

The leader starts as a small spurt of light covering from twenty to 200 yards at a jump.

Then the streak disappears entirely for about fifty millionths of a second. Next a new dartlike streak starts at the point of cessation of the first streak and travels about as far as the first. Thus, the lightning "leader" reaches the ground in a series of from eighteen to twenty jumps.

With the atmospheric path thus clear-

ed by the leaders, the first real flash occurs, which jumps upward from the ground to the cloud with a velocity of about 31,000 miles a second (one-sixth the velocity of light). This is the flash seen by the eye.

The leader streaks constantly vary their direction and may even go two ways at once. This is the origin of the irregular path of lightning.

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PSYCHOLOGY

Happy Marriages Run in the Family, Survey Reveals

MARITAL happiness runs in families. Those lucky people who are happy in their marriages are so because they have inherited or acquired a disposition just a little more amiable and affectionate than those whose marriages go on the rocks. This is reported as "the most reasonable explanation" of facts revealed by a survey of California marriages by Drs. Lewis M. Terman and Paul Bутtenwieser. (*Journal of Applied Psychology*, May).

If you want to be happy in marriage, therefore, pick out a good mother-in-law. Of the 99 marriages for which these figures were available, 83 per cent. reported that the wives' parents had average or more than average happiness in their marriages. And 88 per cent. of the husbands came from happy homes. Nearly 87 per cent. had happily married parents on both sides of the family.

Can June-November marriages be successful? The California scientists found that traditional prejudice against age differences between husband and wife is strongly challenged by the facts. The age differences among the couples studied varied from one case in which the husband was 7 years younger than his wife to three others where the man was 15 or more years the senior. No relation was found between age difference and happiness.

Children in the home are not a guarantee of bliss. Although the presence of children may prevent divorce in some cases, this survey indicated that they have no effect upon the happiness of the parents.

Of considerable importance, however, is the agreement of husband and wife on whether or not they want children.

Nearly a third of the happily mar-

ried couples reported that all of their interests outside the home are shared by the husband or wife. The other two-thirds, with very few exceptions, told of some outside interests held in common with the other member of the marriage. The unhappy couples, by contrast, included only 10 husbands and wives who reported such harmony on all their outside interests.

The boy who grows up tied to his mother's apron strings is not prevented by this from making a happy marriage, so far as this study reveals the facts. Happily married persons, both men and women, report more affection for both father and mother and less conflict with

them, than is reported by the unhappily married. This fails to confirm the psychoanalytic theory that excessive attachment to the parent of the opposite sex interferes with a later happy adjustment to married life.

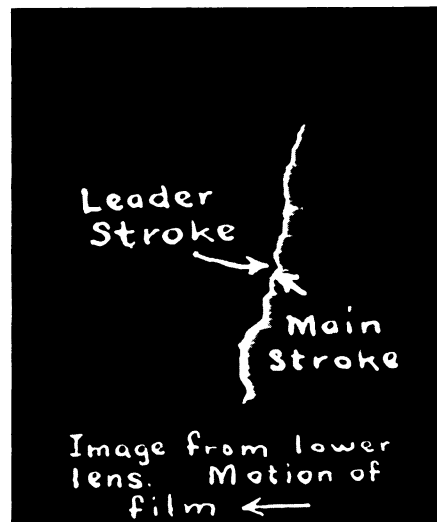
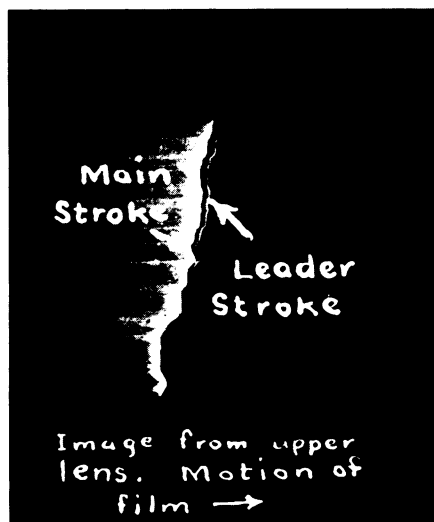
"The conclusion must be either that the theory lacks foundation or that a questionnaire of the type used in this study fails to obtain the facts it seeks to uncover," the scientists comment.

"It might be argued that parent-child relationships become so overlaid by rationalization and compensatory phenomena that the true facts can only be brought to light by psychoanalytic procedures, never by casual questioning. We do not feel competent to pass on this point, but would venture two alternative explanations. . . .

"It seems to us that the most reasonable explanation is that members of the happy group are by inherited or early-acquired disposition a little more amiable and affectionate, on the average, than the members of the unhappy group. This disposition would account for the satisfactory relationship both with parents and with spouse.

"Another possible explanation is that the mere fact of present marital happiness or unhappiness tends to affect the subject's report of his relations to his parents . . . as though these states were colored glasses lending their own distinctive hues to whatever is seen through them."

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LIGHTNING DOES STRIKE TWICE

How a special high-speed camera, invented by the veteran British scientist, Sir Charles V. Boys, "sees" a lightning stroke. Many "strikes" in the same place within a fraction of a second is one finding which annuls the old saying that "lightning never strikes twice in the same place." These photographs were taken with a Boys camera owned by Alfred P. Loomis, of Tuxedo Park, N. Y. General Electric scientists W. L. Lloyd and W. A. McMorris obtained the pictures, which are similar to earlier photographs made by Dr. B. F. J. Schonland in his South African lightning experiments.