

Martian Life Unlikely Because Of Poison Gases

Washington (Science Service) — Life of any kind on Mars is highly unlikely because the Martian atmosphere contains poisonous gases, three scientists reported to the National Academy of Sciences meeting here.

The poisonous compounds are oxides of nitrogen, one cause of earthly — and also noxious — smog. Drs. C. C. Kless, Harriet K. Kless and C. H. Corliss of the National Bureau of Standards here said their new theory about the reactions of nitrogen oxides could explain many of the observed Martian phenomena.

Chalky Deposits
The polar caps, the Drs. Kless had reported to astronomers, are due to chalky white deposits of nitrogen tetroxide. Their yellowish tint is due to nitrogen dioxide in equilibrium with the solid nitrogen tetroxide. Absorption by nitrogen peroxide explains the low reflecting ability of Mars in green, blue and violet light.

The dark belt bordering the melting polar caps is believed liquid nitrogen tetroxide with other nitrogen compounds in solution, or could be due to a wetting of the Martian surface. The spread of heavy, gaseous nitrogen tetroxide over the dark areas, toward the equator, accounts for the seasonal change of color shown by them.

In the Martian atmosphere, nitrogen oxides may exist in both gaseous and solid phases, and, in these forms, account for observed meteorological changes, the scientists said. As tiny crystals, at the temperatures prevailing at various altitudes and latitudes, they could cause the haze and transient blue and white clouds known to occur.

Shift in Equilibrium
The infrequent blue clearing is believed due to a shift in equilibrium from nitrogen dioxide tetroxide, owing to a cold wave. During a heat wave, the shift would be toward higher concentration of nitrogen dioxide, thus accounting for the yellow clouds that, at times, are planet-wide.

If this view of Mars is correct, the planet can be considered as a gigantic photo-chemical nitrogen fixation plant. The known toxic effects of nitrogen oxides "argue against existence of living organisms" on Mars, they concluded.

The spectroscopic observations of Mars showing nitrogen oxides in the atmosphere were made at the Hale Observatories on Mauna Loa, Hawaii, under a financial grant from the National Geographic Society.

New Sugar May Aid Research in Cancer, Diabetes

Cleveland — (Science Service) — A sugar has been discovered that may aid to man's understanding of cancer and diabetes.

Known as a heptose, it was isolated from a rat liver extract and was described to the American Chemical Society meeting here by three scientists of Tufts University School of Medicine, Medford, Mass.

Clarification of its function in living tissue could be very useful in combating diseases in which sugar metabolism is abnormal, it was explained.

A lack of vitamin B-1 (thiamine) in test rats' diets interfered with the capacity of rat tissue (brain, heart and lung) to form the sugar, Dr. Hsien-Gieh Sie said. When thiamine was added to the tissue in a test tube, heptose formation did not resume, indicating that the vitamin deficiency had inflicted grave damage.

In Other Mammals
The heptose may also be found in other mammals, fish, birds, reptiles, plants and bacteria, Dr. Vijal N. Nigam said. He cited this widespread natural occurrence of the heptose as a measure of its biological significance. A heptose is a sugar containing seven carbon atoms arranged in a bead-like sequence.

The heptose was first isolated by heating rat liver enzymes with a phosphate compound of the common sugar glucose. The project was headed by Dr. William B. Fishman, research professor of oncology at Tufts and director of cancer research at the New England Center Hospital, Boston.



WEEK-END VALUES

Our Famous Kenmore, Coldspot and Silvertone Appliances

Matching Washer & Dryer



If You Can't Come in, Call, and
a Salesman will stop by your
home. SP 3-6661.

FREE
1-Year Service (On Parts
or Labor)
Free Normal Washer
Installation

4 Days Only
YOUR
CHOICE
\$268
Only \$10
Down

KENMORE WASHER

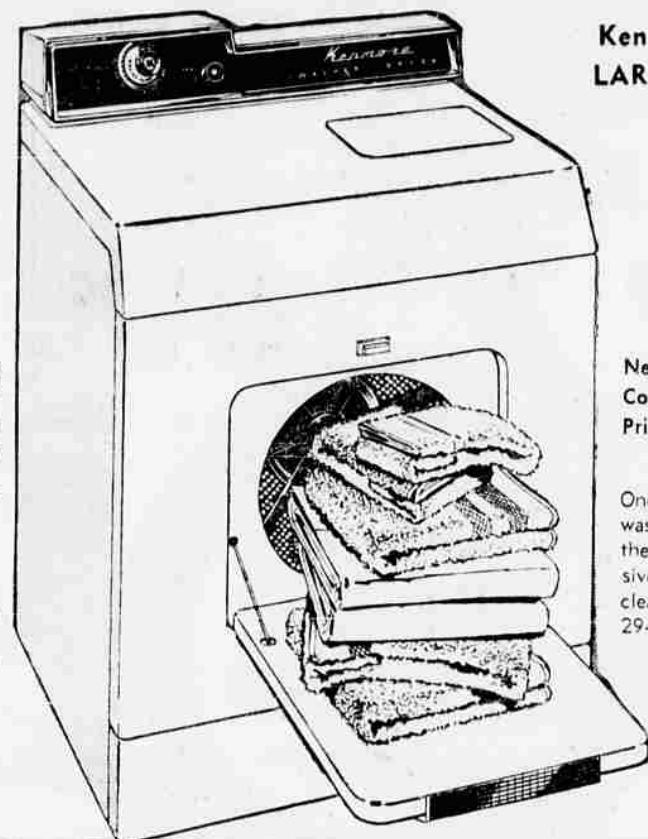
- Built-in Filter for lint-free washing
- Filters with any load... any water level
- Just load it... set it... forget it!
- Family-size porcelain tub won't rust
- 7 rinses for sparkling clean clothes

MATCHING KENMORE DRYER

- Just load it... set it... forget it!
- Flexible timer suits every fabric
- Door has a safety shut-off mechanism
- Load-A-Door serves as handy work area
- Exciting new look hi-console styling

BUY NOW AND SAVE!

Combination Washer & Dryer



Kenmore: World's
LARGEST SELLER

**TWO
IN
ONE**

New Kenmore Washer-Dryer
Combination for the Selling
Price of many washers alone

One-step continuous automatic
wash and dry saves about half
the space of two units. Exclusive
Roto Spray action washes
cleaner. Huge 10-lb. capacity.
29-inch cylinder.

WE SERVICE
WHAT WE SELL
SP 3-6661

13 Cu. Ft. Capacity Coldspot Refrigerator Gives You LARGE SIZE FOR LESS



No Old Style Jam-Packed
Shelves—you've plenty of
room.

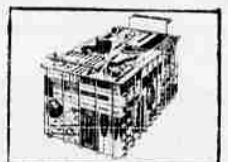
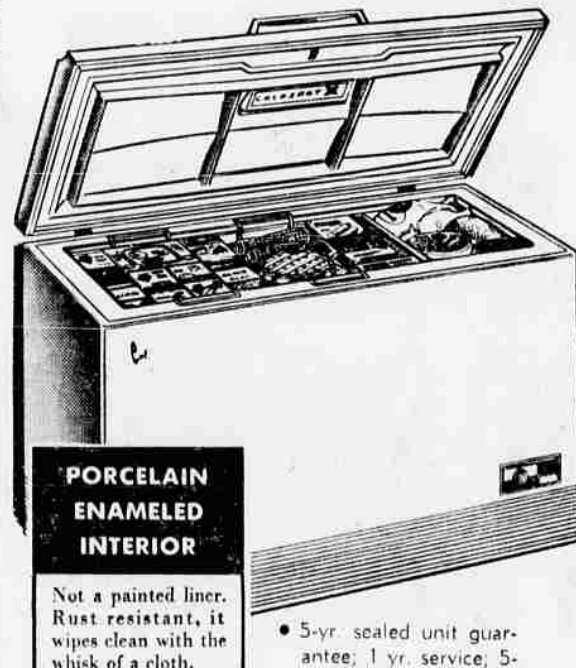
Spacious 88-lb.
Frozen Food Storage
Freezer chest has its
own door to hold cold
in. Chiller tray slides out
for easy access.

\$188⁰⁰

\$5 DOWN
On Sears Easy Terms

- Flush hinges permit door to open within unit's own width
- Silent magnetic door opens easily, seals cold inside, keeps heat out
- Porcelain enameled interior stays bright and new looking
- Sealed refrigerant system guaranteed 5 years, 1 year of service

Live Better with This 17 Cu. Ft. Coldspot Freezer STORES UP TO 598 LBS. Four Months Food Supply for the Average Family

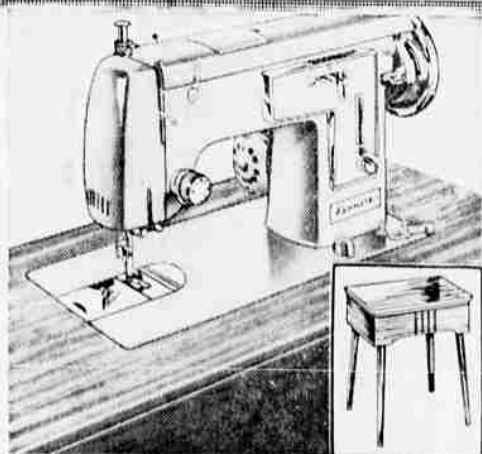


Two Sliding Baskets
Store those most-used
items. Make it easy to
find food you want.

\$268⁰⁰

\$10 DOWN
On Sears Easy Terms

- Front-mounted cold control dial and food safety signal light
- Ease-open lid with wide-angle interior light, lock and keys
- Big separate compartment for "sharp" freezing peak loads

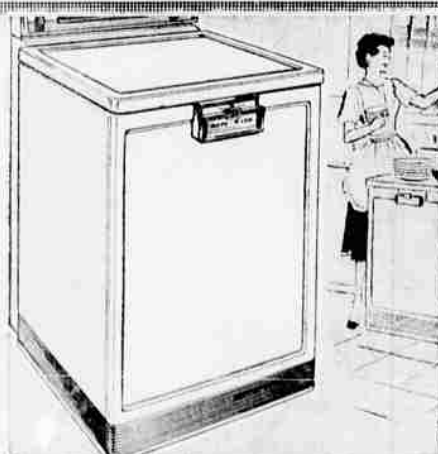


Kenmore Fully Automatic
Zig Zag
WITH CONSOLE CABINET

\$139⁹⁵

BOTH FOR

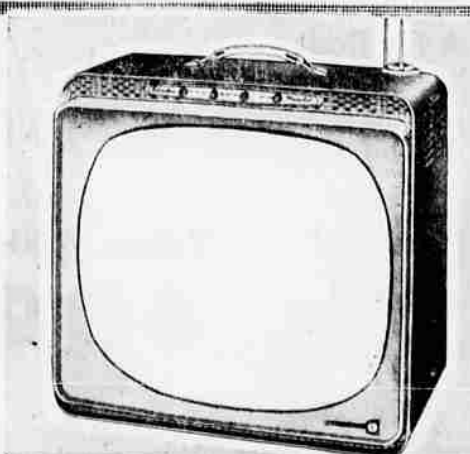
Guaranteed 25 years—Test Sew and see FREE HOME TRIAL.
Attends, Darns, Patches, Makes Button Holes, and Many
other sewing jobs. Just drop in a Coin and Sew. Beautiful
Designs With Ease. \$5 down, \$5 monthly.



New 1960 Lady Kenmore
Portable Auto. Dishwasher

SEARS LOW,
LOW PRICE **\$199⁰⁰**

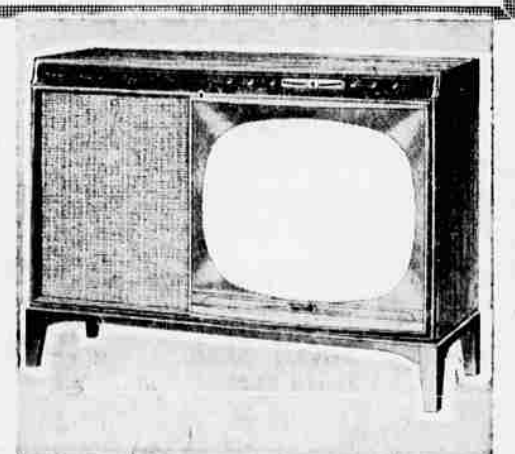
Our finest... with these work saving features,
revolving upper rack cleans every dish thoroughly.
4 separate cycles let you select proper wash and
rinse action.



Silvertone Portable TV With
Powerful Medalist Chassis

REDUCED TO... **\$199⁸⁸**

21-in. (overall diagonal) screen, 261 sq. in. view-
able area. Excellent performance with Medalist
"300" chassis. Tinted removable safety glass.



Medalist Big-Screen TV
With Stereo Phonograph

Reg. \$449.95 **\$399⁹⁵**
REDUCED TO

Our finest Silvertone TV with 331 sq. in. viewable
area, powerful 20,000 volt chassis. Stereo record
changer, 20-watt dual amplifier, 6 speakers.
Second speaker enclosure for stereo... **79.95**

"Satisfaction guaranteed or your money back" **SEARS**

501 East Jackson — SP 3-6661
MEDFORD SHOPPING CENTER
Open Monday and Friday 'Til 9 p.m.

FREE PARKING
OPEN TONIGHT 'TIL 9