

the American layman, F. Twyman, managing director of the famous instrument house of Adam Hilger, Ltd., is widely known to scientists everywhere as an authority on optical systems and lenses. His report on the new molded lenses, therefore, is especially significant. Said Mr. Twyman after a detailed examination of the lenses:

"The lenses submitted to me are satisfactory for the cheap class of work for which they are intended. Further, I am of the opinion as a result of the tests made, that with care in preparation of the material and moulding, lenses could be produced of a quality good enough for such work as good camera lenses, binocular lenses and so forth.

**Two Disadvantages**

"The only defects of the material for such work as mentioned above are the obvious ones that it is not so hard as glass, and is thus more easily scratched and that it becomes plastic at temperatures much more normal, being easily moulded at 100 degrees centigrade."

Thus if one dipped spectacles with molded lenses in boiling water they would melt and run away.

The chemical name of the British resin employed in the lenses is methyl-methacrylate. There are equivalent resins known by different trade names, produced by the du Pont Company in America, and other countries. The molding process is controlled by the Combined Optical Industries, Ltd.

*Science News Letter, June 5, 1937*

Preliminary reports from the recent census in Soviet Russia give a population of 176,000,000.

A report from Turkestan says that a new region containing radioactive ores has been found.

CHEMISTRY-AGRICULTURE

# Apathy Toward Pure Science Deplored by Dr. K. T. Compton

## Farm Chemurgic Conference Hears of Efforts to Find New Uses in Industry for the Products of the Farm

SCIENCE has made possible a "new thing under the sun"—the more abundant life generally distributed, without one man's having to make his gains off another man's losses. Research in pure science must receive public support if this happy state of things is to be stabilized and extended.

These were the main theses of Dr. Karl T. Compton, president of Massachusetts Institute of Technology, in an address at the Third Dearborn Conference of Agriculture, Industry and Science.

The speaker took Government to task for spending so much time and money on regulatory and restrictive efforts in the field of existing technology and knowledge, and giving so little support, relatively speaking, to much-needed research for new. He said:

"I have frequently felt discouraged by the apathy, and sometimes almost antagonism which has appeared to exist in high places in respect to this scientific program. To be sure, I realize full well that the distress of unemployment must be relieved, that wealth must be properly regulated and distributed, and that curtailment of production of crops, oil and other commodities may need to be regulated in the public interest.

"My dissatisfaction is not because these things are being done, but because the other things, so pregnant with possibili-

ties for the future, are neglected to the extent of only half of one per cent. of the budget of our federal government, and probably not more than this percentage of the active interest of our national leaders.

"But doubtless I am too impatient and critical. After all it generally takes a long time and much mental effort to reach conclusions which, after reaching, seem so obvious that we wonder why there was ever any hesitation. So I believe it will be in this case, for I am perfectly confident that in time the public will really put faith in science as the intelligent basis of adjustment and control of the environment in which we live."

**Taught Negroes**

White folks invent special names for making new uses of things grown on the farm. Negroes down South have for quite a long while now been doing something of that kind, though without any special name. One of their own race, Prof. George W. Carver, of Tuskegee Institute, most widely-known of American Negroes in scientific work, developed most of the methods in his own laboratory and then showed his people how to use them.

Prof. Carver told this dramatic story: "Forty years ago, when I came to Tuskegee," he said, "I was met with innumerable facts such as these: terrific losses from soil erosion, soil practically a pile of sand and clay making a yield far below cost of production, poor preparation of land, no diversification of crops, practically no livestock, poor gardens if any at all, food for the family as a rule meager, of the worst type, and poorly prepared."

Against all these evils that beset the Negro farmers, Prof. Carver successfully pitted his hard-won scientific knowledge, only to find himself presently confronted with the same problem that has plagued agriculture everywhere: greatly increased production that outran the existing possibilities of consumption.

So Prof. Carver addressed himself to the problem of finding new uses for

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farm produce—principally on the farm itself. It was a "live-at-home" program. Some of the uses were for non-food purposes, but conditions were still such that Prof. Carver's chemical ability could find plenty of profitable exercise in showing Negroes how to make better use of food.

Demonstrations at fairs and widely distributed pamphlets told of 44 ways to prepare meat, 31 ways to cook sweet potatoes, 115 ways to serve tomatoes, 105 ways to make peanuts palatable, 43 ways to save the wild plum crop. Prof. Carver has by no means confined his researches to home-manufactured products of Southern origin. He has turned his hand to industrial outlets in a wide scope, all the way from peanut-shell wallpaper to cotton-reinforced asphalt paving blocks.

### Chemurgy in the West

Chemurgy, the chemical-industrial utilization of farm products, is no new thing under Utah's sun. Dr. John A. Widtsoe, an important officer in the Latter Day Saints' Church, told the meeting. The first migrants who settled the intermountain country, in the days of Brigham Young, made from farm products the various articles used in a civilized country, and oil, paper, and sugar mills and the like were under way before the railroad entered the Great Basin.

Dr. Widtsoe outlined five lines along which chemical-industrial enterprise might be of particular benefit in the West; factory conversion of farm products like sugar beets and vegetables raised for canning; discovery of new uses for old and standard crops; introduction of crops as yet not raised under irrigation; scientific utilization of farm wastes; profitable disposal of surplus crops.

*Science News Letter, June 5, 1937*

An archaeologist has discovered sites of the kilns where China's rare and famous Yueh pottery ware was made in the tenth century A. D.

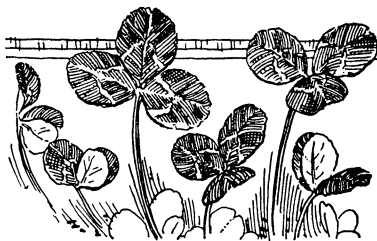
Clothes moths probably do more damage in a year than any of the agricultural pests, says one entomologist.

## RADIO

June 8, 4:15 p. m., E.S.T.  
SCIENCE DIGS A MINE—Charles F. Jackson of the U. S. Bureau of Mines.

June 15, 4:15 p. m., E.S.T.  
FISHING IN ALASKA—Frank T. Bell, Commissioner of Fisheries.

In the Science Service series of radio discussions led by Watson Davis, Director, over the Columbia Broadcasting System.



### The Coming of Clover

CLOVER is so completely and integrally a part of American agriculture that it is nearly impossible for us to imagine a time when it was not. Yet the first colonists did not cultivate clover, and it was only a little while before the outbreak of the Revolutionary War that clover cultivation really began to be generally adopted.

Just when red and white clover first appeared in America is, and probably always will be, a rather uncertain date. A U. S. Department of Agriculture historian has found reference to its presence on Long Island as early as 1679. But these earliest records seem to be of chance-sown plants naturalized and run wild, rather than of deliberately cultivated clover.

One definitely named and located clover cultivator is offered for record by one of his own descendants. Mrs. Mary Vaux Walcott, a notable botanical artist of Washington, D. C., states that an ancestor of hers, one James Vaux, planted clover on "Fatlands," his farm on the Schuylkill river opposite Valley Forge, well before the Revolutionary War began.

As James Vaux pioneered in the bringing of one valuable legume from Europe, so his descendant took the lead in the introduction of another valuable plant of the same family, alfalfa, from the West. Mrs. Walcott claims the honor of having been the first farmer to grow alfalfa in the state of Pennsylvania.

It seems more than a little odd, at first glance, that English and other European settlers in the new land should have been so remiss about bringing in what we have come to regard as an absolutely essential element in sound crop rotation.

On second thought, however, it may not be so strange after all. The farmers in the northern and middle states were

at first pretty much on a subsistence basis, like the later pioneers of the Ohio valley and the West generally. They raised crops mainly for their own consumption, and produced little for export. It was easier to work virgin soil until it would yield no more, and then move on to other rich free land awaiting the clearing ax and the breaking plow.

In the South, where the big plantation system and the institution of chattel slavery made good profits in cash crops for export, like tobacco and indigo, and later cotton, the same practice of working land to exhaustion and then abandoning it was even more intensively and destructively followed.

It was only when the menace of spent and eroding lands began to worry folk near the seaboard that the soil-building clovers began to get proper attention. And it is perhaps significant that the most earnest early efforts toward a more scientific agriculture were put forth in the neighborhood of Philadelphia, first great center of American science.

*Science News Letter, June 5, 1937*

#### GENERAL SCIENCE

## Eiffel Tower Is Lighted To Honor Paris Exposition

See Front Cover

AS in Chicago during the Century of Progress Exposition, modern illuminating art is playing its part in Paris, adding to the city's customary gayety in honor of the occasion of the Exposition Internationale. The festive illumination of the famous Eiffel Tower is shown on the front cover.

At the Paris exposition which will be held from now until November, prominence will be given to art industries. The first group of exhibits contains an initial section on scientific discoveries.

*Science News Letter, June 5, 1937*

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