Published weekly by the University of North Carolina for its Bureau of Extension.

(6) Limitations of Farm Lighting Sets.

Analysis of the power requirements in

rural homes and on the farm with a dis-

cussion of how far the standard sizes of

(7) Organizing a Rural Telephone Sys-

tem. Steps in the procedure of organiz-

(8) Do's and Dont's about Farm Tele-

(9) Community Organization for Coun-

The aim of these articles will be to dis-

cuss in a simple way some of the princi-

ples and contrivances that are being used

more and more every day to make life

The classic definition of engineering is

"the art of directing the forces of nature

According to this definition the engineer

and the farmer have much in common.

recting the most vital forces in nature for

The engineering profession should con-

sider it a great privilege to be able to as-

are crowded into the congested areas of

It is hoped that this series of articles

will do much to further this end, by ac-

farm lighting sets fill the bill.

ing a rural system.

ments make city life.

try Comforts.

EBRUARY 25, 1920

CHAPEL HILL, N. C.

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ditorial Board : E. C. Branson, L. R. Wilson, E. W. Knight, D. D. Carroll, J. B. Bullitt.

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CAROLINA CROP WEALTH

TOWN AND COUNTRY

According to the latest published reort of the State School Superintendent, or the school year 1917-1918, four-fifths f North Carolina's entire school popu ation of 846,000 are rural and live in he country regions. The other fifth live n towns and cities.

The total available school fund for each ural child was \$7.71; for each town or ity child it was \$16.23.

The value of the school property provided for the education of the four-fifths vas \$7,800,000; while the value of the chool property for the one-fifth was \$6, 00.000.

The annual salary of the teachers of ural children was \$244. The annual alary of the teachers of town and city hildren was \$468.

The rural children went to school 113 chool 165 days.

The town and city children had more han twice as much spent for their suf the country children.

egions.

So long as these conditions continue. an we have for the children of North arolina the often boasted equality of ducational opportunity?—E. W. K.

FORTY-NINE CENT DOLLAR

During the last six year- the rising ale of prices has reduced the purchasng value of the dollar from \$1 in 1913 to).495 in 1919.

Taking the prices of 1913 as a base, ne wholesale prices of farm products have owred from 100 to 220. Food has gone to 04; cloth and cloth products to 231; nel and light to 181; metal and metal roducts to 172; lumber and building aterials to 160.

Chemicals and drugs went to 216, but ll to 179; household furnishings rose to 33; and miscellaneous articles to 206 he average of all these items is 202.

The net result of the price increases as been to reduce the purchasing power ith 1913. This means that any individ | Saville. salary has not been double ai w nce 1913 is working under an actual ecrease in compensation.—School Life.

VAR AGAINST BANKRUPTCY

The Attorney-General of the United tates has laid down a platform for stoping, if not bringing down to earth, the igh cost of living. It consisted of five lanks. First, there should be a fair price com-

nittee in every town and county, backed y official authority; second, an organiation of women to refuse buying anyning but actual necessities until prices re brought down; third, conservation nd economy meetings everywhere, under uspices of civil bodies; fourth, the inuence of prosecuting authority to preent industrial disturbances and bring bout peace in industry; and fifth, the emobilization of four-minute men to reach the work - and - save doctrine hroughout the country.—Literary Digest.

OUR WATER POWERS

During December, when manufacturneet the greatest volume of business ever known in this country, a strike of coal safety and prosperity of the country. As result drastic measures were taken to conserve the existing coal in storage. out adequate fuel, and light and power lants reduced to minimum operation.

amiliar with the inconveniences and applied to the miseries of men, that it ered; this and little more. threatened disaster which loomed up in the immediate future. Many of them will lecall the controversy in North Car- And so on and on. A brilliant book. olina daily papers relative to the restrictions placed upon the operation of the S. McKenzie, formerly fellow of Trinity nois, Ohio, and Pennsylvania are instan-

ly removed in so far as they applied to plants operating entirely by water power. As a result certain communities in the State which received their light and power from these plants enjoyed a distinct economic advantage enabling them to keep their industries going at full capacity and their stores open during longer hours than was permitted their less fortunate neighboring communities dependent upon power plants operated by

It happened that this same period was the end of a protracted drought, so that all the streams in the State were near their minimum flow and in consequence there was a shortage even of the normal hydro-electric power.

Small Water Powers

The facts indicate the tremendous advantage to be derived from hydro-elecays. The town and city children went to tric installations. The state is peculiarly rich in water power resources, but many have not been developed. Particularly is this true of the smaller water powers ervision as was spent for the supervision capable of developing from 10 to 500 horse power. These may suffice to pro-Nearly three times as much was spent vide power for individual farm use, for or the operation and maintenance of the use of small mills and manufacturchools for the city children as was spent | ing establishments, and for light and or the operation and maintenance of power to small communities. Many such chools for the children of the rural communities in the State are near enough to some small stream with sufficient fall to provide the necessary power for their

The State Highway Commission is authorized by legislative act to aid in the development of small water powers. This with the Division of Country Home Com | iar window acquaintance with the birds. forts and Conveniences of the University jects have been brought by groups of in terested citizens for the advice of the these projects have been investigated in library detail, reports and recommendations rendered, and the water powers are now in process of development.

sidered, and when warranted a special to call to the attention of our readers. investigator will be sent to study the the dollar to 49 t-2 cents as compared situation and make a report.—Thorndike

OUR HOLIDAY BOOK LIST

Our Christmas recreation was found or the most part in the chance to read a half dozen really worth while books stacked on our work-desk during the busy days hot and muggy all the time. Man does of the fall term. We are listing them in not yearn for activity. He burns from the University News Letter in order to give them the widest possible currency among our readers.

1. Religion — Its Prophets and False Prophets, by James Bishop Thomas, Professor of Systematic Theology in the University of the South, at Sewanee, Tennessee. 256 pp.-Macmillan Co., N. Y. We closed this book feeling that if the Church Visible could and would break over ecclesiastical barriers into Kingdom building in the Master's mind and way, then this sorry scheme-of-things-entire could be salted down unto salvation; that else it is in fair way of rotting to the quick. A wise book; the spirit of it is a benediction.

2. The New State, by M. P. Follett. 373 pp.—Longmans, Green and Co., N. Y. Here is a volume that directly or indirectly involves every re-construction problem ng organizations and transportation that democratic societies are puzzling at acilities were strained to the utmost to these days. A strong book of foundational sort.

3. Philosophy and the Social Problem, workers threatened seriously the welfare, by Will Durant, of Columbia University. author's contention is that philosophy factories were shut down, train service ought to be actively concerned with curtailed, stores forced to close early in the social problem, that its work is he busiest season, households were with- in the streets as well as in the library, that it must have a vital use to commumust organize the wisdom of yesterday for the guidance of today and tomorrow.

4. Outlines of Social Philosophy, by J. ces in point. The income of the farmers in this State. The restrictions were final- Co., N. Y. An excellent companion-piece states is defived mainly from livestock

BUILDING TO-MORROW

John Ruskin

When we build, let us think that we build forever. Let it not be for the present delight, not for present use alone. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say as they look upon the labor and wrought substance of them, 'See! This our Fathers did for us.'

for Durant's volume; competent, discriminative, definitive, dull It organizes the subject for, contemplative thinking and sound culture of the aloof variety.

5. Cotton as a World Power, by James A. B. Scherer, president of Throop Col lege of Technology, Pasadena, Cal. 452 op.—Frederick A. Stokes Co., N. Y. By ong odds the best single volume on cotton as an economic factor in history-English, American, Southern; an informing, stimulating book of maximum value to southern students in college classes and to business circles alike.

6. The Birds of North Carolina, by T. Gilb rt Pearson, C. S. and H. H. Brimev. 380 pp, with excellent plates, and 275 text figures. \$2.75.-N.C. Geological and Economic Survey, Chapel Hill, N. C Invaluable for bird lovers; useful work is being done through cooperation for purposes of identification and famil-

7. Sex Education, by Maurice A. Bigeof North Carolina. Already several pro- low, of Teacher's College, Columbia. 251 and livestock products. Grop saies are pp.—Macmillan Co., N. Y. The sanest relatively a small detail in these states volume in the whole list of sex pedagogy; engineering staff. In several instances ought to be in every home and school

not incorporated towns, that are interest- 228 First St., N. W., Washington. Will ing. ed in the development of small water be sent free of charge. Here is one realpower sites will do well to write to the ly competent, decent paniphlet that e-Director of the Division of Country Home | merges from the ruck of venereal disease | ion in total values, and ahead of 40 states Comforts and Conveniences at Chapel literature—one of the very tew pamphiters Hill. The proposals will be carefully con- on this subject that we have been willing

THE LETHARGY OF HAYTI

I believe that we do not appreciate suf y the absolutely indispensable part that human energy bears to a lot of social and moral problems. Perhaps I had better use the word pep rather than energy, that sense of physical well-being that

the heat of the climate and yearns for the shade and seeks it. Hayti, a land of barbarism, shows it, and I believe it is true that a moderate amount of malaria m a community takes it a long way from the energy of Chicago and New York to-ward the lethargy of Hayti. I suspect, but cannot prove, that hundreds of town-ships in the United States are second and third and fourth class places, when they might be first class or best second class places, if the people for twenty five years could be free of malaria.

We now know how to get rid of the

mosquito, the carrier of malaria. We have been thinking of land drainage in this country in terms of mere land reclamation, so if it didn't pay a man to drain his two acre swamp, or his half or quarter-acre swamp, it was all right. It was his spoiled acre. As a matter of fact, we need to believe, and act on the idea that the removal of every mosquito breeding place is primarily a social matter, a neighborhood matter, a civilization mat-ter, using the word civilization as it applies to a state or a country or a county J. Russell Smith, University of Penn-

PER CAPITA CROP WEALTH

Two hundred seventy-three dollars and 272 pp.-Macmillan Co., N. Y. There is a half per inhabitant, counting men, wonot a single dull page in this book. The men, and children of both races, or nearly \$1400 per family! That's the amazing crop wealth produced by the farmers of North Carolina last year.

Last week we ranked the states accord-

ing to total crop values. Elsewhere in this issue we rank the states according to lants reduced to minimum operation.

The readers of the News Letter are job of remaking society, that it must be light on relative crop values in the different states, the consuming public consid-

Many of the states that rank high in the agricultural column when livestock and animal products enter into the account, rank low when crops alone are the basis of comparison. Indiana, Illi-

COUNTRY HOME CONVENIENCES

ANNOUNCEMENT

Beginning with the next issue of the News Letter there will appear each week a letter from some member of the engineering staff of the Division of Country Home Comforts and Conveniences of the University Bureau of Extension. This division is cooperating with the State Highway Commission in helping the people of the state to install in country homes the comforts and conveniences which heretofore have been available only to those people who were fortunate, or shall we say unfortunate, enough to live in the larger towns and cities.

These letters will appear in four, in the country as full of comfort and hapgroups: (1) Water Power, (2) Water piness as modern engineering develop-Supply and Sanitation, (3) Farm Lighting and Power, (4) Farm Telephones. The following is a list of titles of a few typical letters which will appear from for the use and convenience of mankind." week to week:

(1) The Fundamentals of Water Power. Simple statements about the effect of the In fact, it might almost be said that the two factors, Head and Flow, on the pow- farmer is an engineer for he is indeed dior of a stream.

(2) Water Wheels vs Turbines. Ad- the use and necessities of his fellow man. vantages and limitations of each type of prime mover.

(3) Farm Water Supply Systems. Sim- sist the farmer in his work by bringing ple description and comparison of the to him all of the advantages that it has different methods of supplying water to already made possible for the people who country homes.

(4) Hydraulic Rams vs Pumps. Ad- cities and towns. vantages and limitations of each method of water supp'y.

(5) Man Power vs Electric Power. Sim- quainting the people of the state with the ple economic analysis of saving hy replac- services that may be had free of expense ing man power with electric power.

richest agricultural area on the globe in from a fourth to a third, say, of the total the cotton and tobacco markets. farm income in average years. But

through this division. -P. H. D.

8. Today's World Problem in Disease tal tarm values produced, and total farm thirds of our crop values last year were Prevention, by Dr. John H. Stokes, of wealth accumulated. The richest far- produced by cotton and tobacco alone. the Mayo Clinic, Rochester, Minn. 136 mers in the Union are in the areas of Our standard food crops amounted to Farmers, or communities which are po.-The U. S. Public Health Service, livestock, grain, hay, and forage farm-only 152 million dollars at farm prices, But crops alone considered, North Carolina ranks ahead of 44 states of the Un- For home-raised milk and meat products in the production of per capita values. And for once, South Carolina stands two

Helding It Down

places above us, on this basis of compari

will produce gross money values far be around some such gigantic total as thismakes a man want to do things. yound those of grain, hay, and forage to say nothing of imported Down in Hayti I understand that it is crops. Along with sweet potatoes they for our domestic animals. are the greatest per acre money producers in the entire list of standard farm crops.

But producing great wealth with cotton | year by year. and tobacco is one thing; retaining it in the area where it is produced is another. Indeed, the problem is so hard that year tenancy system. But cotton and tofarmers, would make the southland the food crops and meat and milk animals.

ten years, no matter what prices ruled in In order to open up this statem t

these are the states that rank high in to- somewhat, consider the fact that twoand around 300 million dollars at retail market prices, for \$120 per inhabitant. add a third, which is the normal ratio in North Carolina. The total of home-raised bread-and meat products at retail prices was \$100 per inhabitant in North Carolina in 1919.

But the average annual consumption of pantry supplies is \$360 per person Our high rank in per acre and per cap In brief, we are \$200 short per inhabitant ita crop values is due to the fact that or 500 millions short all told. Our bill even in average years cotton and tobacco this year for imported food alone will run yond those of grain, hay, and forage to say nothing of imported feed supplies

> Safe farming would hold down in North Carolina many or most of these millions

However, it looks certain that starvation alone will ever cure us of the fallacy of buying bread and meat with cotton in and year out, good years and bad, it and tobacco dollars. Cotton and tobaccannot be done on a credit basis in a farm co culture on a bread and-meat basis in North Carolina is tar away we fear. We bacco production in the South on a are threatened by cotton and tobacco bread-and-meat basis, by home owning hysteria; which means less attention to

CROP WEALTH PER INHABITANT IN 1919

Based on the Report of the Federal Bureau of Crop Estimates, December 1919. MISS HENRIETTA R. SMEDES

University of North Carolina

Rank States F		Per Cap.	Rank State		Per Cap.
1.	South Dakota	\$426.17	25.	Missouri	\$158.36
2.	Nebraska	414.98	26.	Tennessee	
3.	Iowa	387.16	27.	Oregon	
4.	Kansas	333.13	28.	Virginia	151.24
5.	North Dakota	331.45	29.	California	149.05
6.	South Carolina	310 08	30.	New Mexico	148.06
7.	Wyoming	287 23	31.	Michigan.	140.10
8.	North Carolina	273.52	32.	Illinois	130.98
9.	Mississippi	243.88	33.	Maine	127.05
10.	Idaho	239.22	34.	Louisiana	126.04
11.	Texas	229.60	35.	Dolawara	121.04
12.	Arkansas	217.21	36.	Delaware	120 42
13.	Oklahoma	211.96	37.	Washington	113.97
14.	Minnesota	209.30	38.	Ohio	106.39
15.				Utah	104.60
16.	Georgia		39.	West Virginia	103.75
	Arisona	200.69	40.	Florida,	95.57
17.	Kentucky	196.81	41.	Maryland	95.13
18.	Colorado		42.	New Hampshire	89.81
19.	Indiana	175.42	43.	Pennsylvania	52.30
20.	Nevada		44.	Connecticut	52.03
21.	Vermont		45.	New York	45.98
22.	Wisconsin	167.79	46.	New Jersey	33.47
2 3.	Montana	164,04	47.	Massachusetts	19.59
24.	Alabama	158.98	48.	Rhode Island	13.34
			6		20,01