

GENERAL SCIENCE

Future Scientists

Will probably come from a broad cross-section of our national family life, survey of Science Talent Search winners indicates.

► AMERICA'S future scientists will probably come from a broad cross-section of our national family life. Their fathers are now following such diverse walks of life as farmer, furrier, manufacturer, lawyer, chauffeur, reporter, business executive, insurance agent, postman, chiropractor, and gas station proprietor, as well as scientist. The great majority of their mothers are homemakers; the few who are following careers in writing, teaching and business are doing so for economic reasons. This conclusion was reached on the basis of questionnaires returned by the 40 trip-winners of the current Science Talent Search conducted by Science Clubs of America competing for \$11,000 in Westinghouse Science Scholarships.

Although some of the winners are related to "top-ranking" scientists, the majority report no scientists in their families. The other winners report from one to four relatives who have scored success in some field of science. Nine fathers and one mother are named as successful scientists.

Most famous scientist with a descendant among the 29 boy winners is

John Clerk Maxwell, pioneer in radio theory and a mathematical genius. As a boy in Scotland in the 1840's he incessantly asked, "What's the go o' that?"—the same question asked by every one of these 40 eager young scientists today.

One winner is related to a noted professor of engineering mechanics listed in *Who's Who in America*, *American Men of Science* and *Who's Who in Engineering*. Two others each report a relative in *American Men of Science*. One father is an engineer listed in *Who's Who in Commerce and Industry*.

Relatives reported in science and technology include eight doctors of medicine, three in one family, six engineers, seven science teachers including three college professors, a mathematical consultant for the Bureau of Ordnance of the U. S. Navy, a metallurgist, an astronomer, a mineralogist and a ship designer. One of the doctors is doing research on tropical diseases at the Rockefeller Foundation and another is working in bacteriological research. Other research fields represented are air-conditioning, color photography, and higher mathematics.

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tectors will also assist in locating hidden loot buried in metal containers and in the recovery of guns or other metal weapons involved in crimes.

Highly sensitive plastics will probably replace plaster of Paris or other types of moulage in taking impressions of tire treads, heel prints, foot prints or tool marks. These new materials are so sensitive that fingerprint impressions can be taken from the plastic cast of a hand.

Mr. Davis revealed that more than 125,000 young scientists, members of Science Clubs of America, are cooperating with the FBI in a special study project. They have been particularly interested in man's fingerprints, the only infallible, unchangeable credentials of personal identification. Today the FBI possesses the largest collection of fingerprints in the world, 94,000,000 strong.

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ENGINEERING

Invention of "Duck" Wins Prize for Dr. Jaggar

► WORK in developing the first "duck" or amphibian mobile boat won for Dr. Thomas A. Jaggar of Honolulu the Franklin L. Burr Prize of \$1,000, just awarded by the National Geographic Society.

Forerunner of the amphibian vehicles which made possible successful landings by Allied forces in Europe and the Pacific, Dr. Jaggar's wheeled boat was built in 1927 to facilitate his volcano explorations. The 16-foot boat had a Ford chassis and engine mounted inside, and axles and wheels with balloon tires outside.

The boat could be driven along the beach on its wheels, and when Dr. Jaggar desired to go in the water, he simply drove down to the edge and in. Then a pair of steel paddle wheels, about two feet in diameter, were attached. These were partly submerged and drove the boat along. The rear wheels continued to revolve while in the water, though largely submerged. The disk front wheels acted as rudders to steer the boat with the same steering wheel that was used on land.

The boat, named the Sea Turtle, was used by a National Geographic Society expedition headed by Dr. Jaggar to carry on researches in Alaska in the region of Pavlof volcano in 1927-28.

The Burr prize, established under a bequest of the late Mary C. Burr of Hartford, Conn., is awarded to members who have done especially meritorious work.

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ENGINEERING

New FBI Aids

► A NEW wartime alloy that is so strongly magnetic that it will lift 4,000 times its own weight will help the Federal Bureau of Investigation recover for evidence criminal weapons and metal objects thrown into deep water, reports Hugh H. Clegg, assistant director of the FBI in charge of training and inspection. Other items resulting from wartime research to be used by police and the FBI are "bullet-proof" gasoline tanks, and "walkie-talkie" radio.

"In the not too distant future every policeman may be a 'walking radio station,' carrying his own personal transmitting and receiving set with him wherever he goes. Every officer would be in immediate contact with his headquarters to report accidents, crimes, or other incidents the moment they occur," he said.

Police photographic equipment now in use will be obsolete by the time the war is over, Mr. Clegg declared in a discussion with Watson Davis, director of Science Service, of how science is helping law enforcement, heard over CBS on "Adventures in Science." Through a secret process developed in the United States, a new type of lens which resembles glass, but is made from oxides of metals, has been produced. This lens is as hard as a diamond and can't be scratched easily. This lens will make smaller pictures possible with much less light than is required today.

Mine detectors used by the armed forces will be of great assistance to police and the FBI in locating weapons or other metal articles buried in the earth or submerged in water, he reported. Mine de-