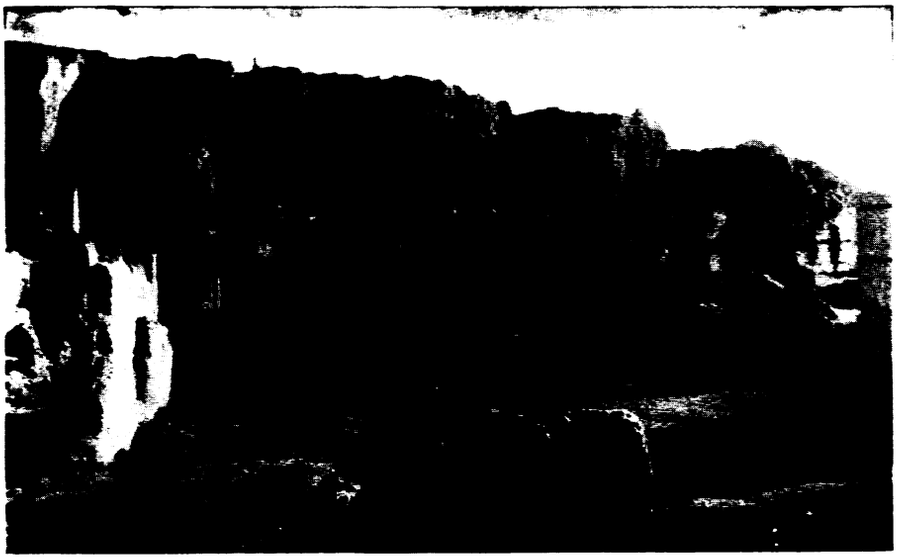

WHERE AMERICAN EXPEDITION WILL DIG

View of the ancient city of Van, looking towards the citadel. In the center is what was probably a public square or possibly a market-place, with surrounding shops.

PHYSICS

Rival Types of Baseballs Given Scientific Tests

THE NATIONAL Bureau of Standards, where almost every conceivable item ranging from an elevator to a clinical thermometer is put through its paces to see that it stands up and behaves, is going to bat to settle once and for all the winter stovepipe league's most bitterly contested verbal battle:

Which baseball is livelier, that of the American or the National League?

Scientific tests now being conducted can be expected to shed scientific light on the question which has consistently popped up wherever fans and ball players meet: Why has the American League consistently reported higher batting averages than the senior circuit?

While no Robot Ruth will stand up at the plate and bat out homers with measured precision, tests under the supervision of Dr. H. L. Dryden of the Bureau will accurately measure the resilience of the balls used in the American and International Leagues, and in the National League, it was stated.

A special machine devised by Bureau scientists will hurl wooden projectiles at baseballs so that the two collide at a relative speed similar to that of bat meeting horsehide coming up from a fast ball pitcher's hurling arm.

Because a fast ball probably travels the 60 feet between the box and home plate at a rate close to 120 feet a second, and because the bat is moving fast also, making a high relative speed, the scientists in charge had to drop any idea of testing the ball's resiliency by dropping it. The ball would not be travelling fast enough. "The impact of a ball dropped from the top of the Washington Monument, or higher, on to the pavement below is probably not as great as that of the bat hitting a fast ball," a statement from the Bureau says.

An air gun will fire a one-pound hardwood projectile representing the bat at speeds up to 200 feet per second against the ball. After impact, the ball and projectile will be caught in ballistic pendulums, by means of which their speeds can be determined. The resilience or "liveliness," it is explained, is measured by the ratio of the relative speed after impact to the relative speed before impact.

The machine doesn't take up the question of the raised stitches on the National League horsehide vs. the not-so-raised stitches on the ball made famous by the long-distance clouting of Joe di Maggio and the Babe.

Science News Letter, March 5, 1938

ARCHAEOLOGY

Van, Ancient City in Turkey, To be Explored by Americans

AMERICAN archaeologists will set out for Turkey this spring in hope that an ancient city called Van will yield important secrets of history.

Ruins they plan to excavate once formed a capital and fortress of a kingdom that rose and fell between about 840 B.C. and 600 B.C. Buried records, it is believed, will explain how the kingdom dealt with its formidable neighbors, before Scythian armies destroyed the capital.

The joint expedition to Van is undertaken by Brown University and the University of Pennsylvania, with such well-known archaeologists in charge as Prof. Robert P. Casey of Brown, Prof. Kirsopp Lake, retired professor of Biblical literature at Harvard, and Horace H. F. Jayne of the University Museum, University of Pennsylvania. Three summers of excavation are planned.

Prof. Casey believes that, if enough cuneiform writings can be unearthed at Van, the kingdom's history can be traced, and this will add to understanding of the Biblical books of Genesis and Kings. Bible scholars have gained much historic background material from Babylonian and Assyrian ruins, but the region of Turkey, or Asia Minor, may also have its version of ancient international affairs to reveal.

Science News Letter, March 5, 1938

ANTHROPOLOGY

Arabs, Indians Related, Blood Type Shows

AMERICA'S pure-blood Indians and the purest-blood Arabs are closely related, says Dr. William M. Shanklin of the American University of Beirut.

Dr. Shanklin, who has been investigating blood types of tribes in the Syrian desert and farther east during a period of several years, has concluded that the two races have the same identical type of blood, scientifically known as blood-group O.

That almost all pure-blood Indians belong to blood-group O, rather than to other blood types found among the world's peoples, had been determined by previous researches. Dr. Shanklin has made the first studies of this kind in the Syrian desert, where the Rwala tribe of nomad Arabs has been living for centuries. Dr. Shanklin has reported his results to the Society for Experimental Biology and Medicine.

"The high percentage of group O among the Rwala is wholly unexpected and most striking," stated Dr. Shanklin. "The decrease in O in some of the tribal camps is in direct proportion to the amount of admixture with the Negro slaves in those particular camps."

Scientists divide mankind into seven different blood types, one of which is the Pacific - American, characterized by a high percentage of group O frequency. Most scientists assume that the human race was originally all of group O, the frequency factors known as A and B, found in other types, having arisen separately through later changes.

The American Indians are very high in group O, above 90 per cent. in many pure tribes, and it is generally conceded that they migrated across Bering Strait from an original center of prehistoric civilization thought to have been somewhere in central Asia.

"A similar explanation may also apply to the Rwala Arabs," says Dr. Shanklin, "who traveled a much shorter distance."

Science News Letter, March 5, 1938

EXPLORATION

Drift Toward North Pole Is Proposed Expedition

Capt. "Bob" Bartlett, Noted Arctic Explorer, Suggests Party of Young Men on Floe or in Icebreaker

CAPT. Robert A. (Bob) Bartlett, hardy Newfoundlander who is this continent's foremost veteran of the Arctic, has sounded a call for "three or four young fellows" or an icebreaker and crew to carry out a drift expedition from the Alaska coast toward the North Pole similar to the feat just completed by four Soviet Russian scientists.

Warmly praising the achievement of the Russians in making detailed scientific observations through a nine-month vigil on an ice floe that drifted from the North Pole toward the Greenland coast, Capt. Bartlett told Science Service that such an expedition would serve to complete knowledge of the other half of the Arctic basin.

"I'd be glad to do it," he declared, "but some people consider me too old. It's a good chance for some young fellows."

The Arctic veteran, who accompanied the late Admiral Robert E. Peary as far north as 87 degrees 48 minutes north latitude on Peary's historic dash on foot to the North Pole in 1909, called such an expedition as he proposes the natural complement to the work of the Russians.

Either a small group of men could drift on an ice floe or the proper type of wooden ship, imprisoned in the ice and clear of the Siberian coast where ice pressure might destroy it, could carry out the work.

"It would be necessary to start from the Alaskan coast in the fall of the year," he explained. Ice conditions for the type of boat necessary are best at that time of the year, while starting from Alaska is necessitated by the need for avoiding the Siberian coast.

Such a party would drift northwestward in the direction of the Pole, on the same general line as the Russians drifted, south from the Pole approximately along the tenth meridian west—both drifts being across the icy "roof of the world."

Fridtjof Nansen, famous Norwegian explorer, made a roughly similar trip in the *Fram* from 1893 to 1896, drifting from the Bering Sea to a point near Spitzbergen, while caught fast in the ice. But, Capt. Bartlett believes, such a journey today would produce valuable results because of the many major scientific advances since that time and the improved instruments men on such an expedition would have at their command.

Interested particularly in the shape of the ocean floor, Capt. Bartlett pointed out that such a group would have as an aid the sonic depth finder with which it might investigate the contour of the ocean bottom and the depth of the Polar seas.

The four Russian scientists, whose work he praised in warm terms, have made important contributions in knowledge of oceanology, magnetology and general Arctic science. They have made actual fact much that was only theory before, he concluded.

Science News Letter, March 5, 1938

CHEMISTRY

Fireproofing of Fabrics Can Be Done in Home

A CURTAIN blown into a gas flame, an overheated iron on an ironing board or a rug too near an open fireplace —puff! and a fire starts. Half of the $350,000,000 U. S. annual fire toll is to private homes and property, and fabrics too close to flames are blamed for much of it.

Something can be done about it. Fireproofing cloth and other material is simpler than doing the family wash. The type of fireproofing most easily applied in the home is made from borax, boric acid and hot water, all ingredients easily obtained. The formula recommended by the U. S. Department of Agriculture is 7 ounces of borax and 3 ounces of boric acid powder dissolved in 2 quarts of hot water.

Articles to be treated are dipped in the warm solution, wrung out by hand or through a clothes wringer, and hung out to dry on the family wash line. Draperies, carpets and other bulky articles can be sprayed with the solution with an ordinary garden sprayer.

The boric acid-borax mixture not only fireproofs but it is a check against deterioration of curtains and other fabrics exposed to the invisible sulphuric acid gas poured into the air by the burning of coal and other sulphur-containing fuels.

Fireproofing does not prevent fire from scorching or charring a fabric but it does prevent it from bursting into flame and spreading the fire. The fireproofing chemicals melt and seal off the fibers of the treated fabric. The melting chemicals also act like a miniature automatic sprinkler system in that they give off moisture that combats the flames.

Science News Letter, March 5, 1938

Bees prefer nectar that is rich in sugar, a scientist has observed.