

ENGINEERING

Apartments to Have Built-in Air-Conditioners

► BUILT-IN AIR-CONDITIONING by individual units without "boxes" in every apartment window is being installed in a Park Avenue building in New York.

The conditioner units, made by Amic Manufacturing Corporation of Long Island City, are in the building's walls. Only the louvers, which are flush with the wall and through which the hot air is drawn, can be seen from the outside.

Each independently serviceable unit works under its own power and can be controlled by each apartment's occupants. The units are less expensive than a single central unit, the manufacturer claims.

Science News Letter, August 6, 1955

PHYSICS

New Method for Spotting Different Oils in Pipelines

► A NEW METHOD for spotting where one kind of oil is followed by another flowing in a pipeline, by bombarding it with neutrons, or uncharged atomic particles, is being developed.

Drs. D. B. Smith and G. R. Church of Britain's Atomic Energy Research Establishment, Harwell, said preliminary tests showed that, using neutrons, the difference between premium and commercial grade fuels can be spotted by a five percent change in reading.

The neutron method, they pointed out in *Nature* (July 30), has "great" advantages over standard radioactive methods. It does not involve "the inconvenience of handling radioactive material in solution, or the necessity of obtaining a regular supply of radioactive isotopes."

Present methods of locating the point where one kind of oil changes to another in pipelines are based either on sampling the flowing oil or labeling the point of change with radioactive substances.

Difference in the hydrogen content of oil causes changes in reflected or absorbed neutrons that can be measured by standard equipment.

Science News Letter, August 6, 1955

**BUILD YOUR OWN
 NEWTONIAN TELESCOPE**

It's easy to assemble a complete professional reflector unit in less than an hour with this new telescope kit. Directions are simple and clear. All parts and optics are precision engineered to the highest standards of accuracy. You'll get observatory results! Send 10¢ for exciting new catalog.

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Compares to Instruments selling up to \$75.00

An UNSURPASSED VALUE! Has fine ground and polished achromatic lenses. Precision ALL-METAL construction - this is NOT A TOY! The triple, revolving objective lens turret will allow you to select a 100X - 200X or 300X magnification. Has right or left hand rack and pinion adjustment for smooth, precise movement. Body inclines 90°. Adjustable plano sub-stage mirror. Complete in sturdy, dovetailed hardwood case. Your satisfaction FULLY GUARANTEED or money refunded.

NEW ARMY SURPLUS 178mm f:2.5 CAMERA LENS

Originally designed for use on the K-21 and K-24 Aerial Cameras. A genuine EASTMAN AERO EKTAR 178mm lens. Has speeds from f:2.5 to f:16. Focal length is 7 inches. This amazing lens is NEW - in original can. Guaranteed perfect condition. Excellent for Color or Black and White. Exceptionally fine for night work or in poor light conditions. Comes with 2 filters - 1 Polarized (for haze) and 1 yellow, plus a filter adapter, a lens heater for high altitudes and a lens dust cap. Can be adapted to 35 mm or Speed Graphic Cameras as a Telephoto lens (see below).

**ONLY
6950**

SPEED GRAPHIC ADAPTERS for above lens - Includes Lens Board, Extension Tube and Bed Support.
 2-1/4 x 3-1/4" **2175** 3-1/4 x 4-1/4" **1875**
 4 x 5" **1475**

ARMY PANORAMIC SCOPE

Originally used as a gun sighting scope on tanks. Objective head lens revolves through 360° and tilts through an angle of approx. 30 degrees. Tube assembly contains 1 1/16" x 3" dove prism. Eye piece is 1" Kellner and eyepiece assem. has a 90° Roof prism. Has crosshair reticle. **595**
 Aprox. 4 power. Use for range-finder, view-finder.

**GOV'T SURPLUS
SIGNAL CORPS EEB
FIELD PHONE**

Easy to operate. A private phone or intercom system. Use any place that portable two-way communication is desired. Gives clear reception up to 15 miles. Operates on two standard batteries. Several phones may be used on the same line. Set contains a ringing generator, leather carrying case and phone. Each set reconditioned and checked-out. . . . price each **1495 EA.**
 COMPLETE CIRCUIT - Set of two . . . **2950**

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RADIO TRANSMITTER
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A tremendous Government Surplus Bargain! ALL NEW in original box. Consists of a type CW-52063A Transmitter - 2000 to 9050 KC, a CW-4051A Receiver - 195 to 13575 KC range, plus all transmitter and receiver coils and boxes. A Dynamotor-Filter unit, Antenna Relay, Transmitter Control Box, Receiver Switch Box, Receiver Remote Tuning Control, plus all tubes and spares. Complete and ready to operate on 12 volt current. Has 71 page manual and wiring diagrams. Made by Western Electric for U.S. Navy. Quantity limited - Order NOW! **9950 NEW**

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Top Quality, professional instrument. Has a triple revolving turret with three precision ground and polished achromatic objective lenses - 10X, RPX and 100X oil immersion. Plus three Huygenian eyepieces of 5X, 10X and 15X giving up to 1500 power magnification. Has a sturdy, lifetime metal body which inclines through 90° for micro-photography. Rack and pinion control. Fine focusing adjustment. Large, 120 mm x 113mm square stage which holds slides up to 3"x2". Sub-stage has an Abbe two-lens divisible condenser with iris diaphragm and rack & pinion motion. Complete in a fitted professional type carrying case with lock and key. Satisfaction **GUARANTEED or Your MONEY REFUNDED!**

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 Complete - no other parts to buy. Will focus from 8 ft. to infinity - setting marked on the mount.
 LEICA - CONTAX S&D - EXACTA . . . **8950**
 CONTAX 2A . . . \$109.50 HASSALBAD . . . \$139.50

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SELF-CONTAINED
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HYDRAULIC
TRANSMISSION**

Gives Constant Torque at all speeds with a variable volume, reversible piston pump which supplies a piston type hydraulic motor. Has 2 H.P. automatic pressure dash pot for smooth control. Power output RPM is -0 to 1/3 input RPM in both directions. Input RPM is 1800 PSI continuous - 4000 RPM intermittently. Ideal to use for Drives, Lathes, Duplicators on Mills, Conveyors, Small Cars, etc. . . . **4450**
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4" SPLINE SHAFTS for power input and take-off on above transmission. Per pair . . . **250**

INPUT and TAKE-OFF PLATE ASSEMBLY
 To adapt above transmission to a pulley drive. Has self-lubricating, high speed bearings, 1/2" keyway shaft. **ONLY 2000**
 Price per set . . .

180° OFFSET DRIVE

Excellent for use where tremendous power at low take-off RPM is desired. Has 6 gears, rotating on self-lubricated, high speed bearings. 85 to 1 gear ratio. Shafts are 1-1/4" x 3/8" diameter. New Surplus! **NEW 1295**

12 Pc. IMPORTED FILE SETS

In demand by Technicians, Model Makers, Repairmen, Hobbies, etc. Made of finest quality, tough file steel. Specially hardened and accurately machined for precise filing. Set of 12 assorted shapes. A \$5.00 Surplus Value . . . **295**

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