

stars in the field. On March 15, the comet will be near Alphard, the orange star in the heart of Hydra.

The positions of the moon from February 27 to March 5, at 8:00 p.m., Eastern War Time, are shown, that on March 2 being shown as a dark disk, representing the eclipse. The comet positions are shown for 8:00 p.m., Eastern War Time, also. The corresponding magnitudes, based on the "fourth power" law, are predicted as follows: March 2, 7.5; March 10, 7.2; March 18, 7.2; March 26, 7.4. It is not possible to predict sudden changes in the brightness and appearance of a comet. These may or may not occur, and the brightness may increase more rapidly and to a greater

maximum than listed above. Binoculars of good light-gathering power are needed to pick up its faint light.

The following positions of the comet at 8 p.m. EWT, as computed by Mr. Thomas, will help amateur astronomers locate it: March 1, right ascension, 10 hr. 43 min., declination plus 8 degrees 7 minutes. March 13, right ascension, 9 hr. 21 min., declination minus 3 degrees 19 minutes.

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The forked tongue of reptiles is probably one of the most wonderful tactile organs in existence, as it feels many vibrations in the atmosphere which are non-existent to the sense of touch of humans.

up to apply the same principles to Kansas City and St. Paul.

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Stutterers' Parents Nervous

STUDY of 15 child stutterers showed a neurotic family background in the majority of the cases, Dr. J. Louise Despert, of the New York Hospital and Cornell University Medical College, reported.

Nervous mothers who are always worrying about whether the baby or small child eats enough are likely to have nervous children who stutter. These stuttering children frequently have other neurotic traits.

"This is of considerable importance," Dr. Despert stated, "if one considers that the White House Conference of 1930 gave 1,300,000 as the number of stutterers in the United States and also that the majority of these cases are being treated by means of speech techniques which involve only the speaking organs and functions."

The stuttering results, Dr. Despert believes, from neurotic attention being focused on the mouth, usually with regard to the feeding situation.

She pointed out that children are learning to talk at about the same time they are learning to eat solid food and to feed themselves. They use the same structures to take in food and to form and pour out words. If mother frightens them while they are trying to take in food, they are likely to be frightened also when trying to form and pour out words, and in consequence stutter and have difficulty in talking. The children themselves sometimes give the clue to this when they tell of their difficulty in bringing out words.

Striking example of how the mother's attitude about food affected the child's speech was the case of the fussy, nervous mother who "tried various devices to startle the child and 'throw food' in his mouth unexpectedly because she feared he would die if he didn't eat."

At the age of eight and one-half years, this boy is still taking six meals a day, five of which are liquid, as well as stuttering when he tries to talk.

Treatment of these children consisted of general psychiatric treatment, with chewing-speaking games for the younger children or chewing-speaking exercises for the older children, in a few cases.

In six cases there was some speech improvement and also general improvement. In four cases there was an im-

PSYCHIATRY

Democracy Threatened By Lack of Neighborliness

Feeling of People Divorced From Social Life That They "Don't Count" Seen as Undermining Morale

LACK of neighborliness in cities, the custom of city people living anonymous lives of their own divorced from the general social life, the feeling of millions of people that "there is no place for them—that they do not 'count,'" threaten the foundations of democracy, Dr. Saul D. Alinsky, of Chicago, told members of the American Orthopsychiatric Association meeting in Detroit.

Dr. Alinsky is the sociologist who helped transform Chicago's notorious "Back-of-the-Yards" district into a genuinely democratic community.

Morale, in his opinion, can only come when the battered word "democracy" begins to mean something to the mass of our people. Not a word that means special privilege to a few, not just a system of voting, not an eagle or a man in a star-spangled top hat. Morale will only come when the rank and file of people can get together and work together, as they used to in small towns.

That this can be done even in huge industrial cities was demonstrated first by the almost miraculous success of the Back-of-the-Yards Neighborhood Council in Chicago, and more recently by Armourdale Community Council in Kansas City, and the South St. Paul Community Council.

Chicago's Back-of-the-Yards, branded

the "Jungle" in Upton Sinclair's famous novel, began its transformation less than two years ago when Dr. Alinsky secured the endorsement of Bishop Bernard J. Sheil and the CIO to set up a Neighborhood Council. The results have amazed sociologists, criminologists, church and welfare workers, and should provide a silencing answer to those who say "democracy won't work."

CIO leaders joined hands with the Chamber of Commerce and the AFL, Catholics, Protestants and Jews worked together under the leadership of Bishop Sheil and Dr. Alinsky to transform Chicago's crime-infested stockyard district into a working community of all the people.

Business men, as well as Church and labor leaders, saw that unemployment, poor housing, inadequate relief with its alarming rate of infant mortality, were their own problems. They cooperated with the Neighborhood Council in providing free meals to undernourished children, building a recreation center five blocks square, setting up the Infant-Welfare Station which promptly cut the infant death rate from ten in every 100 to four out of 605.

Following the astonishing success of the Chicago program, a national Foundation, "Industrial Areas, Inc." was set

provement in either the behavior or the neurotic traits but no improvement in the speech. The cases in which greatest improvement took place were those in which both general psychiatric and specific speech treatment were systematically carried out.

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Noise to Please Oneself

"ONE makes noise to please oneself and language to please mothers and, later, neighbors."

This sums up the child's own feeling about a conflict which makes some children stutter, in the opinion of Dr. John A. Rose, of the Winston-Salem, N. C., Child Guidance Clinic and the Bowman Gray Medical School.

Primary function of speech is self-expression. Imposed on this is the function of communication. When families and their social group place much emphasis on this second function of speech, perhaps hero-worshipping political and religious orators, the child may either struggle against this attitude and become a stutterer or he may take on the family attitude and become a "verbalist."

Fundamentally, stuttering and other speech disorders like feeding and school problems, arise from a "troubled child-parent relationship."

The child guidance clinic, working as it does with both child and parents, therefore has a chance, Dr. Rose believes, even with its limited time, to help with the speech difficulty.

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Children's Fears Traced

EXTREME fears in children, shown by sleepwalking, night terrors, nightmares, inability to sleep and phobias about spiders, cats and death of one or both parents, can be traced to neurosis and instability in the parents and disturbance in their relationship, Dr. Jacob Kasanin, Dr. Joseph Solomon and Miss Pearl Axelrod, of Mount Zion Hospital, San Francisco, found in a study of anxiety states in 20 children.

The anxiety state may develop as early as the age of two years. The children in the San Francisco study were between the ages of four and 12 years. None of the mothers could be considered stable, mature women, and many of the fathers were also neurotic.

Both parents and children were treated and when the parents were able to over-

come their anxiety and take a more grown-up attitude toward their problems, the children invariably improved.

When parents were consistent in showing they did not want children, the latter were less likely to become extremely fearful than when the parents were neurotic and varied between over-devotion and extreme hostility.

More boys than girls were brought to the child guidance clinic for treatment,

perhaps because fears in girls are not considered unnatural, whereas when boys are fearful the parents are more likely to be concerned and to seek help for the child. Results of treatment were worse with the girls than with the boys, however, probably because none of the girls had a stable father and their mothers were more neurotic than the boys' mothers.

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METALLURGY

Old Tin Cans Chemically Exchanged Equally For Copper

Iron Is Thrown Into Mine Waters Containing Copper Sulphate; Iron Salt Formed, Copper Precipitated

GETTING copper from old tin cans sounds like a miracle but it is just good chemistry. Old tin cans may be chemically exchanged for an equal amount of copper by cutting them up into small pieces and throwing them into mine waters containing copper sulfate. Iron sulfate is formed and flows away while the precious copper is saved.

Three plants in the Southwest are planned by the Defense Plants Corporation for cleaning and shredding the cans and sending them to the copper mines. Towns in the locality have been urged to start collecting cans. About 2,000 tons of copper per month are expected to be recovered by this extension of an old practice. Normal consumption in the United States is about 60,000 tons per month.

The process by which cans are chemically exchanged for copper is simple. The iron and tin simply replace the copper in the sulfate and are carried away by the mine waters. The copper, being squeezed out of the sulfate, is precipitated in metallic form on the can. As the latter slowly dissolves away and is replaced by copper, it gives the impression that the tin can has been miraculously converted into a copper one. That would be a miracle indeed without an atom smasher. But the mine water loses its bluish color by the extraction of the copper and becomes yellowish from the addition of iron and tin, indicating that there has been a chemical exchange, not a transmutation.

The process is not new, but formerly scrap iron and even new iron was used.

It was discovered accidentally years ago, so the story goes, when Jim Lefad of Montana threw some tin cans into a stream of mine water that flowed through his back yard. Next morning he found in place of them a sludge of copper which turned out to be 98% pure. He contracted for all the mine water for a year and cleaned up \$90,000 that year.

The tin and iron are of course not recovered in this way, but the cans would be thrown away anyway, unless detinning is successfully established all over the country. Even so, the remainder of the can after detinning could be used in the copper recovery process. And this might be the best use of it, for this iron is not even regarded as good scrap because of the tin remaining in it. The detinning processes so far used remove only about half of the tin in the can, the other half remaining in the iron and unfitting it for many purposes. But it would be no obstacle in the recovery of copper from its sulfate solutions.

The War Production Board's Bureau of Industrial Conservation has proposed collection of cans in the areas around Pittsburgh and Sewaren, New Jersey, where there are detinning plants. If experiments in these areas are successful, collections will be extended to other cities where there are detinning plants.

Housewives will be asked to clean the cans after food has been removed, to cut off the bottoms as well as the tops, and to flatten the remaining portion of the can.

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