

# The Golden Age

Vol. I

New York, Wednesday, October 29, 1913

No. 3

## LABOR and ECONOMICS

### SIXTY CENTS AN HOUR

**I**N various sections of the country a wage of sixty cents an hour for unskilled labor is looked for. This looks like a small fortune, compared with the fifteen or twenty cents an hour that was the ruling figure only a few years ago.

This increase in wages represents more than a rise due solely to high cost of living. The unskilled labor has multiplied three or four times where living costs have doubled. The laborer is better off than before because his day's pay will buy him more.

In the wheat belt in the 1919 harvest season as high as a dollar an hour was paid for farm help, and in some sections there were three jobs to every competent man.

The extra rise in the labor wage is due to the current scarcity of labor. This class of workers has been recruited largely from immigration, but the war cut down immigration to a fraction of its former figure, and the outgoing stream of laborers made the net immigration very small, a situation now aggravated by the great exodus of foreigners returning to their European homes.

The wage of common labor has responded in part to the scarcity of labor. The law of supply and demand at last enables the day laborer to come into his own.

Some employment experts declare that the country is facing a serious labor shortage, owing to the home-visits of the thousands who have been over here longer than usual, and to the revival of business. The estimate is made that by next New Year the country will be short of common labor to the extent of a million and a half workers. What this may do to the price by hour that a laborer can command may be estimated by the wage experts, but even higher than sixty cents may reasonably be looked for.

Labor's wage is considered the basic wage of all industry. For example, where common labor gets a given wage, the wage of skilled labor will be roughly speaking a certain number of times that of the common

labor. This is because common labor constitutes a high percentage of production costs in the basic industries. Any increase in the labor wage adds materially to the cost of doing business. With labor getting more money and the living cost rising to match, there must be looked for demands for increases in the wages of skilled workers who cannot be expected to acquiesce in any retrograde in the purchase power of the day's pay.

Where the top in wages may be, no one ventures to predict; but, with all the apparent rise the worker is not happy, as he sees the cost-of-living figures always a little beyond his own buying capacity.

The retailers have been lining their pockets during this carnival of high prices. Instead of the 5c profit that they should be making on a pound of leg of lamb some meat dealers have been making 10c; instead of clearing 7c on lamb chops they have been clearing 25c, and the same with veal. Cantaloupes costing the retailer 6c have been retailing at 18c to 25c and tomatoes costing him 5c a pound have been selling at 30c per pound. The wholesalers and jobbers have all participated too. Another contributory cause is reckless buying on the part of many.

A House subcommittee investigating War Department expenditures has discovered that almost 400,000,000 cans of vegetables, salmon and pork and beans were withheld from the market at the request of the canners until after the present canning season, but the total value of this is only about \$1 per head, for the population of the United States, and not enough to affect the situation materially.

But no matter what may be the cause, according to the Children's Bureau connected with the United States Department of Labor 6,000,000 American children are actually at this moment underfed and the New York City Board of Health finds numerous poor families that have been obliged to give up meat, butter and eggs. Efforts to locate the trouble persist.

### A MILLION HOMES NEEDED

FOR several years the American people have been "doubling up" two or more families in houses made over into apartments or tenements. The country is short \$4,000,000,000 worth of houses and there is an annual need of \$3,000,000,000 for building purposes, two thirds of which is for homes.

In New York there is an almost total stoppage of work on new houses. Prices and labor are so high that those desiring to build are waiting until they can put up apartments or houses which will not depreciate a quarter in value when the tide of prices has receded.

Some of the percentages of increase in the wholesale prices of building materials since July 1915 according to the *American Contractor*, are as follows, average 119; lime 118; cement 99; brick 170; sand 150; gravel 123; crushed stone 106; linseed oil 240; white lead 86; structural steel 86; hemlock 78; yellow pine timber 87; yellow pine 127; spruce timber 71; window glass 136; plate glass 113.

The percentage increase of wages has been about one-third that of materials, as follows from July 1915 to July 1919; carpenters, shop work 50; carpenters, outside 30; brick layers 20; cement masons 30; composition roofers 50; electrical workers 25; engineers, hoisting 17; marble workers 18; metallic lathers 13; painters 50; plasterers 30; plumbers 27; roofers and sheet metal workers 20; slate and tile roofers 18; steam fitters 27; stone cutters 50; stone masons 35; stone setters 17; tile layers 30; wood workers 53; hod carriers 69.

An important incident of these figures is that building workers, with a thirty-nine per cent wage increase and facing a one-hundred per cent cost of living increase, are not getting a fair share of the goods for their day's work. This condition is attributable to slack business, and is likely to be remedied when building increases. With an increased demand for skilled labor the workers may be expected to apply pressure through strikes to increase their wages to correspond with the advanced cost of living. The practical result to the builder of homes will be that the labor-cost increase should ultimately be in keeping with the 119 per cent increase in material prices.

Further price increases may be looked for in lumber, which may rise from its present average increase of only eighty per cent to a higher figure, and there is a scarcity of some materials. This is the burden under which the home builder of 1920 staggers. It accounts for the fact that in New York the number of apartment houses, tenements and houses has dropped from hundreds five years ago to practically nothing the first half of this year.

A temporary favorable feature is that building

should not only not be cheaper, but should cost more. For a time at least, the discouraged home builder may not expect to find himself in a falling market. For those taking immediate advantage of present prices and wage scales the law of supply and demand is operating favorably and they may be able, for a while, to sell their buildings at a profit. With population increasing two to three per cent a year and the number of homes not increasing by any such rate, there should be a rising price for home properties.

These conditions are the result partly of the abolition during the war of the economic law of competition. In its place was built up a beneficent system of cooperation whereby each party concerned was assured a fair percentage of profit. The cost-plus-a-per-cent system discouraged competition and enabled unscrupulous contractors to put at work unheard-of numbers of men who worked more or less as they pleased and produced buildings of unprecedented cost.

There are numberless houses built under pre-war conditions, and almost as good as new houses, which the home seeker can buy for less than anything of equal quality the builder of today can offer. As long as this class of buildings is in the market there is no reason why an economical home seeker should buy a new house.

Under existing conditions there is a constantly widening margin of the population approaching the homeless state. Scarcity of houses, high rents and extortionate landlords are driving thousands to the point where they find it difficult to avoid having no roof over their heads. They require homes, but the homes are scarcely to be had at a figure which their daily wage will afford. With building at a standstill, or progressing on high-cost lines what are these unfortunate poor to do?

Certainly they may look forward with anticipation to the Golden Age when it shall not be true that the men that build houses build them for other people to live in and they themselves go homeless. Rather the promise is made that soon "they shall long enjoy the work of their hands"—Isaiah 65:21-22.

### WILL FOOD ADMINISTRATION BE REVIVED?

THEY HAD TO revive the Food Administration in England and we may have to do so in this country. There is talk now of placing warehouse owners and cold storage men and wholesalers and large retailers under license. We had them under license during the war. There is talk of enforcing regulations against hoarding. We did it during the war. There is talk of laying down rules governing the profit which is fair. We did that during the war. There is talk of cutting the cost of living by using a zone system for shipments of live stock and fruits. This was done during the war.

Who was benefitted, then, by the abolition of the Food Administration? Who raised the cost of living since it was abolished, and who suffered as a result? If the Food Administration was a good thing to help the people save during the war, would it not be a good thing to help save the people now?

There is a hint in Joseph's experiences in Egypt that in times of world scarcity one of the most useful offices of the Government is to see that the people's food supply is cared for, so that they may not come to want. Joseph's whole purpose in buying and storing the food, and doling it out as needed was "To save much people alive."—Gen. 41:1-57; 47:13-26; 50:20.

### IS THERE LEATHER SHORTAGE?

IT IS hard to get at the truth of some of the statements that appear in the daily press. We can not be sure that some of the things that look plausible were not fixed up on purpose to make them look so. But it does appear reasonable that there is really somewhat of a shortage in leather. Leather is a by-product of cattle raising. Cattle are not raised or slaughtered for their hides merely. The hides result naturally from the sale of beef, and the sales of beef per capita are much less than they used to be, because the people cannot afford to eat much meat at the prices which have recently prevailed.

During the Great War the number of European cattle was greatly reduced and it will be a long time before the leather stocks in those countries will be as great as it once was. There are large stocks of leather at ports in South America, India, China and Siberia, but the shipping of the world is not yet sufficient to transport it.

There has been talk that shoes are selling in Europe for \$20 to \$25 per pair, but thousands of shoes were recently advertised for export at prices ranging from \$1.80 to \$5.75 per pair, or about one tenth the alleged European prices. Somebody must be getting the difference and it looks as if somebody is getting too much. There are quite a good many people in the United States today who can not understand why shoes that cost \$6.75 at the factory should cost the consumer \$12. The retail shoe men claim that they are making less money than formerly because of the loss of business due to high prices.

The Golden Rule, "Whatsoever ye would that men should do to you, do you even so to them" (Matt. 7:12), is a rule of business none too often followed, but is nevertheless the acme of wisdom as well as justice, and in the Golden Age will be enforced upon all by the unseen spiritual powers that will then be in control. The Golden Rule does not spread lies and half-truths in the effort to maintain fictitious prices.

### THE DEMANDS OF LABOR

THE demands of labor to a voice in the management of the businesses with which they are connected are of a nature that will not be set aside. Labor has been moving steadily forward in its attempts to secure a larger share of the profits of industry ever since the inauguration of the factory system, which began in England in the year 1800.

At that time it was a criminal act for workmen even to meet in an attempt to improve their wages and condition of labor, and for more than fifty years the employing class in Great Britain, through its control of legislation, was able to attach to trade unions the taint of lawlessness. The workmen felt this injustice long before the employers admitted it and made their indignation felt at various times in acts of violence in which thousands of dollars worth of property was destroyed.

The workmen were not alone in their resort to violence. More than one employer has been guilty of resorting to violence by hiring ruffians armed with rifles to act as strikebreakers. This practice has now been almost entirely given up, as the experience of many years has shown that collective bargaining has come to stay, and there is no more reason why workers should not organize than there is why bankers, manufacturers, publishers, etc., should be forbidden to do so.

The high cost of living is made higher still by every strike, for it is the people, the whole people, that in the end must pay for every interruption of the business of producing and distributing the necessities of life. Every intelligent workman knows this and every intelligent workman wants steady employment. To be sure he wants the best wages he can get, but he can not really want the impossible and must not have the unreasonable. He will be satisfied, and must be satisfied, with a reasonable share in the profits, but wants his own representatives on the board of directors to make sure that figures are not juggled. With less he will not be content.

In these times, with labor realizing its importance in the defence of the country and the maintenance of the country, instead of an employer trying to regulate wages by imposing his will upon his employes, the best way for him to maintain a permanent labor supply is to sit around the council table with representatives of his men and endeavor to work out the problem on a basis that is just to all concerned.

No one can accurately compute the value of another's labor. We all know that it is to the interest of the country, to employers and employes alike, that the largest production should be obtained with a given amount

of labor, having due regard to the health, safety, rest, recreation and improvement of the workers. These being safeguarded, the larger the amount that is produced the more there is to divide.

The time was when a Pharaoh could say to a people that he acknowledged was mightier than his own people (Ex. 1:9), "Go ye, get you straw where you can find it: yet not ought of your work shall be diminished" (Ex. 5:11) and he expected and for a time received implicit obedience. But now the workers know their strength better than they once did, and the modern Pharaoh knows better than to send out a foreman to his men with such a message as Pharaoh of Egypt sent to the Israelites. The nearer approach of master and workmen to the common level is a happy augury of the actual dawning of a better age.

### **SALVAGING BROKEN RICE GRAINS**

THE 1918 crop of rice in Louisiana, Texas, Arkansas and the Carolinas was 38,000,000 bushels. Ordinarily some 2,350,000 bushels of this would have been converted into beer. The part thus used is made up to the tiniest particles of milled rice, broken pieces of less than one-third of a grain in size. America is not a large rice-using nation and a problem now presents itself as to the best use to make of these broken rice-grains. They can be made into rice-flakes which look and taste like corn flakes, or they can be puffed and made into puffed rice even though the grains are broken. Rice flour can also be used as a part substitute for wheat flour in baking but at the prevailing price of 12c per lb., or \$24.00 per bbl. could not be considered a very good investment.

In America scarcely six pounds of rice per capita is consumed in a year; whereas the per capita consumption in foreign countries is as follows; in Japan each man, woman and child consumes 147 pounds of rice a year; in China 158 pounds; in Russia 11 pounds; in England 27 pounds; in France 34 pounds; in Italy 101 pounds, and in Germany 93 pounds.

It is a favorable sign when we see men considering what to do with such apparently small items of human food as broken rice grains. Anybody can waste; it requires no brains to do that. But to make the wisest and best use of the fragments of human time, effort, food, etc., so that the largest and best results can be obtained for humanity, this requires thought. We have an illustration of the Divine view of the value of human food in the command of our Lord, after he had miraculously fed 5,000 people with five loaves and two little fishes, to gather up the broken fragments of loaves and fishes so that nothing be lost.—John 6:12.

### **WE MUST LEND OR HUNGER**

OUR GREATEST and most natural market outside the United States is Europe. Europe is like a good customer who has been burned out and requires credit. She needs food, coal, raw materials and machinery until she can get on her feet, and meantime, as she has neither gold nor the goods with which to make immediate payment, this country must loan and keep on loaning. It is estimated that to pull through the next year Italy will need loans from us of \$500,000,000, France about \$400,000,000 and Belgium will need about \$200,000,000.

But why cannot we refuse to sell to Europe except for cash, and if she cannot pay cash why cannot we let her go hungry? We can, but if we let her go hungry then we go hungry too. It works out in this way. Ours is a great agricultural country. We raise more food than we can eat. When we can sell this surplus food at good prices our farmers are prosperous. When the farmers are prosperous everybody is prosperous, because the farmer is a good customer, and spends his money freely when he has any to spend. When Europe ceases to need our food exports the prices here will fall, the farmer class will lose its purchasing power and we will all feel the pinch. Hence it is important that we lend to Europe if we would eat.

It is true of the body politic, as it is true of the Body of Christ, that "We are members one of another". (Eph. 4:25) More and more we are led to see that the command to "Love one another; not as Cain, who was of that wicked one, and slew his brother" (I John 3:11,12) is not only good from an ethical standpoint, but it is actually good statesmanship, and a statesmanship that will be more and more valued as we progress farther and farther into the Golden Age.

### **OCEAN GIANTS**

IT IS PROPOSED to build two 1,000-foot steamships to run between this country and European ports.

Thousand-foot ships are big ones, but they do not represent the progress of which humanity might be thought capable. No one knows what was the size of other contemplated boats, but Noah's ark some 4,389 years ago, made a good start with a length of 450 feet, a breadth of 75 feet and a height of 45 feet. The comforts of the ark were negligible and would not have satisfied the modern tourist trade, but they sufficed for the load of animals and people that took the trip from "the world that was" to "this present evil world." The ark, too, was scientifically designed, for its dimensions are said by a marine expert to be those suited for maximum carrying capacity.

## SOCIAL and EDUCATIONAL

### YOUTHS OF 131 AND 144 YEARS

IT SEEMS ODD to read of John Shell, the Leslie County, Kentucky, mountaineer, who recently celebrated his 131st birthday by riding in an automobile. He was born before the French Revolution. It seems odd, too, to read of Zorro, the 144-year-old Turk, still working as a day-laborer in Constantinople, along with his grandson and his grandson's grandson. He was born before the American Revolution and was over a hundred years old when General Grant was elected President the second time. We are not used to such things, but the world was once used to far greater age than that of either Shell or Zorro. The average ages of eight of the ten patriarchs from Adam to Noah was 929 years (Gen. 5:5-31; 9:29), and despite the Flood, and the consequent unfavorable effect upon human longevity, the average ages of the sixteen patriarchs from Shem to Moses was 251 years.—Gen. 11:10-32; 25:8; 47:28; Ex. 6:16-20; Deut. 34:7.

With the return of Edenic conditions in the earth we are assured that "As a child shall one die at an hundred years old" (Isa. 65:20) but the sinner, who makes no progress towards perfection under full light and opportunity, will be cut off in death as soon as a final decision in his case has been reached. Won't it seem strange when such men as Zorro are counted as children and when finally death ceases altogether?—1 Cor. 15:26.

### A FAIR CHANCE FOR BABIES

WE ALL WANT the babies to have a fair chance, but the stubborn fact persists that unless the income of the home is sufficient they do not have that chance and can not have it. Professor Ogburn of Columbia University made a study of 4,000 families in 18 cities and recently gave some of his conclusions at a wage hearing in Chicago. It appears that investigations made prior to 1914 showed that where the family income was \$550 a year the deaths among the infants were 267 per 1,000, but there were less than a third as many when the income was \$1,250 a year, and it was not until the income reached \$2,500 that the death rate dropped to its lowest point. This shows the direct bearing that incomes have upon child welfare.

During the Great War the War Labor Board of Massachusetts decided that \$28 per week was a fair living wage for two parents and three children. This is \$1,456 per year. Professor Ogburn's studies coincided

with the War Board's estimates. He believed that \$1,385 per year was necessary for bare subsistence of a family of five in October, 1918, and that an income of \$1,550 is now necessary. The average annual expense of such a family for entertainment Prof. Ogburn found to be \$5.03 for movies, \$1.09 for concerts, 85c for newspapers, \$1.65 for postage and 30c for magazines. The head of this average family buys a new straw hat every other year and a new soft hat every third year.

Won't it be nice when there is absolutely plenty in the earth for everybody? The Psalmist speaks of such a time of the Lord's promised kingdom, the time of the Golden Age, when he says, "There shall be an abundance [Heb. *pissaw*] of corn in the earth upon the top of the mountains; the fruit thereof shall shake like Lebanon [a forest]; and they of the city shall flourish like grass of the earth." "He shall judge the poor of the people, he shall save the children of the needy."—Psa. 72:16,4.

### COLLEGE PROFESSOR SORROWS

COLLEGE PROFESSORS have been hard hit by the high cost of living, and they know it. Nobody ever became a teacher because of the money there was in it, but there have been advantages in a social way, and lengthy periods of rest, and daily association with bright active, inquiring minds that have made many men of high ideals look to teaching as a line of work in which they could be happy, not only because of the good they could do but because of some compensating advantages.

But when men have to reduce their clothing allowances to the lowest notch, and their wives have to do their own work, and they have to practically give up books, music, travel, and even life insurance, at a time when more is expected of them than ever before, it is following, as a matter of course, that young men are avoiding the work of teaching and many of the older teachers are leaving to enter other lines of business. Many colleges have suffered greatly within the past year or two because the members of their faculties have gone to other lines of work where they could make salaries several times as large.

"The laborer is worthy of his hire" (Luke 10:7) and if we want education for the rising generation we must pay for the work done, or it will be done by incompetents. The demand for justice to the teachers is right in line with the policy of the coming age.

## TWO MILLION NEW GARDENERS

A HAPPY, enthusiastic, successful and healthy army of two million gardeners has been added to the nature-lovers of our country; 400,000 in the states from Maine to Maryland; 250,000 in the states from Virginia to Mississippi; 600,000 in the states from Ohio to North Dakota and 500,000 in the states from Kentucky to New Mexico. That was the enrollment in the United States School Garden Army for 1919. It was all an outgrowth of the Great War, but it was a grand step in the right direction. It is bringing forward a new generation that will appreciate and love Mother Earth and the fresh air and the plants, as the past generation has not done. And it will be a healthier generation, and a far happier one.

It has good backing too. It has come to stay, for it has been made a part of the required school work in many of the curricula and the garden army director has become a part of the official family of the State Department of Education in some states, and will probably be made so in all states. The work is starting right. The motto has been, "A garden for every child—every child in a garden", and courses in gardening have been started in the normal schools, so that the children may have the right kind of teachers. In Ohio the legislature set aside \$1,500 in prizes to be awarded to the young gardeners, and they never appropriated \$1,500 to a more worthy purpose. In New Hampshire 7 per cent of the entire population of the state is enrolled in the Garden Army.

This movement is an important part of the work of the Golden Age. Our original inheritance in the garden of Eden is to be restored, and it will be restored in part by the efforts of men to subdue the earth, as was contemplated in God's original purpose. (Gen. 1:28) The ultimate effect will be that "the desolate land shall be tilled whereas it lay desolate in the sight of all that passed by. And they shall say, This land that was desolate is become like the garden of Eden."—Ezekiel 36:35.

## THE SOCIAL UNIT PLAN

FIFTEEN THOUSAND people, in a section of Cincinnati, have proved that by working together they can virtually remove poverty, crime and disease from their midst. They have done it now for three years. Neighborhood administrations are formed which make it their business to see to it that every person in a particular block is adequately provided with work, food, medical attention and recreation. The theory is that when every block in every city is thus looked after, want crime and pestilence will be things of the past.

The theory is a good one and has the support of able men. We wish it well and interpret it as one of the harbingers of the better era.

## GAMBLING FOR A SICK MAN'S BLANKETS

CHRISTENDOM is sick; every financier knows it; yet the financial news from Wall Street shows no indications of a let-up in the gambling spirit. When the master minds of the country are grappling with the railroad problem it does not read well that the stocks of equipment companies have advanced and "Are enjoying good earnings, with the prospect of an increase in domestic business when the railroads are returned to private operation." It looks too much as though some people were too sure of their present and future profits.

With the common people of the country greatly agitated over the price of shoes it does not read well that "While hide and leather markets reflected agitation against high prices, the stock moved forward in the belief that even at decreased price levels the company will continue to make large profits." It looks too much as though there is somebody that has had more to do with cries of leather shortage and demands for higher prices than is right.

With the great mass of people in New York that has had to give up the use of meat, butter, eggs and milk, it does not read well that "The local traction shares displayed a more buoyant tone on reports that fare increases would be allowed" and "Buying of this issue was predicated on the belief that higher fares will be granted to the traction companies." It looks too much as though some people were interested in seeing higher fares whose interest is not entirely unselfish.

Gambling is always interesting. There was the time, you remember, when eleven of the apostles cast lots to see which of the two men they had picked out for the twelfth apostle should be accepted of the Lord as such. (Acts 1:15-26) But this was before the Holy Spirit had come at Pentecost. Afterward, long afterward, they all learned that the Lord had chosen the Apostle Paul to that high honor, and to him was granted "Visions and revelations of the Lord" (2 Cor. 12:14) which he was privileged to communicate to the eleven who had been with the Lord from the first.—Gal. 1:11-24; 2:1-21.

## BETTER TIMES COMING

BETTER TIMES are coming. It can be stated confidently and scripturally that present conditions of world-wide unrest are but precursors or forerunners of the Golden Age.



## MANUFACTURING and MINING

### MOTOR TRUCKS FOR OIL TRADE

IT HAS BEEN demonstrated that a 1 1-2 ton truck will replace not less than two 2-horse-drawn wagons, and a large truck will displace from six to nine horses and two or three horse-drawn wagons and effect a considerable saving in labor. A 2 1-2 ton truck is usually operated by one man, while a larger truck usually has a helper.

Within a radius of less than ten miles teams are usually most economical to operate, if kept busy all the time, but it is easier to obtain help to operate trucks than it is to drive teams. The truck has the advantage of being able to perform the work more satisfactorily in the heat of summer and in the intense cold of the winter season.

For long hauls and full loads the motor truck has the advantage of the horse in economy and in every other way, particularly because of its greater speed. A truck can handle goods within a radius of 60 miles more economically than they can be shipped by rail. This is because the goods do not have to be prepared so carefully for shipment and because of the fewer handlings that are required. When goods are loaded on motor trucks they are delivered direct to the destination. Where a mileage of 60 or 65 miles per day is covered the most economical size of truck is a 2 1-2 ton truck, whereas in larger centers, where the mileage is 35 to 40 miles per day a 3 1-2 ton truck is the most economical.

Another advantage of the motor truck is that it cuts down the number of hours a man has to work because it shortens the time necessary to make deliveries. It is very seldom that an old employe who has driven a team for a number of years and is broken in on a motor truck wishes to go back to the old style of vehicle. He finds the truck an interesting study and takes more interest in it and better care of it than he would the horses. It has proved in most instances that the old time horse-driver, who is broken in and carefully instructed, makes a much better motor truck driver than a professional chauffeur.

It is not uncommon now to see trucks carrying from 4,000 to 5,000 pounds making their way over the desert regions in the far west, where roads are entirely absent, for distances of fifty to sixty miles.

Special trucks are now made for the oil industry. The requirements encountered by trucks in the oil fields of West Virginia and western Pennsylvania have proven the necessity of these special designs. Most of

the loads consist of long parts, such as standard lengths of piping and derrick material. These overhang at the rear of the truck, and owing to the extremely poor roads which must be traversed in the mountains, the overhung load sways violently and sets up severe rocking strains in the body as well as in all parts of the rear of the truck. The average body will not stand up under these conditions.

The work of oil drilling requires the moving about of much heavy equipment, which has been done heretofore slowly and clumsily by three or four teams of horses. The roads in oil regions generally beggar description. Not infrequently the best oil deposits are in locations which are almost inaccessible. Jobs that formerly required half a day are now done by motor trucks in an hour. Drilling rigs, boilers, pumps, lumber are moved by trucks quickly and with ease, that can be handled by horses only slowly and with difficulty.

When a new field is opened up the same difficulty is always encountered in getting machinery and supplies of all kinds from the nearest railroad to the point where the equipment is to be used. If there are any roads in the section at the start they soon become so cut up with the heavy traffic and so slippery and greasy as to be almost impassable. Under conditions such as these, tractors of the caterpillar type haul loads through to destination which can hardly be moved by any other means. Horses can not be worked when the mud gets as deep as their gamble joints, and this not infrequently happens in the oil fields.

In Detroit recently, in a test, a truck in which the power is applied to every wheel ascended the Court House stairs, step by step, with 22 men aboard. This truck will run in mud so deep that the axle housings drag, and will go down and out of cellars and through sand, almost anywhere.

Creeping tractors, patterned after the "tanks" used in the Great War, are designed as power auxiliaries to do what trucks were not designed for. These tractors will haul loads over roads where a motor truck would not be able to turn a wheel. They are used to pull motor trucks over the worst of roads, and for moving boilers, drilling rigs and casing to new locations; for building and maintaining roads; for pulling trees and stumps and oil casings.

For certain kinds of work where it is desired to discharge the load on either side of a vehicle, gravity

dump bodies are provided which require no power to operate. These discharge the load and return to an upright position by gravity, afterwards locking automatically. The hopper is V-shaped, with perfectly straight sides, which allows the material to completely clear the body when it assumes the dump position.

Constructors, ship builders, quarries, steel and iron manufacturers—all of those industries sending out the most gigantic loads and requiring the most exacting schedules of time on their production—are coming more and more to use motor trucks. Tank cars are specially designed for the transfer of liquid loads and are now to be seen everywhere. Tank cars are built with compartments, connected with cross pipes in the rear which allow any one of the compartments, or all of them if desired to be opened into the main pipe leading to the pump or faucets for filling cans at the rear. Motor driven pumps empty or fill these tanks in ten minutes time.

The operation of several hundred motor truck vehicles over a period of one year shows the following percentages of cost:

Gasoline .....	\$23.21
Depreciation .....	21.76
Repairs .....	17.06
Tires .....	15.16
Garage .....	14.31
Interest, Taxes, License, Insurance .....	6.49
Lubrication .....	2.01

The "swift beasts" (Heb. *kirkaroth*, swaying furnaces) of Isa. 66:20 refer specifically to locomotives, but as automobiles are also, after a fashion, swaying furnaces, they are probably included in the expression. In a little while the Prophet Isaiah will be back here on the earth and we will ask him, or you can, whether automobiles and motor trucks are included in that expression or not.

### WORKERS BUY A STEEL PLANT

ALL WHO wish well to their fellow men will wish well to the Aetna Iron and Steel Company, a corporation made up of former workers of the great steel plant at Gary, Indiana. These men have purchased the old Aetna guncotton plant, near Gary, at a cost of \$400,000. To succeed they will need to have among their numbers skilled salesmen and office workers as well as actual steel makers. They will need to have an executive head and to obey him. They will need to be reasonable in their wage demands, and all to work together for the good of the business. They will need to study economy in every way, and will probably need the services of some good financier.

If they make a success of their venture, their experiences will not differ greatly from their experiences in

the past, except that at dividend time they have a chance at greater profits than heretofore. There is no doubt, too, that they face the possibility of losing all they put into the venture. Business success generally follows a long period of self-restraint on the part of somebody, and self-restraint is a character builder. "He that ruleth his own spirit [is better] than he that taketh a city." (Proverbs 16:32) There are some who will not wish these workers well in their new venture, but we are not of that class. We hope that they will make a great success of their double role of employer and employee and receive an adequate return for the investments in money, skill and self-restraint that they put into the business.

### THE MANUFACTURE OF STEEL

TO EXTRACT the metal from any ore the ore is melted by intense heat and by adding to it lime, which unites with the impurities of the ore to form a liquid slag which floats upon the molten metal. The metal is then drawn off from the bottom of the furnace, after which it needs to be refined. Coke is used to provide the fuel for melting the ore and in order to provide sufficient air for the combustion enormous quantities are pumped in through great stoves where the air is first heated to over 1,000 degrees. These stoves of which there are three or four to each furnace, are large cylinders filled with a checker work of fire brick.

Pig iron always contains impurities, among which are sulphur and phosphorous, and both of these are objectionable and need to be reduced by burning away. Sulphur in too great quantities causes steel when heated to bend or break. Phosphorous in too great quantities causes steel when cold to be brittle. For the burning out of these impurities oil has the advantage of providing a heat which can be easily regulated.

If Tubal-cain, "an instructor of every artificer in brass and iron" (Genesis 4:22), were to visit a modern blast-furnace plant he would surely be astonished at the gigantic scale on which we do things nowadays, even though the principles are the same as he taught five thousand years ago, but all these improvements are necessary to the manufacture of the machinery and tools that will be needed to do the drudgery of the world in the Golden Age on whose threshold we stand.

### SECURITY OF POSITION

LABOR feels that a long period of service for a concern should give as much security of position as that universally accorded to lawyers, physicians, bankers and others who have grown old in the service of their clients.



## FINANCE, COMMERCE *and* TRANSPORTATION

### TOO MUCH MONEY

**W**HEN "free-silver" theories of currency were rejected in 1896, America saved itself from a web like what the people are now entangled in. Silver would have been put on the free coinage basis like gold which, if taken to the mint is, without charge, run through the processes necessary to turn it into gold coin.

Free coinage of gold had not unduly increased the volume of currency, because gold had been scarce. But if producers had been permitted to have silver coined free, the production of silver would have become so great that the quantity of money would have been noticeably increased.

Some might say this would have given the common people and the business men more money to handle, and there would have been an increase in the volume of business, for if any business man needed money for his business he could get all he needed. There is some truth in this; but there is more truth in the fact that business men do not need much more money, because they do business, not with money itself but with credits advanced by the banks; when a business man obtains a loan from a bank, he merely leaves the amount on deposit, and draws checks against it, and usually does not use much cash.

If the volume of money were increased, most of it would be deposited by the people in the banks, where it would become the basis for further loans to business men. On account of the fact that business men do not draw out money, but use checks, a bank loans more credits than the amount of the money, so that the cash in the banks may become the basis of credits ten to twenty times the amount of the cash.

A moderate increase in money in banks serves for very large increases in credit loans to business men. Safe and sane business increases slowly, because based on the slowly increasing consuming power of the people, and a large increase in the volume of money, such as would have resulted from "free silver," would not result in a corresponding increase of legitimate business, but an "inflation" of credits.

A condition exists today like that from inflation of silver, but the inflation now is from an unprecedented increase in the amount of gold. Not only has the volume of gold increased but that of other forms of currency. The amount of money in the United States was \$3,350,000,000 in 1913. In January, 1914, it had risen,

to meet the needs of trade, to \$3,447,000,000, or about 3 per cent increase; in January 1915, to \$3,543,000,000, another increase of about 3 per cent. In January, 1916, it was \$3,909,000,000, or about 10 per cent more; the inflation of currency due to the war had begun to be felt. In January, 1918, it was \$5,120,000,000, another increase of about 15 per cent. At the present time the amount has jumped to in round numbers \$7,563,000,000 or an increase in two years of 50 per cent, an advance in volume of currency wholly unrelated to any increase in the volume of business, or more exactly in the amount of goods produced.

This has an effect of vital importance to the people. While the people save a little, they spend practically all that they earn, the saving usually being a comparatively negligible factor. If their income is raised, they continue to save a trifle but usually spend practically all they earn. If there is no increase in the amount of goods produced, the people will simply spend more money for the same goods, a process which assumes the tangible form of a higher cost of living, now the burden of half the headlines in the newspapers.

Roughly speaking the increase in the cost of living has corresponded with the increase in the volume of currency. From January, 1914, to January 1915, the average wholesale prices of all commodities increased 3 per cent. The next year it increased 19 per cent. From 1916 to 1917 it increased 26 per cent and from 1917 to 1918 it showed an increase of 32 per cent, and since then has made a further large advance.

The volume of currency and the cost of living increase or decrease together. Until the volume of currency is lessened there is little hope of a material reduction in prices. In an era of high prices and corresponding discontent, the mental attitude of the workers reduces the volume of production, as agitation takes the place of efficiency, and men think about grievances rather than work. If the volume of goods, money and credits does not change, prices remain unchanged.

The outlook is for no particular contraction of the currency. If the gold now in the banks were to return to circulation among the people it would reduce the volume of money in banks which is being used as a basis for loans and credits to business men. But the people are trained to consider gold as for the banks, and they do not even try to get it into circulation. It is easier to use paper money and checks than coin, and universal experience is that a people trained to the

more convenient currency do not readily turn back to metal currency for daily use.

The chance is remote of a reduction in gold by its flow to other countries. The situation is reversed that used to prevail as regards payment of gold to Europe, for interest, ocean freight, tourists, laborers' home remittances, and trade balances. To a measureable extent the United States has become a creditor nation, which turns the gold stream toward our shores. Europe needs material for reconstruction and will pay America for it with gold. Europe's exports to America are far smaller than before, which creates a trade balance favorable to this country, with the amount of the balance payable in gold here.

If the banks could reduce the enormous volume of loans to business men, there would be less credit-dollars in circulation, and a contraction of the sums available for business purposes would ensue, and with less money going to the people to pay for goods with, prices and wages will fall. But there is little prospect of a change; the new Liberty Bonds are remarkably good security for bank loans, and there can be no diminishing in their volume until they are redeemed. Paper money may not be expected to decrease in volume for the Federal Reserve notes and bank notes show an increasing tendency toward expansion.

That there is no prospect of a decrease in the currency, but rather an increase, is evident. To get people that have money to refrain from spending practically all they get is to expect a change in human nature. There is going to be plenty of money in circulation, plenty to pay for things with, and on this basis prices should continue high, if indeed they do not rise, after the palliatives applied have run their course of partial and temporary efficiency.

### FROM FARM TO HOME

**T**HERE ARE too many middlemen between the farm and the home, and the great problem of the day is how to get rid of them or at least some of them. An investigation showed that there were eight to ten middlemen between the New York farmer and the ultimate consumer in the city. All of these middlemen have demanded profits, no matter what happened to the farmer, so that it has not infrequently happened that the farmer, rather than receive for his fruit less than the freight charges, has allowed it to rot upon the ground. And it does not seem right for the farmer to receive but six to ten cents per quart for his milk while the consumer ten miles away pays from sixteen to twenty cents.

We find ourselves wondering whether it may not be possible that the motor truck will solve this problem,

and possibly the Government may have a hand in it. The Government did so many things for us during the war that we get to thinking about its powers of organization and imagine things it might find a way to do to help us with our unsolved problems.

One of the principal items in the marketing of food is its transportation. The Government sells the transportation, practically all of it; perhaps it could be persuaded to buy and sell the food itself, or certain kinds of it. Wouldn't it be a great idea in this country, as it is in Europe, to place your order with the postman for butter, eggs, bread, potatoes, etc., and have it come direct by the next parcel post? Seems easy; doesn't it?

We shut our eyes and imagine a time when the people of a great district, acting through the government or some great cooperative association, will organize regular motor-truck services radiating from industrial centers for fifty or a hundred miles and thus effectively bring the food from the farm to the individual consumer. It would seem that it would not take a great deal more time to learn to grade, classify and price all kinds of farm produce than it does to figure parcel post rates, and the same kind of people that were glad a little while ago to buy the Government's surplus bacon would probably learn easily to appreciate the privilege of buying its fresh vegetables. The details of the job would be a task for a Solon, but it seems worth a trial. A ware house would be a necessity, but it is nothing new for the Government to have warehouses. It had many warehouses during the war.

This pressing problem we may be sure is one to which the Lord will give attention when he begins the work of straightening out the earth's tangled affairs. "The earth is the Lord's and the fulness thereof" (1 Cor. 10: 26) and we may be sure he will see to it that adequate arrangements are made for distributing its bounties among his countless happy subjects who will find here their heart's desire. "The desire of all nations shall come."—Haggai 2:7.

### A TRUE STANDARD OF VALUE

**G**OLD IS THE world's present standard of value, because it is about the only thing of value in time of war that can be exchanged for necessities by the nations at war. With the passing away of wars, a better and truer standard of value seems possible.

The real basis of value is that which supports human life, not that which can be used to destroy it. What is needed in the way of money is a certificate which is good anywhere in the world for the same aggregate quantity of flour, butter, beef, bacon, beans, sugar, clothing and fuel. Is the combined intelligence of the world

equal to the production of such a coin or basis of exchange?

If we had such a standard of value a salaried man would know the value of what he had earned; now it changes from day to day. A man who made a contract would know the value of the contract; now he can tell little about it. A person with a savings account would know the value of the account; as matters now stand a person who has been saving money the past six years has been defrauding himself, because he can actually buy less now, with principal and interest included, than he could have bought with the principal alone when he first began to save.

It would be a step forward if all the Governments of the world would take all the gold in existence and melt it into one vast statue dedicated to human folly, and issue in its stead commodity certificates based upon the composite basket of goods which we are all working to create, and in which the whole world is concerned. It would not be as easy to do a thing of this kind as it sounds. It would require the power of the "King of kings" to bring about such a great reformation, but there is scriptural reason to believe, however, that there will come a time when money as we now know it will cease to exist, the "Mammon of unrighteousness" (Luke 16:9) having been superseded by some medium of exchange better suited to the conditions that are to come.

### BUSINESS ITEMS

A STRIKING feature of the financial field is the five hundred applications for charters for national banks and requests for increases of capital of existing banks. This is regarded as an indication of widespread prosperity.

Great Britain, in order to hold its own in foreign trade, has begun the education of hundreds with a view to developing them into experts in that field of work. The most severe competition known is expected both from Germany and the United States.

The packing industry has been invaded by a combination known as "The Allied Packers", and composed of seven large packing concerns. A little more competition in this field should work out well for the people.

The necessity of taking a more human interest in employes has led the American Woolen Company to take out insurance policies in favor of its employes. The blanket insurance policy covers 35,000 employes and amounts at \$1,200 each to some forty million dollars.

### FOREIGN TRADE BLOCKED

IT WAS expected that with the end of war foreign countries might be unable to pay for needed goods with gold and that this might cause trade to languish,

but a somewhat unexpected factor is having a not less serious effect on the sale of American products in European markets.

This is the decline of foreign exchange. When Europe is buying our goods and not selling us hers there exists an oversupply of foreign exchange, which falls in price as the demand for it decreases. It takes more units of foreign money to equal a given number of units of American money, and this has reached a point where the difference tends to wipe out the profits the foreigners might make on the sale of the goods they buy from America. Foreign buyers cannot afford to do business at a loss and they drop their orders to the lowest possible figure. The condition of foreign exchange is a bar to business and the foreign trade of this country is much smaller than was expected. This affects the profits of exporters, the output of manufacturers and the profits on the operation of ships, to say nothing of the effect on transportation lines bringing the goods to American ports.

The problem of foreign exchange is engaging the best financial minds, and hard work is being done to work out a solution that will open wide the doors to foreign trade.

### COOPERATION GROWS Apace

THAT THE economic body thrives best where its members maintain an attitude, not of domination or competition but of cooperation, is demonstrated by many prosperous groups of cooperative peoples.

A few nations are distinguished for the extent to which cooperation is a factor in the daily life of the common people. Cooperative Russia, with some 2,000,000 members in such organizations, is one of the leaders, but the premier place belongs to Great Britain. There the cooperative system already embraces 3,500,000 persons, in over 2,500 societies engaged in the production and distribution of goods.

The British cooperative system is a power financially, rivalling some of the largest corporations of the United States. The total capital is about \$375,000,000 and the total trade is over \$1,000,000,000 annually, yielding a profit of nearly \$100,000,000 a year.

The members benefit by the usual cooperative-store plan whereby the members trading at the store receive back the profits on their trade at the close of the year. This according to the figures above amounts, with the factory profits added, to nearly ten per cent, or the equivalent of more than a month's trade a year for nothing. Such a system ought to be of interest to Americans as part of the campaign for the reduction of the cost of living.

The members during the war were able to get lower prices than others, even on articles for which the government set the price, because the annual dividend amounted to a reduction in price. Government restrictions hampered the full success of the cooperative system, by making it difficult to obtain the necessary supplies for manufacturing purposes, and for distribution through the cooperative stores. The work was impaired by the fact that thousands of the members were called into the army. Membership in the cooperative societies helped the soldiers because the societies made up to the soldiers the difference between their regular wages and their pay while in the army, several million dollars being disbursed in this way.

The cooperative societies, while officered by common workmen, are a living demonstration of the fact that the common people require no tutors, but are competent to manage their own affairs. The great system begun decades ago in the decision of a few workers in a humble cottage to join together in making purchases and has been prudent and efficient. The same wise management which raised the united cooperative societies to the position of the largest trade unit in Great Britain is now reaching out for extensions and improvements in many directions.

One of the developments is the purchase of large coal properties in Yorkshire whereby many of the cooperators can add coal to the list of articles on which they are able to save. This is in addition to a coal mine owned by the society in the neighborhood of Newcastle.

Large sums have been expended for farms and factories. The society paid during the war \$573,480 to extend its factories. It paid \$3,049,650 for new factories and workshops. In farms and other lands it invested \$3,333,960. The grand total of investment for land and factories, in war time, when progress should be slow, was nearly \$7,000,000. The amazing area of farms held by the cooperative societies is some 33,000 acres, in Lancashire, Cheshire, Yorkshire and Cambridgeshire.

If the enterprise were in America, one would never hear the end of it, but who outside of Britain's tight little isles has heard much of the prodigious enterprise of this combination of the common people! At the present time they are looking forward to the addition of the following to their already great list of businesses: flour mills, tanneries, jam factories, boot and shoe factories, corn mills, dairy farms, and other nameless odds and ends under the classification of "similar enterprises." Three weaving mills with a total of 1,900 looms are the property of the societies, and not satisfied, they are about to extend their textile interests, and build a large mill for the spinning of yarn.

In America the common people have swallowed, bait, hook and sinker, the delusion fostered and foisted upon them by the banking interests, that it takes special financial training acquired only at the lower end of New York City, to raise money. The British cooperative societies are securing the money to invest in their great extensions by issues of what they call "development bonds," in denominations of \$100, \$250, \$500, \$2,500, and \$5,000, up to a total of \$12,500,000 for the first issue. The societies agree that these bonds shall bear 4-1-2 per cent interest payable semi-annually and be redeemable at par after ten years; and judging by the past fidelity of the societies in keeping their promises they will meet this obligation the same as though they were "regular" financiers.

Another extension of membership and business is in process. The cooperative societies run their own banks, but up to this time have not been able to persuade the great British trades unions to place their banking business with them. Arrangements to this effect have been concluded, and in order to knit together more closely the interests of the British trades unions and the British cooperative societies, a great plan of agricultural and industrial development will shortly be announced for the benefit of both parties.

In the United States plans for cooperation in manufacturing and distribution of goods have never been the great success they are in Great Britain. The British people, it is said, are more thrifty and more honest in their dealings than the Americans, and both these qualities are required in a high degree to insure success in cooperation. Possibly under the lash of the high cost of living the American common people may become more thrifty, and no doubt enough thoroughly reliable people might easily be found in practically every community to make a success of American cooperative societies comparable to what is seen across the sea.

The idea of the Golden Age is a perfect cooperation among all mankind. It will be not merely a cooperation for business purposes as now, but a drawing together in a unity expressed by Paul, "That ye should speak the same things, and be perfectly joined together in the same mind and in the same judgment." (1 Corinthians 1:10) It will be the materialization of the brotherhood of man and the fatherhood of God.

### **MORE OIL THAN PIPES**

**T**HE OUTPUT rate of a bottle depends not on the size of the bottle, but on the size of the neck. In the oil industry the neck of the bottle is the capacity of the pipe line. The retail trade is capable of absorbing more oil, but it cannot be piped from the wells.

## POLITICAL, DOMESTIC and FOREIGN

### SHANTUNG AND THE STUDENTS

**B**ECAUSE its excellent harbor of Kiaochau is the shortest approach to Peking from the sea, and because the province, Shantung, of which it is the metropolis, excels in soil, climate, minerals and the industrious character of its people, Germany selected it as the basis of its raid in 1897. A corps of engineers visited the whole Chinese coast and having in view the German conquest of the world, had just concluded Shantung would serve its purpose best in China when, as a result of a quarrel, two German missionaries were killed by natives in the interior of that province. German troops were immediately landed, the occupation of the territory was announced, and a ninety-nine year lease of Kiaochau and outlying districts, together with railway and mining concessions, was demanded and obtained from the Chinese government. This lease was always particularly objectionable to the Chinese because the province was the birthplace of Confucius. Hundreds of thousands of the Chinese journey yearly to Confucius' tomb to do reverence to his memory.

Immediately after the outbreak of the war the Japanese government demanded the surrender of Kiaochau and the withdrawal from Japanese and Chinese waters of German men-of-war. The privilege of joining with Japan and England in the driving out of the Germans was refused to the Chinese, despite their request. The Germans were forced to surrender in ninety days.

A year after the outbreak of the war a demand, composed of twenty-one points, by which control of China was given to the Japanese, was suddenly presented to China by the Japanese. These demands came at a time when neither China nor the rest of the world were in position to do other than yield to them. It was strictly Japanese style and Japanese ethics (?) for Japan to present these demands at such a time.

In 1917 China followed the example of the United States in declaring war against Germany and notified her of the abrogation of the Treaty of 1898. Ten days later Great Britain and Japan entered into a secret treaty, under which Japan was to retain, in the province of Shantung, all the rights and privileges granted to Germany under that same treaty of 1898. The United States government, although a greatly interested party, apparently knew nothing of the existence of this secret treaty until February, 1919.

With a hypocrisy that would do credit to one of the

more professedly Christian nations engaged in the pastime of robbing a peace-loving neighbor, the Japanese claimed that they merely wished to develop the resources of Shantung so that its immense coal deposits may be used for warming the people. They also claimed that they wished to give the Chinese a better government than the Chinese can. But the facts are that the Japanese are morally bankrupt. They have made Shantung a base for the flooding of China with morphine, despite the fact that the Japanese government entered into a solemn covenant with the other nations of the world at the International Opium Convention at The Hague in 1912, promising to do all in their power to assist China in her fight against opium and drugs. At the same time that the Japanese are claiming this capacity for superior government they are engaged, in Korea, in a systematic and shameless massacre of Christian missionaries and Christian natives.

Early in the spring of the present year the students of Peking University, angered by the success of Japan and the failure of China, assaulted two of the three Chinese statesmen who negotiated secret treaties with Japan, based upon the piratical Japanese demand of twenty-one points above mentioned. The government arrested a number of the students, the Chancellor of the University resigned and disappeared because of threats against his life by members of the pro-Japanese party, and all the students in Peking above the rank of elementary schools went on strike. They divided into parties of ten, speaking against Japan and Japanese goods. They went to other cities all over China and organized the students similarly. Several hundred of the students were arrested in Peking. The next day the number of speakers was doubled and the arrests ran to over a thousand. The jails could not hold the students and they were shut up in the University buildings. The faculty met and telegraphed their protest widespread.

Merchants of Shanghai went on strike, followed by Tientsin and Nanking. Merchants of Peking and other cities prepared to join. There was talk of a strike against paying taxes. The government capitulated, sent delegates to the students to make apology, as demanded, re-instated the Chancellor, gave instructions to the delegates at Paris not to sign the treaty except with reservations as to Shantung and dismissed the three men accused of pro-Japanese affiliations.

The more we see of the Japanese government the

more we realize that it seems to have thoroughly absorbed the hypocrisy of the so-called Christian nations of the world. But not having had the advantage of centuries of training in making black appear white it is unable to cover up or conceal its true character. In these things which are now coming to light we are reminded of the Lord's words: "Beware ye of the leaven of the Pharisees, which is hypocrisy. For there is nothing covered, that shall not be revealed; neither hid, that shall not be known."—Luke 12:1, 2.

### WILL JAPAN RULE RUSSIA?

**S**O MANY conflicting stories reach us about Russia that we can not believe them all. One month appears a French plan for an encircling blockade, the next a peace offer from England, the third a decision to invade at once, the fourth a withdrawal of American troops because we are not at war with Russia, and then a sinking of Russian warships by the British just as the British Government announces that no more troops will be sent. At one time the newspapers tell us the Moscow Government has been conquered, the next we know is that it has attracted the entire Russian people to its cause. One day we learn that Moscow is deluged with the blood of offenders against the Republic and the next that there has not been an execution in two months. We are told that persons prominent in the British Government are increasing their holdings in Russian securities and then comes the news that Germany is driving a great army into the heart of Russia.

There is one fact that stands out of the Russian collection of misstatements, however, and that is that there is no real foundation to the alleged All-Russian Government of Admiral Kolchak in Eastern Siberia. The State Department message to Colonel House summed him up when it said, "He is surrounded and dependent on the support of reaction elements whose principal idea of government is the reconquest of former grafts. His army is being organized on old lines of Czarist discipline. Several units have already revolted against brutality of officers."

Kolchak's army was levied by conscription and his treasury filled by the reestablishment of the government monopoly in the manufacture and sale of ardent spirits, which the late Czar's government, to its lasting credit, abolished at the beginning of the war, at a loss of \$350,000,000 a year revenue. Aided by arms, munition and money supplied by the Allies he has dissolved local assemblies of elected representatives of the All-Russia Constituent Assembly, imprisoned some and shot others; he has suppressed the opposition press, closed up trades unions and imprisoned all grades of socialists.

But Kolchak is losing ground. He has lost Ufa, Perm and Ekaterinburg in quick succession and the Russian Republic has gained them and with them vast stores of coal, iron and gold, platinum mines with a yield three times as great as the rest of the world's in the days before the war, deposits of nickel, copper, zinc, mercury, silver, iridium, cobalt and asbestos. Kolchak's own supporters in Paris now claim that he can only hold his own with the aid of armed foreign support. The Cossacks in the South are slowing up. There is nobody left in Siberia and eastern Russia to oppose the Russian Republic but the Japanese. Which is the worst foe to democracy? What will be the outcome? Japan, so the rumor has it, is now pouring new thousands of troops into Siberia, while to America is granted the work of keeping the railways open to facilitate their westward flow.

The Scriptures show that we are in the time when every valley shall be exalted and every mountain be brought low. (Isaiah 40:4) We understand this to mean that the lowly and depressed will be gradually raised and the proud and autocratic will be humbled. We class Japan with the latter. Her course in wishing to exercise lordship over the 30,000,000 helpless Chinese republicans at Shantung does not appeal to us, and we do not believe the Lord will favor her ambitious designs in Siberia, or in Russia. How do we know that it would be better and safer for civilization to have the yellow races clamoring at the door of Europe than to let the Russians choose and operate their own form of government?

### THE NON-PARTISAN LEAGUE

**T**HERE are many farmers in the Northwest who feel, rightly or wrongly, that they have been improperly treated at the hands of the railway, grain and banking powers of the country. Not long ago they conceived the idea of trying to take the power out of the hands of men who, when a farmer wanted to buy seed in the Spring and came into a bank to borrow \$75, was asked to sign a note for \$90, and pay interest on that amount at 15 per cent. They did this with a rush in North Dakota, because they became convinced that their legislators were crooked because of politics, and replaced them with non-partisan men who did what the farmers wanted done. Calvin Townley was the man who started the North Dakota movement, a plain farmer stung to action by what he considered the untrustworthiness of both the political parties operating in the state.

Townley was recently tried and convicted in a wealthy county of Southern Minnesota of conspiracy to discourage enlistments in the war against Germany. Each member of the jury that tried him was sufficiently



wealthy to own his own automobile; no member of the Non-Partisan League was allowed a place in it and the defense and one member of the preliminary panel openly charged every juror with acknowledged bias against the farmers' movement. The Government's own certificate of Townley's loyalty, and its acknowledgment of his aid, was not allowed in evidence. Townley was denied his request to dismiss his lawyers and make his own plea to the jury and since the close of the trial indictments charging perjury have been sought by the defense against the prosecuting attorney and the chief witness.

The prosecution failed to produce documentary evidence of opposition to the war in any of the League declarations or instruction sheets or letters to organizers, but the defense was able to show that organizers were specifically commanded to not in any way discourage the Government's war policies, but to support them. Testimony for the defense was excluded unless it was in the nature of a direct answer to the specific charges of the state.

The newspapers of the country are not very jubilant over the conviction of Townley. The farmers are now being joined by organized labor in Minnesota and Washington on a programme of public ownership and operation of railways, steamships, banks, stockyards, packing plants and grain elevators, largely as a result of the Townley trial. The surest way to make a movement grow is to persecute it.

A true statesman can not afford to seek for power, but that is the first thought of every politician and every monarch. The possession of power makes a politician or a monarch blind to what should be his first and last thought, that of securing freedom and justice for the individual. If there are people in the Northwest who have become distrustful of both the great parties their confidence is not to be gained by force.

There was a king long ago by the name of Rehoboam who received from some of his counsellors some very bad advice on the subject of force. The people felt that Solomon had not studied their interests sufficiently and desired that their burdens be lightened. Rehoboam was advised to tell them, and did tell them, "My father made your yoke heavy, and I will add to your yoke: my father also chastised you with whips, but I will chastise you with scorpions", and the result was an everlasting proof of his bad statesmanship.—1 Kings 12:1-20.

### THE MEXICAN OIL SITUATION

PRIOR TO 1884 the Mexican Government required oil companies to file notices stating where and when they intended to drill wells and no operations could be undertaken until the desired official permission was

received. In that year, under the administration of President Gonzales, the Mexican Civil Codes were so amended as to make these notices unnecessary. In 1917 the revised Mexican Constitution restored the arrangement in effect prior to 1884, claiming, and not without justice, that "The ownership of lands and waters within the limits of the national territory is vested originally in the nation" which has "at all times the right to impose on private property such limitations as the public interest may demand as well as the right to regulate the development of natural resources, which are susceptible of appropriation, in order to conserve them and equitably to distribute the public wealth."

In pursuance of these principles a tax of \$1 an acre was levied on all oil acreage held by private owners, whether or not the land was being developed. Subsequently this was reduced to 60c, which was paid under protest, but when it came to filing notices of when and where they would drill, the companies declined to comply with the regulations, with the result that government troops appeared on the scene and prevented further operations. On May 1, the Mexican Congress was convened in extra session and is now endeavoring to fix upon legislation for satisfactorily reconciling the individual interests of the oil producers and those of the nation.

Few nations of the world have such a wealth of undeveloped natural resources as Mexico, a soil capable of producing all the cereal crops and 90 per cent of all the known fruits of the world, vast tracts of timber, including many of precious hardwoods and dyewoods, a wide range of climate, and every known mineral, with oil fields which exported more than 63,000,000 barrels in 1918. It is not to be wondered at that Mexico desires that the Mexican people should have a share of the benefits that will accrue from the development of these resources.

Unconsciously, the Mexican Government is trying to apply on behalf of the Mexican people a principle of the ancient Jewish law under which the Jew could not alienate from his posterity the land which had once been granted to his ancestors. By misfortune or mismanagement he could lose control of it for a time, but once in every fifty years it must automatically come back into his possession or that of his children, all debts against it and against its owners being cancelled.—Lev. 25:1-55

This Jubilee arrangement was an illustration of the plan by which God purposes to restore to human kind all that was lost in Eden, and this restoration era is at hand; we are standing on the threshold of "the times of restitution of all things, spoken by the mouth of all the holy prophets since the world began."—Acts 3:21.

### FRENCH DEBTS AND DISCONTENT

THE FRENCH GOVERNMENT evidently made a mistake in not accepting Mr. Wilson's programme whereby Germany would have been made responsible directly for the area which she devastated. France would thus have been able to secure a far greater sum than she is able to secure in indemnities, and it is impossible for her to divide these indemnities among the owners of the devastated properties without apparently favoring some at the expense of others and thus causing dissatisfaction.

The national debt of France is now 200,000,000,000 francs, which is more than half her national wealth. It is obviously impossible for her to pay the interest on this vast sum without resorting to heroic measures. The minister of finances, several months ago, proposed a tax of 25 per cent on capital as a step toward cutting down this colossal debt, but the propertied classes objected and he abandoned his programme completely, having accomplished nothing by it but to send the cost of living still higher. The Parisian people, realizing that increased pay only means increased prices, are now demanding a complete reorganization of the whole system of production and distribution.

The frequent suppression of newspapers during the peace negotiations, or their appearance with long blank columns, created a bad effect upon the Parisian people, more especially as it became known that the articles prohibited in Paris had already appeared in English papers. Of the 100,000 soldiers brought to Paris to suppress possible May Day riots, many regiments had to be withdrawn and replaced after the soldiers had come in contact with the Paris people, as they were no longer dependable.

In the army and navy itself there were numerous outbreaks of discontent during the war the news of which never appeared until recently. The raising of the red flag on four ships of the Black Sea Fleet, the forming of Soviets at Toulon and the revolt of three artillery regiments at Toulouse all show that we are in just such "a day of wrath, a day of trouble and distress, a day of wasteness and desolation, a day of darkness and gloominess, a day of clouds and thick darkness" (Zeph. 1:15) as the prophet shows will precede the day when the whole world will "call upon the name of the Lord, to serve him with one consent."—Zeph. 3:9.

### THE ISOLATION OF VIENNA

VIENNA was once the great center of 50,000,000 people. Its population of 2,000,000 was not too great to be supported by such a hinterland, but the erection of the new states of Czecho-Slovakia, Hungary and

Jugo-Slavia has left only 4,000,000 rural population attached to Vienna, and Vienna can not live on these.

Of the 6,000,000 people of Austria 3,000,000 are industrial, and if some means could be found whereby Vienna could continue to be the financial, business and railroad center of what was once Austro-Hungary, it could continue to exist, but as it is these 3,000,000 have little to do and practically all the enterprises of the city are stagnant. The result for the moment has been to turn the city into one vast Monte Carlo, but this can not go on; people can not continue for long to live by gambling from one another. Somebody must get to work or they will all starve in a heap.

Thoughtful men have proposed three remedies: one is union with Germany, but this the Allies will not permit, another is communism, which is impractical. The thing that is most desired by the majority of the people is that America should take over the country and develop it. It is the claim of the Austrians that we have plunged mid-Europe into chaos and that we alone have the capital and the business ability to pull it out.

The isolation of Vienna has been the opportunity of Italy. She has been quietly buying up all the steamship securities once held throughout Austro-Hungary, thus obtaining at a small cost the control of the merchant marine of the Adriatic, the very thing she sought to gain by the possession of Fiume, now in her temporary possession as a result of D'Annunzio's raid.

Vienna has been for centuries the greatest seat of Roman Catholic power in the world. In its present idleness and impending poverty and degradation we see a part of the "judgment of the great harlot that sitteth upon many waters."—Revelation 17:1.

### ON WHOM SHALL WE RELY?

ARE WE READY to give up our old time trust in righteousness and place it wholly in force? Do we still believe, "Blessed is that nation whose God is the Lord"? Do we really mean, as our coins declare, "In God we trust"? There are lots of people who are perfectly frank in saying they prefer to put their trust in the worn out formula that "The best way to keep the peace is to be prepared for war." And there are people whose temporary interests are best served by a widespread manufacture and use of munitions of war.

The secretary of one of the great international finance companies is said to have made the remark at a banquet, "If we can only get this country into the war we can get any damned thing we want." Now he is said to be alarmed at the discovery that some of the returned soldiers come back from abroad sadly brutalized by their experiences.

## AGRICULTURE *and* HUSBANDRY

### CULLING POULTRY

**C**ULLING serves two purposes: First, it insures that the feed will be consumed by the better-producing hens, thereby increasing the profit. Second, it makes it possible to save those best suited for breeders, both on account of their better production and on account of their superior strength and vitality, qualities essential to layers to stand up under the severe strain of heavy laying. Weeding out the poor hens gives those left more room and a better chance.

Culling should be continuous throughout the year, of any hen which is sick, which is emaciated, or which shows evidences of nonproduction, weakness, or poor vitality.

The whole flock should also be given a careful and systematic culling at some one time with the object of dividing them into two lots, one the better producers and the other the poorer producers. From the better producers it is also desirable to pick out as many of the best as will be needed for breeders. Band or otherwise mark these hens so that eggs from them only will be saved for hatching. Market those selected as the poor producers. Save for laying and breeding those selected as the better producers.

Hens which show indications of laying in August or September are those which on the average have been the better producers for the year. The better producers during the first laying year are those which will be the better producers in subsequent years. Hens showing indications of having been good producers throughout the year should be retained for the next year regardless of their age, but relatively few hens will prove to be profitable producers beyond their second laying year if of the heavier breeds.

Sickness and lack of vigor are indicated by listlessness, inactivity, tendency to stay on or under the roost during the day, poor appetite, dull eye, dark or bluish color of comb, long toe nails, snaky or crow head, and the tendency to go to roost early in the evening and to be one of the last to leave the roost in the morning.

Molt is one of the most valuable and easily applied tests of production. Hens cease laying completely or almost completely during the molt. The better producers lay late in the fall, and therefore molt late. Late molters also molt rapidly as a rule, while early molters molt slowly. Therefore, save the hens which have not molted by August or are only just beginning to molt late in September or in October, and discard those which have

finished molting or are well into the molt. The hens which molt last, provided they are otherwise desirable, are the best ones to save for breeders. A hen which has not molted at this time is characterized by soiled and worn or broken plumage, which is especially evident in the tail plumage, while those molted or molting show clean, fresh plumage or growing feathers. Culling the early molters just as soon as they begin to molt is one of the easiest ways to weed out poor layers.

In those breeds having yellow legs, the color fades out slowly as the laying season advances. The rapidity and degree to which the yellow color is lost depends to a considerable extent upon the heaviness of laying. The yellow color goes out from the scales on the front of the shanks first and finally from the scales on the rear. Hens on grass range do not lose the shank color as quickly or completely as those in bare yards. Some soils also tend to bleach the color of the legs. Hens showing strong or medium yellow shank color are almost certainly poor layers, but occasionally poor layers may show pale or white shanks. In breeds such as the Rhode Island Red where the shanks may show horn color as well as yellow, the horn must not be confused with the yellow. The rear and sides of the shank show little of this horn color. A sick hen or one in poor condition may also show pale shanks.

In breeds having yellow beaks, the same principle applies as in the case of the yellow shanks. However, the color is lost from the beak more quickly than from the shanks and is also regained more quickly. The lower beak bleaches faster than the upper, but may be used where the upper is obscured by horn or black.

In yellow-skinned breeds the yellow color of the skin immediately about the vent is quickly lost with laying, and is quickly regained after laying ceases. White or pink vent color generally indicates that the hen is laying, while a yellow vent means that the bird is not laying. The vent of a hen laying heavily is large, expanded, or moist, while that of a hen not laying is comparatively small, hard, puckered, and dry.

When a hen is laying or about to lay, her comb is large, waxy, full of blood, and bright red in color. When not laying, the comb is small and shrunken, pale or dull in color, comparatively hard, and covered with whitish scales. A dark or bluish color indicates sickness. The changes in the wattles and ear lobes are similar to those of the comb, but not so marked.

As a hen stops laying there is a tendency for her to

take on fat. This is noticeable in examining the pelvic bones, the two bones which can be felt as points on either side of the vent. When the hen is laying, these bones are comparatively flexible. When she is not laying, they feel thicker and less flexible, due to the fat which has accumulated there. The spread or distance apart of these pelvic bones is also a valuable indication of whether or not the hen is laying. When laying they are wider apart than when not laying. The spread can be roughly measured for practical purposes by determining how many fingers can be laid between the bones. If the spread measures two fingers or less, the probabilities are that the hen is not laying while if the spread is greater, she is probably laying. In measuring this spread the size of the hens of different breeds, with the corresponding natural difference in the spread, must be kept in mind.

A hen laying well is a good eater. Her intestines are, therefore, fuller and more distended, and require more room than when she is not laying and not eating so much. When laying, the ovary and oviduct are of greater size and require more room. To provide this extra room, the distance from the rear end of the keel to the pelvic bones increases, with a consequent increase in size of the abdomen. A spread of three or more fingers in the smaller breeds, such as the Leghorn, and four or more fingers in the larger breeds, such as the Plymouth Rock, indicates that the hen is in a laying condition. A spread of less than three fingers in the smaller breeds and less than four fingers in the larger breeds indicates that she is not in a laying condition.

When the hen is laying, the greater size of the abdomen, together with the lessening tendency to accumulate fat at this point, results in a soft, flexible abdomen, suggesting, when handled, the texture of a partly milked-out udder of a cow. When laying has ceased, the abdomen grows smaller, or contracts, and it feels, when handled, harder and less flexible.

In culling the flock remember that it is safer to depend upon the agreement of a combination of several characteristics rather than to select by any one alone. With this in mind cull these hens: sick, weak, lacking vigor, inactive, poor eaters, molted or started to molt, with small, puckered, hard, dry vents; with small, shriveled, hard, dull-colored combs; with thick or coarse, stiff pelvic bones, pelvic bones close together, small spread between pelvic bones and rear end of keel, and full, hard, small abdomen. In breeds with yellow skin and shanks, the discarded hen should also show yellow or medium yellow shanks and yellow beaks and vents.

Save these hens: healthy, strong, vigorous, alert, and active; good eaters; not molting or just beginning to

molt in September or October; with large, moist vents; with large, bright-red combs; thin, pliable pelvic bones well spread apart, wide spread between pelvic bones and rear end of keel, and large, soft, pliable abdomen. In breeds with yellow skins and shanks, the hens saved should also show pale or white shanks, and pale or white beaks and vents.

The culling of live-stock which is constantly going on upon every well-managed farm is something akin to what is going on in the present operations of divine providence with respect to our race. The gospel was sent forth to the Gentiles "to take out of them a people for his name". (Acts 15:14) Those gathered by the gospel call are depicted as of every sort, and after the full number to suit the divine purpose have been gathered into the gospel net a certain kind of separation is carried on. "The kingdom of heaven is like unto a net, that was cast into the sea, and gathered of every kind: which, when it is full, they drew to shore and gathered the good into vessels." (Matt. 13:47, 48) There is nothing in this to intimate that those unsuitable at the first sorting may not grow up and at a later time be suitable for another purpose. The object of gathering out the "people for his name" is declared to be the blessing of all the residue of mankind.—Acts 15:17.

#### PURPOSES OF PRUNING

UNDER NATURAL conditions plants grow thickly; one crowds upon the other, and in that way all superfluous individuals as well as branches are crowded out. Under artificial conditions plants are placed at distances which prevent this natural pruning. The increased amount of food available to plants under artificial conditions frequently excites growth, so that the distance between the different whorls of branches, which naturally develop from near the end of the growth of each season, becomes great, giving the plant an open form and the appearance of having been built by stories. By a judicious use of the pruning knife the gardener shortens the annual growth, thus reducing the distance between the branches formed in successive years, with the result that the tree has a more compact and symmetrical form.

Extreme examples of the necessity of heading-back are almost invariably met with in the case of poplars grown for decorative purposes. Among orchard trees none presents greater necessity for annual treatment in this way than do the peach and the Keiffer pear, although nearly all of the fruit and ornamental trees while young require care in this particular.

Another reason why pruning is necessary with plants grown under artificial conditions is that some of our most

desirable ornamental trees and shrubs have an unfortunate natural habit of growth which results in a method of branching which makes trees unable to withstand high winds or snows. It is the gardener's business, therefore, to guard against such branching and to so direct the growth of the tree as to force it to distribute its branches in such a manner as will best prevent it from being broken during high winds or heavy storms. A notable example of this undesirable system of branching is had in the silver maple. This tree almost invariably branches so as to throw two strong shoots from the point of branching, each of which grows at about the same rate, with a very narrow angle between them; the result is, that as the branches increase in size, the union between them not being perfect, severe pressure placed upon one of them has a tendency to split them apart. Everyone who has observed the silver maple has frequently seen large trees badly broken or split after severe wind storms. If the tree trainer had given careful attention to the arrangement of the branches during the early life of such trees, these undesirable results, which are so fatal to successful park adornment, might have been avoided. Pruning, then, is necessary in order that the habits of a tree which are naturally bad may be corrected.

With fruit trees pruning is important because it can be used for the purpose of checking the growth as well as for the purpose of thinning the fruit. It is an old and well established maxim among fruit growers that whatever tends to check growth increases the fruitfulness of the plant. Pruning can be used to accomplish this result.

Contradictory as it may at first thought appear, pruning is frequently resorted to to accelerate or augment growth in plants. Weak growing nursery stock is frequently severely cut back during the resting period in order that all the strength of the root may be forced into the formation of a single upright stalk which will make the plant a salable nursery tree. Severe pruning is also resorted to with older plants for the purpose of rejuvenating them. Old apple trees and old shade trees are frequently so treated, in order to induce them to throw out strong new shoots.

With such plants as the peach, which bears its fruit upon the growth of the previous year, pruning is of great importance, as the growth can reduce the crop in proportion to the capacity of the tree. Successful fruit growers thoroughly understand the importance of gauging the quantity of fruit allowed to be borne by a tree to the capacity of the tree, the ability of the tree in this respect being measured by the rate of growth, the variety, and the soil and climatic conditions to which it is subjected.

Pruning is of prime importance also in controlling the action of some of our most dreaded plant diseases. The study of pear-blight, for instance, has shown that this disease is very generally communicated from plant to plant by insects, through the pollen, as they pass from blossom to blossom, or, later in the season, from shoot to shoot. It is also believed that the disease can be carried by the wind and that infection can take place while the vegetative processes are active and the tissue at the ends of the branches can easily be entered by the germs of the disease.

The way in which pruning is of service in controlling pear-blight is as follows: It is the natural tendency of the pear and the apple while young to form fruiting spurs upon the body and larger branches of the tree. These fruiting spurs produce blossoms from year to year, which are in turn as liable to be visited by bees or other insects carrying the destructive spores of the pear-blight as are the blossoms at the extremities of the branches. It is evident, therefore, that a blossom situated upon the body or larger branches of a tree becoming infected by this disease would communicate it directly to the framework of the tree, with the result that the tree would be fatally injured; but if these fruiting spurs are all eliminated from the body and larger main branches of the tree by careful pruning the possibility of infection in this way is overcome. The available means of gaining entrance to the tree by this parasite is confined to the smaller branches, which, if affected, can be cut away without severely injuring or disfiguring the tree. This is, in brief, the method of successfully controlling the pear-blight. It is purely a mechanical operation, but one which requires a rigid execution of the principle of removing all fruiting spurs from the body and main framework branches of the tree as well as cutting out all infested shoots in other parts of the tree.

In the case of the dreaded plum and peach rot the ravages of the disease can be stayed to a limited extent by the removal of branches which interfere and would bring the fruit upon adjacent branches in contact, for it is well known that this disease is readily communicated from fruit to fruit if they come in contact. It is the aim of successful growers of peaches and plums to have the fruits so distributed upon the branches that they shall not come in contact even when fully developed. It is the aim of the peach grower to have the fruits at least 6 inches apart, while it is the object of the plum grower to have them 2 1-2 to 4 inches apart.

The gardener, therefore, has as reasons for pruning trees the removal of dead, dying or broken branches, the removal of branches in order to prevent the breaking or disfiguring of the tree in later years, the removal of

branches and fruit spurs for protection against infectious diseases, and the reduction of the annual growth in order to reduce the crop in proportion to the capacity of the tree.

The Creator never intended that even in a perfect earth the trees and shrubs would not need human care. "The Lord God took the man, and put him into the garden of Eden to dress it and to keep it" (Gen. 2:15), and the more he knows about how to dress and keep the earth's surface, and the better use he makes of his knowledge, the more wonderful will be the results obtained. In several places in the Scriptures the heavenly Father himself is likened to a vine dresser, notably in John 15:1-8, showing that the pruning of vines and plants is necessary to their well-being, and especially to their fruit-bearing.

### BUYING AND FATTENING BEEF

**S**TEERS are ready to sell when they get so fat that the back apparently sinks a little, and an indentation appears deep enough to hold a cup of water so that it will not run down the sides. An animal ready for the block has two backs, one which grows on the steer, and the other put on by the feeder through the use of plenty of the right kind of feed.

The first lap in profitable buying is to buy the right kind of a steer. Cattle which are merely hide and bones are hard to judge. Feeders should average 900 to 1,000 pounds, of good quality and in good flesh. A few poor steers in a load will bring down the price of the whole load. Angus cattle get into very fine condition, make good gains and are economical feeders.

Desirable feeders are built like a block set on four pins, as low-hung as possible, should be straight along the back, wide back, thick loin, and deep, well-arched ribs; should carry out well behind, have wide chests and round shoulders fitting snugly to the body, with a short thick neck, wide, short head, quiet eyes and lips not too thick.

Cattle which are curried daily and fed on shelled corn, oats, oilmeal, and timothy and clover in limited quantities, with a little fodder now and then, will average to gain three pounds a day. The shelled corn is gradually increased until each head is getting a half bushel per day and the oilmeal until they are getting 3 lbs. per day. The steers like to be curried and currying them makes them friendly and in good condition to take on fat. The currying also makes the cattle more attractive to the buyer. In the spring the corn gets dry and needs to be ground.

Steers can be fattened by the above process in four months time and should be disposed of at that time, as

it does not pay to carry them longer. The ideal steer is rectangular and even from front to rear.

Too much grass gives meat a watery finish, and it sells at a discount. Too much green silage produces the same effect. Corn makes a fine white fat. The color of the best meat is bright red. Cottonseed meal firms up the flesh and adds to the quality. Steers eighteen months old are not sufficiently matured for prime cuts and carcasses past three years are too coarse in meat and uneven in finish and quality. The bones of the older animals are flinty, and layers of lean meat are stringy and tough, and the fat is yellow.

The raising of live-stock is one of the oldest occupations of man, and if you don't believe they knew something about it in olden times read Genesis 30:31-43 and see how Jacob, after having his wages changed ten times by his avaricious father-in-law, finally managed to get the better of him by using his knowledge of how and when to make use of pre-natal influences upon the unborn cattle.

### SKY COLORS

**T**O THE FARMER the colors of the sky foretell for him the weather conditions on which his work may depend. He cannot rely on the Weather Bureau for the conditions for his particular farm, and naturally learns enough to forecast accurately his own weather.

Sky colors have been from of old an index of the meteorological. Shakespeare gives us the commonly accepted index of foul weather:

A red morn that ever yet betokened  
Wreck to the seamen, tempest to the field,  
Sorrow to the shepherds, woe unto the birds,  
Gusts and foul flaws to herdsmen and to herds.

On the other hand red in the evening indicates the opposite of the morning red.

If the evening sky, not far up, but near the western horizon is yellow, greenish, or some other short wavelength color, the chances for good weather are excellent, for these colors indicate less condensation and a drier air than does the evening red.

But an evening sky, devoid of these colors, and overcast with a uniform gray indicates an air saturated with moisture and ready to drop down rain or snow.

Shakespeare from his depth of resource gives this index of a clear day:

The weary sun hath made a golden set,  
And by the bright track of his fiery car  
Gives token of a goodly day tomorrow.

We would like to say that our Lord referred to weather signs in the familiar passage Matthew 16:3, but these words are missing from the oldest Greek MSS. and are evidently no part of the Divine record.



## SCIENCE and INVENTION

### OUR DYE INDUSTRY IN DANGER

IT WAS RECOGNIZED during the war that the success of the American dye industry depended on the continuance of the war and that peace would see conditions resumed that had made the industry negligible. Peace is at hand, and ways and means are now being suggested for saving the millions invested in the business.

Owing to the German propaganda Americans had been led to believe that good dyes could not be made outside of Germany and that dyes made elsewhere would always be more expensive than the German made product. This was attributed to the patient research of German chemists, the free use of their services made in all German industries, the alleged thoroughness of German scientific education and what might not generally be known, that German chemists were so plentiful that good men could be hired for thirty dollars upward a month.

Until the European war broke out in 1914 there was practically no dye industry in the United States. The development of the industry had been opposed by immense textile interests on the plea of the necessity of keeping costs down, which the necessary protective tariff would have raised during the development period of the business. Out of the 900 different colors on the market American dye plants produced nine and was supplying about ten per cent of the market requirements. German concerns supplied 90 per cent of the dyes used and produced an infinite variety of hues, one plant alone listing over 11,000 colors.

The war placed American manufactures, totaling some three billion dollars, in a predicament. Most colors were simply unobtainable, and even the government found itself embarrassed to find dyes to print its stamps and currency. Dye works produce and use chemicals of value in the manufacture of explosives, and the United States found itself deprived of a supply of substances essential to the prosecution of war. The government immediately encouraged the building up of an American dye industry suitable for both peace and war purposes and hundreds of millions of dollars were invested therein.

Practically the entire American dye business is in danger of destruction at the hands of a German competition which Congressman Longworth describes as a "competition of an adversary so powerful, so fierce and so desperate that no practicable rates of duty would offer

a really effective defense." Not merely is the dye industry at stake, but the entire fabric of chemistry and allied sciences. The solution proposed to protect the interests of American chemical industry and science is a system of licensing the importation of dyes and other chemicals on such a basis that if a substance is being produced by American concerns it shall not be imported at all by foreign makers until the American plants are sufficiently well established to meet competition on equal terms.

As long as nations make war on one another it is absolutely necessary to practice self-preservation, even though production costs may run higher. In due time this condition will be changed, for it is promised that Jehovah in the Golden Age will "scatter the people that delight in war."—Psalms 68:30.

### DIRIGIBLES and PHOTOGRAPHY

A USEFUL byproduct of the Great War is aerial photography, which gives promise of being widely used hereafter in the laying out of railroads, highways, irrigation canals, dams, timber reservations, park sites and boundaries. A good vehicle for the aerial photographer is the dirigible.

A dirigible can be stopped in midair, and raised or lowered to any altitude desired; it can be moored to a tree and can get along without shelter. During the war it was not uncommon for dirigibles to be moored in the open for months without damage. There is no vibration, hence long exposures can be made by the photographer and thus the best results obtained. There is plenty of room to work and to develop negatives, there is no occasion for haste, and there is no nervous strain upon the photographer while he is aloft. The first cost is about \$25,000 and the operating cost about \$1,200 per month. Helium can now be obtained in quantities for lifting purposes, and is safe, where hydrogen is always treacherous. Landing is simple; on calm days a ten-acre area will answer the purpose.

In photographic mapping an area of approximately two square miles is photographed at each exposure 10,000 feet above ground; at lower height the area of course is less.

"Surely the wrath of man shall praise" the Creator. (Psa. 76:10) Out of the Great War have come and are coming many inventions and discoveries that are fraught with blessings to mankind. Who would have expected war to bring a new method of mapping the earth!

### TO BLOW EARTH TO PIECES?

**W**EIRD STORIES have been published of master minds discovering dread agencies of untold potency which the discoverers employed for the weal or woe of humanity. But that such power might be more than a fantasy was not given serious thought.

Sir Oliver Lodge, well known scientist, declares definitely the possibility of the discovery of such a source of power. He calls it "atomic energy" and notes that the first practical use of this power is in wireless telephony. This is beneficent enough, and there are endless other peaceful uses of atomic energy. Sir Oliver suggests that a single ounce would contain enough power to raise the entire sunken German fleet and pile it on top of the mountains. Just what use the fleet of battle ships and destroyers would be in a world where a pinch of the new power would be sufficient to wipe the fleet off the map is not told by the eminent scientist. The development of "atomic energy" would solve the power problem, for it would take the place of the cumbersome plants now employed for extracting from coal a fraction of its latent energy. The Standard Oil Company might suffer from the general adoption of atomic energy, unless it should first corner the market and dole it out at so many dollars a grain. The multitudinous owners of Fords, however, would rejoice in getting away from gasoline and having in its place a grain of atomic energy powder in an engine of vest pocket dimensions.

Sir Oliver's hope is that the world may not get hold of "atomic energy" until it has brains and morality enough to use it properly. Under present conditions the discovery of this power would be hailed as the most wonderful chance yet to monopolize the good things of the planet and reduce the inhabitants to perpetual slavery. But the Word of God leads one to the belief that men are destined to make a degree of progress little dreamed of, for instead of being imperfect it is promised that the race will progress up to absolute perfection, mental, moral and physical, and that these supermen will be those spoken of where it says, "The perfect shall remain in the land". (Proverbs 2:21) These giants in all the best there is in man are Biblically known as "the righteous" and are thus spoken of in the incoming Golden Age: "In his days [the Golden Age] shall the righteous flourish; he will never suffer the righteous to be moved; and the righteous shall inherit the land, and dwell therein forever."—Psalms 72:7; 5:12; 37:17; 55:22; 37:29.

Among the professions made by this eminent scientist is that he is a spiritist. If this is so, it is of interest to note that spiritism is another name for demonism, or the cultivation of relations with evil spirits. Possibly

demonism had something to do with the announcement of the tremendous force of "atomic power," and demonism may possibly have something to do with the premature discovery of this power, before men are good enough to properly handle it, for nothing would suit the purpose of demonism more than the introduction of an irresponsible force in the world to complete the perplexity, distraction and distress of humanity.

### WAR INVENTIONS USEFUL

**N**OW THAT the Great War is over we find that we can use in peace a number of the war inventions. The gas mask is a necessity for firemen and rescue squads in mines, and has been for years, but the war has greatly simplified and improved its construction and hundreds now understand how to make and apply these masks who did not know before the war.

Beneath every great city are tunnels reaching far into the bowels of the earth in which live millions upon millions of rats, who are naturally breeders of pestilence and wholly a nuisance. By means of poison gas pumped into the outlets of their holes great quantities of these rats can be killed and their carcasses automatically deodorized, disinfected and shriveled up.

Especially valuable for communicating with entombed miners and with ships lost in the fog are some of the instruments employed to direct the whereabouts of sapping operations on land and submarine movements at sea.

While the government is making efforts to utilize airplanes for mail transportation it has been found that they are of real value in the surveying service. An airplane recently flew over Washington along a specified route and took all the photographs necessary to a complete, detailed composite view of the city in a little over two hours. Copies of these photographs are now on exhibition in various parts of the country and are remarkable for their clearness.

War is an evil, but not an unmixed evil, because there is one thing that it yields which is of real value to mankind, and that thing is knowledge. Much of this knowledge is worthless because it cannot be put to good ends, but one general effect of every war has been to spread knowledge of many subjects far and wide, among people many of whom would never have made any mental progress worth mentioning except that it was required of them.

The prophet shows that one evidence of the incoming Golden Age would be a general increase of knowledge on all subjects (Daniel 12:4), and the fact that we see all about us evidences of such enlightenment should be proof to us that "the night is far spent and the day is at hand."

## HOUSEWIFERY and HYGIENE

### HYGIENE VERSUS CORDIALITY

**I**T WAS a bit of hygienic wisdom that Health Officer Gaub of Montclair, New Jersey, uttered when his bulletin said, "Don't shake every paw that is extended to you." Certain diseases are communicated by contact. During an epidemic of grip a business concern improved the sickness record by having the door knobs continually wiped with an antiseptic solution. Less cases occurred after the precaution than before.

In the literal as well as the figurative sense no one knows whose hands are clean. Not all persons are as careful about personal cleanliness as they might be. Some use something besides the hygienic handkerchief for cleaning their noses. A small percentage have skin diseases or sores with which their hands come in contact. A still less number have tuberculosis or other infectious diseases, and can communicate the deadly germs via the hand. A very few are carriers of typhoid or of sexual disease germs. Promiscuous handshaking makes one liable to catch some of these germs.

Officer Gaub's advice has some sound medical opinion back of it: "The clean hand habit is a good one, and should be adopted, for it means much in promoting community health, due to the fact that the human hand has been shown to be the medium through which many diseases have been spread. Handshaking is almost universal, and while it stands for friendliness and sociability, it has its dangers. Medical men are agreed that the infection of influenza is often conveyed in this way."

Possibly other customs might be put under ban. No woman should kiss another on meeting or parting. No one ought to eat from a spoon or fork, and certainly not with such indecorum as from a knife, that another person has used, unless the eating tool has a certificate of sterility. Detectives, maintained at public expense, should see that no unmarried persons, or children especially, kiss one another. Street railway and railroad car seats should have removable and systematically sterilized covers. Handshaking should be made "safe for humanity" by laws requiring any person before grasping another's hand to see that the hand is properly and suitably inclosed in a germ proof glove, or in the case of the very poor, a mitten or stocking or a piece of cloth or paper. Provision should be made for all persons appearing in public to be hygienically clad in antiseptic gauze or in medicated cotton. In due time the public would become educated up to the correct standard of hygiene, especially if offenders were ferreted out by a sufficiently

large and alert force of medical spies. But we spare you.

The presence of germs is undeniable, but the principal error in the foregoing assumption is that liability to disease comes chiefly from the fact that the germs are upon the body. Well authenticated medical opinion states that every person is literally covered with germs and that every mouth and nose is a reservoir of all kinds of these lower forms of life. The hygienic thing is to build up the germ-resisting powers of the people so that the bodily powers overcome the efforts of the germs to find breeding grounds in weakened tissues. Persons of good vitality can shake hands and still be safe, if they are reasonable followers of the advice posted conspicuously in a large hospital :

"IF YOU WANT TO LIVE WASH YOUR HANDS."

One of the results that will be the crowning achievement of the healing arts will be the eradication of deadly germs from the earth, as has been done in some localities where a successful fight has been waged against yellow fever. As the Golden Age progresses this will undoubtedly be done, and simultaneously vitality will be built up to perfection. Then "the inhabitant shall not say, I am sick" (Isaiah 33:24), but every one that follows the beneficent guidance of the coming age will gradually find that "his flesh shall be fresher than a child's; he shall return to the days of his youth." —Job 33:25.

### NEUROTICS IN TIME OF WAR

**T**HE WAR did something for neurotics; it helped to discover them and thus made it possible to do something for them. A sufferer from neurosis does not know what ails him, nor does his physician, but the malady is very real and its cure easy. The *symptom* is a more or less imaginary illness, generally diagnosed as gastro-intestinal trouble, which totally unfits the sufferer for service in the battle-line, and results in his being taken to the hospital. Over 11,000 cases came to light in the army, and it is estimated by the physicians who came in touch with these cases that probably 10 per cent of all the cases in hospitals of all kinds are cases of neurosis which have not been identified as such. The old cure for neurosis in time of war was flogging or imprisonment; such a cure is really the torture of the sick. What the neurotic needs is light employment in the open air, or in any position in which the strain upon the nerves is slight. The neurotic can work, and accomplish good results, but not if egged on by fear or any other

motive calculated to impair his weakened nervous system.

"Nerves" are a reality not recognized by those who do not have them. The Scriptures indicate that along toward the last of his career, when our Lord was weakened by the healing of others, all at the expense of his own vitality (Greek, *dunamis*—Mark 5:30), his nervous system was badly shattered. The sweating of drops of blood in the garden of Gethsemane indicates this.

### MOUNTAIN RESORT IN THE CITY

**T**HIS SEEMS hardly possible, in view of the fact that most of the great cities of the world are built at tide water, but such progress was made during the Great War in the construction and management of mammoth gas bags that it is now seriously proposed that airships be used as hospitals for the cure of patients suffering with tuberculosis.

There are not many of earth's millions that can afford to go to the mountains when afflicted with early pulmonary tuberculosis, but it does not require a great stretch of the imagination to foresee a time when every city might be able to give all the benefit of a trip to the mountains to even the poorest inhabitants. It would be but a trifling expense to give the afflicted a few days or weeks life in the higher and drier atmospheres a mile or less above every city, by sending them up for a stay in captive airships fitted up for the purpose.

### HONEY AS A FOOD

**B**EFORE the use of cane sugar, honey was one of the principal sweetening materials. As a food it is a syrup of four parts sugar to one part water, with practically no nitrogenous substances. The action of the bee's digestive juices make honey a predigested sugar more wholesome than cane sugar, valuable to delay oncoming fatigue during great exertion. Honey is slightly laxative and has certain other very slight physiological effects. A number of good recipes may be made up with honey, as follows:

#### *Bran Brown Bread*

Cup white or whole wheat flour; teaspoon soda;  $\frac{1}{2}$  teaspoon salt; cup bran;  $\frac{1}{2}$  cup honey; cup sour milk;  $\frac{1}{2}$  cup raisins floured; sift together the flour, soda and salt; add other ingredients; steam 3 hours or bake 40 minutes in slow oven.

#### *Butter Honey Cake*

1  $\frac{1}{2}$  cups honey;  $\frac{1}{2}$  cup butter; 3 egg yolks; 5 cups flour; 2 teaspoons ground cinnamon;  $\frac{1}{2}$  teaspoon salt; 1  $\frac{1}{2}$  teaspoons soda; 2 tablespoons plain or orange-flour water; whites 3 eggs; rub together honey and butter; add unbeaten yolks; beat thoroughly; add flour sifted with cinnamon and salt; add soda dissolved in the water;

beat the mixture thoroughly; add the well-beaten whites of the eggs; bake in shallow tins; cover with frosting made as follows:

#### *Orange Frosting for Butter Honey Cake*

Grated rind of orange; teaspoon lemon juice; tablespoon orange juice; egg yolk; confectioner's sugar; mix all ingredients but the sugar; allow the mixture to stand an hour; strain; add confectioner's sugar until frosting is thick enough to be spread on the cake.

#### *Other Spices for Butter Honey Cake*

Instead of the cinnamon, this mixture of spices may be used:  $\frac{1}{2}$  teaspoon ginger; 2 teaspoons cinnamon; teaspoon ground cardamom seed; teaspoon cloves;  $\frac{1}{2}$  teaspoon nutmeg;  $\frac{1}{2}$  teaspoon white pepper; chopped citron or nuts may also be added.

#### *Honey Ribbon Cake*

$\frac{1}{2}$  cup butter; 2 cups sugar; 4 eggs; cup milk; 3  $\frac{1}{2}$  cups flour; 5 teaspoons baking powder; 1  $\frac{1}{2}$  teaspoons ground cardamom seed; 1  $\frac{1}{2}$  teaspoons ginger;  $\frac{1}{2}$  teaspoon cinnamon;  $\frac{1}{2}$  teaspoon cloves; 1-3 cup raisins seeded and cut in pieces; 1-3 cup figs finely chopped; tablespoon honey; rub butter and sugar together; add yolks of eggs; sift together flour and baking powder; add them to the mixture, alternating them with the milk; add whites of the eggs well beaten; bake two-thirds of the mixture in two layer-cake pans; to the remainder add spices, fruit and honey and bake in layer-cake pan; put layers together with crystallized honey between.

#### *Honey Cookies*

2-3 cup honey; 2-3 cup sugar; 2 1-2 cups flour; 1-2 teaspoon soda; 1 1-2 teaspoon cinnamon; teaspoon cloves; teaspoon allspice; 2 ounces finely chopped candied orange peel;  $\frac{1}{2}$  pound walnut meats finely chopped; sift together flour, spices, and soda; add other ingredients; knead thoroughly; roll out thin; cut with biscuit cutter; these cookies are very hard.

#### *Baked Honey Custard*

5 eggs;  $\frac{1}{2}$  cup honey; 4 cups scalded milk;  $\frac{1}{2}$  teaspoon powdered cinnamon;  $\frac{1}{2}$  teaspoon salt; beat eggs enough to unite yolks and whites, but not enough to make them foamy; add other ingredients; bake in cups or large pan in a moderate oven; the baking dishes should then be set in water.

#### *Soft Honey Cake*

$\frac{1}{2}$  cup butter; cup honey; egg;  $\frac{1}{2}$  cup sour milk; teaspoon soda;  $\frac{1}{2}$  teaspoon cinnamon;  $\frac{1}{2}$  teaspoon ginger; 4 cups flour; rub butter and honey together; add egg well beaten; add sour milk; add flour with soda and spices; bake in shallow pan.

## TRAVEL and MISCELLANY

### MAKING THE DESERT SAFE

**T**HE AMERICAN DESERT is triangular in form, with its western edge the Sierra Nevada and Cascade mountains, its southern edge the Mexican border to a point about one-third the way through Texas, and its third edge from eastern Oregon to western Texas by a line running through Salt Lake City and Santa Fé. This country contains many prosperous cities, agricultural districts and mines, but the localities that have water supplies are widely separated and travel between them by automobile is unsafe without a knowledge of where water can be secured. Automobiles that use no water are wanted on the Desert.

The government has recently appropriated ten thousand dollars for sprinkling these desert regions with signboards directing thirsty travellers to water. About a thousand townships have already been covered by these signs and it is estimated that for \$100,000 more the whole territory can be covered and such things as death by thirst will be almost impossible. It is a surprise to many to learn that the famous Death Valley of California contains numerous large springs, some of which afforded excellent swimming to the party that covered that district with the signs above mentioned.

The Prophet says, "Go through, go through the gates; prepare ye the way of the people; cast up, cast up the highway; gather out the stones; lift up a standard for the people." He also says, "Prepare ye the way of the Lord; make straight in the desert a highway for our God". (Isaiah 62:10; 40:3) There is an interesting analogy between the signboards in the American Desert, pointing the thirsty travelers to springs of water, and the "standard for the people," lifted up by the people of God "in the desert" of human sin and folly. Humanity will find it safer travelling when the way of truth is pointed out.

### ICELAND

**I**CELAND, like all other countries, has suffered greatly from increased cost of living as a result of the Great War, but she has profited too. The cost of living is more than double what it was four years ago but the war has taught the people how to get about three times as much for their wool as formerly, for now they have ships plying in regular commerce between Reykjavik and New York.

The people of Iceland, taken as a whole, are the most

highly educated people in the world, printing and selling more books in proportion to the population than any other country. Many speak a half-dozen or more languages fluently. There are 85,000 Icelanders in the home country and half that many in Winnipeg, Vancouver, Seattle and other points in the Northwest. Iceland is about the size of Kentucky. It has equal suffrage and no jails or courts. The last crime on the island was committed more than thirty years ago. In the matter of civil deportment no land in the world is as nearly ideal as Iceland.

The Iceland pony is the means of travel, and there is practically no other way of transporting people or goods than by pony back. For that reason the island is poetically and appropriately called "The land of bridle paths."

We may not suppose, perhaps, that it was of literal snow that the Lord spoke when he said, "Hast thou entered into the treasures of the snow"? (Job 38:22) It may be that this represents truths coming in crystallized form. Water symbolizes truth, and snowflakes are merely crystallized rain drops. However, it may also be true that Iceland and other far northern countries contain great treasures of mineral wealth or possibly even of agricultural wealth when their valleys, filled with glaciers at the time of the flood, gradually become more and more accessible to man.

### BRITISH ANTARCTIC EXPEDITION

**I**N JUNE, 1920, a six years' polar expedition to the South Pole will be started under the leadership of John L. Cope, who accompanied the Shackleton expedition as surgeon and geologist. The object of the expedition will be to ascertain the position and extent of mineralogical and other deposits of economic value, to note the distribution and migration of whales and generally to extend the knowledge of Antarctica. The expedition will take along a fairly powerful wireless set to keep in touch with civilization during its long stay. It expects to use an airplane in accomplishing the final stages of the trip.

"There is nothing covered that shall not be revealed" (Matthew 10:26) The Antarctic continent is now about to be subjected to the closest scrutiny as to the treasures it contains for the needy world. Without doubt the coming expedition will lay bare many of its riches, providing a further step in the preparation of humanity for enjoyment of the blessings of the Golden Age.

**SEEING DESTROYED FRANCE**

OF THE million tourists who plan to visit "ruined France" next season, many thousands are destined to disappointment. A few, perhaps, picture the whole of France as a barren waste; others see only Northern France wholly devastated and expect to wander for weeks amidst scenes of desolation.

The truth is that not over ten per cent of France was occupied by the Teutons, and that of this area not over a tenth, or one per cent of the whole of the country was subject to the iron heel. As France has an area of some 207,129 square miles, the devastated part amounts to about 2,000 square miles, strung out along the line of the front from Switzerland to the North Sea.

Of parts overrun by the Germans the battlefield of the Marne is already as well cultivated as it was before the war; other parts show little trace of war. It is only in "No Man's Land" and adjacent thereto that the farms and villages are very seriously damaged or destroyed.

The villages were originally built of stone, tile and cement, and will be rebuilt the same way, for that is the age-long habit of the French citizen. But the thrifty Frenchman will consider well which will be worth most to him—a restored property or one making a good looking ruin for tourists to gaze at, and thus a location for a thrifty little bit of trade with the Americans.

The real damage to France consists of ruined textile mills, electric plants, machinery factories, sugar refineries, machine shops, mines and steel works, whose value totals close to a billion dollars, but whose ruins are anything but spectacular.

Tourists that want to see real devastation should have traveled over the wake of some of the armies of ancient times when there was nothing but heaps of stone for jackals to howl over and every trace of life was obliterated.

**UNIVERSAL MILITARY TRAINING**

IT IS NOT clear that the American people are ready to adopt the policy which brought about the ruin of Germany. The National Guard Association came out flatly against the proposal to put 1,500,000 Americans under arms every summer, and this would lead Congress to look askance at the plan to resort to national militarization which has been advocated by some.

There is something appealing to the minds of lots of people in militarism. They like to see the splendid specimens of physical manhood which the army brings together, they enjoy the uniforms, the marching, the military bearing of the officers, the music, the glistening weapons, the visible evidences of strength and force. But there are other things that have to be taken into consideration, and some of these are being considered now.

**AIRPLANES ARE LIKE BOATS**

AN AIRPLANE is an air boat, driving through the air the same as a submarine drives through the water. Anything that would retard the speed of a submarine in its element, the water, would retard the speed of an airplane in its element, the air. In the design of a boat every effort is made to make it glide easily and naturally through the water; angles, projections, everything that would create eddies are avoided.

The most economical design of an airplane hull is one that will permit the tucking away within its stream-lines of everything except wings, rudders and propellers, and the time will come when the landing wheels of airplanes will be tucked up into the hull during flight, as a gull on the wing tucks up its legs. In an airplane travelling 90 miles per hour if one raises the hand above the windshield, the sensation is the same as dipping it into the water from a motor-boat.

From the modern air-tunnel we know the details of the correct proportion of airplanes. In these tunnels experiments are made with miniature airplanes which exactly reproduce every existing or conceivable kind of machine. Watching the behavior of these machines in the currents of the tunnel, and cataloging them, the principles have been discovered which make today's machines stable and airworthy in bad flying weather.

Gradually mankind is mastering the science of navigation of the air; gradually he who "walketh upon the wings of the wind" (Psalms 104:3) is permitting our race to taste the joys of sailing about in the blue expanse of heaven. It is said that some become so enamoured of the air by the first flight that they are never able to content themselves in other occupations, though some can never be induced to go aloft a second time.

**THE GREATEST STUDY OF MANKIND**

CERTAINLY no one can overestimate the value of an accurate answer to the question "What is Man?" Of all questions which confront man this one should be most readily understood for the reason that we are all born on this human plane and all surrounded by thousands of other human beings. With such subject matter for observation we should be thoroughly informed; but we are not. On no subject are the majority of people more confused than upon this very one. So limited are our powers of observation, so inaccurate our ability to make deductions, that we are really confined to the information given us in God's Word. Aside from what the Bible tells us of man's nature and being there are two main thoughts abroad in Christendom. We are sure our readers will be greatly interested in the discussion of this subject which begins on the next page.



## RELIGION and PHILOSOPHY

## WHAT IS MAN?

"What is man that thou art mindful of him?"—Psalm 8:4.

ORTHODOXY would have us believe that man is not man at all, but is some kind of a dual being, ostensibly human, ostensibly made fit for the earth and its conditions and society, but really a sort of ethereal being confined by fate's decree in a body of clay, supposed to be sighing and moaning for the time of his deliverance. Very well. Suppose an arm is lost by accident; manifestly there is no more restraint upon that part of the mystic subjective self, which is supposed to be waiting for the moment of release. Does this spirit arm or leg fly to some more blissful sphere, waiting for the rest of the spirit body to join it? Is it laid aside in some celestial service station where "parts" are kept and whole bodies reassembled after death? Or does the new untrammelled arm faithfully dog the steps of its erstwhile neighboring body?

But, the orthodox tell us, by way of scattering the issue, while man's body is born after the manner of ordinary generation in animals, God in some unsearchable and inexplicable way implants a spirit and associates a soul with that body at the time of birth. Orthodoxy is unable to distinguish very surely between the spirit and the soul; but they are very sure that both are immortal—that God himself either does not or cannot terminate the existence which he started. In later years the majority of orthodox bodies have come to look with much more than tolerance upon the would be scientific theory called evolution. Practically all of the schools of science in Europe, which at first espoused the doctrine of evolution, have long since abandoned it as being founded on insufficient evidence. But it seems to have gotten well ingrained into the systems of ecclesiasticism. That it is a real and present factor in religious circles is plain from a recent item in a Denver newspaper, part of which we quote:

"The ministers of Denver having recently been thrown into mild tremors over the recurrence of the controversy concerning the doctrine of evolution, are now to take a long look into the past in the hope of determining where man came from and when he came. The Program Committee of the Denver Ministerial Alliance, inspired by President A.H. C. Morse, has scheduled an illustrated lecture for the meeting Monday on the topic, How Old is Man? It is expected that the traditional Bible chronology of Usher will be given a somewhat serious crimp when the proposition of anti-quarian cavemen passes over the screen and their personal history is recited by the distinguished lecturer from Boulder."

But if the reverend gentlemen of Denver are not interested in looking to the Bible to find out man's origin, some of the rest of us are. But let us first glance briefly at what legitimate science tells us about man, his body, soul and spirit.

Science informs us that the human body is composed of seventeen chemical elements. These elements are not peculiar to man: for they are found quite extensively in other realms of nature. But what can science tell us about the soul—that supposedly elusive genius pining to escape from its body of clay? Science knows nothing of such a being; the most elaborate and painstaking dissection of the human anatomy has revealed no trace of it. On the other hand the testimony of science is all to the effect that consciousness is inseparably connected with organism. If a great shock, or the action of disease benumbs the nervous system, consciousness not only ceases but it has ceased with such benumbing.

Science tells us that man's superior power of reasoning is due to his superior brain. Lower animals can reason somewhat, and it may be stated as generally true that power to reason is in proportion to the size and fineness of the brain structure. Moreover, even in man his power to think and feel varies at different stages of his individual development. The infant can reason little better than some of the lower animals and after, having grown to manhood, he passes into senility it not infrequently occurs that his powers of reasoning lapse back to a very low stage, and all because his organism is deteriorating.

And the spirit? The only spirit science knows about is the spirit or power of life. And this spirit of life is dependent upon nourishment, even to the smallest individual cell. If nourishment to a tiny cell is cut off, that cell will die, even though the life of the organism as a whole may persist. On the other hand, after the death of the coordinate activities of the body, life remains for several days in many individual cells of the body.

Science knows nothing of a future state. The few scientists who have dabbled in Spiritism and who profess to believe in a future state on the grounds of their researches in that field, may be truly scientific along other lines, but their conclusions in the realm of occultism are born more of desire than of science. The word science comes from *scio*, to know. Speculations by scientists, or by others, are not science, however interesting they may be. The very most that real science can say about spiritism is that spirits are evidently beings, of an invisible nature. And this accords perfectly with

what the Bible has to say on the subject, namely, that there are spirit beings of high intelligence, who never were human beings, but who, through their disobedience, are estranged from God and from all holy beings.

But what does the Bible say, then, about the nature of man? Its answer not only agrees with the best that science has to offer, but it goes much further in that it tells the origin and present of man, also his future.

The words immediately following our text give some valuable suggestions upon the point of our inquiry. "Thou madest him a little lower than the angels," establishes man's relationship to the superior orders of creation: angels, seraphim, cherubim, archangels, and quite possibly others which inhabit the celestial sphere. Whatever man is, then, he is not an angel, not as high in plane of existence as an angel—is not, in fact, a spirit being at all, he is "of the earth earthy."—1 Cor. 15:47.

"And hast crowned him with glory and honor." The reference here is evidently to the glory of being endowed with the character image of Jehovah (Genesis 1:26, 27), and with the honor of being made lord over all of God's other creation of earth. Not only was he *qualified* by his very superiority of nature to be earth's king, but God definitely "set him over the works of his [God's] hands" (Hebrews 2:7) and "put all things under his feet".—Psalm 8:6.

Man according to these Scriptures, is an exquisite animal, originally crowned with the glory of character perfection, and with the honor of earthly dominion. But does not the Bible mention the soul and the spirit? Quite so; but they in no wise disturb the simple yet glorious picture of man. The soul is a conscious being, the individuality, the *ego*; the spirit is simply the animating principle, the spark of life. No personality whatever attaches to the spirit. Let us examine the account of man's creation more minutely. We read: "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life [Hebrew, the breath of lives, i. e. that breath common to all life]; and [as a consequence of this action] man became a living soul"—a pulsating, sentient being.—Genesis 2:7.

Could anything be simpler? This brief statement of twenty-seven words tells the whole story of man's creation. God formed a body of earth; he animated that body, and conscious existence began. But while man is sublimely and wonderfully made (Psalm 139:14), in that his organism is intricately fashioned and the actions and reactions of his elaborate nervous system defy accurate calculation, still, there is no mystery regarding his nature, if the Bible account be followed. He is a *human* being, an earthly being, made fit for and appropriate to the earth and its arrangements. No uncanny "soul" crouched in him as in a prison cell; no

elusive "spirit" hovered over or near him. No: man stood upright as God's highest handiwork on earth, as Jehovah's representative, capable of responding to all the promptings of his Maker. The Scriptures leave no doubt whatever as to man's original perfection. "His [God's] work is perfect" (Deuteronomy 32:4); "God hath made man upright" (Ecclesiastes 7:29); and "God saw everything that he had made, and, behold, it was very good". (Genesis 1:31) If with Jehovah's perfect taste and with his perfect ability to have improved upon his own handiwork he still pronounced man "very good", he must have been a glorious creature indeed. But though he was a perfect being, yet he was a dependent creature and God had made every provision for his well-being and happiness. He had provided for his sustenance the fruit of certain trees of the garden, saying, "Of every tree of the garden thou mayest freely eat: but of the tree of the knowledge of good and evil, thou shalt not eat of it; for in the day that thou eatest thereof thou shalt surely die".—Genesis 2:16, 17.

But the sad story is that Adam did disobey and thus brought upon himself death, and at the same time brought upon all his posterity imperfection, sorrow, sickness, suffering and death. (Romans 5:12, 18, 19) There has been no perfect human being on earth since Adam's disobedience, our Lord Jesus alone excepted. We all sinned in that one transgression and "are come short of the glory of God". Now our glory, like our knowledge, is fragmentary (1 Corinthians 13:9) but while our original endowment of perfect wisdom, perfect justice, perfect love and perfect power is now disarranged and distorted, such disarrangement does not affect our nature.

Adam surely understood what death meant; he could hardly have *realized* what it would mean in suffering and distress, for he had never observed, much less experienced, death. But he had a perfect mind and knew full well that death meant the taking away of those life rights and privileges which he had received not as a debt, but as a boon from his Maker, but even if he had had the slightest uncertainty on this point Jehovah made it plain when his disobedient son was being driven from Eden, his lovely home: "In the sweat of thy face shalt thou eat bread until thou return to the ground; for out of it wast thou taken, for dust thou art and unto dust shalt thou return".—Genesis 3:19.

Some would here be inclined to quote the words of the poet: "'Dust thou art, to dust returneth' was not spoken of the soul". But which is worthy of greater credence, Longfellow or Jehovah? There is no effort in this text to distinguish between the cessation of activities in the body and the cessation of consciousness. Elsewhere we are told concerning man: "His breath goeth forth, he returneth to his earth; in that very day his thoughts

perish". (Psalm 146:4) Furthermore it is the same "thou" which would be responsible for the transgression which was to come under the sentence of death, in case of disobedience. God deals with the responsible part of an individual: "Man looketh on the outward appearance but God looketh on the heart". (1 Samuel 16:7) Jehovah certainly knew that Adam's body was not going to walk around and do something without the direction of the mind. The warning did not read: 'In the day that thy body eateth thereof thy body shall surely die'; but it did read: "In the day that *thou* eatest thereof *thou* shalt surely die". Both the warning and the sentence were manifestly to the individual, the conscious, sentient, the responsible being as a whole.—Ecclesiastes 3:20.

"The dust of the ground" is, of course, merely another way of saying "the elements of the earth". Before his transgression Adam had a perfect mind, a perfect body, perfect environment, perfect life, a perfect dominion. He had all these things to keep and to enjoy forever. Death is not a normal thing on earth, any more than it is so in heaven. But when Adam sinned he lost at once his perfect dominion and his perfect surroundings. His mind and body, through dearth of proper nourishment, began to lose their respective sharpness and vigor; and the bright flame of life, which had been started by Jehovah's own hand, began first to dim, then to flicker, and finally died out altogether. All his powers returned to that inert unconscious state in which they were prior to his being energized with life from a divine fountain.

And what becomes of the soul at death? It simply ceases to exist; it goes just where the flame goes when the candle is snuffed out; it goes just where the figures go when they are rubbed off the blackboard. You may retain a memory of them; the results of the figuring maybe lasting even after the figures themselves are gone. Even so, some influential souls, "departing, leave behind them footprints on the sands of time". And do not the Scriptures speak of a resurrection and does not that imply that something is alive somewhere? Certainly the Scriptures speak of a resurrection; but why a resurrection if the individual is already alive somewhere? Evidently there is some kind of a record kept of each individual child of Adam, that his individuality may be reproduced in God's due time, that he may be recreated with the same identity, and given a body, for there can be no conscious existence without an organism. But a record of a soul or being is a vastly different thing from having that soul or being alive somewhere.

Where does the spirit or animating principle go at death? It simply returns to its Giver. Up to the point of death the possessor of life can retain his life and also pass it on to others by process of procreation, but as soon as death has ensued no one has control of that measure

of life but God. The most skilled physician cannot "Back to its mansion call the fleeting breath". And so we read just as our own five senses tell us: "Then shall the dust return to the earth as it was [the seventeen elements shall disintegrate]; and the spirit [energy or power of life] shall return to God who gave it".—Ecclesiastes 12:7.

A little illustration might help to retain the points in mind. Here is a candle; it has neither light nor heat. We light it with fire and both light and heat are given off. It has power, capacity for performance. Its little flame can be used to light other candles, or it could be used to start a very destructive conflagration. The wax is gradually burned up; the flame flickers and dies. Its powers to start other flames, or even to work injury, is gone; it gives forth neither light or heat. So with the creation of man. There was first the inert and insensible body of Adam. The brain and nervous system were there, but incapable of perception or reasoning. Then it is lighted from the torch in God's own hand, and both light and warmth, both brilliancy of human wit and warmth of love are radiated. Thousands may feel the influence of that personality; had it not been for sin and the ensuing sentence of death that warmth and light could radiate for all eternity; but as facts now stand a few years suffice to consume the organism and the individual ceases to pulsate, ceases to radiate any more thoughts or to give out tender sympathies. The soul is dead. The spark of life is under God's control to be given back at the resurrection (which is to be brought about by divine power as a result of Christ's redemptive sacrifice) and the body simply decomposes into its several elements.

But does not the apostle say something about being 'delivered from this body of flesh'? And does he not also mention about our 'outward man perishing, but our inward man being renewed day by day'? Yes, but the apostle was a member of the *new* creation; and that is another story. Much of the confusion on the subject of man's nature has come from applying Scriptures to man which are intended to apply only to the church of the Gospel age, which is admittedly in a transitory state. To understand the Bible at all, it is essential that we "rightly divide the word of truth".

Man originally created perfect, became a sinner, forfeited his life and brought sickness and death upon all of his offspring. Jesus provided redemption for mankind through his death and resurrection. "By the grace of God he tasted death for every man," and this fact must be "testified to all in due time". (Hebrews 2:9-1; 1 Timothy 2:3-6) In God's "due time" the blessing of being restored to human perfection will be offered to all mankind. The Bible designates such as "the time of restoration" or re-construction period—the Golden Age.

# GOLDEN AGE CALENDAR

October 29 to November 11, 1919

- YEAR:** 1019 A. D.: 6048 since Creation: 7427-3 Byzantine Era: 5680 Jewish Era: 2672 of Rome: 2695 of Greek Olympiad Era: 2370 Japanese Era: 1338 Moham-madan Era
- STARS:** Morning: Venus, Mars, Jupiter and Saturn: Evening, Mercury.
- OCTOBER 29:** Fiesta de Minerva holiday, Guatemala: 1918, Austria requests immediate armistice.
- OCTOBER 30:** Muhammadan Hadji holiday, Ceylon: 1918, Italians advance from Piave River, Austria recognizes Czecho-Slav nation, Turkish army on Tigris captured.
- OCTOBER 31:** Halloween: Moon first quarter 8:43 p. m., New York: Administration Day holiday, Nevada: Emperor's Birthday holiday, Japan: Thanksgiving Day, Norway: 1918, Airplane scandal reported.
- NOVEMBER 1:** All Saints' Day holiday, Louisiana, Algeria, Argentina, Austria, Hungary, Belgium, Bolivia, Brazil, Quebec, Chile, Colombia, Dominican Republic, France, Germany, Guatemala, Haiti, Honduras, Italy, Mexico, Nicaragua, Panama, Paraguay, Philippine Islands, Peru, Salvador, Spain, Turkey, Uruguay, Venezuela: State Fire Day, Nebraska: Mid-Autumn Holiday, China: Feast of the Lanterns, Hong Kong: 1918 Brooklyn Elevated wreck kills 79: Sugar allowance increased to 3lbs. per person: Hungary minus a king.
- NOVEMBER 2:** All Souls Day, Belgium, Bolivia, Ecuador, Germany, Guatemala, Haiti, Nicaragua, Porto Rico: St. Justus Day, Trieste: Memorial Day, Brazil: 1918, 362,358 German prisoners taken since July 18, Italians take 30,000, King Boris abdicates Bulgarian throne.
- NOVEMBER 3:** Separation from Colombia holiday, Panama: 1918, Italians take Trent with 20,000 prisoners: Jug-Slavs take Austrian fleet.
- NOVEMBER 4:** Election Day, United States except District of Colum-bia: Occupation Day, Rhodesia: 1918, Austria ac-cepts truce terms: Allies sign terms for Germany.
- NOVEMBER 5:** Cup Day, Melbourne: 1918, Elections give Republic-ans control of Congress.
- NOVEMBER 6:** General election, Porto Rico: Gustavus Adolphus Day, Sweden: 1918, 400 "flu" orphans placed in New York asylums: Germans retreating fast.
- NOVEMBER 7:** Full Moon, 6:25 p. m., New York: Small partial eclipse of moon visible in U. S., begins 5:58 p. m., ends 7:30 p. m., Eastern Time, old: Mohurram holi-day, India: 1918, Methodists give \$5,000,000 for after-war work: Americans occupy Sedan, revolts in German navy, premature peace report in America.
- NOVEMBER 8:** St. Dimitrios Day, Bulgaria, Greece, Roumania: 1918, "flu" deaths in New York total 19,000: rebels control much of Germany, Germany asks for ces-sation of hostilities.
- NOVEMBER 9:** King Edward's Day, Jamaica: 1918, Socialists take over German government, Kaiser Wilhelm renounces throne, his soldiers revolt, general strike in Germany.
- NOVEMBER 11:** Martinmas: King's Birthday, Italy: 1918, President Wilson reads armistice terms to Congress: Thomas G. Masaryk elected president Czecho-Slav Republic, Germany signs armistice terms, and war ends.