

THE RICHMOND PALLADIUM
AND SUN-TELEGRAMPublished Every Evening Except Sunday, by
Palladium Printing Co.Palladium Building, North Ninth and Sailor Streets
Entered at the Post Office at Richmond, Indiana, as See
and Class Mail Matter.

MEMBER OF THE ASSOCIATED PRESS

The Associated Press is exclusively entitled to the use
for republication of all news dispatches credited to it or
not otherwise credited in this paper and also the local
news published herein. All rights of republication of spe-
cial dispatches herein are also reserved.

Trees Along the Highways

The conservation commission of Indiana suggests the planting of trees along the highways of the state. Two purposes would be served. The beauty of the roads would be enhanced, shade afforded for teams and tourists, and long stretches of barren roads would be paralleled by rows of beautiful trees; and from the utilitarian standpoint, the rapidly diminishing supply of timber would be replaced for the coming generations.

The suggestion of Richard Lieber, director of the commission, ought not to be dismissed without serious consideration. It has many fea-

tures to recommend it to the thoughtful consideration of the people of this state.

It will require a heavy outlay of money to accomplish the ambitious plan of the director. Citizens cannot be expected to pay higher taxes to provide funds to line the roads with trees. But progress toward the attainment of the ideal can be made if farmers will transplant young trees, especially walnut or yellow poplar, along the road sides.

The advantages of planting trees are enumerated thus by the commission:

Aside from their natural beauty, highway trees have many advantages. In heated seasons they serve to reduce the temperature, frequently enhanced by reflection of the sun's rays upon hard surface roads, thus rendering a service to traveling man and beast. In winter these same trees serve as a wind break. During long periods of drought, they materially cause the macadam or gravel road to retain moisture it otherwise would not retain and thus much of the surface of the road, pulverized into fine dust by repeated churning of wheels, is prevented from blowing away with every passing zephyr.

THE GEORGE MATTHEW ADAMS DAILY TALK

NOT IN VAIN

I think it was Wells who once wrote in one of his books: "Nature plays!"

The thought that he wanted to bring out, I believe, was this—that Nature knows that all of her forces are not able to be used one hundred percent efficiently in every instance—but that they must oftentimes be changed and born anew.

No good effort is ever put forth in vain.

Much of what we look upon as lost is merely set aside for our benefit or the benefit of others—later on.

I recently talked with a woman who has been a teacher for nearly twenty years. She was discouraged and regretted that her life had amounted to so little. I congratulated her on her life's amounting to so much!

If there is one life that is not lived in vain, it is that of the teacher.

We lose a fight that we had hoped to win gloriously. And we are inclined to lose heart—but just remember that honest work and planning and thinking is never in vain.

One of the great reasons why Nature is so lavish in its ability to repair damage is that it recognizes that mistakes are the common lot of all.

Tonight you may become inspired by the gleam of some star, lost and extinguished millions of years ago, but which still wanders in the sky along its endless road.

Nothing is ever wholly lost!

The Automobile Simplified

By FREDERICK C. GUERRICH, M. E.
Make This Your Automobile Correspondence School

A N intimate talk on the working units of the automobile discussed in such a way that the layman can easily understand them. If in reading these articles as they appear in the Palladium each Saturday, there is anything not clear to you, ask Mr. Guerrich about it. An answer will be published on the completion of the articles on the section of the automobile under discussion.

Copyrighted, 1917, by Frederick C. Guerrich.

LESSON NO. 47.

The Ford Transmission.

As there are in the neighborhood of 2,000,000 Ford cars in service, and as circumstances may arise, because of which many of our readers may at some time own a Ford, in addition to their present car, or alone, it is well worth while to study the special transmission used on it.

The transmission of the Ford car is

movable gear B are where we want the pressure as at B of the safe. Then to exert a pressure of 500 pounds at B only 100 will be needed at C. The gears C might be regarded as a flat crowbar.

It is but a step to change the portion of gears shown in Fig. 2 to full gears, as shown in Fig. 3, (and in Fig. 4, which is a side view). The point C we can convert into a pin and we can

then hold the band L and the flywheel, and, therefore, engine is revolving, that the gears F and G will roll about D, and so drive the gear E, which is connected to the rear wheels through the propeller shaft, etc. The gears F and G might be regarded as a revolving crowbar.

When, however, the band L is freed, then the drum K will be freed, and as there will now be more resistance to the revolving of the gear E than to the gear D, the gears F and G will now roll on E and so simply drive the gear D and its drum backward. Thus there will be no need to drive the car by the running engine.

You will note that no gears are shifted, the connecting of the engine to the rear wheels being accomplished by the tightening of the band on the drum, as to hold it from revolving; while the disconnecting is accomplished by the freeing of this band.

If the gears D and G were ten inches in diameter, and the gear E six inches, while F was four inches, then the leverage of the pin C would be 5 to 1, but this will not be the engine leverage. The diameter of the circle through which the crank revolves will be less than the diameter of the circle of the pin C and so there will be a resulting reduced leverage. Were the crank circle six inches, only six-tenths (6/10) of the pressure of the crank would be exerted on the pin C. Thus the resulting leverage would be but (6/10) six-tenths of five, or 3 to 1.

I have assumed the crank circle as the same diameter as the gear E, to simplify matters. This will be found to be a fair assumption if the leverage is figured out in detail to the rear wheels. The calculations will resolve themselves to this.

Now as to the speed ratio. By referring to Fig. 4, you will observe that if the gears D and G are of the same diameter, or have the same number of teeth (which they must have if they are of the same diameter), then when the pin C has made a complete revolution, the gear G will have made a complete revolution about the pin, and the tooth A will again be in the position shown. Now the gear F has but forty teeth, while E will have sixty, and so when it makes a complete revolution it will have rolled around but two-thirds of E. In other words, the tooth B will be in mesh with the tooth H of gear E. Now as the gears F and G are one piece, when gear G has made one revolution, gear F will also have made one revolution, and the tooth B will have to be in the position shown. In order, therefore, for the tooth B to be meshed with the tooth H, the gear E will have to travel so that H comes to B, which will be one third of a revolution. Thus for every revolution of the fly wheel the gear E will make a third of a revolution, or expressing this differently, the engine will make three revolutions to one of the gear.

As the gears F and E are brought more nearly to the same diameter, the greater will be the engine speed. Thus if they had forty-five and fifty-five teeth, gear E would move for only ten of its fifty-five teeth and the engine speed would be 5.5 to 1.

When the gears, that is, all four, are of the same size, there will be no car speed, while if F is made larger than E, thus crossing the neutral point, the car will reverse. How this principle is used for reversing will be shown next.

ESCAPED AN OPERATION

By Taking Lydia E. Pinkham's Vegetable Compound. Many Such Cases.

Cairo, Ill.—"Sometime ago I got so bad with female trouble that I thought I would have to be operated on. I had a bad displacement. My right side would pain me and I was so nervous I could not hold a glass of water. Many times I would have to stop my work and sit down or I would fall on the floor in a faint. I consulted several doctors and every one told me the same but I kept fighting to keep from having the operation. I had read so many times of Lydia E. Pinkham's Vegetable Compound and it had my name so often being mentioned, I have never felt better than when I have taken this and I keep house and am able to do all my work. The Vegetable Compound is certainly one grand medicine."

Mrs. J. R. MATTHEWS, 3311 Sycamore Street, Cairo, Ill.

Applied without rubbing, it penetrates to the affected part, bringing relief from rheumatic twinges, sciatica, sore, stiff, strained muscles, lame back, and other exterior pains and strains and the result of exposure. It leaves no muddiness, stain, clogged pores.

Get a large bottle for greater economy. Keep it handy for use when needed. Your druggist has it. Three sizes—35c., 70c., \$1.40.

DON'T BE WITHOUT SLOAN'S LINIMENT

Keep it handy—it knows no equal in relieving pains and aches.

SLOAN'S LINIMENT has been sold for 38 years. Today, it is more popular than ever. There can be but one answer—it produces results.

Applied without rubbing, it penetrates to the affected part, bringing relief from rheumatic twinges, sciatica, sore, stiff, strained muscles, lame back, and other exterior pains and strains and the result of exposure. It leaves no muddiness, stain, clogged pores.

Get a large bottle for greater economy. Keep it handy for use when needed. Your druggist has it. Three sizes—35c., 70c., \$1.40.

Sloan's Liniment *Keep it handy*

tures to recommend it to the thoughtful consideration of the people of this state.

It will require a heavy outlay of money to accomplish the ambitious plan of the director. Citizens cannot be expected to pay higher taxes to provide funds to line the roads with trees. But progress toward the attainment of the ideal can be made if farmers will transplant young trees, especially walnut or yellow poplar, along the road sides.

The advantages of planting trees are enumerated thus by the commission:

Aside from their natural beauty, highway trees have many advantages. In heated seasons they serve to reduce the temperature, frequently enhanced by reflection of the sun's rays upon hard surface roads, thus rendering a service to traveling man and beast. In winter these same trees serve as a wind break. During long periods of drought, they materially cause the macadam or gravel road to retain moisture it otherwise would not retain and thus much of the surface of the road, pulverized into fine dust by repeated churning of wheels, is prevented from blowing away with every passing zephyr.

Dinner Stories

"So you really think your memory is improving under treatment. You remember things now, then?"

"Well, not exactly, but I have progressed so far that I can frequently remember that I have forgotten something, if I could only remember what it is."

The village photographer was losing patience with his woman patron. "Just a little smile, please," he said, dwelling somewhat on the last word. "A smile adds so much to the artistic effect."

The woman shook her head. "Of course, if you'd rather," commented the artist.

"I would not," came from the direction of the headrest. "Our one layin' died this morning, bacon's gone up tuppence a pound, mother's had a couple o' fits, my boy George has just broken a plate-glass window, and my husband is in a military hospital with four or five pounds o' lead inside him. If you think I'm goin' to grin like a Cheshire cat when I'm up against that shower of blessings you're scratchin' the wrong pig. You git on with it natural, mister."

The bulletin confirms his original statement. Mr. Miller says, that there was no justification for wholesale condemnation of the cold pack method of preserving fruits and vegetables, because the ripe olives, which are said to have been the source of botulism poisoning in Michigan and Ohio cities, had been packed in this manner.

Mr. Miller says that the evidence in the hands of the government's agents shows that all spoiled food does not contain botulism poisoning, but any spoiled food, even though showing very slight evidence of spoilage, may contain it, and therefore any canned food showing unnatural color, having unnatural odor, swollen or showing evidence of a gas content, should be discarded, and especially where there is the slightest trace of decomposition.

Good Evening
BY ROY K. MOULTON

SHOULD A WIFE BE A HOME MAKER OR A HAYMAKER?

Dear Roy: My mother wanted me to marry a rich young college girl when I was 24, but I turned her down for a pretty stenographer, who worked with a big insurance firm downtown, and we had a happy married life.

At the declaration of war I volunteered, and was assigned to the flour section of the quartermaster's department. My wife had higher ambitions for me, and it pained her not to have me made a general right away.

She became head of a nursing section for sick horses in our community, and spent all her time at the stables during the war period.

I didn't mind that then. But after I was mustered out of my permanent station in Arkansas, and returned to my home in Jersey, I found that my living room and my library had been turned into a veritable barnyard for sick colts and things.

My wife and I had never disagreed to speak of. But this was too much. And I tried to insist upon her giving up her activities.

And then I remembered a boyhood friend, a veterinary surgeon, and I sought him out for advice and counsel.

On my way home from his house I carried a small vial in my pocket. It contained a deadly poison—deadly only to horses, however.

At night I managed to administer this to the animals in my first parlor. They died ignominiously, despite my wife's nursing. This performance I repeated a number of times.

Till my wife, realizing that her nursing abilities were failing, resigned from her position—and came back to me—her lawful husband.

ICHABOD HANKS.

Those who are well-to-do, are generally hard-to-do!

Many employers who have a good employer, and really can't do too much for him, are foolish enough not to!

Don't become a contractor, if your specialty is debts!

Fashions put a taboo upon large hats, because they emphasized the smallness of one's cranium!

Don't spend money recklessly, especially if it's your own!

Edentately Samuel Taylor Coleridge had January 16 in mind when he wrote the famous passage in "The Ancient Mariner": "Water, water everywhere, and not a drop to drink!"

We trust it was the latest mode of that Lucy Page Gaston threw into the presidential ring, because, if it wasn't, the feminine vote will be sure to talk about it.

Referring to a certain cartoonist, a western paper says: "He stands alone." We have seen this same cartoonist when he couldn't do that.

Jack Nash sees by the papers that

the pin on the flywheel of the

transmission of the Ford car is

movable gear B are where we want the pressure as at B of the safe. Then to exert a pressure of 500 pounds at B only 100 will be needed at C. The gears C might be regarded as a flat crowbar.

It is but a step to change the portion of gears shown in Fig. 2 to full gears, as shown in Fig. 3, (and in Fig. 4, which is a side view). The point C we can convert into a pin and we can

then hold the band L and the flywheel, and, therefore, engine is revolving, that the gears F and G will roll about D, and so drive the gear E, which is connected to the rear wheels through the propeller shaft, etc. The gears F and G might be regarded as a revolving crowbar.

When, however, the band L is freed, then the drum K will be freed, and as there will now be more resistance to the revolving of the gear E than to the gear D, the gears F and G will now roll on E and so simply drive the gear D and its drum backward. Thus there will be no need to drive the car by the running engine.

You will note that no gears are shifted, the connecting of the engine to the rear wheels being accomplished by the tightening of the band on the drum, as to hold it from revolving; while the disconnecting is accomplished by the freeing of this band.

If the gears D and G were ten inches in diameter, and the gear E six inches, while F was four inches, then the leverage of the pin C would be 5 to 1, but this will not be the engine leverage. The diameter of the circle through which the crank revolves will be less than the diameter of the circle of the pin C and so there will be a resulting reduced leverage. Were the crank circle six inches, only six-tenths (6/10) of the pressure of the crank would be exerted on the pin C. Thus the resulting leverage would be but (6/10) six-tenths of five, or 3 to 1.

I have assumed the crank circle as the same diameter as the gear E, to simplify matters. This will be found to be a fair assumption if the leverage is figured out in detail to the rear wheels. The calculations will resolve themselves to this.

Now as to the speed ratio. By referring to Fig. 4, you will observe that if the gears D and G are of the same diameter, or have the same number of teeth (which they must have if they are of the same diameter), then when the pin C has made a complete revolution, the gear G will have made a complete revolution about the pin, and the tooth A will again be in the position shown. Now the gear F has but forty teeth, while E will have sixty, and so when it makes a complete revolution it will have rolled around but two-thirds of E. In other words, the tooth B will be in mesh with the tooth H of gear E. Now as the gears F and G are one piece, when gear G has made one revolution, gear F will also have made one revolution, and the tooth B will have to be in the position shown. In order, therefore, for the tooth B to be meshed with the tooth H, the gear E will have to travel so that H comes to B, which will be one third of a revolution. Thus for every revolution of the fly wheel the gear E will make a third of a revolution, or expressing this differently, the engine will make three revolutions to one of the gear.

As the gears F and E are brought more nearly to the same diameter, the greater will be the engine speed. Thus if they had forty-five and fifty-five teeth, gear E would move for only ten of its fifty-five teeth and the engine speed would be 5.5 to 1.

When the gears, that is, all four, are of the same size, there will be no car speed, while if F is made larger than E, thus crossing the neutral point, the car will reverse. How this principle is used for reversing will be shown next.

Charles M. Schwab is boosting Wood, and wonders if Charlie is tired of iron and steel.

A Yonkers store, according to M. H. Y., is advertising "Stockings 36 inches wide." This would be the kind to hang up for Christmas.

Discard Spoiled Canned Food; May Have Botulinus

Botulinus poison is never present in foodstuffs that are sound when packed and proper application is made of the cold pack