By JOHN DICKINSON SHERMAN

THE expression, "Power on the Farm," increasingly in use everywhere, is the central picture of a vision of the day when the American farm community shall be supplied with cheap electrical energy. No man living in the country needs to be told what it will mean to him to have ample low-priced power for use about the farm and home. Nikola Tesla, the "electrical wizard," says that this power will soon be transmitted by wireless. For the time being, however, electrical energy will continue to be increasingly supplied by transmission lines. Many agencies are working to the end that this electrical power may be generally distributed under satisfactory conditions.

"Home industries reached by good roads and motor cars," said Guy E. Tripp, chairman of the Westinghouse company, in a recent address to the Engineers' Society of Western Pennsylvania, "power-driven farms, modern appliances in the home and a busy contented unit would mean that the American rural home has been reestablished on a modern basis. For a steady diet Omar Khayyam's paradise would not be a patch on that Utopia, if, as and when it comes."

Superpower, over which many of our public men are waging wordy battles, is more of a tendency than a thing. Superpower is the growth of the power industry along lines involving more efficient plants, wider interconnection and a more centralized control. Some denounce superpower as a giant which will strangle America. Others see in it a magic which will work wonders for the people.

Superpower certainly has special advantages for the electrical industry.

One basic reason is that the cost of making electricity is very small compared with the cost of distributing it—about 1 to 6. If systems having different demands on their service can be so connected that the power can be used at all times of the 24 hours, there are obviously great economies in operation and possibilities of reduced rates to consumers.

Anyway, the superpower is already here. For example, Samuel Insull says in the annual reports of the Commonwealth Edison company just made:

Chicago has become the center of a great pool of power, with large and economical electric generating stations not only in Chicago but in the surrounding territory. The system forms with further interconnections a part of a vast superpower system extending from the upper peninsula of Michigan throughout Wisconsin, Illinois, Indiana, Kentucky, and into Virginia. The Commonwealth Edison company's capacity is now 886,000 kilowatts, of which 160,000 kilowatts comes from the Crawford avenue generating station in Chicago. But the capacity of this station will be increased to 235,000 kilowatts this year and eventually will be expanded to 750,000 or 1,000,000 kilowatts, making it the largest station in the world. The superpower system is meeting the increasing use of electricity at relatively lower costs.

It is no secret that engineers see in the near future electrical power quite generally in use in factory, farm and household, furnished by great central power stations run by water and by steam and distributed by interconnected systems forming one centralized and highly efficient system.

Electrical companies are in the business to make money, of course, but their future prosperity depends largely upon getting many customers. And the big companies are working hard on the problems of rural electrification.

Dr. E. A. White, director of the National Committee on the Relation of Electricity to Agriculture, says in part in Power Plant Engineering (Chicago):

Seventeen state committees on the relation of electricity to agriculture spread from New Hampshire on the east to California on the west, from Alabama in the south to Minnesota on the north, with a goodly representation in the corn belt. Study of the possibilities for the use of electricity on the farm has become an established project in agricultural experiment stations. Farmers, agricultural leaders, electrical men, manufacturers are at work on this problem. It is no longer a question of whether this thing should be or not; it is. The real problem is how to secure maximum results at minimum expense.

Today there are at least 1,500,000 farms within reasonable reach of primary distribution systems. This is somewhat less than one-fourth of the total. With an average of three farms per mile this means rural distribution lines to reach 170 times across this continent—and, at the minimum figure of $1,000 per mile, will represent an investment of $500,000,000. It is safe to predict that, to make electric service a dominant factor in agriculture, twice as much will be spent on the farms as in the building of rural distribution lines. Thus it appears that this is a $1,500,000,000 undertaking.

It is coming to be recognized that the first step is the development of a rate system adapted to agriculture. A number of rural rates have recently been developed. The general tendency is for these rates to contain a minimum charge in some form considerably higher than in the case of urban rates and to taper off rapidly to low energy rates. The attempt is made to divide the rate into fixed charges and an energy charge on the kilowatt-hour basis.

Following the establishment of a satisfactory rate, electric light and power companies are organizing to put a comprehensive plan behind their rural service programs. During the past year at least six prominent companies have appointed men to have sole charge of this work. One company has gone further and established a rural service department. In some cases rural electric districts are being mapped out and distribution systems planned to make service available to every resident in the district.

Mr. Tripp in his address to the Engineers' society called attention to the fact that there has been an application of power to practically all industries except the farming industry, and that in consequence the latter has lagged behind. He also made this point:

"Everybody knows, or should know, that the standards of living and wages of the world, expressed in common purchasing power of money, are almost in exact ratio to the amount of power placed at the disposal of the worker; . . . the fact often overlooked is that the use of machinery and modern appliances has been a great influence in developing the masses of men into more alert if not more intelligent human beings."

Mrs. John D. Sherman, president of the General Federation of Women's Clubs, applied the same thought to the American housewife in an address before the National Electric Light association last fall at San Francisco. The General Federation is now completing a "Survey of the American Home" with a view to increasing the efficiency of its housekeeping. Mrs. Sherman said: "There is nothing that will furnish this efficiency as quickly and effectively as electricity—the cheapest item in the family budget," and added:

In the heart of the home-maker performing her daily tasks in the old and wasteful way lurks a discontent, a sense of injustice, a resentment over the drudgery involved in home-making. Over other inadequately equipped home-makers spreads an apathy and resignation which argues arrested growth and an indifference to standards of living. Home-making in the United States today is the greatest industry in the world—and its improvement is a challenge to Uncle Sam and to such groups as are represented in the National Electric Light association and the General Federation of Women's clubs.

The National Electric Light association—a noncommercial organization—has long been working on ways and means of applying electrical service to farming communities. Many of the Public Utilities are co-operating. The Alabama Power company, for example, is building 117 miles of experimental lines to serve 1,940 rural customers and will try out the many problems in connection with experiment stations.

"Power on the Farm" looks like a reality of the near future. Its effects, direct and indirect, will be interesting. It should improve the condition of the farmer. Will it tend to the industrial decentralization of cities? Will it still further decrease the farm population?

Fuel From Dust

If you pump cornstarch with air into an inclosed tube and ignite the mixture with an electric spark it will explode. Recent government experiments have shown in dust great explosive energy going to waste. It is this that is utilized in a new fuel announced recently, according to Popular Science Monthly.

Fuel made from dust or scourings not only will make use of waste material but will reduce a big potential fire hazard in manufacturing plants, explains W. A. Noel, an engineer of the bureau of chemistry of the Department of Agriculture. It would solve the problem of cheap fuel for factories, he adds, for it may be used in steam or gas engines.

Wood, metal, leathers, chemicals, cork, rubber, sugar, grain, cocoa and cinnamon are but a few of hundreds of products from which the inflammable dust may be obtained. Probably the most powerful of all dusts is that of aluminum, while grain dusts are available in the greatest quantities.

Deaf Made to Hear

During a test of a device, which is a combination of radio and phonograph, with headpiece and speaking tube attachments, pupils at the American School for the Deaf at West Hartford, Conn., who had never before heard a human voice or sound heard not only the voice of the speaker, but their own voices as well.

IMPROVED UNIFORM INTERNATIONAL

Sunday School Lesson

(By REV. P. B. FITZWATER, D.D., Dean of the Evening School, Moody Bible Institute of Chicago.)
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Lesson for March 28

REVIEW—THE GOSPEL OF JOHN

REVIEW—The Gospel of John.

GOLDEN TEXT—These are written, that ye may believe that Jesus is the Christ, the Son of God; and that believing ye may have life in His name. —John 20:31.

PRIMARY TOPIC—Beautiful Stories Told by John.

JUNIOR TOPIC—The Greatest Things in John's Gospel.

INTERMEDIATE AND SENIOR TOPIC—Great Scenes in John's Gospel.

YOUNG PEOPLE AND ADULT TOPIC — The Great Teachings of John's Gospel.

Happily we have come to one time at least when the quarterly review is easy and a pleasure. The teacher's supreme aim should be to make Jesus as real to his pupils as He was to the disciples when here upon earth, for the "Word made flesh" is now dwelling among us "full of grace and truth" revealing God (John 1:14, 18). The best way to reveal the quarter's lessons will be to grasp the central purpose of John in writing his book, gather the central teaching of each separate lesson and use it in proving the central proposition. John clearly states his purpose in 20:31. Two things are set forth in this verse.

1. That Jesus is the Christ, the Son of God.

2. That through believing in Him, eternal life is received.

It should be the teacher's aim to establish this truth and to accomplish this glorious purpose in the lives of all his pupils.

January 3.—In this lesson Jesus is presented as the eternal Word existing with God before all worlds, the almighty Creator, the source of light and life, made flesh in order to reveal God to man.

January 10.—John the Baptist testifies that Jesus is the Lamb of God. This truth was certified unto him by a voice from heaven and the descent of the Holy Spirit upon Him (Matt. 3:16, 17). Andrew, Philip and Nathanael corroborate John's testimony by declaring that Jesus is the Messiah of whom Moses and the prophets did write—the very Son of God.

January 17.—Jesus is the bestower of eternal life. He is the only begotten Son of the Father, who gives eternal life to those who believe on Him. Since God alone can give life, Jesus is divine.

January 24.—Jesus testifies to the Samaritan woman that He is the Messiah. His ability to disclose the secrets of the woman's heart and life convinces her that He is divine.

January 31.—The creative act by which five thousand men, besides women and children, were fed from a few small loaves and fishes, with a superabundance left over, demonstrates the deity of Jesus.

February 7.—Jesus is divine, because He opened the eyes of the man born blind. So unusual was this miracle that such a thing was never heard of "since the world began." The man whose eyes were opened, confessed Jesus and worshiped Him as the Son of God.

February 14.—Jesus is the Messiah, the Son of God, because He is the Good Shepherd. In the Old Testament, Jehovah is set forth as the True Shepherd (Ps. 23, Ezek. 34). The true shepherd devotes his life to the welfare of his sheep, even to the extent of laying down his life for them. This Jesus did, therefore He is the promised Messiah.

February 21.—Jesus is divine because at His command, Lazarus, a man dead four days, was raised to life.

February 28.—Undivided love to God is man's supreme obligation. The Second Commandment is like unto the First, in that it centers in love.

March 7.—Jesus is divine, because He came from God and went to God (John 13:3). Though Jesus boldly claimed to be the Lord, yet He stooped to render the most menial service to His disciples.

March 14.—Jesus claimed equality with God and therefore asked His disciples to place their faith in Him as the divine being, just the same as in God.

March 21.—Jesus proved his deity by coming forth from the grave. This is the unquestioned seal of His deity.

Water of Life

If ye know what He is preparing for you ye would be too glad. He will not, it may be, give you a full draught till ye come up to the well-head and drink, yea, drink abundantly, of the pure river of the water of life that proceedeth out from the throne of God and from the Lamb.—Samuel Rutherford.

Moody on Enthusiasm

Enthusiasm means "in God"; and I can't understand how any man can realize his standing before God and not be on fire 365 days in the year. Any man who goes into business and doesn't throw his heart into it doesn't succeed. Now, why not go into the Lord's work as earnestly as into athletics?—D. L. Moody.

Purpose of Prayer

The purpose of prayer is to get God's will done.—S. D. Gordon.

Obedient

Mrs. Henpeck—Just put this parcel under your arm, James."

Mr. Henpeck—Yes, my dear—right or left arm?

Two Views

Optimist—Every cloud has its silver lining.

Pessimist—Yes, until the plating wears off.

It seems to be easier for a rich man to pass through the eye of a needle than it is for a wayward boy to keep out of a poolroom.

The Treasury department refunded $151,000,000 to taxpayers during the last fiscal year, but it kept more than that amount.