senior of Arlington Heights, Ill., took over the kitchen duties when her mother died seven years ago.

She soon became interested in the changes undergone by various kinds of food in the cooking processes and she began to figure them out chemically.

In one series of experiments, Miss Cummisford studied the actions of various kinds of leavening agents, yeast, baking soda and baking powder. She found that a double action type of baking powder, starch and baking soda with an acid constituent consisting of a combination sulfate-phosphate, was quite satisfactory for cooking because only a portion of the carbon dioxide was liberated at room temperature. Thus, cookies could be stored in the refrigerator before baking.

She is also studying sugar and starch cookery, egg cookery, and colloidal dispersions (foams and emulsions).

Miss Cummisford plans to continue study in the field of science as related to food and perhaps some day, she says, "I will be a scientist working in one of the many laboratories throughout the world—working for the betterment of mankind."

For Better TV Reception

➤ EXPERIMENTS which point the way to better television reception have been performed by 17-year-old Dana R. Spencer, a potential physicist.

A senior at the Arlington Senior High School, Arlington, Mass., Mr. Spencer thought of applying the theory of diffraction—the bending of light, sound and water waves around obstacles—to the electromagnetic waves used in radio and television.

Television waves travel in a straight line and therefore cannot go through a hill. However, if there is diffraction in television waves, Mr. Spencer figured, like the diffraction in light waves, some advantage might be taken of this fact in improving television reception.

Mr. Spencer first experimented with light waves. He set up a pinpoint light source, focused it on a screen, placed an obstacle in its way and photographed the result. The diffraction could be clearly seen and measured in the photographs.

The young scientist then transferred his experiments to the roof of his house. He used about 20 feet of wire netting as his obstacle and then took a series of readings of the strength of the signal of a local television station.

Mr. Spencer concluded that more experiments with several extraneous factors better controlled needed to be done before his theory about television wave diffraction could be either proved or disproved.

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GENERAL SCIENCE

Draft Control Planned

Two organizations being set up to handle deferment of college students and scientists. One is advisory committee for Selective Service, other in manpower office.

➤ A RACE is on between Selective Service Director Lewis B. Hershey and Mobilization Director Charles E. Wilson's new manpower policy committee for control of draftable college students and scientists.

The manpower committee's new director, President Arthur S. Flemming of Ohio Wesleyan University, is still an innocent bystander, but it will probably be one of the first problems he has to take up.

General Hershey is preparing to set up an advisory committee to Selective Service which would plan now for the selection of the 75,000 students to be deferred to enter college next fall. This committee would also advise General Hershey on deferring young scientists in vital industries.

At the same time, the National Security Resources Board's manpower office is preparing an executive order creating a National Scientific Personnel Board under Dr. Flemming. This board would have the same duties General Hershey wants his committee to perform.

The new draft bill, recently reported out by the Senate Preparedness Subcommittee, calls for a five-man Presidential Commission to select those who would be permitted to go to college on a competitive basis.

The idea of the National Scientific Personnel Board comes from the so-called Thomas report, written by a committee headed by Executive Vice-President Charles Allen Thomas of the Monsanto Chemical Company. It is expected that the Thomas Committee—the Scientific Manpower Advisory Committee—will move from N.S.R.B. to the new Flemming manpower office as soon as it is operating.

All hands are agreed that, if any deferments for college training are to be made under the new draft law, plans for an orderly selection of the students should be made as soon as possible.

The proposed law provides, in addition to a method of selection, that the Presidential Commission shall consist of three men from one political party and two from the other, that the students shall wear distinguishing insignia, and that financial assistance shall be given to those students who could not otherwise afford to go to college.

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TECHNOLOGY

Artificial Fur Made For Soldiers' Clothes

➤ ARTIFICIAL fur, suitable for use in Arctic clothing of men in the armed services, is in experimental use at the Wright-Patterson Air Force Base. Two types are in use. One is to replace wolf fur, the other is a substitute for mouton from sheep. Both are inexpensive.

The principal use of these furs in the Air Force is in trimming and lining parka hoods, flight jackets and caps for Arctic operations. Strips of wolf fur, used because its long, smooth-fibered guard hairs enable frost formed by breathing to be easily knocked off, is a satisfactory material. But wolf fur is no longer available in sufficient quantities.

The new synthetic wolf fur, still in an experimental stage, is made of nylon fiber on a backing of knit cotton coated with rubber. As nylon is a poor conductor of heat, the parka wearer's face stays warm. As it does not absorb moisture readily, frost is easy to brush off.

Since sheep are scarce too, the Air Force is experimenting with synthetic mouton made from a blend of two synthetic textile fibers, Dynel and Vicara. Like artificial wolf fur, this synthetic mouton will prove much cheaper than the real material. It will be used for collar trimming on flight jackets and hoods.

Both products rival their natural counterparts in luster, softness, quality and wearability. They are easy to work with and, unlike natural furs which must be sewed together, can be cut in any desired shape or form. These synthetic furs are made by the George W. Borg Corporation, Delavan, Wis.

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INVENTION

Television Viewers May Receive Scents

➤ TELEVISION viewers will receive "appropriate scents" along with the picture and sound by means of a system which brought Emery I. Stern, Jackson Heights, N. Y., patent 2,540,144.

The device will "automatically release predetermined scents at predetermined phases of the action," he states. The odors will not come through the air from the transmitter station but will be released from containers at the receiver by light signals accompanying the radio waves.

Substances to provide various odors are added to a harmless gas and put in containers at the television receivers. The light signals sent from the broadcast station will be of different frequencies, each frequency attuned to release the gas and odor from a particular container. The pressure of the gas will disperse the scent through the room.

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