

tion of the sound energies among the fundamental tones and overtones. It is this distribution which sets off a Stradivarius from just another "fiddle."

Such overtones are caused by the multiple vibration of the bowed string. The existence of these extra vibrations can be shown by placing several little "saddles" of paper over the string and bowing it. Where the vibration is intense the saddles jump off. Where vibration nodes exist the saddles stay in place.

The Danish scientist Poul Jarnak, working in the United States through funds of the H. C. Oersted's Foundation, Copenhagen, has not only made studies on the tones of violins but has developed experimental instruments which compare very closely in tone with expensive 17th century Italian violins. This comparison is made not only by the oscillograph records but also by the ears of trained musicians, says Mr. Jarnak in a report published in the *Journal of the Franklin Institute*.

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'WAY DOWN DEEP

Curator M. R. Harrington of the Southwest Museum shows where he has found stone tools used by prehistoric Americans of surprising antiquity. Buried under seven feet, five inches, of accumulating earth, these stone tools, he says, mark the camp site of unknown primitives who invaded American shores about 15,000 years ago. These new-found Dawn Men will replace Folsom hunters in scientific annals as the earliest known people in America. The discovery site is in Clear Lake Park, California.

MEDICINE

Benzedrine Sulfate Is Found a Speedy Cure for Hangovers

Physicians Warn Against Going to the Drugstore For a Dose, However, Go to the Hospital Instead

SOBERING up is a speedy process by the benzedrine sulfate method, but—

Unless the man with a hang-over is in the hospital it is not safe for him to use the drug.

Drs. Edward C. Reifenstein, Jr., and Eugene Davidoff of the Syracuse, N. Y., Psychopathic Hospital, give this warning in the course of an otherwise enthusiastic report. (*Journal, American Medical Association*, May 28)

The doctors have treated 28 patients with psychosis (mental disorder) due to intoxication from alcohol, and 93 per cent. of them showed definite and at times a marked acceleration of improvement. Pathologic intoxication, delirium tremens, acute hallucinosis and Korsakoff's psychosis were the conditions from which the various patients suffered.

In just plain, every-day drunkenness, where no psychosis was present, an even more satisfactory result was attained. In these cases the depressive effects of a hangover—headache, fatigue, languor and mental retardation—disappeared within an hour or so after a morning

dose of the benzedrine sulfate.

However, the Syracuse physicians are convinced that the drug in itself is habit-forming. It is open to question whether it should be administered to persons who have shown a tendency to addiction by their chronic alcoholic habits.

Only by restricting its use to hospital patients where the supervision is adequate can it be called safe to use, Drs. Reifenstein and Davidoff feel.

They fear not only addiction but untoward effects or serious toxic reactions among persons who seek the drug themselves from the corner pharmacy.

Under hospital conditions, however, they are hopeful that it may prove of value in overcoming the chronic alcoholic habit.

Their theory is that the benzedrine sulfate may produce these beneficial responses in alcoholic states through its action in stimulating the central and sympathetic nervous system and also directly by neutralizing and antagonizing the alcohol itself.

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PHYSICS

M.I.T. Gets Grant For Solar Energy Use Research

METHODS of creating "sun power" by converting the tremendous amount of solar energy into some form in which man can use it as a source of power will be the goal of a comprehensive program of chemical, electrical and mechanical research to be undertaken in the near future at the Massachusetts Institute of Technology.

Enabled by a \$647,700 gift from Dr. Godfrey L. Cabot of Boston, the research will be devoted specifically to a search for direct means of converting the sun's radiant energy into useful power or storing such energy for future use. Under the terms of the gift the income from the fund must be used in

these studies for at least 50 years, after which it may be diverted to other purposes at the discretion of the Institute's corporation.

While scientists at Technology will concentrate on direct physical and chemical methods of using solar energy, research workers at Harvard University, which received a similar grant from Dr. Cabot last year, are making a pioneering study of the possibilities of speeding up the growth of trees, and thus "streamlining" the conversion of sunlight into forms suitable for human use.

In announcing the gift, Dr. Karl T. Compton, M. I. T. president, commented on the enormous potential power of