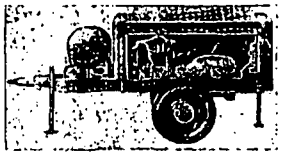
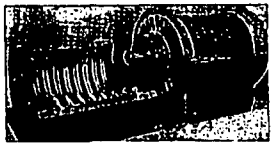
in automatic load levelers, external control of capacity vapor-cushioned valves, removable cyclinder sleeves, vapor-cooled cylinders, removable precision bearings, oil-cooled shaft seal, automatically reversible oil pump, and magnetic oil drain plugs. Carrier Corp, Syracuse, N. Y.

X3 AIR COMPRESSORS—Portable electrically-driven air compressors, in sizes from 60 to 315 cfm, are available on skid, 2-wheel trailer and 4-wheel trailer mountings. Compressors are 2-stage units, equipped



with intercooler and safety valves, direct driven from 1200 rpm, 220-440v ac squirrel-cage motors. Davey Compressor Co, Kent, Ohio.

X5 AXIAL-FLOW COMPRESSOR—Unit embodies new principle in compressor design and is only 17 in. in diameter and 22 in. long. Delivers 18,000 cfm at 25 psig, requiring 1500 bp. Essential improvements are: (1) savings in power consumption, (2)



capacities from 3,000 to 150,000 cfm, (3) pressures up to 100 psig in single unit, (4) floor area 10% less than usual, (5) weight 10% less than usual. Compressor can be driven electrically, by steam or by gas turbine. Manufacturer states that new design provides higher efficiencies up to 88%. Fredric Flader, Inc, 583 Division St, North Tonawanda, N. Y.

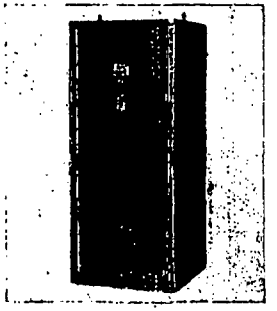
CONTROLS

B1 BOILER CONTROL—Instrument controls combustion in hog-fuel-fired boilers by flame brilliance, furnace-wall or fuel-bed brightness. Forced draft controlled by steam pressure, induced draft by furnace draft and fuel feed by steam flow, but is readjusted by brilliancy instead of steam-flow air-flow ratio. Bailey Meter Co, 1050 Ivanhoe Road, Cleveland 10, Ohio.

B2 TEMPERATURE CONTROL — Hot-water immersion-type temperature control unit has cadmium-plated frame and bonderized cover to help prevent corrosion. Thermix Corp, 1st National Bank Bldg, Greenwich, Conn.

B10 OIL BURNER CONTROL—*Fireye* programming control provides automatic starting and control for commercial and industrial oil burning equipment. Unit is used with photoelectric flame-failure scanner, and timing cams are driven by specially designed high-torque synchronous motor. Combustion Control Corp, 77 Broadway, Cambridge, 42, Mass.

B4 SPEED CONTROL — *Regutron* provides excitation and speed control through a magnetic drive. Rectifies 3-phase power to energize magnetic drive and adjust excitation current to hold output shaft



speed to within ±1%. Load speed selected automatically or manually by positioning small potentiometer. Electric Machinery Mfg, Minneapolis 13, Minn.

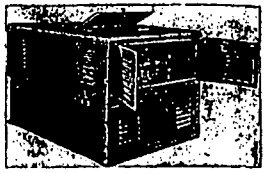
B5 SPEED CONTROLLER—When connected to variable-speed transmissions unit gives true speed setting automatically, despite load changes. Consists of master controller calibrated in speed, the controller and a speed-measuring generator. Unit also used to maintain precise speed ratio between several isolated loads, such as conveyors. Yardeny Labs, Inc, 105 Chambers St, New York, N. Y.

B8 COMPRESSOR CONTROL—Solenoid-operated valve provides automatic control of water supply to water-cooled compressors. Connections can be made so that compressor will not start until water flow completes an electric circuit through an electrode mounted in discharge line. If water flow stops while compressor is operating, machine will shut down immediately. Johnson Corp, Three Rivers, Mich.

B6 PNEUMATIC TIMERS — Providing wide range of time-limit motor acceleration, timers are unaffected by normal variations in ambient temperature and voltage conditions. Square D Co, Milwaukee, Wis.

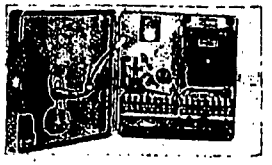
B7 SERVO SYSTEM — Automatic in operation, this electronic remote-control positioning unit controls valves, dampers, and other mechanical mechanisms. Askania Regulator Co, 240 E Ontario St, Chicago 11, Ill.

B3 POWER UNITS — Hydraulic power units designed for special requirements of industrial machinery. They include all necessary valves, pumps, oil reservoirs, intermediate piping, motors and air cleaners in single casing. Vickers, Inc, 1596 Oakman Blvd, Detroit 32, Mich.



B13 CRANE CONTROL—Unit for overhead cranes consists of a simple rotor and a stationary field member through which braking forces are exerted electromagnetically. It makes possible with ac power smoothness of control and speed which previously could only be obtained with dc power. Harnischfeger Corp, Milwaukee, Wisconsin.

B11 OIL BURNER CONTROL—Photoelectric combustion control shuts off flow of fuel to an oil burner immediately if oil fails to ignite or flame goes out. For gas-electric ignition systems it stops flow of fuel if gas pilot does not ignite. System



allows burner motor to operate for definite interval after shut down for purging. Manual reset must be made to change the system from lockout once a failure has occurred. Control Div, General Electric Co, Schenectady 5, N. Y.

B12 COMPRESSOR REGULATOR — Norton compressor regulator controls machine load according to air requirements. Regulator keeps compressor operating continuously, adjusting the load according to discharge requirements. Continuous compression of even small amounts of air cushions piston at all times at end of stroke. Unit is interchangeable with conventional type regulators because it uses the standard equipment tubing or piping that is on the compressor. Body is bronze with a neoprene diaphragm that is impervious to oil or water. Self-aligning valve requires no lubrication or attention. Norton & Shea Co, 916 Wallace St, Erie, Pa.

DIESEL ENGINES, GAS ENGINES AND ACCESSORIES

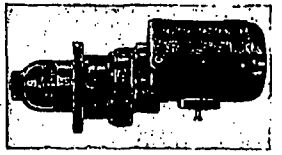
C8 ENGINE GENERATOR SET—Available for dc single- or 3-phase output, engine comes in sizes from 10 to 125 kw. Each set is complete and fully equipped with controls. Generator, radiator and engine are all mounted on self-contained base. Engine is watercooled, burns gasoline, natural gas and butane. Buda Co, Harvey, Ill.

C1 MULTI-FUEL ENGINE—*Lorain* Type L operates on diesel fuel, natural gas or butane. Engine has rating of 10.7 hp at 800 rpm, and 21.4 hp at 600 rpm. White-Roth Machine Corp, Lorain, Ohio.

C2 DIESEL ENGINE — Single-cylinder stationary engine, the *Sturdy Scot*, is vertical full diesel. Produces 10 hp at 600 rpm, 12 hp at 720 rpm, and 14 hp at 800 rpm. Lorimer Diesel Engine Co, 16th & Wood St, Oakland, Calif.

C3 PISTON SHAPER—*Thermo-Sizer* reshapes and resizes worn and collapsed alloy pistons up to 0.30 in. Dial gage measures expansion, as it occurs, to 0.001 in. Wilkening Mfg Co, Philadelphia 42,

C6 DIESEL AIR STARTER—Unit consists of 7-hp air motor with Bendix starting drive, and mounts on any diesel with SAE No. 2 flange. Starter will handle engines up to 600 cu in. displacement. Chicago Pneumatic Tool Co, 6 East 44th Street, New York, N. Y. 17

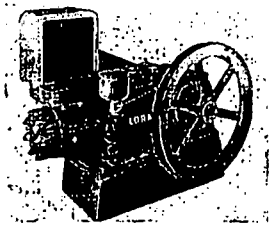


C4 DIESEL ENGINE & TRACTOR—Diesel D311 available in an industrial power unit, an electrical set and a marine engine. Engine develops maximum output, with radiator, fan and full equipment, of 49 hp at 1700 rpm. Engine also used in new diesel D2 track-type tractor made by company. Caterpillar Tractor Co, Peoria 8, Ill.

C5 INTAKE CLEANER — Series ICS cleaner-silencer, for engine, compressor and blower intakes, available in pipe sizes from ¾ to 6 in. in diameter. Burgess-Manning Co, Libertyville, Ill.

C7 DUAL FUEL ATTACHMENT—For service with Caterpillar diesel D13000, attachment consists of special precombustion chamber, modified fuel-injection pump for precise metering of minute quantities of fuel oil, special governor control assembly for interconnected fuel-injection pump and gas throttle valve, necessary gas lines and pressure regulators. Once initial conversion has been made, it is necessary only to change precombustion chamber to convert back to full diesel operation. Caterpillar Tractor Co, Peoria, Ill.

C9 HORIZONTAL DIESEL ENGINE —For operation as a cold-starting full diesel or for ready field conversion to burn natural gas or butane, new *Lorain* Type O single-cylinder horisontal 2-cycle engine is rated at 34.3 hp at 450 rpm. The



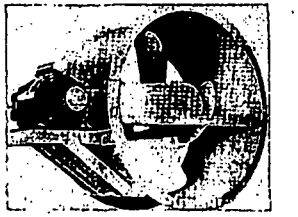
9½x10-in. cylinder is fitted with wet liners of alloy cast iron to assure long life and ready replacement. Crankshaft and cross shaft are equipped with Timken bearings, condenser-type cooling system eliminates need for a water pump, and makeup water is negligible. Standard equipment includes Twin Disc clutch, Pierce governor, Air Maze oil-bath filter and McCord lubricator. White-Roth Machine Corp, Lorain, Ohio.

HEATING AND VENTILATING, REFRIGERATING AIR CONDITIONING

D1 COOLING TOWER — Induced-draft tower is of cell-type construction for easy erection and maintenance. New features permit compactness, low pumping head and automatic control of off-peak loads. Towers available from 75- to 2000-gpm capacity. Refrigerating Machinery Co, 525 Market St, San Francisco 5, Calif.

D2 UTILITY FAN—Chelsea Type AA fan suitable for cold storage and for eliminating dampness by air circulation. Available in 3000- and 4800-cfm capacity. Chelsea Fan & Blower Co, 1206 Grove St, Irvington 11, N. J.

D3 BOOSTER FAN—Designed for either vertical or horizontal mounting. Series DXB booster fans come in sizes from 2000 to 9500 cfm. Fan shafts and motors are

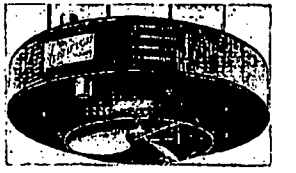


ball-bearing mounted for smooth operation and long life. Chelsea Fan & Blower Co, Inc, 1200 Grove St, Irvington, New Jersey.

D12 HEATING COILS—New line of coil heaters built without baffles or shielded headers within the casings, resulting in unrestricted air flow and low friction loss. Modine Mfg Co, Racine, Wis.

D10 ELECTRIC HEATER — Portable lightweight, rustproof aluminum unit gives heat by convection and radiation. Electric Heating Dept, Westinghouse Electric Corp, Emeryville, 8, Calif.

D11 UNIT HEATER—Circular discharge-type unit heater reduces noise and saves 35% in total weight, maker says. Motor, at center of circular heating core, is mounted in a stack open at both ends. Special fans draw room air through stack and at same time direct outlet air from heated core down through fan opening. Young Radiator Co, Racine, Wis. (*Photo below.*)



D4 UNIT VENTILATOR—On industrial installations, unit regulator incorporates resilient belt-drive mechanism for quieter operation. Trane Co, La Crosse, Wis.

D5 AXIAL-FLOW FAN — *Axiflow* pressure fans operate in either horizontal or vertical position and have large volumetric capacity to perform effectively against wind and duct-system resistance. Westinghouse Electric Corp, 306 Fourth Ave, Pittsburgh, 30, Pa.

D7 AXIAL-FLOW FANS—*Axivane* adjustable-blade fans available for heating ventilating and air conditioning requirements. Fans are for pressure range up to 9.60 inches of water and volumes up to 100,000 cfm. Joy Mfg Co, Oliver Bldg, Pittsburgh 22, Pa.

D8 AIR CONDITIONER—New saturating-spray Type A machine operates on