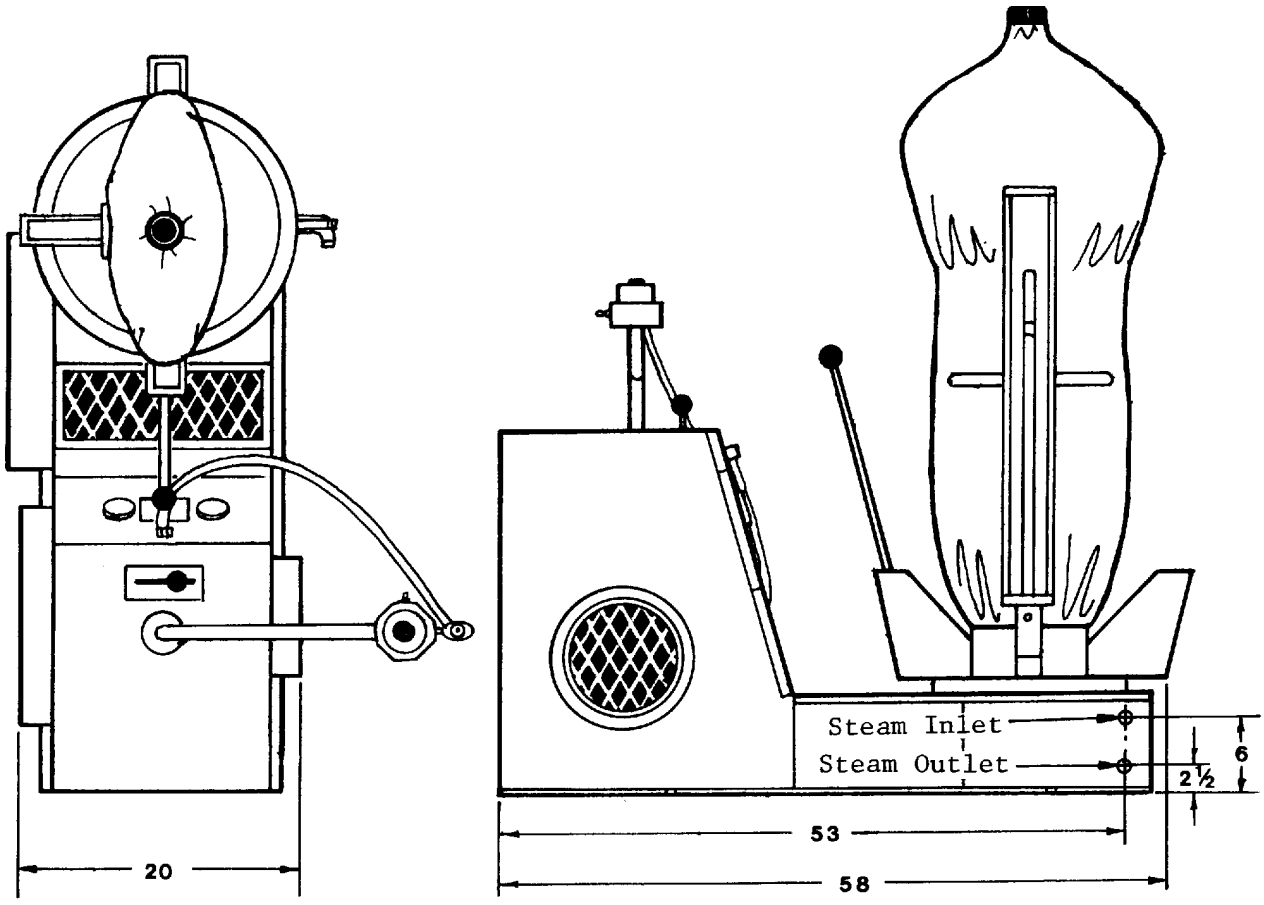
Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

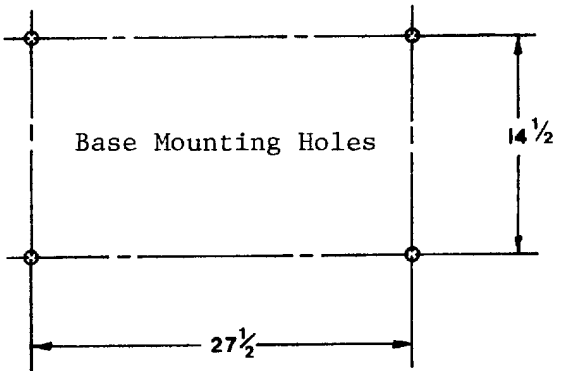
The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

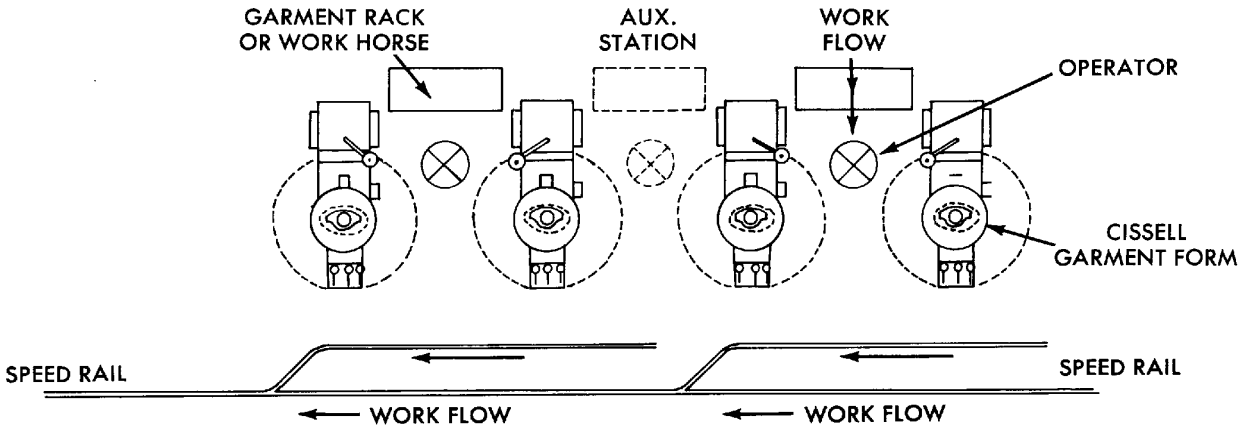
CISSELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the Distributor from whom the Cissell equipment or part was purchased. If the Distributor cannot be reached, contact Cissell.


Steam Inlet
Steam Outlet
2½
6
53
58
20


Base Mounting Holes
14½
27½

CISSELL
GARMENT MANUFACTURERS
FORMS
TYPICAL INSTALLATION



GARMENTS ARE RECEIVED ON RACK OR WORK HORSE ADJACENT TO FINISHING OPERATOR.

TUBULAR GARMENTS (DRESSES, BUTTONED COATS, ETC.) MAY BE BUNDLED AND PLACED ON A WORK HORSE, FRONT UPWARD, WITH HEM TOWARD THE OPERATOR. OPERATOR CAN GRASP EACH GARMENT BY THE HEM AND SLIP IT OVER THE FORM.

GARMENTS ON HANGERS MAY BE RECEIVED ON RACKS. OPERATOR CAN REMOVE HANGER FROM A GARMENT, CARRY THE GARMENT OVER ONE ARM, AND HANG THE PREVIOUSLY FINISHED GARMENT ON THE SPEED RAIL CARRIER OR ANOTHER RACK. THE UNFINISHED GARMENT CAN THEN BE PLACED ON THE FORM. WHILE IT IS BEING STEAMED AND DRIED, THE NEXT GARMENT CAN BE PICKED UP AND HANGER REMOVED.

MAXIMUM PRODUCTION OF HEAVY GARMENTS WITH LONG STEAM AND DRY CYCLES CAN BE UNLOADED AND RELOADED WHILE THE FIRST IS STEAMING AND DRYING. LIGHT WEIGHT GARMENTS WITH VERY SHORT STEAM AND DRY CYCLES PERMIT MAXIMUM PRODUCTION WITH ONE OPERATOR WORKING ONE FORM. OPERATORS PREPARE THE NEXT GARMENT OR OBTAIN A HANGER DURING THE STEAM AND DRY CYCLE.

SUGGESTED FORM CENTERS ARE APPROXIMATELY 4' 6" SO THAT THE FORMS CAN BE OPERATED INDIVIDUALLY OR IN PAIRS AS SHOWN BY POSITION OF AUX. STATION IN DRAWING ABOVE.

CISSELL

GARMENT MANUFACTURERS FORMS

GENERAL INFORMATION

INSTALLATION INSTRUCTIONS (REFER TO ILLUSTRATION SHEET)

UNCRATE MACHINE. Check voltage and current on name plate before installing machine. Electrical specification of relays, timers and motor solenoids must be the same. Do not remove the plastic protective cover on the form until the machine is ready to be placed in operation.

SET MACHINE IN POSITION. Grip a control knob and the turning knob and lift revolving form assembly about 22" to remove from base.

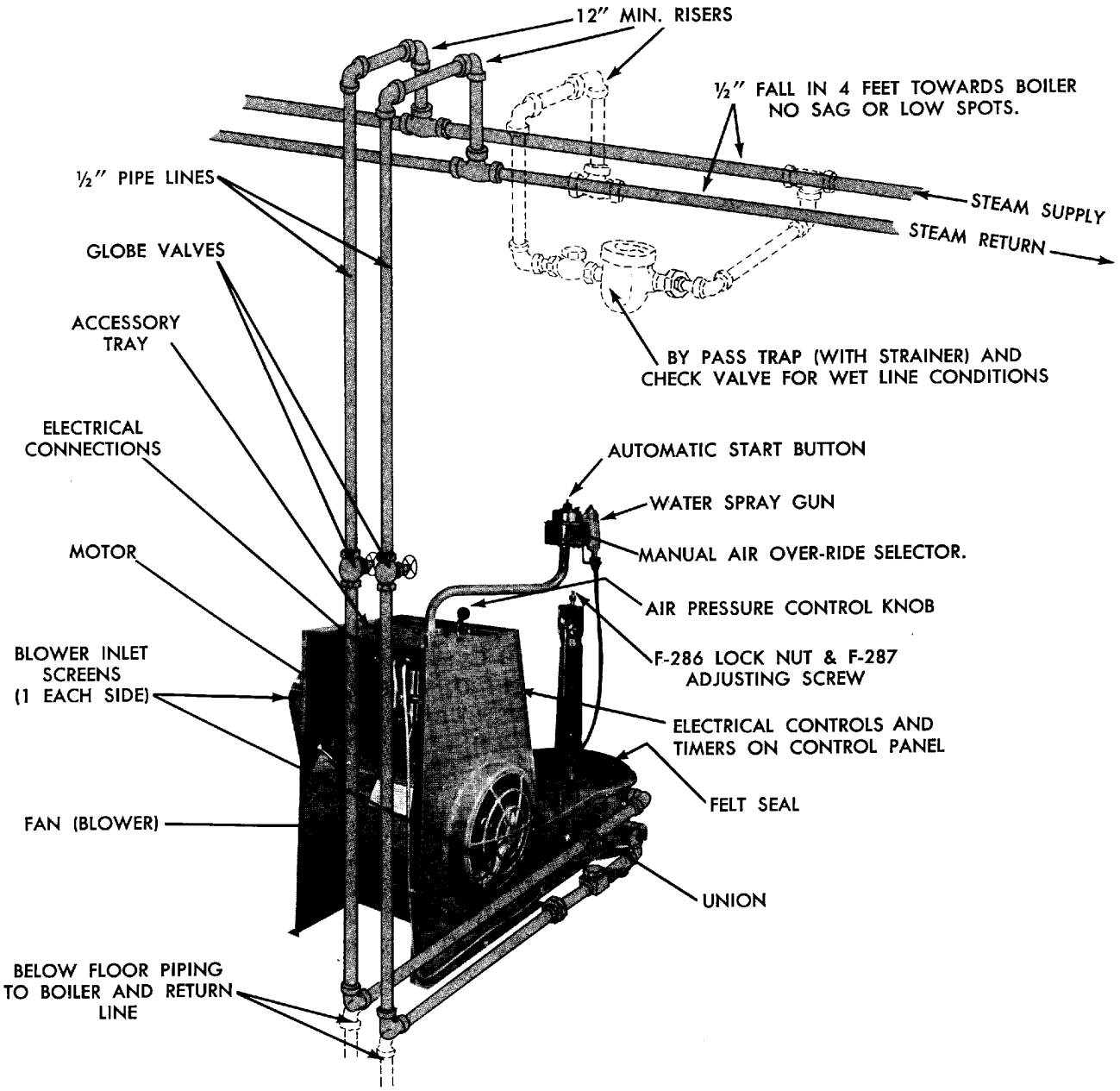
CONNECT STEAM SUPPLY LINE. This line must fall towards the macnine (without water pockets). Connect to steam supply line with union, gate valve and 12" or more riser. If finisher is located near end of steam line, install a by-pass trap and check valve as illustrated in dotted lines.

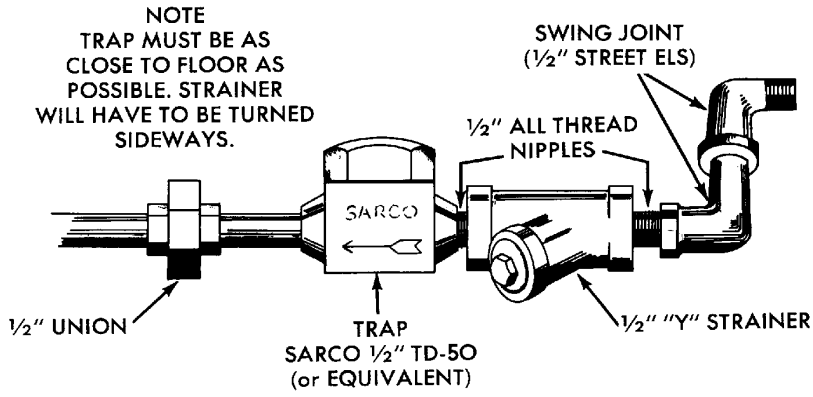
CONNECT RETURN LINE. This line must fall towards boiler (without water pockets). Connect to steam return line with unions, strainer, steam trap, and 12" or more riser. Inspect trap carefully for inlet and outlet markings. Install trap as near the machine as possible, and lower than the return line outlet on the machine.

NOTE: A check valve is not required for a thermodynamic trap. A check valve is required with an impulse trap.

Use a Sarco or Yarway Thermo-dynamic Trap, Impulse trap or equal in the return line of the machine. Do not use a bucket trap unless its size will permit installation below the return line outlet of the machine.

IMPORTANT: Before making final connection to return line, open gate valve in steam supply line and flush pipe dope, borings, and all other foreign matter from the steam connections and steam chamber. Failure to do so will cause trap troubles.


12" MIN. RISERS
½" FALL IN 4 FEET TOWARDS BOILER
NO SAG OR LOW SPOTS.
½" PIPE LINES
STEAM SUPPLY
STEAM RETURN
GLOBE VALVES
ACCESSORY TRAY
BY PASS TRAP (WITH STRAINER) AND
CHECK VALVE FOR WET LINE CONDITIONS
ELECTRICAL CONNECTIONS
AUTOMATIC START BUTTON
WATER SPRAY GUN
MOTOR
MANUAL AIR OVER-RIDE SELECTOR.
AIR PRESSURE CONTROL KNOB
F-286 LOCK NUT & F-287
ADJUSTING SCREW
BLOWER INLET SCREENS
(1 EACH SIDE)
ELECTRICAL CONTROLS AND
TIMERS ON CONTROL PANEL
FELT SEAL
FAN (BLOWER)
UNION
BELOW FLOOR PIPING
TO BOILER AND RETURN
LINE


NOTE
TRAP MUST BE AS CLOSE TO FLOOR AS POSSIBLE. STRAINER WILL HAVE TO BE TURNED SIDEWAYS.
SWING JOINT
(½" STREET ELS)
½" ALL THREAD
NIPPLES
SARCO
½" UNION
TRAP
SARCO ½" TD-50
(or EQUIVALENT)
½" "Y" STRAINER

MAKE ELECTRICAL CONNECTIONS. Refer to wiring diagram on fan housing inside the control panel. All controls and motors are single phase. The line voltage must be the same as the electrical specifications of the motor and controls. Electrical connections must include a fused disconnect switch and be capable of carrying 15 amps, 115 volts or 8 amps, 230 volts. Use only "slo-blow" fuses. UL and California Codes require 2 black wires for 220 volt, 1 black, 1 white for 110 volt: The white is the grounded 115 volt neutral of a 3-wire 220 volt system. Connect the two black leads of a 115 volt machine to the proper terminals of the electrical power line. Connect the green lead to an approved ground.

To connect standard single-phase machines to 3 phase current, be sure the voltage is correct, then connect the two black power leads to any two terminals of the 3 phase line through an approved disconnect switch.

NOTE! Consult your local electrical code before making any electrical connections, and be sure that the electrical installation conforms with all local requirements. Double check all wiring connections before closing disconnect switch.

Replace revolving form on the base. Remove plastic protective cover and all packing paper and tags from the form and clamps.

TEST THE MACHINE. Turn main disconnect "ON" and machine Fan Motor Selector switch "ON". The blower motor will start and run continuously. Move air pressure lever to MAX air position and operate Air Selector on push button box. Air will inflate the bag and permit it to deflate as the selector is moved "ON" and "OFF". Turn the selector to "OFF".

Set the Steam Timer to approximately three seconds and the Air-Timer to approximately 8 seconds.

Turn the Steam-Air Selector to "SEPARATE". Push START button or Foot Pedal momentarily. The machine will "steam" for 3 seconds and blow air for 8 seconds. (The steam solenoid will operate but no steam will escape since the steam is turned off).

Turn the Steam-Air Selector to "MIXED". Push START button or Foot Pedal momentarily. The machine will "steam" and air will blow simultaneously. At the end of 3 seconds the steam solenoid will release. At the end of 8 seconds the air solenoid will release and the bag will deflate.

Repeat each cycle several times.

YOUR CISSELL FORM IS READY TO OPERATE.

GENERAL NOTES: When machine is not in use, permit it to cool, and replace the plastic protective cover on the form to prevent dust and dirt from soiling the nylon.

Remove nylon bag from the machine (see detailed illustration) at frequent intervals for cleaning, as determined by its soiled condition. WET cleam only - do NOT dryclean. After wet cleaning, the nylon bag should be extracted and blown dry on a garment dryer.

Keep nylon bag clean. The nylon fabric acts as a filter in operation, collecting dust and lint from the air, which clogs the fabric pores and greatly reduces its efficient operation. Failure to keep bag clean may cause transfer of soil from bag to garments.

Repair holes or worn spots in nylon bag to extend its useful life. Reinforcement is applied at points of greatest wear to extend the bags useful life. Replace when holes or worn spots are beyond repair. A defective or badly worn nylon bag will cause the machine to operate unsatisfactorily.

CAUTION

Use only genuine Cissell replacement nylon bags for satisfactory results. The fabric for Cissell Nylon bags is especially woven (and cut to an exact pattern) to give the correct porosities for proper operation, steaming and drying. Your Cissell Form depends entirely on the nylon bag for proper operation.

SPECIFICATIONS

Electric Motor: 3/4 HP, 3450 RPM, 115/230 Volts, 60 Cycle, AC single phase
Operating Steam Pressure: 60 to 100 psig, recommended pressure 80-90 lbs.
Boiler Horsepower: Approximately 2
Steam Supply Line: 1/2” pipe
Steam Return Line: 1/2” pipe
Depth: 44”
Height: 62” (Approx. depending on type of form)
Width: 19”
Swinging Radius: 22”
Net Weight: Approx. 220 lbs.

OPERATING INSTRUCTIONS FOR
CISSELL FMFC AND FMJC FORM FINISHER

(See drawing on next page)

STEAM TIMER - Set Timer for required cycle. Located on the control panel (front of the blower housing). Turn the small knob on the timer face until the pointer indicates the desired time setting. Turn the knob only when the machine is not in an automatic cycle.

FOR LIGHT SYNTHETIC FABRICS, a time setting of 3 to 4 seconds is normally adequate. For heavier, more absorbant fabrics increase the time setting until a good finish is obtained.

NOTE: Avoid over-steaming. Over-steaming may shrink stitching, require a longer drying time, cause condensation and slow production. The minimum steam that will give the desired finish is best.

1. AIR TIMER - Set Timer for required cycle. Located on the control panel (front of the blower housing). Turn the small knob on the timer face until the pointer indicates the desired time setting. Turn the knob only when the machine is not in an automatic cycle.

   FOR LIGHT SYNTHETIC FABRICS, a time setting of 4 to 5 seconds with SEPARATE Steam-Air or 7 to 9 seconds with “”MIXED” Steam-Air is normally adequate. For heavier fabrics that retain more moisture, increase the air time until the garment is properly cured.

2 SET PRESSURE CONTROL lever “A” at minimum position.

3 PUSH FAN MOTOR SWITCH to “ON” position. Located on the control panel (front of the blower housing). Blower will start and run continuously and control circuits will be energized. Machine can be operated automatically or manually. To de-energize the entire machine, push selector switch to “OFF”.

4 POSITION GARMENT on form and adjust shoulders (knob on top of form).

5 PUSH MANUAL AIR OVERRIDE SWITCH to “ON” position. Located on the push button box. When the Fan Motor switch is turned “ON” and the bag inflates and remains inflated, move the air override selector to its opposite position.

6 PUSH PRESSURE CONTROL LEVER “A” toward maximum until bag comes within 1/4” of filling hemline of garment.

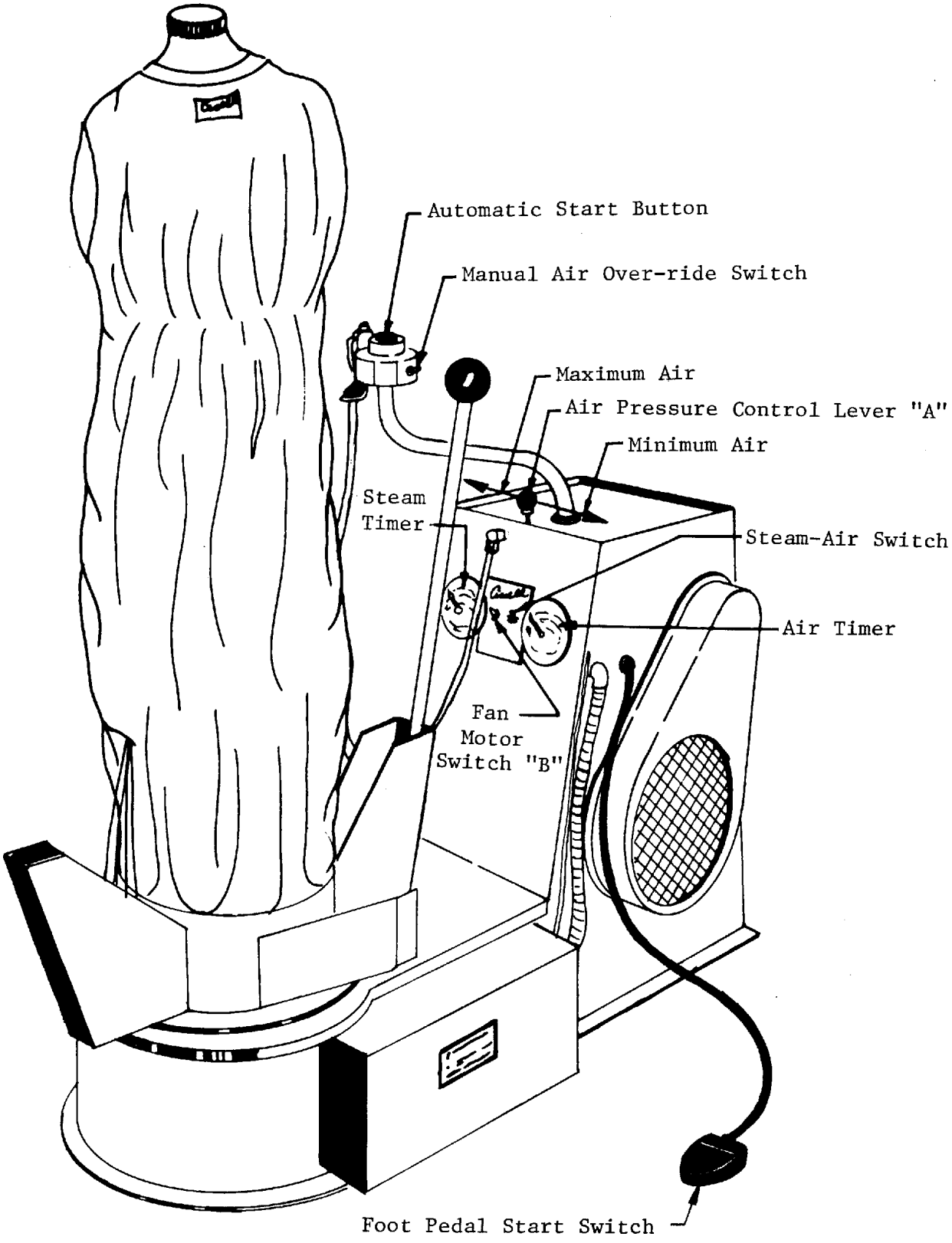
7 RETURN MANUAL AIR OVERRIDE SWITCH to “OFF” position.

8 PRESS AUTOMATIC START BUTTON - Located on the movable pipe column supported on the blower housing. This button or the FOOT PEDAL SWITCH is pressed momentarily to start the automatic cycle. This can be operated from either side of machine. (by swinging column.)

9 REPEAT STEPS 2, 4, 6, 7 and 8 when changing size and/or styles.

10 STEAM AIR SWITCH - Located on the control panel (front of the blower housing). For automatic sequence of STEAM WITHOUT AIR FOLLOWED BY AIR, push switch to “SEPARATE” position. For automatic sequence of STEAM AND AIR MIXED (simultaneous start) followed by AIR ONLY, push switch to “MIXED” position. Determine the best setting for each fabric by test. When using STEAM AND AIR MIXED the air time should be doubled; Example -

Steam	- Air	- Total
4 sec.	8 sec.	8 sec.


Automatic Start Button
Manual Air Over-ride Switch
Maximum Air
Air Pressure Control Lever "A"
Minimum Air
Steam
Timer
Steam-Air Switch
Air Timer
Fan
Motor
Switch "B"
Foot Pedal Start Switch

MECHANICAL ADJUSTMENTS

AIR PRESSURE CONTROL - A control lever is provided just below the push button support column in the accessory tray. Move the lever to obtain the desired air pressure. In general the air pressure ahould be sufficient to pull the garment taut without stretching it. The lower pressures are generally used for wools and very fragile fabrics or fabrics that tend to distort very easily and should not be pulled overly taut while they are curing.

ADJUSTABLE LEVERS - Move back and forth to regulate size of nylon bag at waist, hem and lower positions. Rotate knob on lever clockwise to lock, counter-clockwise 1/4 to 1/2 turn to unlock. Move knob forward (toward form) to decrease size of bag and back (away from form) to increase size of bag. Avoid excessive tightening or loosening of knobs as this will require additional time and slow production. Adjust these levers with a garment on the form and manual air turned on, with pressure set as indicated by the Garment Fabric.

WAIST CONTROL - Regulates expansion at waist line. Start with the Lever completely forward. Unlock the control knob and move back to the desired position. Move the garment in the area of the waist while the bag is being enlarged. When the bag barely makes the garment taut in the waist, lock the lever in position.

HEM CONTROL - Regulates expansion at hem line. Start with the Lever completely forward. Unlock the control knob and move back to the desired position. Observe the garment at the hem line. When the bag pulls the hemline taut without “belling”, lock the lever in position.

LOWER CONTROL - Regulates amount of fullness in hip area and size of bag at hem line. Start with the Lever completely forward. Unlock the control knob and move back to the desired position. Observe the garment in the hip and waist area. Enlarge the bag until the hip is full, but do NOT permit enough fullness to cause a roll at the waist.

NOTE! Some sizes and styles of garments will require adjustment of hem control again after the lower control is adjusted in order to obtain the best possible overall adjustment.

SLEEVE CONTROLS - (Only on bags provided with nylon sleeves). Rings are provided on the bag sleeves to adjust the effective sleeve length. Slide the rings up or down as required until the garment sleeves are well filled but not “belled”. When the form sleeves are not required, fasten ther sleeve ends together inside the bag with the ball-chain and swivels sewn into the sleeve ends. Sleeves may be left hanging loose if garment fabric does not stretch or mark easily.

SHOULDER WIDTH ADJUSTMENT - A knob on top of the form is used to adjust the form shoulder width to suit the garment. Turn knob clockwise to increase width - counter-clockwise to decrease.

ELECTRICAL CONTROLS

FAN MOTOR SWITCH - Located on the control panel (front of the blower housing). Push to "ON" position. Blower will start and run continuously and control circuits will be emergized. Machine can be operated automatically or manually. To de-energize the entire machine, push selector switch to "OFF".

STEAM AIR SWITCH - Located on the control panel (front of the blower housing). For automatic of steam without air followed by air, push switch to "SEPARATE" position. For automatic sequence of steam and air mixed (simultaneous start) followed by air only, push switch to "MIXED" position. Determine the best setting for each fabric by test.

MANUAL AIR OVERRIDE SWITCH: Located on the push button box. When the blower motor is running, push selector to one side to inflate the bag. Return it to its other position to deflate the bag. When the Fan Motor switch is turned "ON" and the bag inflates and remains inflated, move the air override selector to its opposite position.

AUTOMATIC START BUTTON - Located on the movable pipe column supported on the blower housing. This button or the foot pedal may be used to start the automatic cycle. Press either momentarily to start.

STEAM TIMER - Located on the control panel (front of the blower housing). Turn the small knob on the timer face until the pointer indicates the desired time setting. Turn the knob only when the machine is not in an automatic cycle.

For light synthetic fabrics a time setting of 3 to 4 seconds is normally adequate. For heavier more absorbant fabrics increase the time setting until a good finish is obtained.

NOTE: Avoid over-steaming. Over-steaming may shrink stitching, require a longer drying time, cause condensation and slow production. The minimum steam that will give the desired finish is best.

AIR TIMER - Located on the control panel (front of the blower housing). Turn the small knob on the timer face until the pointer indicates the desired time setting. Turn the knob only when the machine is not in an automatic cycle.

For light synthetic fabrics a time setting of 4 to 5 seconds with "SEPARATE" Steam-Air or 7 to 9 seconds with "MIXED" Steam-Air is normally adequate. For heavier fabrics that retain more moisture, increase the air time until the garment is properly cured.

NOTES

When sizing the form always operate the levers in a right to left sequence (Waist-Hem-Lower). When pulling the form "in" to start resizing, always operate the levers in a left to right sequence (Lower-Hem-Waist). The levers can not be pushed forward (toward the form) when the bag is inflated.

A water spray gun is provided to add moisture when needed for difficult wrinkles in hard fabrics. Spray garment where needed DURING THE STEAMING CYCLE holding the spray gun about 15" from garment and allowing mist to FALL INTO THE STEAM and onto the fabric.

Collars and various trim may be finished during the normal cycle by wiping with a hand pad before the garment is dry.

Always reduce form to its smallest size before starting the sizing operation.

IMPORTANT!

For maximum production always finish as many garments of the same size and style as possible at the same time. This avoids unnecessary adjustments and improved overall machine performance.

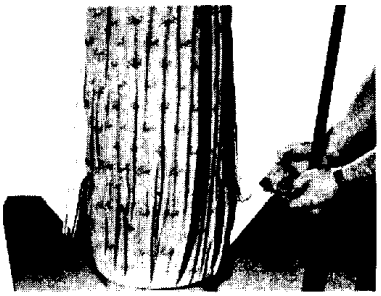
Place garments on a rack, front upward, so they are convenient to the form operator, with the hem toward the operator. The operator can then easily grab the hem, and with a single sweeping motion partially fill it with air so it will be extended and drop easily over the form, failing completely down so the hem will be straight.

When using the bag sleeves, a garment is best removed from the form by holding the garment sleeves at the UNDER side and lifting upward. The bag sleeves will easily slip out of the garment.

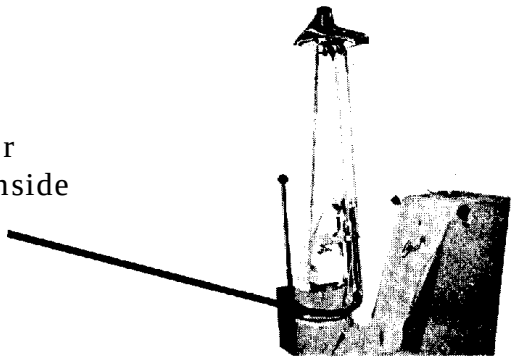
CHANGING INSTRUCTIONS

TO REMOVE BAG

(1) Remove yellow weights, 1 each side.

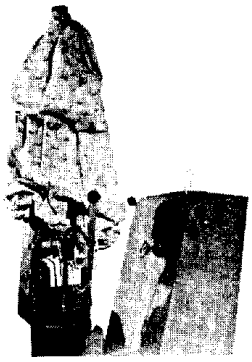


(2) Raise the lower control ring (inside bag).



(3) Open zipper and untie bottom string.

(4) Lift bag off over revolving assembly shoulder form.



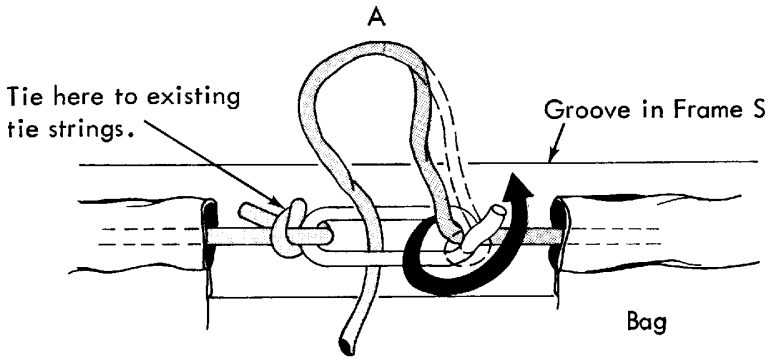
TO REPLACE BAG

(4) Replace yellow weights, one each side, on end of control strings.

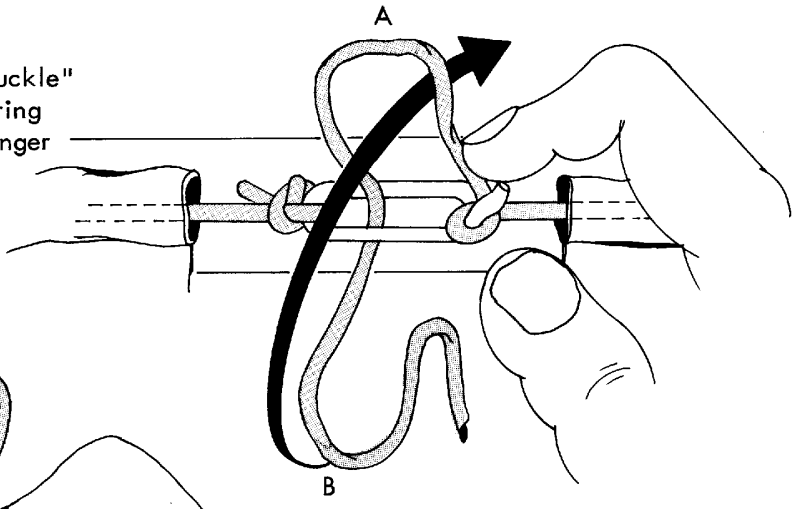
(3) Lower the control ring inside bag.

(2) Tie bottom string in groove and close zipper. Refer to instructions on next page for proper knot when tying string. Straighten bag until control strings are at the sides.

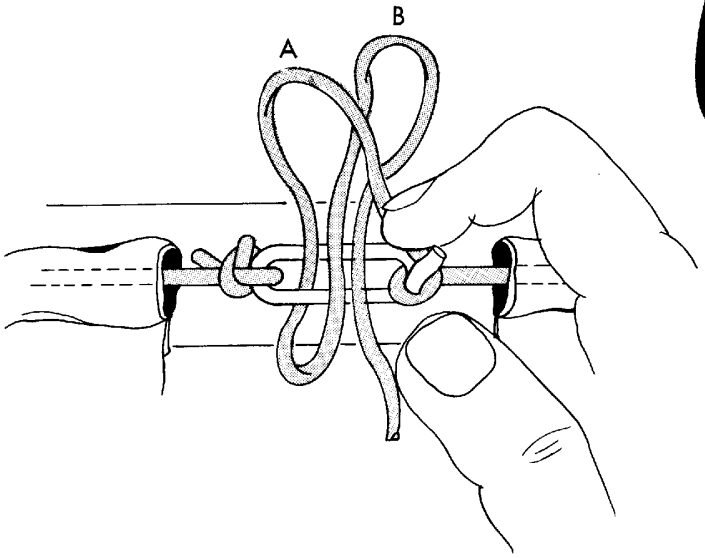
(1) Place bag over revolving assembly shoulder form, with front of bag toward front of form.



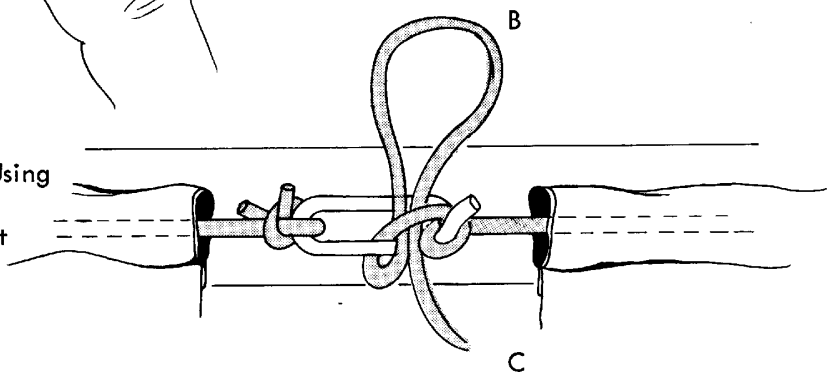
STEP 1 Work tie string into the groove, loop through the "buckle" as shown and pull string tight into groove.



STEP 2 Loop tie string around "buckle" horn and grip horn and string between thumb and forefinger as shown above. This will prevent slipping and steady the buckle for the next operation.



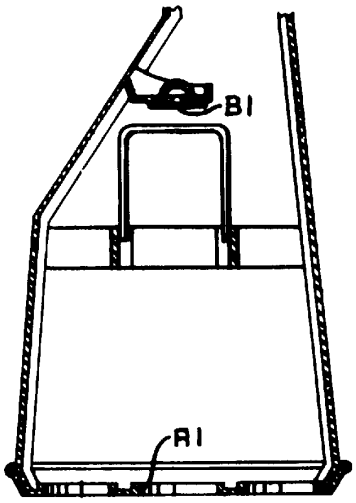
STEP 3 Loop additional tie string B through existing loop A, still holding the buckle.



STEP 4 Pull on loop B and tighten the knot on the buckle. Using look B and string C tie an overhand knot to keep knot from slipping.

CISSELL FORM FINISHER

Lubrication of Bearing Areas and Installation of Metallic Steam Spreader



REVOLVING FORM

INSTRUCTIONS FOR LUBRICATING BEARING SURFACES WITHIN FORM FINISHER

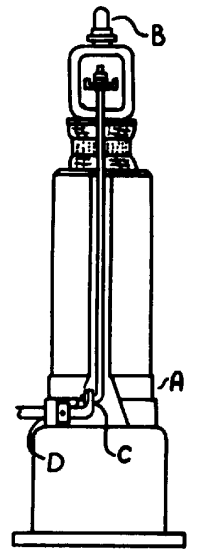
NOTE: Inspect bearing areas at least every 30 days. If an accumulation is evident, bearing surfaces must be cleaned and lubricated.

FIRST: Lift revolving form up and off of steam chamber.

SECOND: Sand off old lubricant, or foreign matter, from bearing surfaces A and A1.

THIRD: Wipe dust and lint off of surfaces A, A1, B, B1, C and D.

FOURTH: Spread DOW CORNING "VALVE SEAL A" (Heat Stable Silicon Lubricant) with a piece of cardboard over surface A, and apply to bearing points C and D. With Finger, pack inside of dome above ball bearing B1 with Valve Seal A.



STEAM CHAMBER

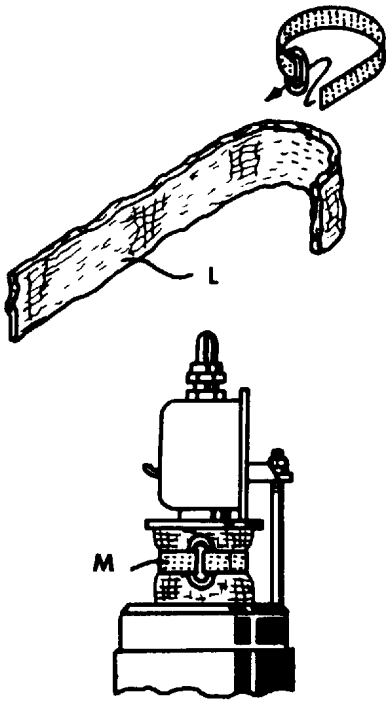
TO REPLACE METALLIC STEAM SPREADER

FIRST: Remove old metallic spreader if it fails to diffuse steam properly.

SECOND: Fold new copper mesh "L" over, three times, into approximately a 1 1/2" width band, 18" long.

THIRD: Wrap copper mesh tightly around valve body.

FOURTH: Place perforated brass draw band with ring "M" around copper mesh. Feed end of band through ring and pull band tight. Fold band back over ring with a pair of pliers to keep band tight.



INSTRUCTIONS FOR LUBRICATING BEARING POINTS ON OUTSIDE OF BASE

Wipe bearing surfaces clean and oil with a lightweight oil, at least every 60 days.

NOTE:

Nylon bearings do not require lubrication.

CISSELL STEAM-AIR FINISHER
INSTRUCTIONS FOR ADJUSTING HEIGHT OF REVOLVING FORM
(Model FM** and Model FG-1)

Should the revolving form "drag" on the base rather than turn freely, the form must be raised.

Conversely, if the revolving form hides too high above the base, permitting steam to escape from the space between the form and base, the form must be lowered.

WHEN AN ADJUSTMENT MUST BE MADE, REMOVE REVOLVING FORM BY SIMPLY LIFTING IT STRAIGHT UP OFF THE BASE.

PROBLEM: Revolving Form "drags" on base.

TO CORRECT: Loosen F286 Bearing Lock Nut. Turn F287 Bearing Adjustment Screw COUNTER-CLOCKWISE.

CHECK ADJUSTMENT: Replace revolving form on base. Rotate form. If perfectly adjusted, form will rotate freely and snugly on felt seal around top of base. If form is still too low...or too high...repeat adjustment until it is correct.

PROBLEM: Revolving Form rides too high above base.

TO CORRECT: Loosen F286 Bearing Lock Nut. Turn F287 Bearing Adjustment Screw CLOCKWISE.

CHECK ADJUSTMENT: Replace revolving form on base. Rotate form. If perfectly adjusted, form will rotate freely and snugly on felt seal around top of base. If form is still too high...or too low...repeat adjustment until it is correct.

AIR DAMPER LINKAGE ADJUSTMENT

1. Start the blower motor. See that the air damper is closed (position shown below). Blower air pressure will hold it closed.

2. Check to see that the pins in the air solenoid lever and air damper lever are located as shown below.

3. Loosen the set screw in the air damper lever hub and, with the damper closed, rotate the lever until the air solenoid armature gap is 7/8".

4. Tighten the air damper lever set screw slightly. Check to see that there is slight end play of the levers on the air damper shaft so they may rotate freely. Then tighten the set screw tightly.
   NOTE: If the damper does not open in a positive manner, reconnect the lower end of the damper opening spring to the alternative connection position shown below.

AIR PRESSURE SETTING ADJUSTMENT

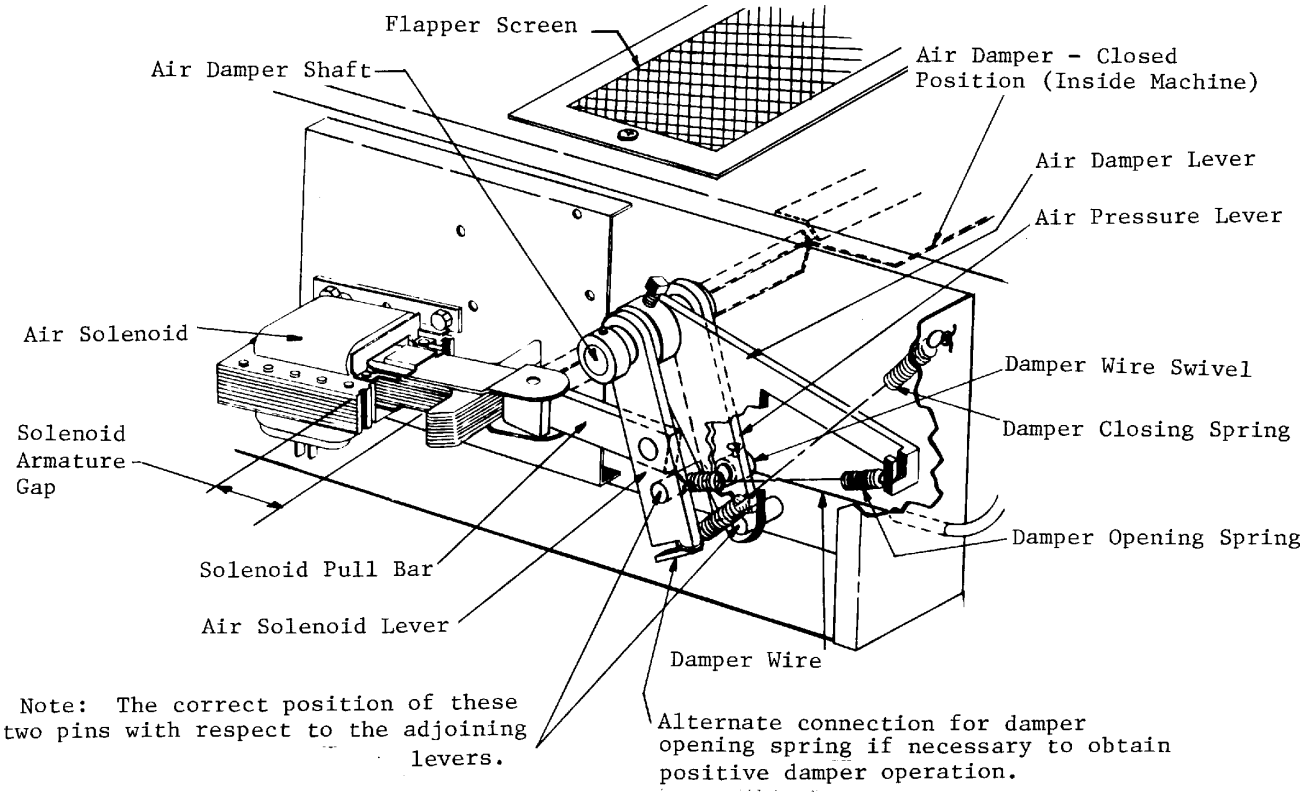
1. Adjust the air damper linkage as described above.

2. Loosen the set screw in the damper wire swivel.

3. Move the air pressure control lever on top of the control enclosure to minimum setting.

4. With the blower motor running and the air damper closed, move the air pressure lever until it touches the pin in the lower end of the air damper lever.

5. Tighten the damper wire set screw onto the damper wire tightly.

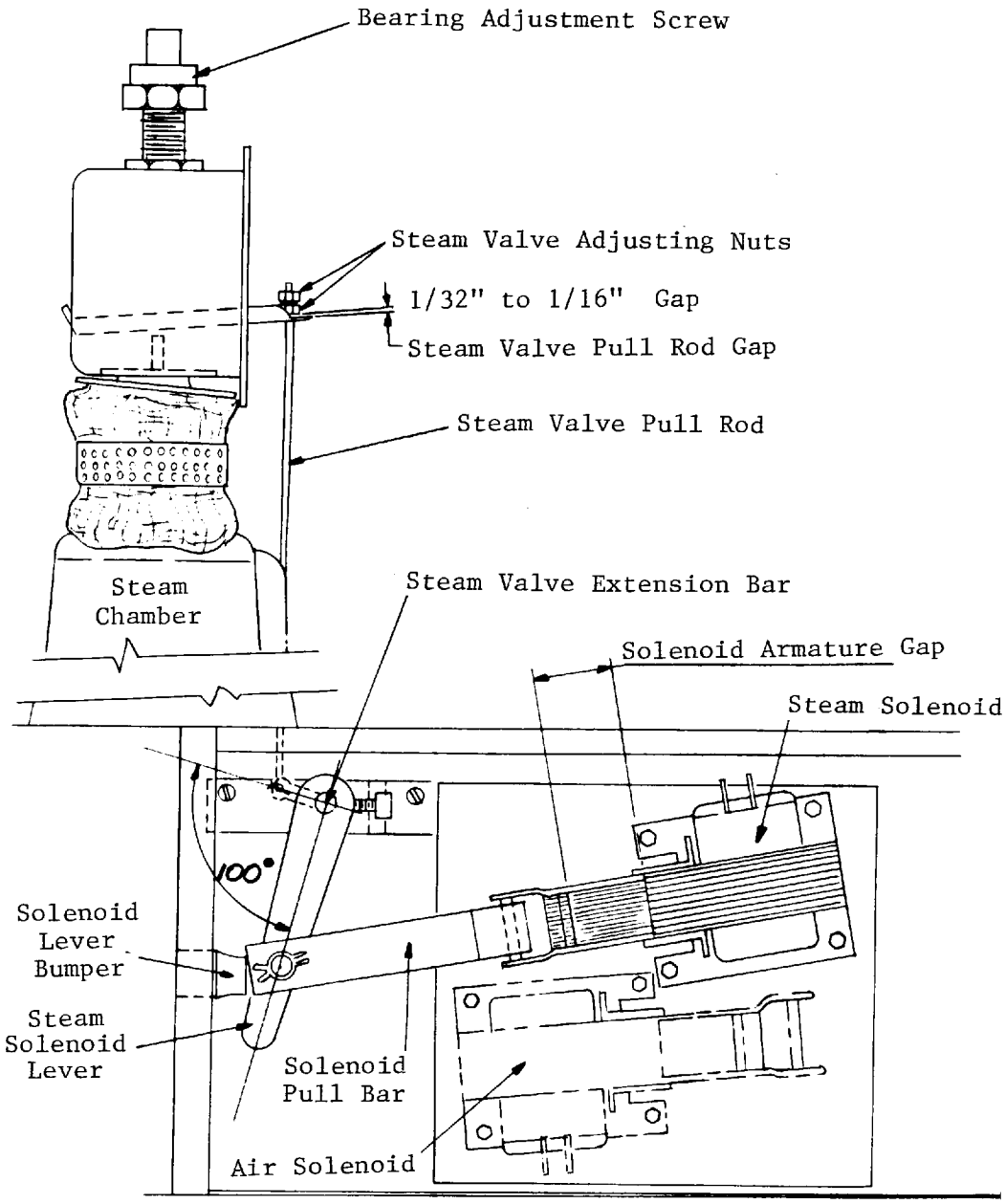


STEAM VALVE LINKAGE ADJUSTMENT

1. With steam solenoid lever resting against lever bumper, loosen the set screw in the lever hub.

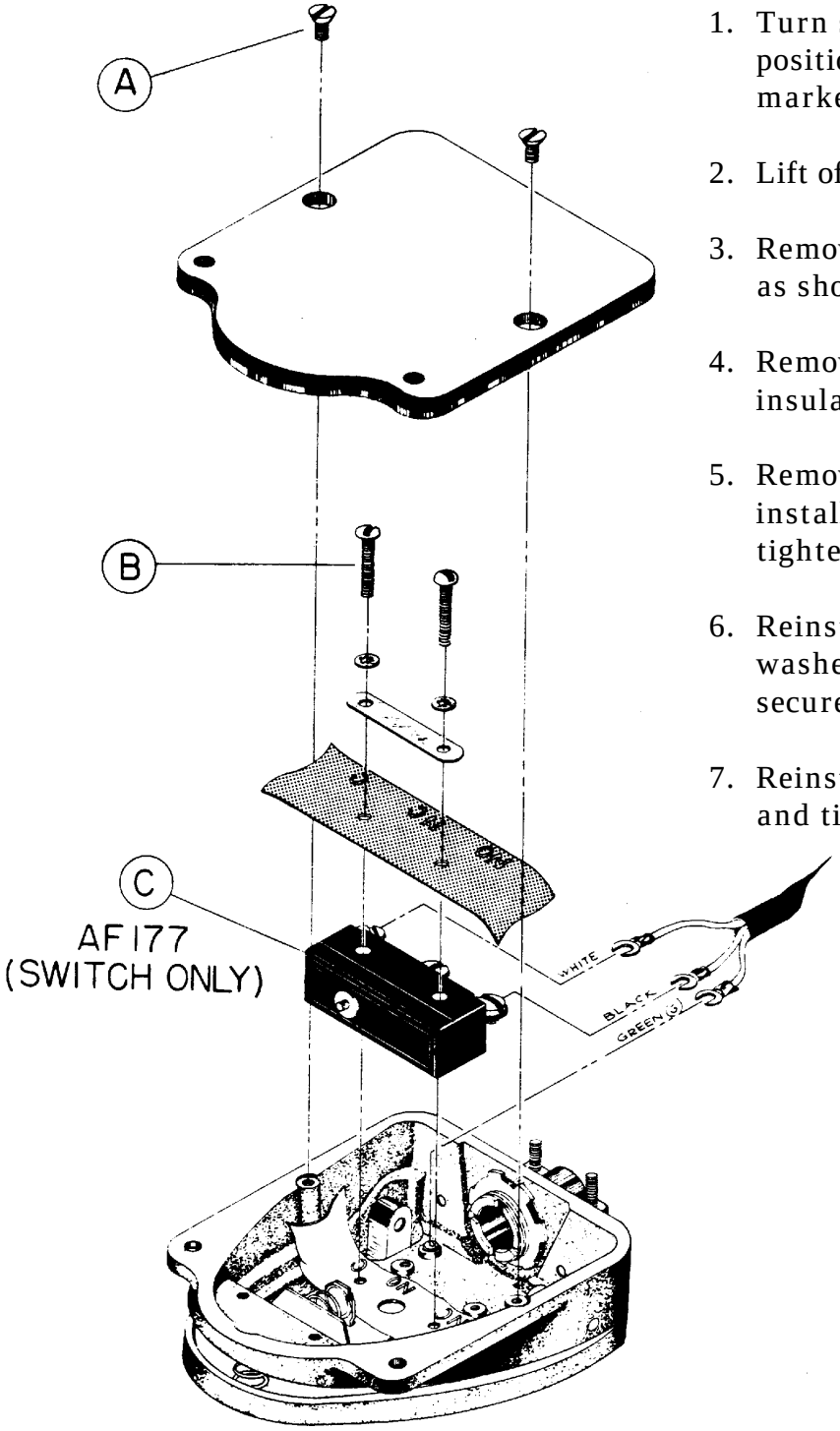
2. Set the steam valve extension bar at the angle shown (approximately 100º off centerline of steam solenoid lever) and retighten set screw.

3. Adjust position of steam valve adjusting nuts to obtain 1/16" pull rod gap at the valve lever and lock adjusting nuts together. The steam valve must be touching the lever bumper.



FOOT PEDAL SWITCH ASSEMBLY - F1178

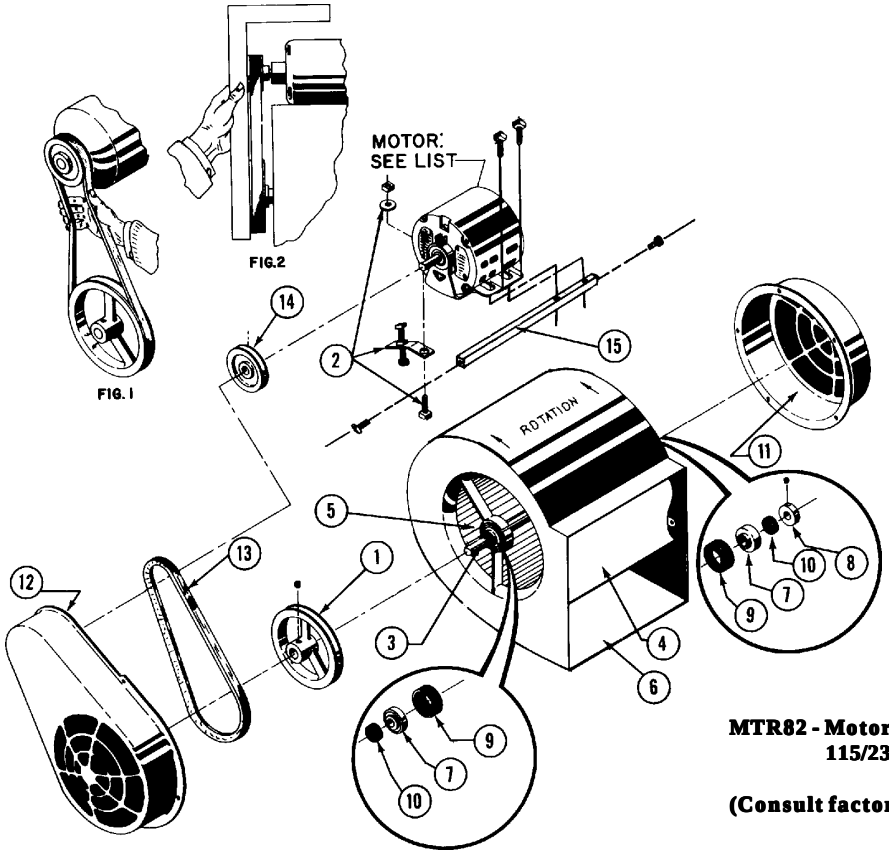
INSTALLATION INSTRUCTIONS FOR AF 177 SWITCH



1. Turn switch to upside down position and remove two (2) screws marked (a) as illustrated.
2. Lift off base plate pad.
3. Remove two (2) screws marked (b) as shown.
4. Remove two (2) washers, plate, insulation and switch.
5. Remove wires from old switch and install wires on new switch and tighten securely.
6. Reinstall switch, insulation, plate, washers and screws and tighten securely.
7. Reinstall base-plate-pad and screws and tighten securely.

CISSELL FORM FINISHER
BLOWER ASSEMBLY(LOW BASE)
PARTS AND INSTALLATION

WHEN ORDERING PARTS OR MAKING INQUIRY, Specify Machine, Serial Number, Voltage and Current.



MTR82 - Motor 3/4 HP
115/230/60/1

(Consult factory for other voltages.)

Ref. No.	Part No.	Description
	F-734	Blower Assembly Complete less motor, guards, pulleys and belt
1	F-363	Blower Pulley (1) 3/4" dia. hole (AK-61)
2	F-365	Adjustment Bolt with square nut, strap pad, mounting bolt, nut and washer (1)
3	F-366	Shaft 3/4" dia. x 16 1/2" length
4	F-367	Cut-off (with speed nuts and stove bolts) (1)
5	F-368	Blower Wheel (1)
6	F-369	Blower Housing (with cut-off)
7	F-371	Bearing Assembly (2)
8	F-372	Thrust Collar (1)
9	F-373	Bearing Insulator Cup (2)
10	F-374	Plastic Thrust Washer (2)
11	F-375	Blower Guard (1) (for machines to be used in Calif. and all FMAA Machines order F-375.
12	F-376	Belt Guard (1) (for machines to be used in Calif. and all FMAA Machines order F-376.
13	TU-2317	V-Belt (1) 4L-380
14	TU-2318	Motor Pulley with set screw 1/2" dia. hole (AK-34)
15	PT-47	Motor Support Bar
16	P-36	Allen Head Wrench, 5/32" across flats (not illustrated)

ELECTRIC MOTOR -- 3/4 HP, 3450 RPM, 115 or 230 Volt, 60 cy., AC, Single Phase. WHEN ORDERING, SPECIFY VOLTAGE DESIRED. Other voltages and currents available at additional cost.

INSTALLATION OF MOTOR AND BLOWER ASSEMBLY FOR CISSELL FORM FINISHERS

INSTALLATION OF BLOWER

A. Place Blower Wheel in housing with blades at bottom cupped towards opening.
(See illustration on other side)
B. Install cut-off sheet.
C. Slip Shaft through center holes of Housing and Blower Wheel.
D. Align Blower Wheel equidistant from each side of Housing with equal lengths of shaft extending beyond each side of Housing. Tighten Blower Wheel Set Screw against flat of Shaft with fingers.

NOTE

USE ONE DROP OF LIGHTWEIGHT OIL IN HOLE OF EACH BEARING BEFORE INSERTING ON SHAFT.

E. Install Bearing Insulator, Bearing Assembly, and Plastic Thrust Washer on each end of Shaft, as illustrated. Also install Thrust Collar as illustrated. Tighten Set Screw of Thrust Collar and Center Blower Wheel Set Screw with a wrench.
F. Slip Large Pulley on Blower Wheel Shaft against Plastic Thrust Washer with Set Screw outside. Tighten securely.

NOTE

SEE INSTRUCTIONS FOR ALIGNMENT AND PROPER BELT TENSION.

INSTALLATION OF MOTOR

NOTE

CONDENSER MUST BE REMOVED BEFORE REMOVING OF INSTALLING MOTOR.

A. Install Motor Support Bar and Adjusting Bolt on Motor before installing Motor in Housing
B. Place Motor in position and secure with bolts in each end of Support Bar.
C. Slip Small Pulley on Motor Shaft with Set Screw out away from Motor. Have end of Pulley flush with end of Shaft.

ALIGNMENT OF PULLEYS

NOTE

IF INSTALLATION HAS BEEN MADE ACCORDING TO INSTRUCTIONS THE BELT ALIGNMENT SHOULD BE CORRECT. IF THERE SHOULD BE ANY DOUBT, CHECK THE FOLLOWING INSTRUCTIONS.

A. Place a straight edge against face of Large Pully and align face of Small Pulley with straight edge. Move Small Pulley for adjustment. (Fig. 2)
B. To put tension on belt turn Adjustment Bolt Clockwise. (Use wrench) Hold bolt with wrench, tighten Square Lock Nut clockwise with a wrench.

BLOWER BELT SETTING EXTREMELY IMPORTANT

Improper belt tension and misalignment develop bearing and belt failures.

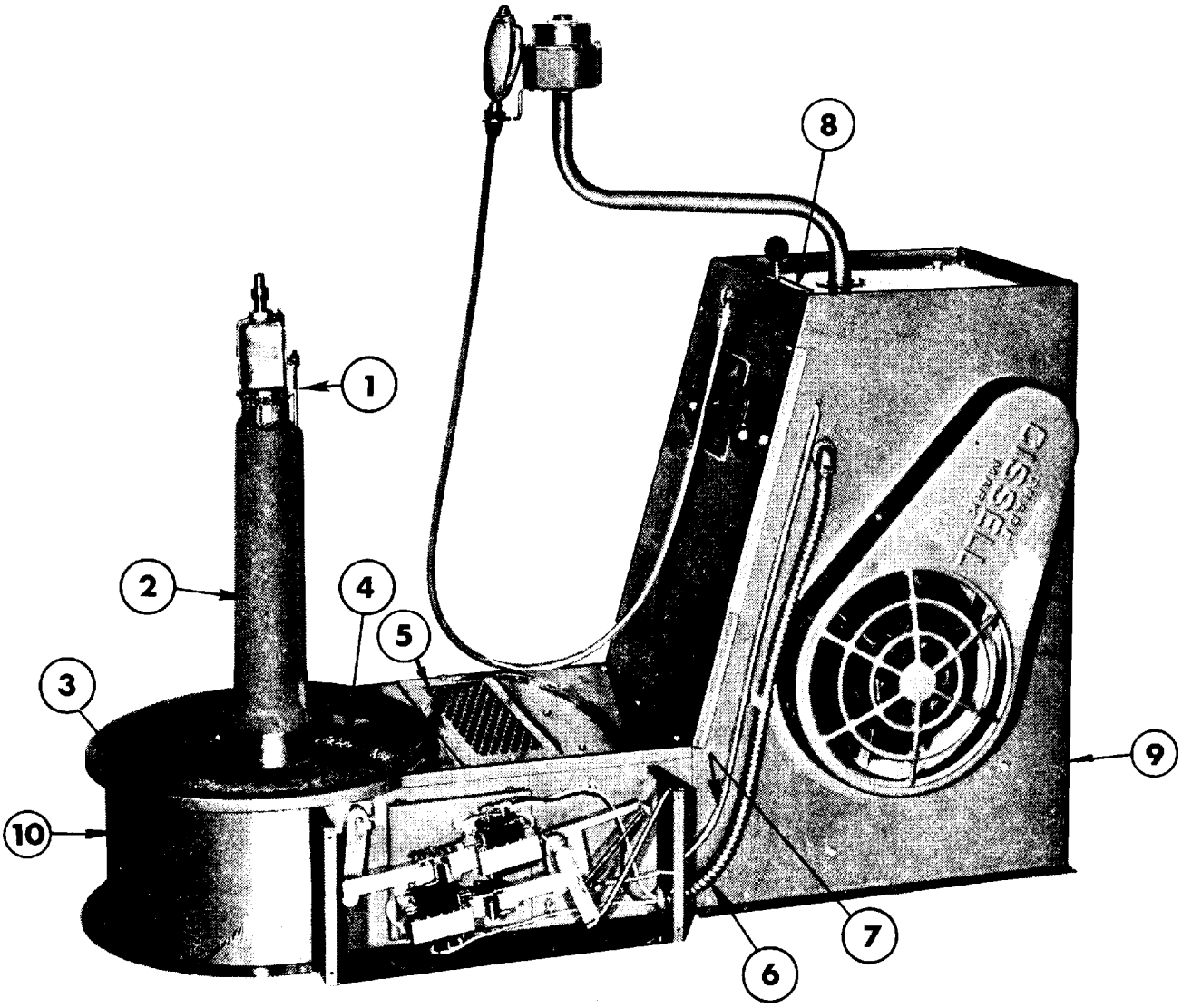
FIGURES 1 and 2 deal with proper tension and correct alignment of belts and pulleys when used on blower applications.

FIGURE 1 indicates the recommended tension, determined by grasping the belt as shown and when a normal pressure is applied, a deflection of approximately 1" in the belt will occur.

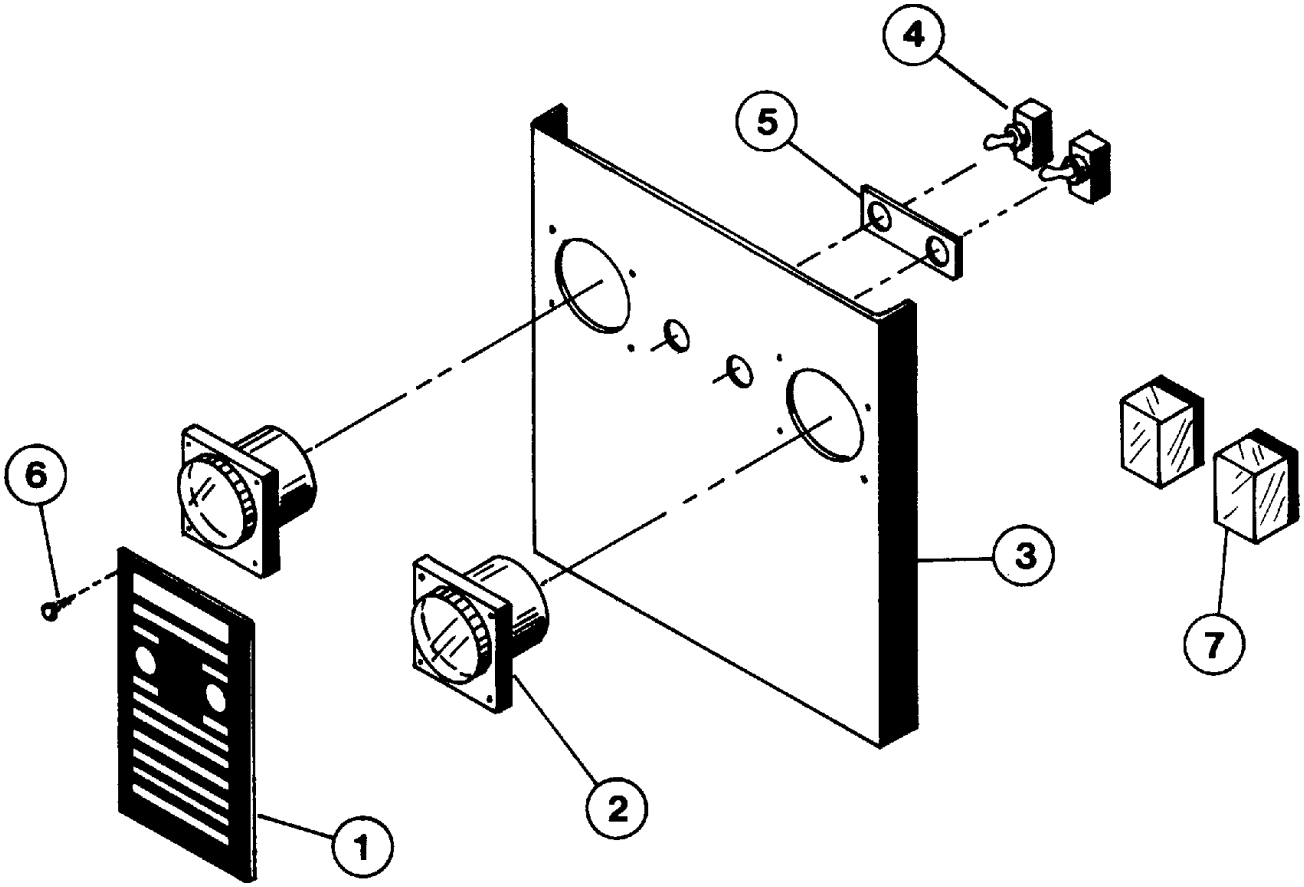
If the deflection is much in excess of that indicated, belt slippage may occur and excessive belt wear can result.

If the deflection is somewhat less than indicated, the belt is too tight and will shorten the life of the bearing. Excessive tension will actually pull the shaft through the oil film in the bearing and allow metal to metal contact. In addition to decreasing the bearing life, it will contribute to noisy blower operation. Any defects in the belt or pulleys will be exaggerated.

FIGURE 2 deals with a recommended method for checking correct alignment of pulleys. Excessive misalignment produces increased belt wear and can produce lateral motion of the wheel and shaft to the point that considerable noise can develop.



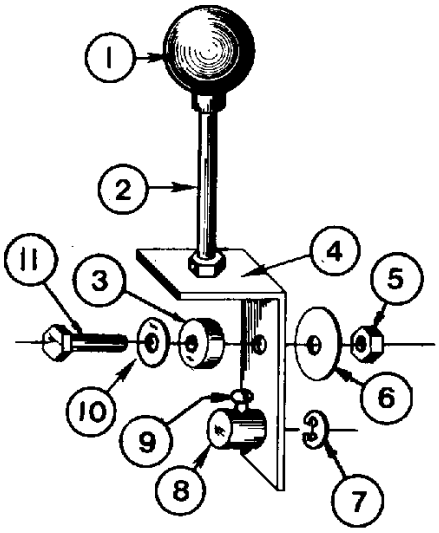
Ref. No.	Part No.	Description
1	F149	Steam Valve Pull Rod
2	F539	Steam Chamber
3	F357	Felt Air Seal
4	F1187	Steam Coil
5	F1166	Flapper Screen
	F1063	Flapper Plate
6	F680	Greenfield Cable - 22" w/Adapter & Locknuts
7	F1062	Damper Control Wire Tube (only)
	F1127	Damper Control Wire (only)
8	F634	Damper Control Nameplate
9	F974	Housing Weldment
10	F973	Low Base Weldment



TIMER PANEL ASSEMBLY

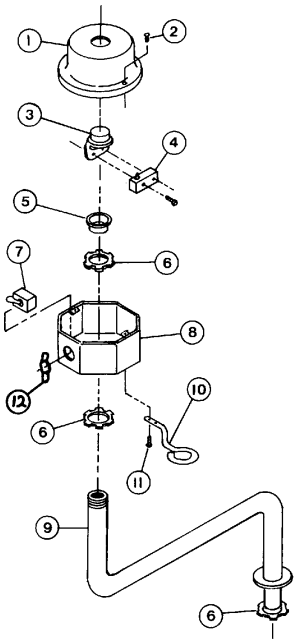
Ref. No.	Part No.	Description
1	F588	Timer Nameplate
2	K131	Timer - 115V. 60 Hz.
	K132	Timer - 230V. 60 Hz.
	K133	Timer - 230V. 50 Hz.
3	F1160	Panel Weldment (Specify Color)
4	TU264	Toggle Switches
5	F971	Switch Keeper
6	TU7733	#8 - 18 x 1/2 Self Drill Screw (Pkg. 6)
7	TU13224	Relay - 120V.
	TU13225	Relay - 240V.

DAMPER CONTROL ASSEMBLY



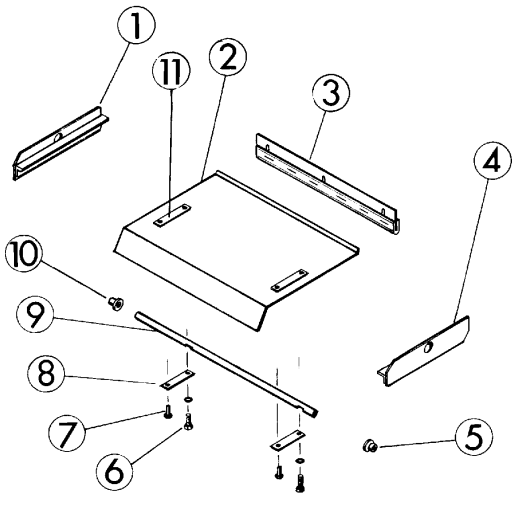
Ref. No.	Part No.	Description
1	D16	Knob
2	F750	Shaft w/Nuts
3	F660	Rubber Washer
4	F663	Bracket
5	TU4934	1/4 - 20 Hex Nut (Pkg. 6)
6	F639	Friction Washer
7	F358	"E" Ring (Pkg. 6)
8	F664	Swivel
9	SV332	#8 - 32 x 3/8 Rd. Hd. Screw (Pkg. 6)
10	TU2847	Flat Washer (Pkg. 6)
11	RC344	1/4 - 20 x 3/4 Hex Screw (Pkg. 6)

PUSH BUTTON DOME & PARTS



Ref. No.	Part No.	Description
1	F986	Push Button Dome
2	TU7733	#8-18x1/2" Self-Drill Screw (Pkg. 6)
3	F714	Push Button w/Bracket, Screws, Nuts & Washers
4	F713	Switch
5	F717	Bushing
6	F94	Lock Nut
7	TTU103	Toggle Switch
8	F994	Case
9	F999	Support Pipe
10	F590	Spray Gun Holder
11	TU3624	#6 - 32 x 1/4 Rd. Hd. Screw (Pkg. 6)
12	502655544	Switch Plate (on-off)

DAMPER ASSEMBLY



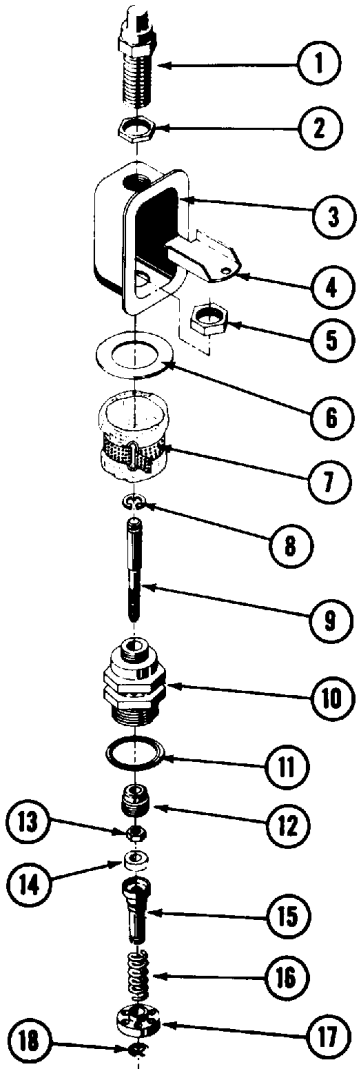
Ref. No.	Part No.	Description
1	F962	Left Damper Assembly
2	F723	Damper
3	F231	Upper Air Seal w/Felt
4	F963	Right Damper Slide
5	F212	Delrin Bearing
6	F725	#10 - 24 x 5/8" Hex Screw (Pkg. 6)
7	TU4959	Rivet
8	F2323	Tension Bar
9	F638	Damper Rod
10	PIF172	Delrin Bushing
11	F2322	Tension Bar

F1174 Damper Assembly includes items F2323, F2322 and F723.

STEAM VALVE PARTS

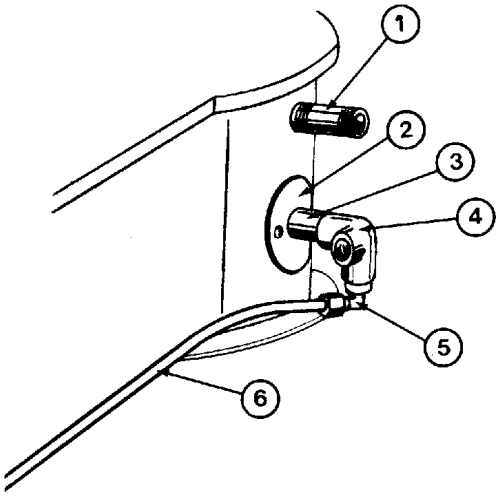
Ref. No.	Part No.	Description
1	F287	Bearing Adjustment Screw
2	F286	Bearing Locknut
3	F285	Bearing Support Box
4	FV101	Valve Lever
5	OP547	Large Locknut
6	FV106	Collar Retainer
7	F18	Steam Spreader w/Band
8	F359	"E" Ring (Pkg. 6)
9	FV103*	Valve Stem
10	FV100	Valve Body
11	P103*	Gasket (Pkg. 6)
12	V36*	Valve Seat
13	V15*	Small Locknut (Pkg. 6)
14	V16*	Teflon Disc (Pkg. 6)
15	FV104	Valve Disc Holder
16	V330*	Spring (Pkg. 6)
17	FV105	Spring Retainer
18	F358*	"E" Ring (Pkg. 6)

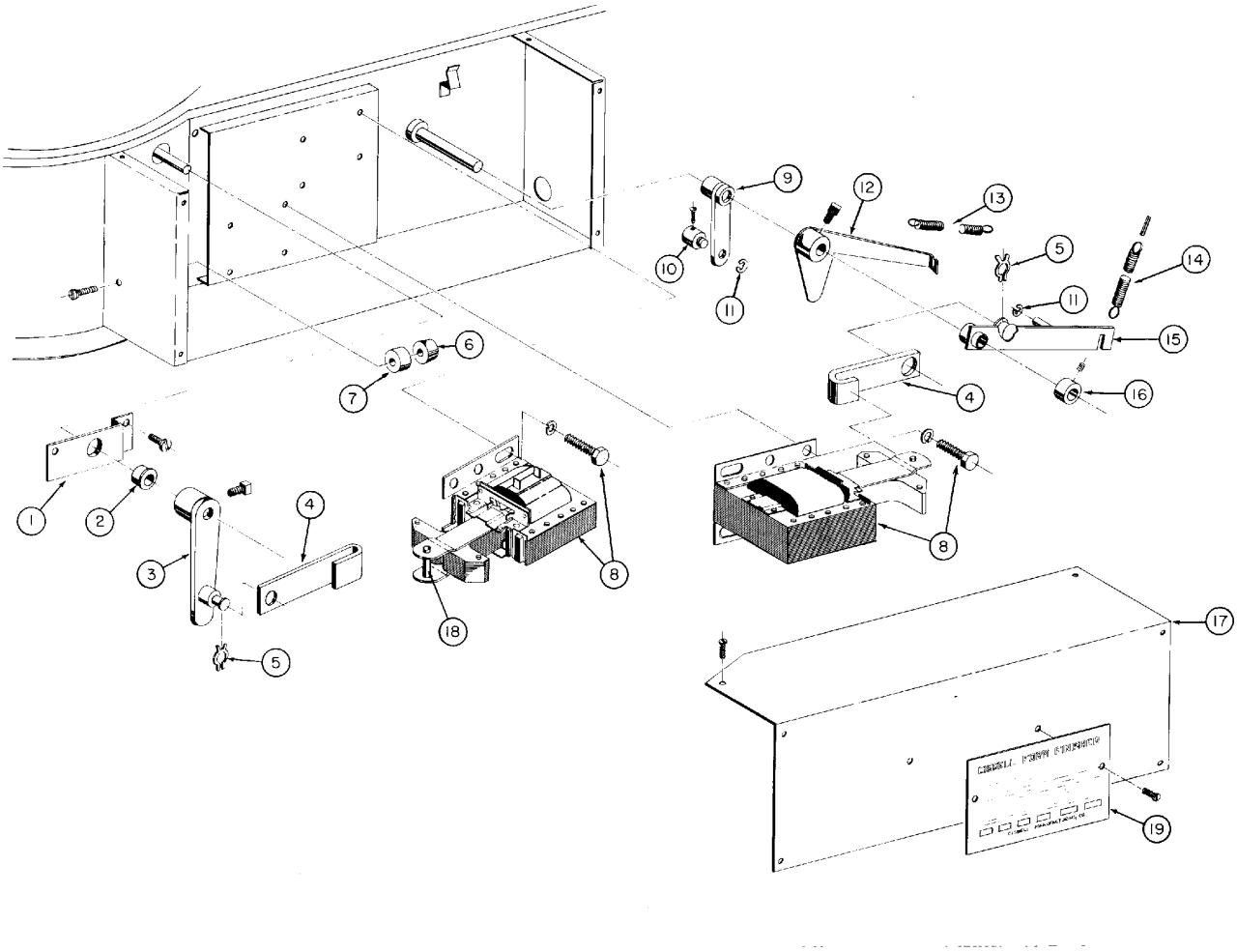
* Items are included in K451 Repair Kit for FV110.



INLET/OUTLET PIPING

Ref. No.	Part No.	Description
1	OP292	1/2" x 2 1/2" Supply Pipe
2	F225	Spacer Ring
3	F226	1/2" x 7" Return Pipe
4	F573	Bushed Side Outlet Asm.
5	OP224	90º Comp. Elbow
6	F883	5/16" Copper Tubing

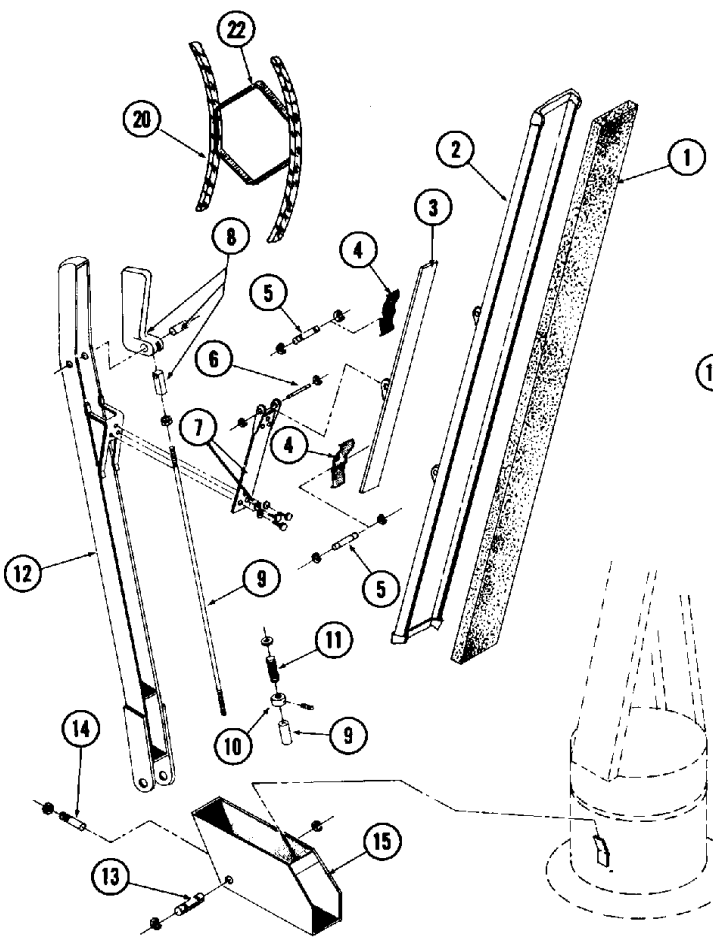




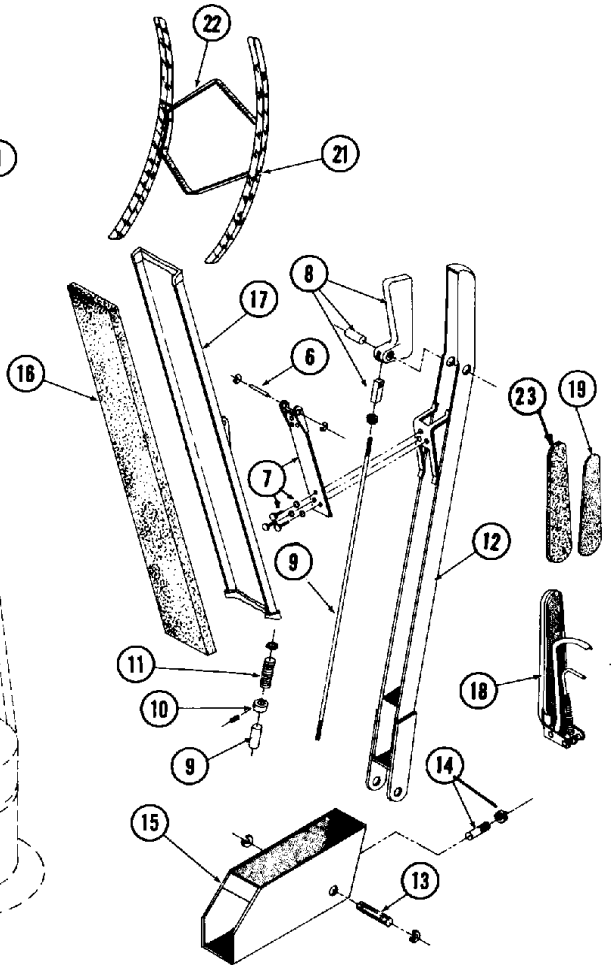
SOLENOID CONTROL BOX

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	F254	Spacer Plate	11	SG053*	"E" Ring
2	TU49	Delrin Bearing (Pkg. 2)	12	F642	Air Damper Lever
3	F744	Steam Valve Lever	13	F849	Spring
4	F726	Solenoid Hook	14	J9	Spring
5	F362*	"X" Washer	15	F643	Air Solenoid Lever
6	TU3549	Rubber Bumper	16	F215	Collar
7	F785	Bumper Spacer		P126*	Set Screw
8	F738H	Solenoid - 230V.	17	F5861	Cover
	F739H	Solenoid - 115V.	18	F990*	Roll Pin
9	F641	Damper Position Lever	19	F779	Nameplate
10	F664	Lever Bushing			

*Sold in Pkg. of 6



FG137WH - Complete Front Paddle Assembly



FG164WH - Complete Rear Paddle Assembly

PADDLE CLAMP ASSEMBLY - "C" MODEL

Ref. No.	Part No.	Description
1	F433	Sponge (Front)
2	F432	Front Paddle
3	F237	Clamp Slide
4	F243	Slide Spring Clip (2 req.)
5	F240	Pin (2 req.)
6	F267	Pin
7	F218	Clamp Leaf Spring & Pivot
8	AF157	Trigger Release w/Latch Hinge
9	FG443	Clamp Latch Rod
	F122	Nut
	P104	Washer
10	F215	Set Collar
11	F151	Latch Spring
12	FG135	Front Handle
13	FG288	Pin
14	FG277	Stud
	TU4787	Hex Nut (Pkg. 6)
15	FG287	Clamp Base
16	F435	Sponge (Rear)
17	F434	Rear Paddle
18	F842	Vent Clamp
19	F904	Replacement Pad Set for F842
20	F11	No. 11 Wooden Sleever
21	F24	No. 24 Wooden Sleever
22	F63	Springs w/Hardware
24	FB187	#10 Split Lockwasher (Pkg. 6)
25	F901	10 - 24 x 3/8" Hex Hd. Screw
26	F489	"E" Rings (Pkg. 6)
27	F888	"E" Rings (Pkg. 6)

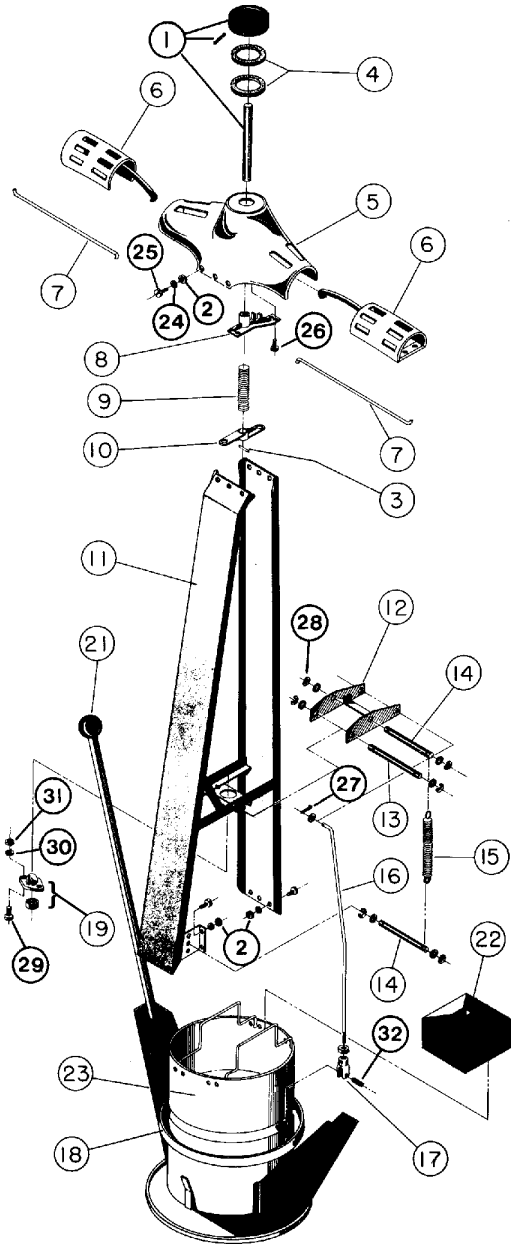
Painted parts furnished in white unless otherwise specified.

REVOLVING FORM ASSEMBLY

FG236 - "C" Model F1081 - "M" Model

Ref. No.	Part No.	Description
1	F381	Knob, Rod, Pin Asm.
2	FB185	#10 Hex Nut
3	F49	Shoulder Lever Pin
4	F192	Gasket
5	F492H	Shoulder
6	F493	Sliding Shoulder
7	F336	Connecting Link
8	F494	Bearing Plate
9	F197	Tension Spring
10	F317	Shoulder Lever
11	FG219	"C" Frame Asm.
	F1093	"M" Frame Asm.
12	FG220	Pivot Plate Asm.
13	FG222	Pin - 3 5/8"
14	FG223	Pin - 4 1/2"
15	TU2089	Spring
16	FG201	Support Rod
17	FG444	Yoke
18	FG202	Weight Ring
19	F1060	Bearing Asm.
21	FG156	Knob
22	F09	Steam Spreader
23	FG264	Shell Assembly
24	TU4820	Washer (Pkg. 6)
25	TU3477	#10 - 24 x 1/2 Screw (Pkg. 6)
26	TU3478	#8 - 32 x 1/2 P. H. Screw (Pkg. 6)
27	FB201	Cotter Pin (Pkg. 6)
28	F359	"E" Ring (Pkg. 6)
29	F859	1/4 - 20 x 1/2 Screw (Pkg. 6)
30	F860	Washer (Pkg. 6)
31	PT355	1/4 Hex Nut (Pkg. 6)
32	FG284	Roll Pin (Pkg. 6)

F517 - Adjustable Shoulder Asm.
consists of parts: 1 - 10 w/Hardware



LIST OF REPLACEMENT NYLON BAGS FOR "FM" FINISHERS

Equipment Model No.	Bag No.
FMFC	(F) F817
FMJC	(J) FS817
FMCD	(C) F835
FMGG	(G) F836
FMLM	(L) FS1064
FMMM	(M) F1064

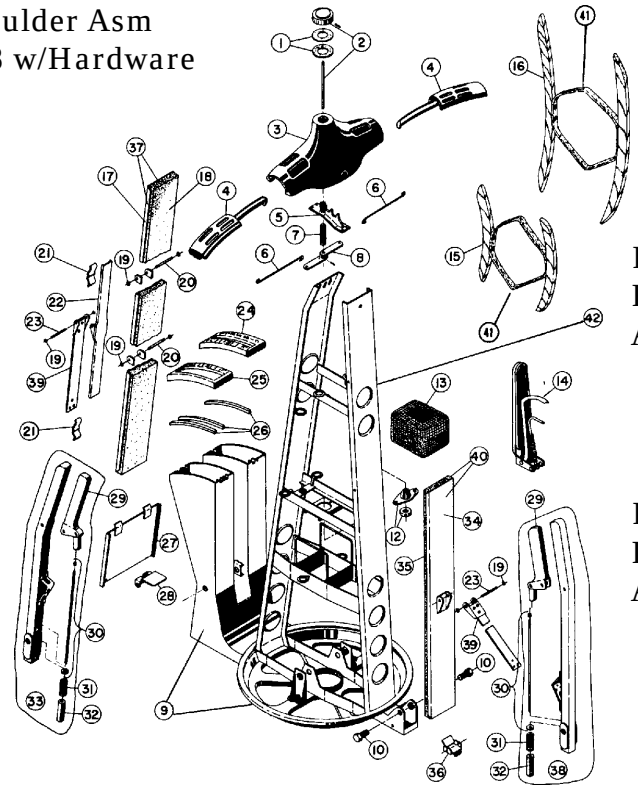
F517 - Adjustable Shoulder Asm
consists of Parts: 1 - 8 w/Hardware

F862
Front Paddle Clamp
Asm. for "D" Model

F861
Rear Paddle Clamp
Asm. for "D" Model

F1012
Front Paddle Clamp
Asm. for "G" Model

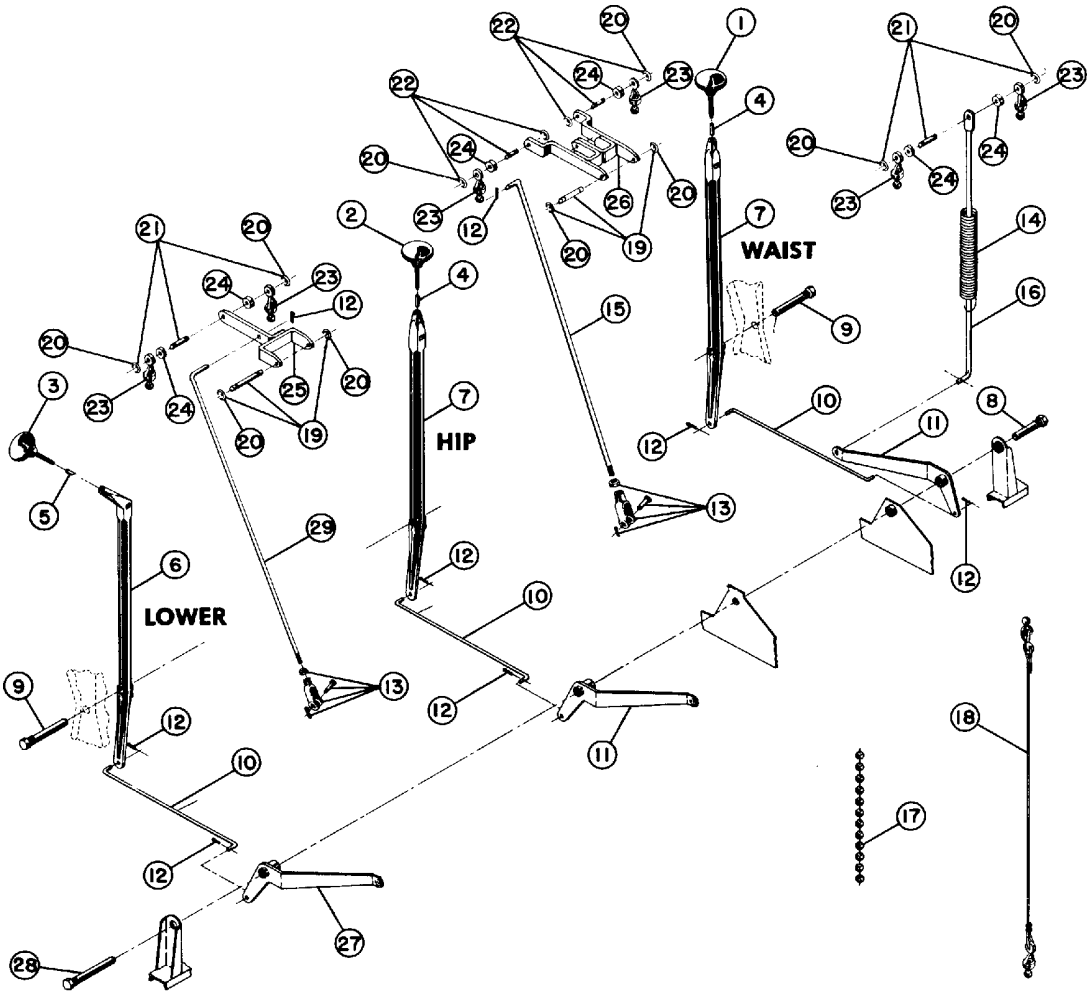
F1011
Rear Paddle Clamp
Asm. for "G" Model



REVOLVING FORM ASSEMBLY

Ref. No.	Part No.	F22 - "D" Model Description	Ref. No.	Part No.	F1007 - "G" Model Description
1	F192	Insulating Gasket (2 req.)	23	F267	Pivot Pin
2	F381	Shldr. Adj. Rod, Knob, & Pin	24	F304	Waist Index Plate
3	F492H	Shoulder Form	25	F303	Hip & Lower Index Plate
4	F493	Shoulder Extension	26	F302	Control Slides
5	F494	Bearing Plate	27	F332	Front Plate
6	F336	Shoulder Link	28	F333	Front Latch
7	F197	Shoulder Tension Spring	29	F104	Trigger Release
8	F317	Shoulder Lever	30	F335	Clamp Latch Rod
9	F533	Control Box & Pan Assembly	31	F151	Compression Latch Spring
10	F140	Clamp Bearing Bolt	32	F137	Latch Plunger
12	F289	Cup & Brng. w/bolts, nuts & washers	33	F334	Front Handle w/Latch Plunger, Spring, Rod Asm. & Trig. Rel.
13	F09	Cloth Steam Spreader	34	F434	"D" Rear Paddle Only
14	F842	Vent Clamp (not part of asm.)		F1014	"G" Rear Paddle Only
15	F11	No. 11 Wooden Sleever	35	F435	"D" Sponge Only
16	F24	No. 24 Wooden Sleever		F1019	"G" Sponge Only
17	F432	"D" Front Paddle Only	36	F427	Back Latch
	F1016	"G" or "M" Front Paddle	37	F436	"D" Front Paddle & Spon. Asm.
18	F433	"D" Sponge Only	38	F437	Rear Handle w/Latch Plunger, Spring, Rod Asm. & Trig. Rel.
	F1018	"G" or "M" Sponge Only			
19	F888*	3/16 "E" Ring	39	F218	Clamp Leaf Spring
20	F240	Clamp Slide Support Pin	40	F438	"D" Rear Paddle & Sp. Asm.
21	F243	Slide Spring Clip	41	F63	Cov. Spring Asm. w/Hardware
22	F237	Clamp Slide	42	F534	"D" Revolving Form Frame
				F535	"G" Revolving Form Frame

*Sold in Pkg. of 6



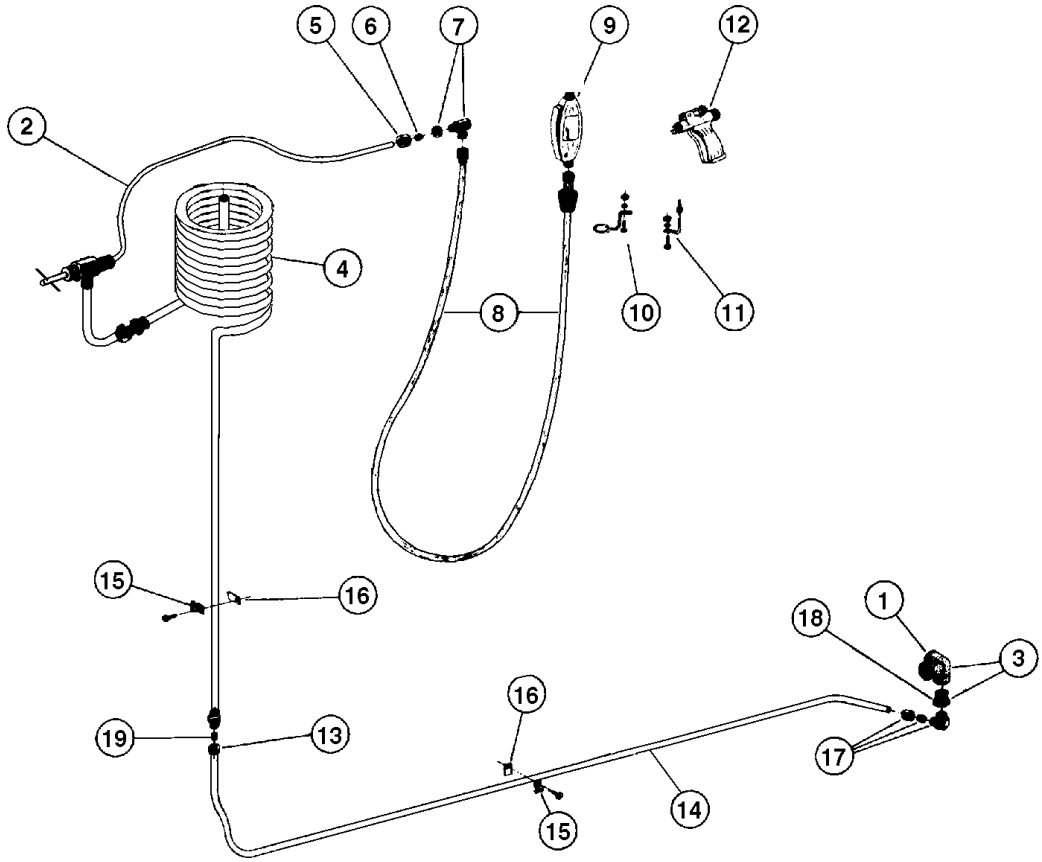
WAIST, HIP, AND LOWER CONTROLS FOR MODELS "D" & "G"

Ref. No.	Part No.	Description
1	F322	Waist Control Knob
2	F323	Hip Control Knob
3	F321	Lower Control Knob
4	F301	Spacer for Hip or Waist Control
5	F300	Spacer for Lower Control
6	F319	Actuating Lever
7	F318	Actuating Lever
8	F377	Bearing Pin
9	F324	Bearing Pin
10	F325	Connecting Link
11	F490	Draw String Lever
12	V02	Cotter Pin
13	P39	Yoke, Pin & Cotter Pin
14	F429	Tension Spring
15	F439	"D" Lever Rod - Hip
	F1056	"G" Lever Rod - Hip
16	F440	Lever Rod - Waist
17	040113282	Bead Chain
18	F442	Nylon Cord & Beads
19	F443	2 Pins w/4 "E" Rings
20	F888	"E" Rings Only (Pkg. 6)
21	F444	2 Pins w/4 "E" Rings
22	F445	2 Pins w/4 "E" Rings
23	F446	12 Swivels & Beads
24	F447	6 Spacers
25	F448	Lower Control Swivel Arm
26	F449	Hip Control Swivel Arm
27	F450	Lever
28	F331	Bearing Pin
29	F451	"D" Lever Rod - Lower
	F1059	"G" Lever Rod - Lower

F1003 Lower Lever Rod Assy
F1004 Hip Lever Rod Assy

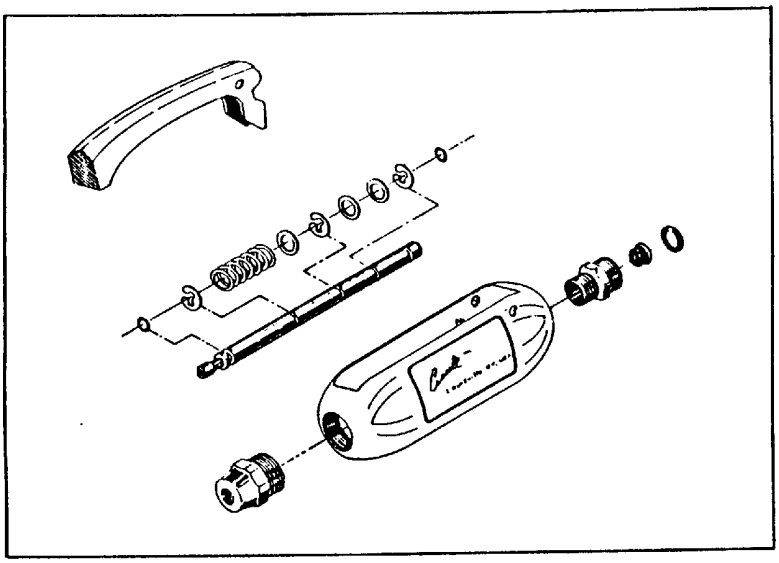
CISSELL WATER-SPRAY GUNS and COIL ASSEMBLY
for Form Finisher Parts

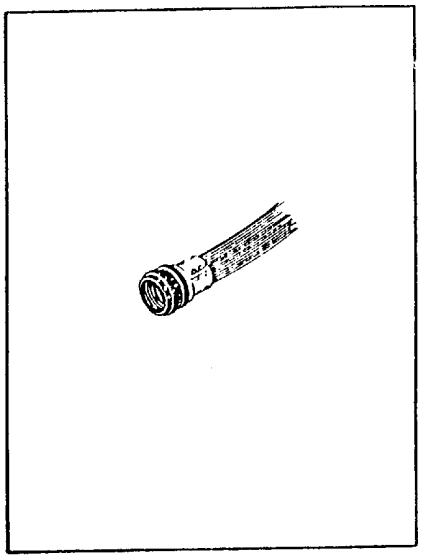
WHEN ORDERING PARTS OR MAKING INQUIRY, Specify Machine, Serial Number, Voltage and Current.



Ref. No.	Part No.	Description
1	F574	Side Outlet Elbow 1/2 x 1/2" x 1/2"
2	F1496	1/4" Copper Tubing
3	F573	Bushed Side Outlet Ass'y
4	F1490	Coil Assembly with Addition
5	SU65	1/4" Compression Nut
6	PU8	1/4" Compression Bead
7	F636	Adapter Fitting w/Lock Nut & Hose Adapter
8	SG114	4'-4" Water Hose Ass'y w/rubber bumper
9	SGO43	Water Spray Gun Only (overhead)
10	F590	Water Spray Gun Holder for Overhead Spray Gun w/mtg. hardware
11	F570	Water Spray Gun Holder for Pistol Type Spray Gun
12	SGP42	Water Spray Gun Only (Pistol type) (Specify top outlet)
13	F959	5/16" Compression Nut
14	F1491	Condenser Line
15	F646	Tubing Clamp
16	F647	Backing Plate
17	FG159	90° Compression Elbow w/nut & bead
18	F575	1/2" x 1/8" Pipe Bushing
19	390308250	5/16" Compression Bead (2 each)

OVERHEAD WATER SPRAY GUN





Water Spray Gun

Complete Assembly - SG043
Repair Kit - SK043 Consists of:
(Parts to repair one spray gun)

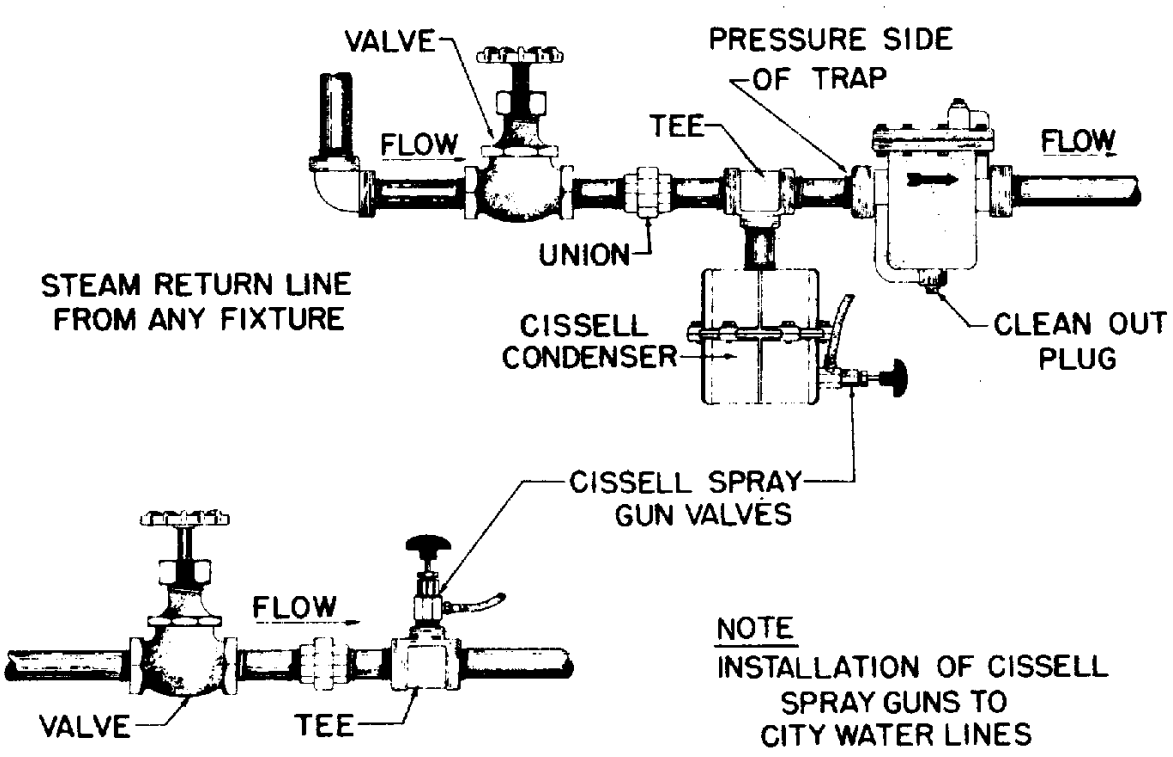
Plunger Tube Asm.	1 ea.
Strainer	1 ea.
Nozzle	1 ea.
Gaskets	2 ea.

Water Hose Assembly

Includes fittings, gaskets, and ferrules at each end of hose

Part No.	Description
SG114	4' 4" Long
SG37	5' Long
SG68	7' Long
SG115	9' 9" Long
SG87	11' Long
SG155	20' Long

INSTALLATION
CISSELL WATER-SPRAY GUNS



Install the Water-Spray Gun either to the water supply line or steam return line as shown in illustration.

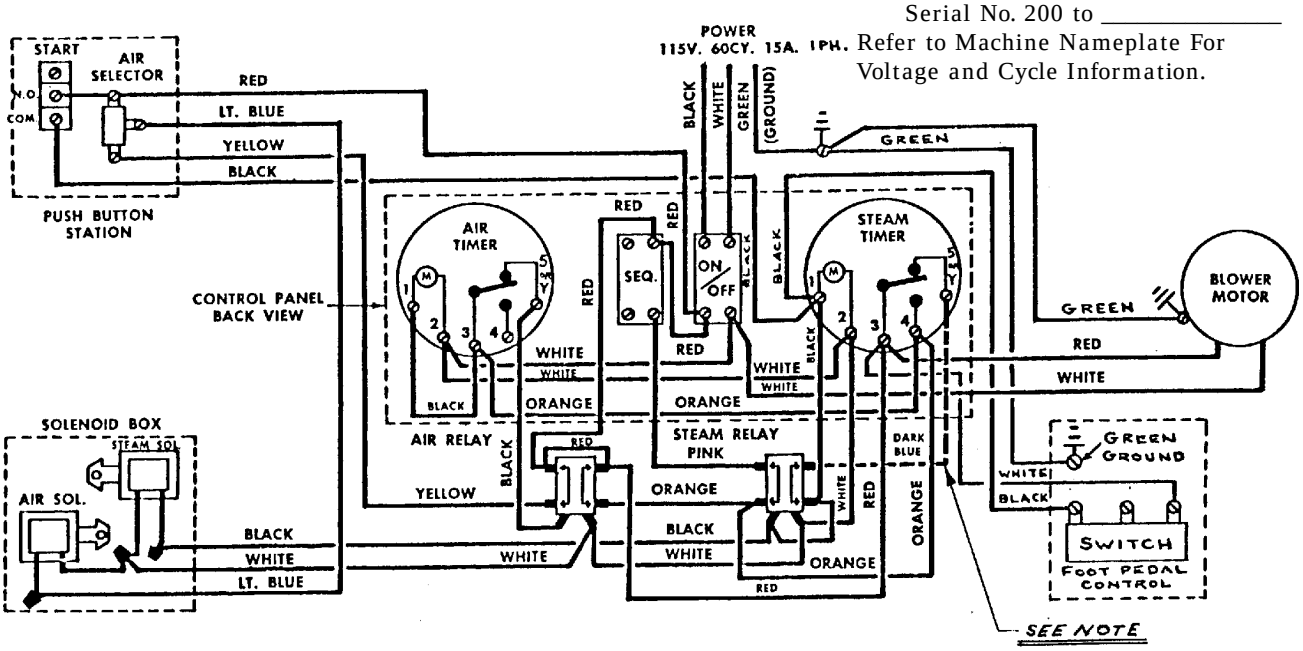
Before connecting water hose assembly to spray gun valve, open valve and allow water to run freely to flush sediment from line or condenser.

Check hose connection to valve and gun and see that SG25 Gaskets are in place. Also, see that strainer is properly installed in hose connection of gun.

The Cissell Water-Spray gun will operate on any pressure from 40 to 100 lbs. without adjustment. It may be connected to a water supply line, or to a Cissell Steam Condenser installed on the pressure side of a steam trap in the steam return line.

When the City water pressure is less than 40 pounds, the Cissell Steam Condenser must be used. Recommended operating pressure, 70 pounds.

Wiring Diagram FWB-91
Model FM Form Finisher
Push Button and/or Foot Pedal Control
Garment Manufacturers
Serial No. 200 to _____



NOTE:

When Steam Timer is:

A. Cramer Timer, Blue Wire must be connected between RBM Relay and Terminal "Y or 5" on Steam Timer.

B. Eagle Signal Timer, Terminal "5" on Steam Timer is not connected, and blue wire from RBM relay must be omitted or removed.

CISSELL APPAREL MANUFACTURERS FORMS
MODEL FM**
SERVICE CHART

PROBLEM	CAUSE	REMEDY
(1) No Steam	1A Steam Supply Valve "OFF"	Open valve in steam supply line.
	1B Loose wiring	Inspect wiring, especially to steam solenoid. Replace any loose wires and tighten all connections.
	1C Incorrect voltage of electrical parts	Inspect nameplate voltage and voltage on electrical parts, especially the steam solenoid. Replace if necessary.
	1D Defective steam solenoid	Inspect the steam solenoid. Replace if it is burned, armature does not move freely, or if it will not operate on rated voltage.
	1E Defective solenoid linkage	Inspect linkage between solenoid and steam valve. Adjust according to instructions. Repair or replace any defective parts. Tighten all lock nuts and set screws.
	1F Defective start button switch	Inspect start button switch to see that it operates properly and will carry current. If not repair or replace.
(2) Motor won't start	2A No electric power	Check electrical service for blown fuses and loose connections. Turn main disconnect "ON". Turn main switch "ON".
	2B Loose wiring	Inspect wiring, especially to motor and inside the motor junction box. Replace any loose wires and tighten all connections.
	2C Incorrect voltage	Check power source, machine nameplate voltage and motor nameplate voltage. All three must be the same. If not, correct by replacing parts as required.
	2D Defective motor	Check motor to see if it will operate on normal nameplate electrical power. If not, replace the motor.
(3) Motor will run, machine won't start auto cycle	3A Defective start button switch	Inspect start button switch to see that it operates properly and will carry current. If not, repair or replace.
	3B Loose wiring	Inspect wiring, especially to the start button switch. Replace any loose wires and tighten all connections.

PROBLEM	CAUSE	REMEDY
(4) Steams with button depressed, won't maintain steam cycle	4A Incorrect voltage	Check voltage of electrical parts, particularly the steam relay. Replace if not same as machine nameplate voltage.
	4B Defective steam relay	Check to see if relay will operate on rated voltage and if contacts will carry current. If not replace relay.
	4C Loose wiring	Inspect wiring, particularly on steam relay and steam timer. Replace any loose wires and tighten all connections.
(5) Steams continuously	5A Defective steam timer	Check timer operation. See that timer motor will run and that timer switch operates properly. If not, replace timer.
	5B Defective steam relay	Check steam relay to see if contacts are welded together. If so, replace relay.
(6) Manual air won't come on	6A Defective air toggle switch	Inspect air toggle switch in push button box. Replace if defective.
	6B Defective air solenoid	Inspect the air solenoid. Replace if it is burned, armature does not move freely, or if it will not operate on rated voltage.
	6C Defective air solenoid linkage	Inspect linkage and levers between air solenoid and damper. Be sure they are arranged and adjusted according to instructions. Replace any broken or stretched springs. Repair or replace any defective parts. Tighten all set screws.
	6D Loose wiring	Inspect machine wiring, especially to toggle switch and air solenoid. Replace any loose wires and tighten any loose connections.
	6E Improper air operating lever assembly	Refer to parts dwgs. and assemble levers on damper shaft properly. Pins on these levers must be properly arranged with respect to adjoining levers. Repair or replace any defective parts and adjust according to instructions. Replace all springs and tighten all set screws.
(7) Auto air won't come on	7A Defective steam timer	Check timer operation. See that timer motor will run and that timer switch operates properly. If not replace timer.
	7B Defective air timer	Check timer operation. See that timer motor will run and that timer switch operates properly. If not, replace timer.
	7C V belt off or loose	Check to see that the V belt is on, properly aligned and adjusted according to instructions.
	7D Defective air relay	Check to see that the air relay will operate properly on rated voltage and the contacts carry current. If not, replace the relay.

PROBLEM	CAUSE	REMEDY
(7) Auto air won't come on (Cont.)	7E Loose wiring	Inspect machine wiring, especially to steam timer contacts and air relay. Replace any loose wires and tighten any loose connections.
	7F Defective air solenoid	Inspect the air solenoid. Replace if it is burned, armature does not move freely, or if it will not operate on a rated voltage.
	7G Defective air solenoid linkage	Inspect linkage and levers between air solenoid and damper. Be sure they are arranged and adjusted according to instructions. Replace any broken or stretched springs. Repair or replace any defective parts. Tighten all set screws.
	7H Damper plate stuck	Check to see that damper plate can freely open and close when air is off. If not free the damper. Repair or replace if necessary. Adjust according to instructions.
	7I Improper air operating lever assembly	Refer to parts dwgs. and assemble levers on damper shaft properly. Pins on these levers must be properly arranged with respect to adjoining levers. Repair or replace any defective parts and adjust according to instructions. Replace all springs and tighten all set screws.
(8) Relief damper "flaps"	8 Stretched damper springs	Inspect damper springs. If stretched or broken replace it. See adjustment section.
(9) Auto air won't stop	9A Defective air timer	Check timer operation. See that timer motor will run and that timer switches operate properly. If not, replace timer.
	9B Defective air relay	Check to see that the air relay will operate properly and the contacts are free to move (not welded). If not, replace the relay.
	9C Defective air solenoid	Inspect the air solenoid. Replace if it is burned or armature does not move freely.
	9D Broken or stretched damper opening spring	Inspect damper operating springs. Check parts dwgs. and replace spring if required.
(10) Bag won't inflate to garment size	10A Pressure setting too low	Increase pressure in the bag with the pressure control lever.
	10B Pressure control defective	Inspect damper control wire, levers and pressure control lever. Be sure that all parts are connected and adjusted according to instructions. Repair or replace any defective parts.

PROBLEM	CAUSE	REMEDY
(10) Bag won't inflate to garment size (Con't.)	10C Bag size levers not properly set	Move the sizing levers until the bag is properly sized.
	10D Bag improperly installed on frame	Refer to bag installation instructions and check to see that bag strings ane untangled and properly connected.
	10E Defective damper operating linkage	Inspect linkage and levers between air solenoid and damper. Be sure they are arranged and adjusted according to instructions. Replace any broken or stretched springs. Repair or replace any defective parts.
(11) Bag won't deflate	11 Damper opening spring defective	Inspect damper springs. Replace any broken or stretched spring.
(12) Inadequate steam	12A Steam timer setting too short	Increase timer setting with knob on face of timer.
	12B Valve not opening properly	Inspect steam valve linkage to steam solenoid and adjust according to instructions. Repair or replace any defective parts. Tighten all lock nuts and set screws.
(13) Inadequate air	13A Pressure setting too low	Increase air pressure in the bag with pressure control lever.
	13B Defective damper operating linkage.	Inspect linkage and levers between air solenoid and damper. Be sure they are arranged and adjusted according to instructions. Replace any broken or stretched springs. Repair or replace any defective parts.
	13C V belt loose	Check to see that the V belt is on and properly aligned and adjusted according to instructions.
	13D Motor pulley loose	Inspect V belt pulley on motor shaft to see that it is properly positioned and set screw well tightened on shaft flat.
	13E Blower pulley loose	Inspect V belt pulley on blower shaft to see that it is properly positioned and set screw well tightened on shaft flat.
	13F Lint or inlet screens	Clean inlet screens every morning at start of work day.
(14) Excessive noise or vibration	14A Foreign object in blower wheel	Inspect wheel and remove any foreign objects and lint.
	14B Blower wheel out of balance	Inspect wheel for loose balance weights, out of round or damage. Replace wheel if necessary.
	14C Blower shaft bent	Inspect to see that blowers shaft is straight. If not, replace it.
	14D Worn blower shaft bearings	Check to see that shaft is tight but free to turn in brgs. If brgs. have very loose fit on shaft, replace brgs.
	14E Worn motor brgs.	Run motor with V belt removed and check by feel to see that brgs. are good. Replace motor if necessary.

PROBLEM	CAUSE	REMEDY
(14) Excessive noise or vibration (Con't.)	14F V belt tight or loose	Check to see that V belt is properly aligned and tightened according to instructions. Replace if badly worn.