

# • New Machines and Gadgets •

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⚙️ **UTILITY SPRAYER**, for home or multiple farm uses with either light liquids or heavy emulsions, can be attached to a gallon can or used with an open pail. It is a two-nozzle, hand-operated device that works like the ordinary trombone, and comes equipped with two individual replaceable nozzles.

Science News Letter, September 25, 1948

⚙️ **FOLDING BACK-REST** for bleacher seats at the ball game, recently patented, consists of a seat section with an upward-curved rear extension to which is hinged the back rest. When not in use, the back rest folds flat over the seat.

Science News Letter, September 25, 1948

⚙️ **REDUCING VALVE**, for use in laboratories and where gas is used industrially, gives higher delivery pressure with better control because the gas pressure is used to regulate the delivery pressure. Pressure is governed by admitting gas into a ballast chamber above a diaphragm until the desired figure is reached.

Science News Letter, September 25, 1948

⚙️ **AIR-FILLED "SWAN"** for the tiny tot, shown in the picture, is one of a line



of new inflatable toys made of vinylite plastic. Others, designed for use in bathtubs, represent alligators, fish and frogs.

Science News Letter, September 25, 1948

⚙️ **ENGINE ANALYZER**, for use in airplanes in flight, locates and identifies improperly functioning parts of the complete powerplant and provides instantaneous and continuous indications of engine troubles. Doing this during flight means that flight engineers upon landing can give accurate instructions to maintenance crews.

Science News Letter, September 25, 1948

⚙️ **VACUUM CLEANER**, for picking up the almond harvest shaken from the trees, meets a special problem in gathering the nuts and not the dust. Its nozzles have an intake two inches wide and 19 long. The width of the flanges and the exact height at which they work above the surface determine their effectiveness.

Science News Letter, September 25, 1948

⚙️ **PICNIC KIT** does double duty as a carrying case and as a table. Covered with canvas duck, its two equal box-like halves open to form a flat table which is supported by four fold-in legs like those on the familiar card table. As a case, it holds two vacuum bottles, two stainless-steel sandwich boxes and four plastic cups.

Science News Letter, September 25, 1948

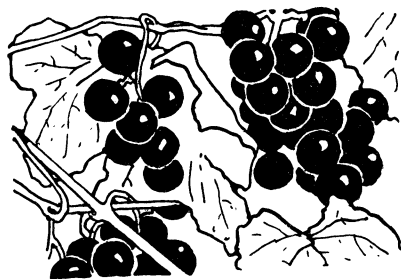
## • Nature Ramblings by Frank Thone •

► **CROP PLANTS** native to this hemisphere form an old and familiar catalog: corn, potatoes, tobacco, beans, pumpkins, squashes and all the rest. However, all these came from the south, from the tropics and subtropics. Even the ones that the Indians of the East and Midwest were cultivating when the first white settlers came had been brought to them by nameless prehistoric forerunners of today's agricultural extension workers.

But a whole array of highly appreciated fruits and nuts occur naturally in the more heavily populated parts of the United States. Indians used them though they did not cultivate them, finding enough for their needs in the wild state. European settlers, finding them to their taste, brought them into orchards and gardens, some in Colonial times, some more recently.

Among the earliest, and certainly among the most successful, were our native grapes. Old-World grapes did not take very kindly to our Eastern conditions, though they do very well in California. But three species native to the East were made into

### Success Stories



good table and juice grapes by selection and hybridization, and became the foundations of such types as Concord, Catawba and Scuppernon.

Cranberries and blueberries were long gathered for the white man's market just as the Indians gathered them, direct from the wild. In recent times, however, great areas of Eastern bog and acid-soil uplands have been devoted to the cultivation of improved varieties of these native berries.

Native species of strawberry, raspberry, gooseberry, currant and plum have been used in producing successful hybrids with European, Asiatic and South American fruits. Our American wild crabapples, however, have not been used in breeding new apple varieties, probably because they are too sour and too puckery with tannin. Three native fruits that are still largely neglected are pawpaws, persimmons and red haws.

The roster of native-nuts that have made good in cultivation is shorter, but contains some notable items. Outstanding is the pecan, native to our South. More recent, but highly promising, has been the cultivation of two of its relatives, black walnut and shellbark hickory. Best-flavored of all chestnuts was our native species, now virtually extinct from the deadly attack of the blight fungus. Sole chance of survival of the American chestnut flavor lies in the use of stray flowers still found, as source of pollen for producing hybrids with the better kinds of Asiatic chestnuts.

Science News Letter, September 25, 1948