FACTS are to the mind the same thing as food to the body. On the ingestion of facts depends the strength of the one, just as vigor and health depend on the other. The wisest in our generation have decided that the most important thought is that which promotes understanding the
The "Ford Guide" is the answer to the growing demand, coming through daily experience, for the larger possibilities presented to our employees, and through them to the Company, of greater efforts in mutual helpfulness. The plan of present thought is to gather between the covers of one publication the work being done along independent lines of effort, to consolidate the labors of the several departments into one medium of communication to the end that the entire Ford family may profit, individually and collectively—the welfare of each one is the immediate interest of all. We are independent, our progress is mutual. The Company cannot enjoy success without the good will as well as the good work of its employees; neither can the employees succeed individually if the Company does not prosper. We must work together.

We all want to make progress toward better conditions and our mutual progress must, will, and does, depend upon each individual one of us. Each one of our big Ford organization is just as important to his fellow-workers as he is to himself. He or she must give as freely of conscientious efforts for the welfare of all as they are to receive benefits from the co-operation of others. Team work—the union of our efforts for the prosperity of our Company—means as much to us individually as the general results do to the Company.

Let us be one big family of earnest workers. It is our Company, so all pull together for the common good. Read the "Guide" for a year to cover, and get the spirit of its mission: to be your helper, not arbitrary, nor commanding, but informative and kindly suggestive, in the earnest desire to have your co-operation.

And, so the "Ford Guide" comes as our common opportunity to assist with valuable information, wise suggestions, helpful counsel and brotherly advisements, asking to receive in return the most cordial reciprocity. Come to us with your ideas for the betterment of home and factory conditions; give the benefits of your experiences to your co-workers and the Company—help the "Ford Guide" to be a help.
Habits

The first time we do a thing, we can do as we choose. But if we continue to do and think the same thing, there comes a time when it’s easier to do what we usually do. So we usually do as usual.

You have eating habits, drinking habits, buying habits, business habits. You are fortunate if yours are good enough habits so that they are not interfering with your greatest success.

The whole question—habits to acquire and to avoid, habits which have built for happiness or success or failure in others’ lives, the experiences of men who have overcome habits or acquired them—is a subject of real interest to the thoughtful mind.

Many a successful business is founded on the habits of other people.

Many a business has succeeded through changing the buying habits, or thinking habits, or even the living habits of other people.

And surely our individual life is made up, in its pleasures and regrets, in its failures and successes, through and from the habits which we have followed daily until they have become a part of our very lives.

There is no man so ignorant that he does not know the difference between his own good and bad habits. Every man best knows his own weaknesses, his own bad habits—and he is lost to self-interest if he does not quit them, overcome them, give them up, fight them off, as he would a pestilence—for, look it from any point of view, every man’s moral and material welfare must be the result of his habits.

Wise thing, then, for every one to take in hand of personal habits every little while—so that bad habits are developing they may be stopped—the good habits will take care of themselves.

Some Thoughts on Success

What do we mean by success? We have a way of saying of this or that person “He has made a great success of his life.” “He has been a great success.”

Not one in a thousand stops to analyze just what success means.

Too often the appraisal that the average American puts upon a man’s success is purely a monetary one. A man’s success is measured by the size of his income or by the amount of his inherited wealth. But this is not a safe basis for estimating real success.

Success is born of effort and an honest desire to promote the welfare of mankind in general. Success is the offspring often of a dream; of the untiring application of midnight toil; of the visionary who would like to see his fellow beings a little better morally or more comfortable physically.

Professor Langley was a type of the highly successful man, although it is said that he died of a broken heart because of the ridicule poured upon him by the public, when his flying machine sank into the Potomac. Langley’s apparent failure was an important stepping stone upon which the navigation of the air has become practicable.

Back on a farm in New York there lived a man who never traveled much beyond the confines of his farm and a small country village. Yet to this man’s inspiration is traced the nurturing of the germ of the success of one of our greatest university presidents, a man of international reputation, because of his scholarly attainments and humanitarian views.

The inventor of the flexible film which makes moving picture reeds possible, died in comparative poverty. He had, nevertheless, the satisfaction of knowing that humanity had benefited by his creative genius. The world had not, however, during his lifetime given this man much of any material recognition.

Do more examples need to be given? How often is the man of dreams lightly called a fool? How often is the love of humanity stems these every effort to put mankind upon a higher plane, disposed of with unmerciful finality as being “little cracked.”

Success is native attribute, not an acquired characteristic. Some are born great and these are truly great, others acquire greatness, but can do so only if nature has endowed them with the germs of greatness, and others have greatness thrust upon them, but can in no sense claim a life of usefulness and real success unless they possess within themselves the essentials of greatness.
Infantile Paralysis
By Dr. John N. E. Brown, Sup't Henry Ford Hospital

During the past few weeks in New York City over 5000 children have suffered from Infantile Paralysis, of whom over 1000 have died. A great number of those who did not die will be paralyzed for life in one or both legs, and of some of them in one or both arms as well; which means that they will be cripples.

This disease usually attacks healthy children, most of whom are under 10 years of age. It comes most often in hot weather. In some children the attack is so light that there is no paralysis at all. The sick child may be thought to be suffering from some stomach trouble, with fever, vomiting, pain, restlessness, fretfulness and some pain or stiffness in the back and legs. During the first two days it is difficult to make out what is wrong with the child; but, if on the second day, it is found that one or both legs have lost power, then we knew that the child is suffering from this awful disease.

In a few days, in 80 or 90 per cent of the cases, the sick feeling disappears but the paralysis remains, and the affected muscles, during the next few weeks, waste away. The little bones cease to grow, the legs and feet become drawn out of shape; and the child becomes deformed.

Infantile Paralysis is caused by very small germs, or microbes, which get into the body through the nose and throat, being breathed in the air or taken into the mouth with the food, drinking cup, spoon, fork or the fingers. The germs multiply by millions in a few hours and make their way into the brain and upper part of the spinal cord, attacking the nerve cells which govern the growth of certain muscles of the legs and arms and trunk. If the poison of the germs kills or injures these cells, the muscles dwindle away.

Nature tries to kill these microbes and their poison by means of the blood; and sometimes succeeds in saving the nerve cells. In this case, the muscles by proper treatment may recover.

Should the germs attack and kill the nerve cells which supply nerve force to the muscles by which we breathe and our heart muscle beats; then breathing ceases, the heart stops beating, and the patient, of course, dies. This happens in about 15 out of every 100 cases.

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When the disease once attacks a child there is no known method of checking it by medicines; we must depend on nature. The doctor may relieve the patient's restlessness, pain and discomfort, but the medicine he gives does not cure the disease. Therefore, the great thing to do is to try to prevent the disease from catching us; that is, to prevent the germs from getting into our bodies.

This may be done, in the first place, by keeping away from any person suffering from Infantile Paralysis.

As soon as the doctor finds out that a child has Infantile Paralysis he puts it in a room by itself, or, better, sends it to a hospital for six weeks. The Board of Health shuts up the rest of the family in the house for two weeks to see whether any of them will get the disease. The mother and the other children may have the germs in their noses and throats and on their hands, and may spread the disease to other people.

Doctors and nurses seldom have the disease, because they are very careful to wash their hands well each time after they handle the patient, or sick person, or attend to him in any way. They also remove their gowns, worn while waiting on the patient, before they leave the sick room. All the dishes and other things used by the patient are boiled and his soiled linen disinfected. His sheets, shirts and napkins — because, as in typhoid fever, the sheets are full of these germs.

The same kind of care should be taken by any of us who have been near a person that may have Infantile Paralysis.

If we have clean clothes (especially the hands), clean homes (especially clean dishes and clean linen), clean food, clean yards, clean lanes, and clean streets, we cannot get the disease easily. The germs cannot thrive in "Spotless Towns."

Flies may carry the disease; therefore we should screen our windows and doors, and "keep the fly" out. Lit, bedbugs and insects may carry the disease. Horses and dogs with distemper are dangerous. Pec, dogs and cats should not be allowed in the house, or in the neighborhood. Children should not attend picture shows, schools, and other crowded places, lest they come in contact with some one who is beginning to take the disease or who may be carrying the germs. Such a person is called a "carrier" and is dangerous, because if he laughs, coughs, sneezes, or spits, he may spray the microbes all around, or the germs may fall to the floor, become dry, and rise in dust and get into our bodies through breathing.

To prevent deformity after the paralysis of the muscles is developed, is very important. The best thing to do is to consult a doctor, preferably one who is a specialist in deformities. Such a medical man is known as an orthopedic surgeon. He will recommend massage and apply splints. If his advice is followed the deformity will be much reduced and the cripple may be able to live a fairly comfortable life and do some kinds of work very well.
The Public Library

A public library is meant for you, because you are one of the public. In the library you will find books, papers, and magazines, which were put there because you can find in them something that will interest you.

Let us suppose that you want to find out the names of the presidents of the United States, from George Washington to President Wilson. Perhaps you have no book at home in which you can find these names.

You go to the nearest Public Library, step up to the desk and ask the person there for a book which will have your answer in it.

You may be sure that the one at the desk will be very courteous and glad to help you find the answer to your question.

One library has a card with this printed on it:

"When you want Information—Statistics—Facts
Don't hesitate
Come to your Public Library or telephone
This service is yours for the asking."

After you have visited the library once, you will do it often. Try it.

There are a number of other things to learn about the library after you have started the "library habit."

Every day you read or think about something, and right away you want to know more about it.

If you have no books at home which can tell you what you want to know, you will go to the library, if you really are anxious to find out.

The person at the desk will tell you where to find the book that you are after. In most libraries there is a large room called a reading-room with tables and book-shelves in it.

You will be permitted to use the books at the tables as long as the library is open. You can often find a book for yourself easily, if you know just what kind of book you wish.

Let us see how to do it. You want to find out, perhaps, something about the kind of furniture to put into your home.

Somewhere in the reading-room are shelves or cases of such marks:

THE FORD GUIDE

USEFUL ARTS

or with a name that means the same. On these shelves are books that will give you information on (1) Housekeeping, (2) Furnishing a home, (3) Plans for building a home, (4) Proper care of a home.

You will probably find just what you want among these.

On other shelves may be found books marked:

History—Biography—Travel—Literature—Amusements—Fiction—Fine Arts—Science—Foreign Lands, and many other subjects.

There are also magazines and papers in most Public Libraries. Make the Public Library your school.

Perhaps the library is so far away from your home that you cannot use it as often as you may wish.

We shall soon find out how you may take books home with you, to use them.

English Study of Words

Key To Pronunciation Taken From Webster's Secondary School Dictionary

\[
\begin{array}{|c|c|c|c|c|}
\hline
\text{Language} & \text{Pronunciation} & \text{Sound} & \text{Example} \\
\hline
\text{ale} & o & \text{æb} & \text{ice} & \text{oi as in oil} \\
\text{senate} & as & \text{æd} & \text{in} & \text{ch as in chair} \\
\text{care} & in & \text{soft} & \text{g as in go} \\
\text{arm} & \text{consect} & \text{u} & \text{ing as in sing} \\
\text{account} & \text{u} & \text{inite} & \text{nk as in ink} \\
\text{ask} & \text{e} & \text{evert} & \text{in} & \text{tu as in nature} \\
\text{soft} & \text{as} & \text{ind} & \text{circis} & \text{th as in then} \\
\text{o} & \text{as} & \text{old} & \text{maker} & \text{oo} \\
\hline
\text{in} & \text{æbey} & \text{â} & \text{fæb} & \text{in foot} \\
\hline
\end{array}
\]

Study each of the following words to learn:

(1) How it is spelled.
(2) How it is divided into syllables.
(3) How it is pronounced.
(4) What it means.
(5) How it is used in a sentence.

Industry, tractor, automobile, machine, student.

This is how you do it with the word automobile.

(1 & 2) How the word should be spelled and divided into syllables:
\[\text{au to mo bile}\]

(3) How it should be pronounced:
\[\text{æ ò mò bâl}\]

(4) What it means:
\[\text{A carriage (or other vehicle) which runs by its own power.}\]

(5) How it is used in a sentence: The automobile can run without a horse or other animal.
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Art That Everyone Should Know

Jean Francois Millet (pronounced Mii-yel) was born about 1814 and died in 1875. He was the son of poor French parents. His father was a musician, a lover of nature, and a good man. The son was like his father in many ways and showed his love for the beautiful in his paintings.

The boy painted so well that when his teacher, a famous painter, saw his first work he said, "It is easy to see that you have painted a great deal," although Millet had never touched a brush before.

Like many other artists Millet had to work hard to make a living. He even had to paint signboards so that he would not starve.

The world soon learned to love the beauty of his pictures. Millet was fortunate enough to live to see this time.

A Word About Art

What do we mean by Art? Perhaps we may say that the beautiful things in the world around us, that give us pleasure and that make us able to give pleasure to others belong to Art.

A beautiful picture like "The Gleaners," or a statue like many in a museum of art, pleases us. These are works of art and are called Painting and Sculpture. The maker of the picture or of the statue is an artist.

We get pleasure from listening to beautiful music or from playing such music ourselves. So music is another kind of art. The one who makes the music is the artist; the music itself is art.

It is the same with buildings. If a house or a church or other building is beautiful we say that its architecture is artistic, and architecture is another form of art.

Then, too, ideas expressed in beautiful language are an art that we call literature. Poetry is a special kind of literature. Only a real artist can write poetry that has any value.

We have, then, several kinds of art: music, painting, sculpture, architecture, and literature.

How did man start to be interested in art? When man first came to live on the earth he found time only for self-protection and for getting food. When these became easy for him, he looked around for other things to do. The first painter was the man who secured his food, then returned to his cave for protection, and before going to sleep made a picture on the handle of his knife, or some animal he had shot.

Then the man who lived in a tent, now, instead of a cave, hung some skins of animals over his tent because he liked the looks of his tent so decorated. So the beautiful architecture was started.

Another made beautiful sounds either with his voice or on a hollow stick or stalk, and music began to give pleasure.

This is perhaps how the different kinds of art were started.

We get our real pleasures in life from one kind or art or another. Art is found in our work and in our play. In the lessons that follow this one we will try to learn more about the pleasures art can give us.
American History

Columbus Tries to Find a New Route to the East

Five hundred years ago or so, merchants of Europe wished to find a new passage to India and the East, the places from which their riches came. The old route around the Cape of Good Hope took a greatly deal of time and was full of dangers, and the road over the land could not be traveled.

A few people believed that the East could be reached by sailing west, but no one had tried to prove this.

Columbus was not the first to believe this, but he was the one who dared try to prove it to the world. At first he found it hard work to get others who could help him interested in an ocean trip to prove that the East could be reached in a new way. King John of Portugal made Columbus believe that he would help him but did not do so. Then Queen Isabella of Spain gave him money and ships with which to make the voyage. Columbus had three ships, the Santa Maria, the Pinta, and the Nina, and one hundred and twenty men. They sailed for seventy days in unknown waters.

Of course, the men were afraid and Columbus had to work hard to keep them from turning against him, or from running home. He even changed his course to please the men.

Later he found out that if he had not done this he would have reached land several days earlier.

Columbus started his voyage in August, 1492, and on the morning of October 12th, a little more than two months later, he saw land for the first time during this voyage.

Columbus had a dream and told it to Queen Isabella, who believed in him and helped him with money and ships to find out whether the dream would come true.

The dream of Columbus did not come true, but something a great deal better happened. Columbus tried to find India but found America instead.

Since this voyage of Columbus, many others have crossed the ocean in search of a short route to riches, but instead, like Columbus, have rediscovered America, the land where every man has a chance.

Questions

Why did Columbus think that he could reach India by sailing west when everyone else had sailed east to get to India?

In his first voyage Columbus did not reach India. Did he find out anything new about the shape of the earth?

In what way was this first voyage of Columbus important?
Every-Day Science
Why We Should Study the Sciences

A few years ago a wise man asked this question: "How does a man usually make a living?" His answer was, "By making or raising those things which people need, by getting them ready to be used, or by helping others to get them."

The next question asked was, "How can every man best make his living?" You can easily guess the answer to be, "By knowing as much as possible about his work."

The word science means "knowledge." Science or knowledge teaches us how best to do the things that we do each day.

Without science we could not build houses properly, or make machines, or prepare foods.

We would not know how to make books or furniture.

Many people can be made to see and hear better because of science; their lives are safer on land, and on sea, in the factory, and in the mine.

Our comforts and pleasures come from science. We would not have the telegraph or the telephone, the moving picture, or the airplane, if it were not for science.

Science has made it possible for us to get more and better foods, and other useful and necessary articles. Some of these are glass, porcelain, soap, medicines, insect-killers, and metals.

We cannot get along without a knowledge of science. Everything we do depends upon it. Even the nations at war have found that their very lives depend upon what science can do.

Haven't we a good reason for studying this subject?

You should understand that it took many hundreds of years to find out what we know about science today. A great deal was learned by accident. A great deal more will be found out in the same way. But the more that we know about the secrets of Nature, the easier it will be to learn more about them.

Everyone wants to know as much as he can, because he understands that one can do a great deal more with knowledge than with one's muscle or body.

The way science has made it easy for man to use the power that is around him is a wonderful story that will take some time to tell.

Practical lessons will come from time to time in this magazine. A careful study and many reviews of these earlier lessons will soon lay a ground floor for subjects in science more difficult which might come in the future.
How We Live

Man Depends Upon Plants and Animals

All that is alive around us is either in the plant or the animal kingdom. Man is an animal.

Man depends on the animals and the plants about him for his living. If all the plants on the earth were destroyed, it would soon be impossible for a person to live, because he could get no food. Plants make all of man’s food for him, with the exception of a few such things as table salt and water.

Then, too, man depends a great deal on other ways upon other animals. They are his beasts of burden; they furnish him with clothing and food. (Animals that are used as food by man, themselves depend upon plants for their food.)

We may say that human beings have learned to use the other living objects about them for their own benefit, that man depends on these objects for his living.

There are some plants and animals that do not benefit us. The rattlesnake is an enemy to man. Poison Ivy is dangerous to many people. These are two common examples of living things, one plant and one animal, that do harm to people rather than good.

If you made a list of all the plants around you that can be used for your good, this list would be a very long one. A list of the same kind for animals would also be long.

Animals depend upon plants for food. Man depends upon both plants and animals.

Sometimes it is hard to tell just how a plant or an animal may be of use to us. Some of you think of a bee as a little insect that stings and that should be killed, perhaps. But the bee is a very useful creature not only because it makes honey, but because it makes seeds in some plants possible, in a way that we shall learn about later.

In these lessons on “How We Live” we shall have many opportunities to find out facts about life in towns and communities.

The Care of the Human Body

a. How the Body is Like a Machine
b. How the Body is Unlike a Machine

No one need be told today how necessary it is to keep the body in good condition. Yet only a few years ago such advice was not followed by many people.

Our bodies in some ways are just like machines. Both the body and a machine must have some kind of power to run them. A locomotive, for instance, is run by steam-power. The steam is made by boiling water from a liquid to a gas, and this is done by getting heat from fuel.

The power that runs the body comes from using food. The fuel of the body-machine, then, is food.

Poor fuel gives poor power. Food that does not contain the proper materials does not give the body the proper amount of power. We must always see that our food is clean, wholesome, and well prepared.

There are some ways, however, in which our body is not like a machine. If a locomotive jumps the track and is damaged, it is sent to the repair-shop. It is repaired from material that is in no way like fuel.

The engineer who was injured in the accident, is sent to the hospital where his wounds are dressed, and then his body must repair itself. The steam engine cannot be repaired with fuel, but the body of the engineer can be repaired with food.

The Human Machine and another kind of Machine working together

How easy it is to see why the right kind of food should always be used! There are two reasons: first, because food gives power; second, because the body is repaired from food.

Other lessons on the Care of the Body will take up important points about the care of our wonderful human machine.

Questions

Can fuel be used for power built into a machine?
Can the body keep alive without air?
Can you tell whether the heat when fuel burns?
Can you tell whether your body is warm?
Can you tell whether it is necessary for burning fuel? Why is it also necessary to keep your body warm?
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Not All Adopted for Reasons, Etc.

The time required to get many of the suggestions into operation may seem long to you, but we want you to assure that every suggestion received will be considered and passed upon; that we are as anxious as you are to give the quickest adoption to all good ideas, and have them operative as soon as possible.

Promotion

In the recommendations we have recently passed upon for promotion, I assure you it has been a pleasure to see names selected from those who have been found worthy through the good ideas they have given the Company through the suggestion system. It would be difficult, if not impossible, for me to meet personally the hundreds of workers who have given suggestions, but I assure you with all earnestness that, while all the ideas contributed have not been put into operation, every one is on the records, so that we may always have knowledge of the interest in and desire to assist the Company. You can all of you, are among the first who have had your suggestions adopted, and your names placed on the Honor Roll and credit given your record cards accordingly.

In behalf of this Company I assure you of our appreciation for the practical interest you have shown and our desire that you have the widest opportunity for continuing to use your mental as well as your physical forces to your own best interests by thus making it possible for the Company to reward your loyal helpfulness in its progress.

Honor Roll

The following men have been credited for suggestions which have been adopted:

CHAS. A. BARNUM Tin Shop, Dept. 1810
For drawing attention to necessity of repairing guard over chain and sprocket on Front Axle Miller No. 2771, located at B 18 x 6.

W. J. BEACH Cam and Crank Shaft, Dept. 307
For calling attention to need of repair of shaft and binders on countershaft for Rear Axle Tester Lathe No. 4035, at H 11 x 2.

WM. BERRY Motor, Dept. 500
For suggesting increased clearance between T-978, Connecting Rod Clamp Screw and Connecting Rod, Operation No. 2, Balancing Machine, located at B 31 x 6.

G. E. BLAIR Tool Room, Dept. 1800
For suggesting guards for starting levers, Shaper No. 870 and No. 671, located at A 1 x 20, to prevent lever coming out when starting machine and endangering operator.

D. H. CASTLE Shop Clerk, Dept. 3
For advising change of location of deck 1295 x 3 and aid in flying chips from machines nearby.

ALBERTO Y. CHAVES Motor, Dept. 500
For suggesting covering over work switch controlling current in Electro Magnetic, Magnetizing Pile for flywheel magnets located at E 35 x 6.
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CHAS. B. CULVER
For suggesting the use of two-piece adjustable friction pins for head trunnion machines located at X 3 x 10.

W. J. DAHILL
Shop Clerk. Dept. 303
For suggesting the use of a separation machine No. 16 of Rear Axle Housing be chased as a helping operation of No. 37, instead of a separate operation.

Oscar DeMENENAERE
Sweepers. Dept. 1701
For suggesting the use of rubber tracks for setting refuse, eggs and paper when collecting.

John R. DONLEY
Bushing. Dept. 319
For drawing attention to use of chalk for markings before pressing and testing.

Will Dyer
Heat Treat. Dept. 201
For suggesting the use of rubber for slurry pipe under floor about fifteen feet northeast of steel hammer No. 1014, Heat Treat No. 1.

J. W. EDDY
Front Axle Parts. Dept. 328
For suggesting the use of a rubber wheel for picking up parts.

VANCE EMERICK
Rough Stock. Dept. 600
For suggesting the use of a rubber wheel for picking up parts.

WM. G. FRIEDRICK
Wood Pattern. Dept. 1500
For suggesting the use of a rubber wheel for picking up parts.

F. G. GITTOES
Pressed Steel Tool Room. Dept. 1603
For suggesting the use of a rubber wheel for picking up parts.

Edward GRAFERT
Gas Tank. Dept. 516
For suggesting the use of a rubber wheel for picking up parts.

F. C. GUMPHER
Shop Clerk. Dept. 3
For suggesting the use of a rubber wheel for picking up parts.

HARRY M. HANCE
Tool Repair. Dept. 1801
For suggesting the use of a rubber wheel for picking up parts.

J. HAUPT
Tool Room. Dept. 1800
For suggesting the use of a rubber wheel for picking up parts.

JAMES HIGGINS
Transmission Parts. Dept. 302
For suggesting the use of a rubber wheel for picking up parts.

Henry HOATT
Press Steel. Dept. 400
For suggesting the use of a rubber wheel for picking up parts.

W. H. JOHNSTON
Gen. Stock. Dept. 5
For suggesting the use of a rubber wheel for picking up parts.

FRED JONES
Inspection Dept. 601
For suggesting the use of a rubber wheel for picking up parts.

WM. KALBA
Front Axle Parts. Dept. 328
For suggesting the use of a rubber wheel for picking up parts.

JAS. E. KING
Rough Stock. Dept. 600
For suggesting the use of a rubber wheel for picking up parts.

ANTHONY KLETTE
Bushing. Dept. 310
For suggesting the use of a rubber wheel for picking up parts.

OSCAR KOLAKOFKI
Tool Stock. Crib 13
For suggesting the use of a rubber wheel for picking up parts.

FRANCIS D. LACY
Transmission Parts. Dept. 302
For suggesting the use of a rubber wheel for picking up parts.

Wm. McCARTHY
Diffential Gear. Dept. 300
For suggesting the use of a rubber wheel for picking up parts.

HARRY McMAHON
Steamfitters. Dept. 1601
For suggesting the use of a rubber wheel for picking up parts.

ROBERT MASON
Electrical. Dept. 1601
For suggesting the use of a rubber wheel for picking up parts.

C. J. MILLER
The Repair Dept.
For suggesting the use of a rubber wheel for picking up parts.

BEN OAKES
Steamfitters. Dept. 1609
For suggesting the use of a rubber wheel for picking up parts.

GUY R. PRICE
Moulding. Dept. 100
For suggesting the use of a rubber wheel for picking up parts.

IRA R. PULCFER
Front Axle. Dept. 325
For suggesting the use of a rubber wheel for picking up parts.

CHAS. B. CULVER
Bolt Heading. Dept. 325
For suggesting the use of a rubber wheel for picking up parts.
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FREDERICK O. RUNNELS  Differential Gear Dept. 318
For suggesting extension sport oil can for use in oiling counter shaft bearings over
Cleveland Gear Cutting without use of ladder.

EUGENE SINGLETON  Factory Service Dept. 6
Calling attention to the practice of hanging coats, aprons, etc., on sprinkler heads
in toilets 1, 2, 3 and 4 in Building A.

GEO. W. SNIDIN  Minor Dept. 500
For suggesting auxiliary switch to permit quicker stop of transmission assembly
conveyor, located at B. 35 x 4 in F. 10.

LUTHER SOUTHWELL  Front Axle Dept. 501
For suggesting need of guard on screw machine located at F. 37 x 5, on Operation
No. 2, T-201, protecting operator from flying chips and water.

EDGAR S. SPICER  Front Axle Parts Dept. 328
For calling attention to unbalanced press handle on drill press located at E. 24 x 10
also possibility of handle dropping.

H. TERRY  Gen. Stock Dept. 5
For suggesting change in clothes rack near foreman's desk at K.3, Foundry Main
Building.

HENRY J. THURKOW  Transmission Parts Dept. 302
For suggesting addition of fence on guard between screw machines working on
T-307, New Speed Gear, located at E. 30 x 2.

FRANK UHLER  Millwright Dept. 1003
For suggesting a work holder for transmission shaft with center holes are re-drilled,
to protect operator from hot chips.

FRANK F. VIAS  Rear Axle Dept. 502
For suggesting posting of danger signs on poison containers—cyanide chests located
at E. 20 x 1 unmarked.

A. F. VOLZ  Transmission Parts Dept. 302
For calling attention to protruding lathe centers in crib No. 5.

ROBERT WOODS  Motor Dept. 500
For calling attention to need of partition at end of waisting machine at E. 54 x 4.

B. WRIGHT  Shipping and Loading Dept. 1000
For suggesting that packer's numbers be shown on each package in order to trace
errors etc.

The Laboratory Library

There is maintained in conjunction with the Laboratory a circulating
magazine library. Some of the trade and scientific journals and magazines
being received monthly are:

Furnace & Steel Plant, Chemical Abstracts, Engineering Magazine, Engineering Index,
Engineering Record, Factory, Farber Zeitung, Foundry, Heating & Ventilation, India
of American Chemical Society, Lighting Journal, Medical Clinic & Gutch, Metallurgical,
Metals & Chemical Engineering, Monthly Catalog of Public Documents, National
Petroleum News, Oil, Paint & Drug Reporter, Public Safety Reports, Scientific Ameri-

Also there is contained in the library a complete collection of books giving
in condensed form scientific, statistical, technical and general references and
information.

Employees are invited to make use of this Library during the hours of
open 8:30 a.m. to 5:30 p.m. When E. is desired read the magazine or book after hours,
arrangements can be made with the librarian.

SAFETY FIRST

Those in charge of our Safety First work will come with all thought and advice for the
physical welfare of individual workers. To their efforts we have the means to discover and carry
out suggestions. We have the means to do it, but we must not do it without the help of our
members. Those making suggestions without offering to do any great work, are so much more
useful machinery, and then become the leader's helper. Labor can not be idle and productive as the workers
are watchful, thoughtful and careful in following instructions.

Fire Prevention and Control

It is the aim of the Ford Motor Company to eliminate fires as nearly
as possible. But while prevention is first and most important, it must
be closely followed by adequate means of putting out fires, once they
have started. For this reason the best equipment that can be found is employed
here to prevent fires or to extinguish them as quickly as possible.

A good idea of how we are prepared to put out fires is gained by a look
at the picture below. Here we show a part of our regular Fire Department.
These men are trained at a central point and when the alarm comes they are off
with their reels of hose and chemical extinguishers, in short order.

In many cases, however, the fire is out before the regular firemen can
reach the place. This is because we have a complete sprinkler system
throughout the entire plant, fire hydrants with hose and nozzles in readiness
and sand buckets and small hand extinguishers at frequent intervals.

The sprinkler system and the hose with nozzle are shown in the
picture.

To prevent fires we try to remove every possible cause of fire as nearly
as we can. This work includes the use of electric furnaces in place of
gas wherever possible, the clearing out of pipes and vents over ovens,
the quick removal of all refuse, the careful storing of oils and paints and
the installation of Safety emergency valves on all ovens burning oil or gas.
THE FORD GUIDE

In a plant as large as ours no little equipment is necessary to go around. For instance we have 1,450 3-gallon and 64 40-gallon chemical fire extinguishers. We have 250 Pyrene extinguishers for electric fires, 1,150 sand pails, 29 sandhose boxes for smothering fires and a total of 17,000 feet of hose carried on the racks and on portable reels. The help of every Ford man is needed to prevent fires, but in case you discover one go to the nearest phone and tell the operator the exact location of the fire. Then do everything you can to put the fire out at once. Don't wait for the regular firemen. Time is precious. In this way we can make ours a safe factory.

What the Ford Motor Company is Doing to Safeguard its Employees

Quite a large number of Ford employees have seen the motion pictures on Safety which were shown as often as possible during the spring and early summer, but for the benefit of those who will not be able to see the film later we plan to show the different safety devices that have been worked out to protect Ford men and to explain how the Safety work is being carried on.

The machine illustrated here is one of our largest punch presses and is to be found in the F crane way. This press punches from sheet steel the crank cases which are placed directly under the Ford motor. It stands about 18 feet high and weighs 115,000 pounds. A 40-horsepower electric motor operates the press.

The guarding arrangement is very noticeable. The motor and all gears on the huge wheels are carefully enclosed. Oilers and repairmen do not have to take any chances when climbing about this monster for they work in safety on platforms guarded with rails or steps up from one platform to the next on permanent ladders.

The front of the die is guarded by the up and down strips just above the operator's hand in the picture in such a way that he cannot get his hand under the die when it comes down to form the crank case. This makes the press just as safe as it can be made. All that is asked of the operator is that he keep constantly on the alert and never allow his attention to be drawn away from his work. When closed down the starting button is locked so that no one who does not understand the press can start it.

Be Careful of Gasoline

Gasoline is dangerous anywhere we handle it—either in the shop or at home. Recently a woman was cleaning a dress with gasoline in a metal dish or pan. Electric sparks from the cloth in her hands jumped to the pan and ignited the gasoline. She was seriously burned. It is much safer to use an earthen receptacle when handling gasoline and especially when there is any chance of an electric spark igniting it.

Who is the Loser?

If one of our men loses a finger or an eye, or is injured in some other way, is it the only loser? Did you ever realize that it is only ONE of the losers? No man is as good a workman if he loses some member, such as a finger or an eye. If he is not, then he suffers, his family suffers, this company suffers—the State of Michigan suffers.

Each one of us is in the world to do some good. Nature gave us our hands and our eyes to work with. If we lose these things, the loss will be felt by everyone in some way. That is why it's worth while to be careful. Are you doing everything in your power to prevent accidents in this factory?

Wear Aprons for Protection

Men working in the founaday, the forge shop, the blacksmith department or on any job where there is danger of particles or chips flying should be careful to wear a rough leather apron.

Looking over the accounts of accidents throughout the country we find that a very large number of accidents, many serious and several fatal, were caused by flying particles and chips striking workmen who were not properly protected by aprons.

The picture herewith shows one of our large steam hammers used in forging connecting rods for the Ford motor. This kind of work is necessarily hard and dangerous and our men are cautioned to use all possible care in protecting themselves and those who work with them.

On the left the operator is shown guarded with gloves and a stout leather apron to protect himself against burns from the red hot metal which he handles and from flying chips. Good light and the best possible working conditions are provided, and if he is reasonably careful this man will never be hurt.

Another Dangerous Practice

Some of our painters, tinsmiths, electricians, millwrights, and others who work overhead in the machine shop are in the habit of leaving tools, ladders and planks on the I-beams. They appear to forget that the vibration of the hundreds of machines and thousands of feet of shafting will soon cause these things to fall. With several thousand men working below it is remarkable that many are not seriously hurt.

This is a kind of carelessness that cannot be mechanically guarded against. We must depend entirely upon the men who work above to be careful and protect those below who may be in the greatest danger and never know it. Let's make it a habit to be careful and thoughtful. Like all habits, good or bad—once formed it's hard to lose and being careful and safe will be easy from that time on.
Climbing on Machines

Several of our men have been injured—one of them very seriously—while they were attempting to make repairs while standing on top of machines. This is a hazardous and wholly foolish thing to do when it is so easy to be safe.

A millwright wanted to place a belt on a shaft above a machine so he climbed onto the pulley of this machine—an Acme—only to slip off almost immediately. He was badly scratched and bruised as a result.

An electrician was placing a fuse in a fuse box. In order to reach the box he stepped onto the rear half of a shaper. He received a bad shock while trying to place the fuse and fell heavily to the floor.

A little judgment will very often save injuries which mean suffering. There are plenty of ladders for all kinds of work. Use them in a safe way. It will pay you well.

Safe Speed for Emery Wheels

Emery wheels are nearly always run at high speed and for this reason must be carefully watched if accidents are to be avoided. All Ford emery wheels are carefully tested twice each year. In addition, if a wheel is moved or a new one installed they are carefully checked up before being allowed to run.

Because of the heavy guards placed around all Ford emery wheels, the operator is in little danger even if they should break, but the machine is badly damaged. Breaks are usually caused by an improper mounting of the wheel on the spindle, by the spindle or bearings being in bad condition, by flaws in the wheel or by too high a speed for the wheel.

To allow a wheel to revolve faster than it should is very dangerous and for this reason a table of correct speeds is given below, both for solid wheels and the cup-shaped wheels:

<table>
<thead>
<tr>
<th>Solid Wheels</th>
<th>Cup-Shaped Wheels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>Revolutions per minute (Safe Max)</td>
</tr>
<tr>
<td>6 inches</td>
<td>3675</td>
</tr>
<tr>
<td>8 inches</td>
<td>4200</td>
</tr>
<tr>
<td>10 inches</td>
<td>2650</td>
</tr>
<tr>
<td>12 inches</td>
<td>1775</td>
</tr>
<tr>
<td>12 inches</td>
<td>1275</td>
</tr>
<tr>
<td>14 inches</td>
<td>1400</td>
</tr>
<tr>
<td>16 inches</td>
<td>1025</td>
</tr>
<tr>
<td>18 inches</td>
<td>24</td>
</tr>
<tr>
<td>20 inches</td>
<td></td>
</tr>
</tbody>
</table>

Running is Dangerous

Ford men work short hours. They are well paid. They are well cared for. Most of us are in good spirits all the time for these reasons. But some of us forget occasionally, and show our good spirits by racing down the aisles to the tool crib, the card racks or the pay windows.

This practice is not only out of place but dangerous. One of our men was struck by another who was running to the card racks. This man was knocked down and his back wounded so he could not work for a week.

Let's think of the other fellow. We should treat him just the way we would want him to treat us. We certainly would not want him to knock us down and cause us the loss of a week's pay. It's just careless—but it's mighty serious all the same.

Safety "Last"

We might call this "Safety LAST": One man took a light into an enameling oven to see if the gas was on. It was. After considerable lost time and suffering this man has decided that he will NOT use this method of finding gas again.

Another employe wanted to see if the electric current was on at a certain switch. He put his hand on the switch and found out. The current WAS on. He was attended to at the nearest First Aid station.

Such things may SOUND funny to tell, but these two men will tell you that they are very serious. Both men are now safety boosters. They learned their lessons—but paid dearly to learn.

Personal

A carpenter was given a ladder to repair. After the ladder had been sent back to the department where it belonged, the new rung that the carpenter had made were found to be rotten. The ladder was more dangerous than before. If a thing is worth doing at all it is worth doing safely. All ladders should be made of strong wood, free from rotten places and knots.

Save Yourself

If you discover that you have been given a tool or a chain or anything that is in bad condition and may cause an accident, return it at once and report the fact to your foreman. If no action is taken, report the fact to the Suggestion Department, the Superintendent's office or to the Safety Department.

Your Eyes

Your eyes are your most valuable servants. You have but two of them. Guard them well. To prove their value, close just one eye and see how helpless you are.

A foreign body, such as a piece of steel or emery dust, may cause an ulcer if left in the eye over night. The scar from this may blind you or dim your vision. Take no chances. If you get anything in your eye go at once to the Medical Department.

Operators' Permits

Before he is allowed to operate a crane, elevator or monorail car in the shop, every man is required to satisfy the Safety Department that he is qualified. After which he will be given a general permit which will give him the right to operate cranes, elevators or monorails, subject to the Safety rules of the Company.
Beware of Tape

Leo Goldberg advises all men not to wrap up small cuts with tape. He did so and had a severe case of blood poisoning as a result. This is a kind of warning to others. Go to the nearest first aid station and have all cuts or minor injuries attended to at once.

Be Gentlemen

While riding on a crowded Hamilton car on one of those very hot days in August, a woman, who was forced to stand up, fainted. A number of Ford men were sitting near her and must have noticed that she was not well. Of course we all like to be seated while riding but this does not excuse Ford employees from being gentlemen.

Two Fingers Lost

You would all laugh at a man who would blow out a gas light before going to bed, but how about a man who oils or repairs a machine while it is running and loses two fingers as a result? But this very thing happened in our shop not long ago. It's easy to shut down a machine, but fingers can never be replaced.

Any man seeing a dangerous condition about the shops should report it to the Safety Department—phone 104 at once. Many do this now and the Safety Department appreciates this help. It is one of the many practical ways of helping the other fellow.

It's a great thing to know how to mind one's own business—but it's also well to remember that a few words of warning or caution to the other fellow may save him from serious injury. But be careful HOW you tell him. He is human just as you are.

This factory will be as safe as we make it—and no safer. If you have a suggestion for Safety, write it or come to the Safety Department or tell the Safety Inspectors or your Foreman. It is well worth the time and may save you an injury.

You cannot get back a hand after it is cut off, but you CAN prevent it from being cut off. How? By being careful—by watching your work and by taking no chances. By thinking and by avoiding danger.

Alcoholic excess causes more cases of tuberculosis than any other thing. The man who drinks liquor will pay the penalty sooner or later.

The man who thinks Safety and uses good common sense is Efficient. Efficiency and Safety pay big dividends. They are a fine investment.

Much time and trouble will be saved if the brass number tags on each machine are kept clean so that they may be easily read.

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Shouting is Dangerous

When you see an employe in a dangerous place or some hazardous position, do not shout at him. We had a man do this recently and his act cost the other man, who was on a ladder, to fall. He was quite badly hurt. Of course the first man didn't mean to scare the other. But he didn't think of what might happen. If you see a man in a hazardous place, remember what happened to this man and be very careful. Perhaps you will be on a ladder or some dangerous place next time.

Never hold up line at lunch wagon to argue with man selling. Take man's number and wagon number and report immediately to Factory Service Office. Never ask the lunch man to make change from more than 50 cents. It causes trouble and delays service. Never buy lunches for other employes in your department, unless absolutely necessary. Never lose your temper, the company will not allow its employes or lunch men to use profane language. Please put your paper napkins, soup bowls and lunch boxes in waste cans.

Any employe found using glass milk or coffee bottles for oils, grease, or other factory materials, will be severely dealt with.

It is not a safe plan to leave a machine running while you are away from it. If you are called away be sure to shut your machine down first. Several times the machines have been broken while they were left unwatched.

All Foremen have been instructed from the Superintendent's office to see that their men observe the Safety rules fully and to see that guards are carefully kept in place.

Goggles will protect your eyes. Wear them when grinding, chipping steel or cement, when lighting furnaces or when working around acid.

It's easy to think what we should have done after the accident has happened. The best way is to do your thinking before it is too late.

Record shows that one-third of the deaths of persons under 40 years of age are caused by diseases caught while living in dust and filth.

All material in the W & X buildings must be kept at least 18 inches away from the railroad pits so brakemen may work in safety.

Your eyes are the windows of your soul. Protect them by wearing goggles when engaged in dangerous kinds of work.

Wherever possible, truckers should draw their trucks behind them. This is much safer than pushing the trucks.

It is bad enough to allow an accident to happen ONCE. To allow it to happen more than once is criminal.
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About Coming Late

When "cars," "car service," "street car trouble" and similar terms are
given by an employe as his excuse for being late, timekeepers will please
find out and state in their reports the nature of the trouble, and also
employe's address. Sometimes employees leave home late and miss the
car. This excuse should not be confused with "street car trouble."
"Street car trouble" consists of obstacles on the track, a car off the
track, a disabled car, fire hose across the track, or other cause by
which the service is delayed for 15 minutes or longer. Infrequent or
irregular service, or slow movement of cars, does not properly constitute
"street car trouble" and must be provided against by the employe.
The reason for tardiness in such cases is that the employe left home too
late, which is not a legitimate excuse.

It shouldn't be necessary to do much explaining to convince Ford men
that it is very necessary to keep all aisles free at all times. We never
know when the firemen will have to go through the aisles with their
hose and chemical trucks. Nor do we know when the Hospital
ambulance will have to be rushed through. It is a poor time then to clear
the way. Delays at such a time may mean the loss of a life or a big fire
loss.

Great care should be used to keep all barrels, trucks, chip boxes or
any other obstructions out of the aisles when they are not actually
being moved. It is the safe way and therefore the efficient way.

Most of our electric switches are covered by sheet metal boxes with
a small door in the front. They do look very much like cupboards but
this is no reason why they should be used as such. The practice is
dangerous because there is a possibility of blowing fuses or otherwise
hurting the electrical equipment. Then there is the danger of receiving a
shock and being thrown back and injured. It is well to keep out of the
switch boxes unless it is to turn the power on or off and not then unless
your foreman tells you to.

Your blood passes completely through your body and returns to your
heart every two minutes. It gives you life. The wise and careful man will
never do anything to hinder it or to cause the loss of blood. It is precious.
Guard it jealously. You must have it to live.

Dissipation ruins the health, causes ACCIDENTS and saps the world
with suffering.

Don't get rattled. The best time to get excited is when you have
nothing else to do.

"Never put off till tomorrow the Safety work you should have done
yesterday."

There are thirteen public libraries in Detroit. Which one do you visit?

Remember the wife and children at home and be careful.

Chance-takers and fools get hurt. Take

REAL ESTATE

A sound investment in real estate is one of the best and safest that can
be made. The Ford Motor Company desires that every one of its
employees own his own home as soon as possible. However, there is
great harm in buying too much real estate merely for speculation,
and the Legal Department will not advise employes or give aid in any way
in such purchases.

As a general rule it is not best to buy property on land contract unless
you are able to pay ten percent of the purchase price as a first payment,
or should the amount you agree to pay each month be more than one-
third of your monthly income. A man receiving $5.00 a day should
not pay more than $40.00 per month on a land contract.

Insist upon a direct contract with the owner of the property, and for
that reason have the abstract of the same examined and the land
contract looked over for you before it is signed. Do not contract to buy
real estate from a person who himself only holds a land contract unless
you are able to buy out his entire interest and make your payments directly
to the owner. When buying vacant property see that the lot number and
description in the contract you sign is the same as that of the lot you
select from the plat or blue-print and intend to buy. Dishonest agents
or dealers often substitute lots on careless or too trusting purchasers.

See that the entire agreement you make with the owner or his agent is
made a part of the land contract, and that any extra provisions and
promises in regard to sidewalk, sewer, etc., are put in writing. Have a
date set when water is to be furnished and when sewers and sidewalks
must be completed.

If you wish to know whether the price asked for a house and lot,
which you are buying for a home, is reasonable, apply to the Legal
Department and give them the price, monthly payments and location
of the property you expect to buy, which can then be appraised and a
report made to you.

Have all first payments or deposits made on real estate subject to this
Company's approval of the transaction after examination of the abstract
and contract, and have the receipts state that the money is paid subject
to such approval.

There is nothing more substantial than to own
your
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I was doing. I felt I could, if only I were able to get enough ahead to make myself feel secure and place a safeguard around the future welfare of my wife and children.

"In the few years of this plan of saving, I have acquired (through the bank) a $500.00 bond, paying 6½ per cent interest on the sum I paid for it, also an equity of $1200.00 in our home, and $250.00 in the savings bank. My wife and I are partners in a mutual ambition to be independent, laying by a little each month and putting back what we make in interest on our savings.

"We are denying ourselves none of the essential things in life and are enjoying every reasonable comfort, and a few moderate luxuries. We are working together in harmony, as a team, providing for that day when we shall no longer be able to work."

Notice

It has been brought to our attention that a large number of our employees are sending money to the old country through foreign agents who are not authorized by the State of Michigan to do banking business.

If you deal with an unauthorized agent, you are in danger of losing money entrusted to him.

If you are in doubt as to whether the agent you wish to do business with is authorized by the State, take the matter up with the Department of Education, who have a complete list of all agents who have complied with the requirements of the State law, and they will tell you if the party in question has the right to do this kind of business.

All state and national banks are authorized to handle foreign remittances.

"If you want to know whether you are going to be a success or a failure in life," said the late James J. Hill, President of the Great Northern Railway, "you can easily find out. The test is simple and infallible. Are you able to save money? If not, drop out. You will lose. You may not think it, but you will lose as sure as you live. The seed of success is not in you."
It Pays to Think

When are you going to get one of the big jobs with the Ford Motor Company?

The company is growing so rapidly that scarcely a month passes in which a new managerial or some other important position isn't developed.

Filling these positions is one of the hardest tasks we have to do. We can get plenty of men of average ability for jobs that pay average returns. But men capable of filling the executive's chair at the head of a big department are scarcer than the teeth of Mr. Hen.

This isn't alone true of the Ford Motor Company. The same state of affairs exists throughout the business world. You have no trouble in getting men for $15.00 a week jobs, but the $5,000-and-up-a-year men are few and far between.

Teach yourself to think, and think logically, if you would be an executive. This is the prime requisite. The thinkers sit in private offices.

Most of us work mechanically. We do the task the way it has always been done without knowing why we do it that way. We blindly follow precedent.

It is easier to do the task the way the other fellow did it, without asking why, than it is to sit down and think the thing out.

It takes effort to think if you're not used to it. But it pays.

The man who does a task by rote, will always have this rote to do.

But the man who thinks while he works and works while he thinks, will get a big job with Ford.

If you would be an executive, think! Think! THINK!

It helps the world a lot just to want to help it

—Baltimore Sun