

PHYSICS

Spark Less in Summer

High summer humidity covers material with thin moisture film that dissipates electrostatic charges that otherwise can build up to cause sparks.

► CHANCES ARE you do not spark as much in the summer as in the winter. But it is not the heat, it is the humidity.

Romantic notions aside, the sparks referred to here are created by static electricity. It may be generated when you slide out of your automobile across plastic seat covers. It may be generated when you walk on a thick rug.

High summer humidity covers materials with a thin moisture film. The film, combined with impurities on the materials, provides a short-circuit path for the static electricity, thus preventing sparks. Heat has nothing to do with it.

But in the winter, when cold air is warmed in your house, its relative humidity drops. The moisture film vanishes. You sometimes get shocked when you touch various household objects.

The most practical way to reduce static in the home is to increase the relative humidity to about 50% by humidifiers, says Francis L. Hermach, who heads the National Bureau of Standards' research section on the subject.

Static electricity becomes a hazard in many places. Hospitals, for instance, cut chances of explosions of the anesthetics used in operating rooms by installing floors of moderately low electrical resistance, and by requiring personnel to wear rubber-soled shoes. The rubber soles have carbon black in them that carries off the static charge.

When static charges may be dangerous in stationary objects such as grain elevators, sometimes the entire building is connected together, electrically speaking. Where moving things are involved, current-carrying floors are used to reduce chances of spark-caused explosions.

If you are charged to about 300 volts, you might spark when you touch some other object, but you cannot hear, see or feel the spark. When the voltage reaches 1,000,

you can feel it. When it reaches 5,000 volts, your nervous system gets quite a jolt.

But although the voltages are high, the amount of energy in the spark is low. Static electricity in the home ordinarily creates no danger to human life. A few exceptions do exist, but Mr. Hermach says they are so rare the Bureau disregards them.

Currently the National Bureau of Standards is conducting research on static electricity for various governmental agencies. Its object is to find standards that may help to reduce hazards from static electricity.

Science News Letter, July 19, 1952

PSYCHOLOGY

Gambling Habit Strong In Winners and Losers

► THE GAMBLING habit is much stronger in those who have had the experience of both winning and losing than it is for either the habitual winner or the steady loser. The steady winner is the first to quit the game when he begins to lose.

This was observed in watching the behavior of six- and seven-year-old boys who won and lost little plastic cowboys and football players, playing a push button machine. The boys all believed the game was honest; none had any idea that the machine was rigged.

Each boy started play supplied with 20 toys. On each play, he would put up one of his toys. The scientist—"croupier" also put up one. If the boy won, he got both toys; if he lost, both went into the "croupier's" bag. The boys were permitted to quit the game whenever they wanted to.

Strength of the gambling habit was measured by the number of times the boy was willing to play after he ceased to win.

One group was permitted to win ten times running before their losing streak started. Although they then had ten more toys than they had to start with, they were ready to quit when they had lost eight of them. The two groups who won half the time and six times out of ten were the most confirmed gamblers. They were not ready to give up until after 15 or 16 losses running. A fourth group that was never permitted to win, nevertheless kept on playing until the boys had lost half of their toys before they were ready to quit.

Details of the experiment, which was conducted among school children of Inglewood, Calif., is reported by Dr. Donald J. Lewis, now of George Washington University, Washington, D. C., to the JOURNAL OF EXPERIMENTAL PSYCHOLOGY (June).

Science News Letter, July 19, 1952

Do You Know?

The stomach lining has more than 5,000,000 tiny *glands*.

Citronella is a giant grass that is grown easily and inexpensively in Ceylon.

California grows about 80% of the United States' *garlic* crop.

Television *antennas* are good lightning targets; they should be properly grounded.

Aspirin does not preserve cut flowers if dissolved in the water into which the flowers are placed.

Juniper scale from the United States slipped through Bermuda's plant quarantines and has infected almost a million trees.

After boring through the twigs, caterpillars or worms of the *oriental fruit moth* later attack ripening peaches.

NEIGHBORS PRAISE HIS ARTICLES



"As a 'buy-product' of my NIA Training, I have received a total of \$73.00 for three articles and filler material from Autobody and the Re-conditioned Car. Autobody paid about \$6.00 an hour. The local weekly, City and Suburban Life, printed one of my practice articles and asked for more. When neighbors stop you on the street to say they read your piece, there's nothing, but nothing, like it."—George R. Maire, 114 9th St., Laurel Gardens, Pennsylvania

To People who want to write but can't get started

DO YOU have that constant urge to write but fear that a beginner hasn't a chance? Here is what the former editor of Liberty said:—"There is more room for newcomers in writing than ever before. Some of the greatest of writing men and women have passed from the scene in recent years. Who will take their places? Fame, riches and the happiness of achievement await the new men and women of power."

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BIOLOGY TEACHERS

You can get better microscopic slides for less! Since comparative histology tells so much about the nature of man, this study should begin early and be enlarged on in the liberal arts and teachers colleges, and in the university. Like English, it should be a required study for all students in every school of intermediate and higher education. The result would be a better citizenry: better parents, better teachers, better preachers, better physicians, a better man, and a better society, which is the purpose of education. Premedical students should make comparative histology their biggest course, because the medical schools devote very little time to the study of this most important discipline. The medical students should realize that knowledge of cellular biology gives meaning to pathology, anatomy and physiology and is the natural and least costly approach to all medical problems. *Begin study histology in high school.*

THE AGERSBORG BIOLOGICAL LABORATORY
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