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FEBRUARY 28, 1906

HOW TO BUILD A RURAL TELEPHONE.

To one not in constant touch with such matters it is truly astonishing news to learn at what a rapid rate rural telephone lines are being built all over this country. A network of such lines is fast spreading all over the land, furnishing a means of quick communication to ing spring calves, nearly two years havthe farmer as well as to the dwellers in the town and cities.

But many communities have not yet built such lnes, and the farmers there of each one of the six untreated animals are consequently shut off from the benefits and privileges their more fortunate neighbors enjoy. It is only a question of time, however, until every farm home will have its telephone. The farmer who hasn't connection now with a rural line will soon be taking the matter up with his neighbors and figuring how they can build a line to their farms.



For the benefit of all such we recommend that they read the book, "How the Telephone Helps the Farmer," published by the Stromberg-Carlson Telephone Mar Co. Rochest N. N. P. phone Mfg. Co., Rochester, N. Y. Besides enumerating all the practical advantages the telephone offers the farmer and his family, it tells how to go about it to interest your neighbors with you in building a rural telephone line; how to organize the company,—giving blank forms for constitution, by-laws, etc.; how to select and buy the proper equipment, with a chapter on the probable cost per mile to construct the line. In fact, the book is full from cover to cover with helpful, practical information the farmer cannot get anywhere else, and makes the preliminary work of getting a telephone line perfectly clear and easy. The same company publishes several other books you will want. If you are other books you will want. If you are interested they will send them all to you free, and will assist you in every way they can to organize your company and build your line properly, so that it will not only be a success but a benefit to every one on the line. Write to-day for the book, "How the Telephone Helps the Farmer," and tell them what you are doing and what you expect to do. are doing and what you expect to do.they will give you expert advice which will make the work easy for you. It will only cost you a stamp to write for it, and may save you several hundred dollars when you come to build your line.—Adv.

VACCINATION OF CATTLE AGAINST TUBERCULOSIS.

Dr. Leonard Pearson, Dean of the Veterinary College of the University of Pennsylvania, says that tuberculosis in cattle can be avoided and the cattle rendered immune by vaccination. The method is as follows:

"A lot of young cattle are tested with tuberculin and found to be free from tuberculosis. Part of them are vaccinated repeatedly with a weak variety of bacilli —a special culture from a human consumptive—and others are not vaccinat-Then all of the cattle are inoculated with a virulent lot of bacilli injected into the wall of the windpipe; and while all of the animals that were not vaccinated are found to have tuberculosis in virulent form, the vaccinated animals remain in normal condition.'

Twelve calves of a diseased herd were found to have tuberculosis in December, 1902, and were divided into two lots. One lot was given no creatment; the other lot was given a number of inoculations with tubercle bacilli of human origin—that is, bacilli that are weak for cattle and proper for vaccination of cattle. Some of this second lot of cattle received injections of tuberculin also, but that is only a detail as far as we are concerned. Six calves were not treated at all; six were vaccinated repeatedly. The treatment began the next February after the disease was discovered. All the calves were kept together under the same conditions

One untreated calf died May 5, 1903, and another September 13, 1904. One untreated calf and one treated calf were killed April 4, 1904. The remaining eight were killed in September, 1904, when they were over two years old, being elapsed since first they were discovered to be diseased.

Examination showed that in the case some part of the body was undergoing destructive bacilli, had been dried up or, more usually, had had a heavy coating—a thick, fibrous wall—thrown around them through which there could be no connection with the outside tissue. Nature had treated these centers of disease as she would a bullet or other foreign substance in the tissue—isolating them by putting a covering around them so that they could do no damage. The antitoxin produced in the system when it repelled the mild bacilli introduced artificially, attacked the virulent bacilli already there—bacilli so virulent that when they infected the animal no antitoxin resulted.

CONTROLLING NATURE.

Everybody knows that of late years natural forces have been wonderfully subjected to man's need. We are dazzled by the spectacular achievements in steam and electricity but are likely to forget the less noisy but no less marvelous conquest of animal and plant life. Horses are swifter, cattle heavier, cows give more milk and sheep have finer fleeces than in days gone by. In plants the transformation is even more marked. People now living can remember when the number of edible fruits and vegetables was far less than at present, and even those that could be grown were vastly inferior to what we now have. For example, our parents knew nothing of the Tomato except as a curious ornament in the garden. Sweet corn was hardly better than the commonest fleld sorts. All oranges had seeds. Celery was little known and poor in quality. In the flower bed the magnineent pansy has replaced the insignineant Heart's Ease from which it was developed and the Sweet Pea in all its dainty splendor traces its origin to the common garden vegetable. This progress has been made in spite of the great tendency manifested in all plants and animals to go back to the original type. It is indeed a battle to keep strains pure and up to the standard they have already attained, let alone any improvement. The practical results are accomplished by men operating largely for love of the work, like Luther Burbank in California and Eckford in England, as well as by the great seed merchants, D. M. Ferry & Co., of Detroit, Mich., who are not only eternally vigilant to hold what ground has been gained, but have a corps of trained specialists backed by ample means to conduct new experiments. The results of their experiments can be found in their 1906 Seed Annual which, they will send free to all applicants. conquest of animal and plant life. Horses are

Seed Annual which they will send free to all

WE SEND OUR SIO.50 WATCH, ONLY S3.65

But Remember, positively only one order filled for any one persons. We are going to send out 10°. "Samole, Watches" to the inst 100 persons ordering, for don tyou know that the money or lose on them will come back quickly, for every person who receives one will rush right off and show it to a so re or more friends, stilling them of our "Wonderful silo.50 Sample Watch." then the orders will come rolling in on us at ur regular price of \$10.50. We depend on the 100 "Sample Watches" we propose to send out in the next 60 days, at this wonderful cut in price, to bring us fully 1,000 orders at our regular price of \$10.50. We know that you will be so well pleased with the "Sample," that y u can't help showing it to Everybody you meet. Genuine American Mov. ment, Full Nick Ledand Jeweled, Timed, Tested and Regulated, Stem-wind and Stem-set, Patent Safety Finion, Everyuet Hair-spring, Fully Guaranteed. Gases, Double Hunting of Open Face, Finest Goldansorted and Elaborately Engraved Besigns, Lady's or Gent's Siles, TO ANY ONE PERSON DON'T SEND A CENT OF MONEY, No Sin. Not to be paid until you have fart held this "Sample Watch" in your examination, you think it the best. Watch Bargain on earth, pay Express Agent not \$10.50, but our dreat Gut Sale Price \$3.65, and Express Charges, and take the Watch. Besure to give your name, P.O. and Express Office plainly, and state if you want Lady's or Gent's size. The Remember, Only One Order filled for one Perroen. We send Absolutely Free a fine Gold-laid 50-in Lorgestee Chain with Lovely Bilded with Laly's Watch, and beautiful Gold-laid Vest Chain with Gent's Watch, if Cash accompanies order. Send at once—To-day. The National Watch and Jewelry Co., Ecoz 3349 Toronto, Can



ADVERTISE IN THE FARMER'S ADVOCATE---IT PAYS



We really can't make this advertisement too strong nor say too much in praise of this Grand Concert Phonograph Outfit. It is positively worth \$20.35. The Instrument itself is thoroughly up-to-date, with large size, beautifully toned, concert size Sound Box, handsome Cabinet highly polished to a fine niano finish, fine gold and silver trimmings, and large improved shaped Horn, through which the words and music issue, loud, clear, distinct and as sweet as a bell, talks, sings and plays much plainer than lots sold for \$20.00. They are all exactly like the Illustration except that some have a little different Horn. The Records are simply wonderful, they are so clear, distinct and natural. We mention a few titles in the Illustration, which, perhaps, mightu't be what you would like but we have thousands of others. We can give you almost anything in Banda, Orchestras, Chimes, Duets, Quartettes, Sacred Music, Selections on any Instrument, every description of Dance Music, Sad, Comic Sentimental and Coon Songs, all the latest popular music and all the old favorites as well, You can send for our Catalorues if you would like to make your own selections, but it will

save-time if you will tell us us what you like and let us choose for you. There is really no a minute to lose. We have only a few dozen Outfits to offer at this price and we fully expect to sell every one the first time this advertisement appears. You can order as many Records, besides the ten, as you like, and we'll send all we can and charge you only 25c each for the additional ones. Now understand we are not offering you any bargain stock but the latest up-to-date goods, and at the lowest prices ever approached in the Talking Machine business before. We have good reasons for making this big slump in prices, but all that interests you is that we are offering a few dozen of the best Home Entertaining Outfits—Instruments, Records and everything complete—for about one-third its value. It would be a pity to miss it. We strongly advise you to write at once. Remember you run or risk, Read our straightforward offer above. Address—JOHNSTON'S LIMITED, Canada's Largest and Leading Phonograph Dealers, 1911 YO'GE TMENT