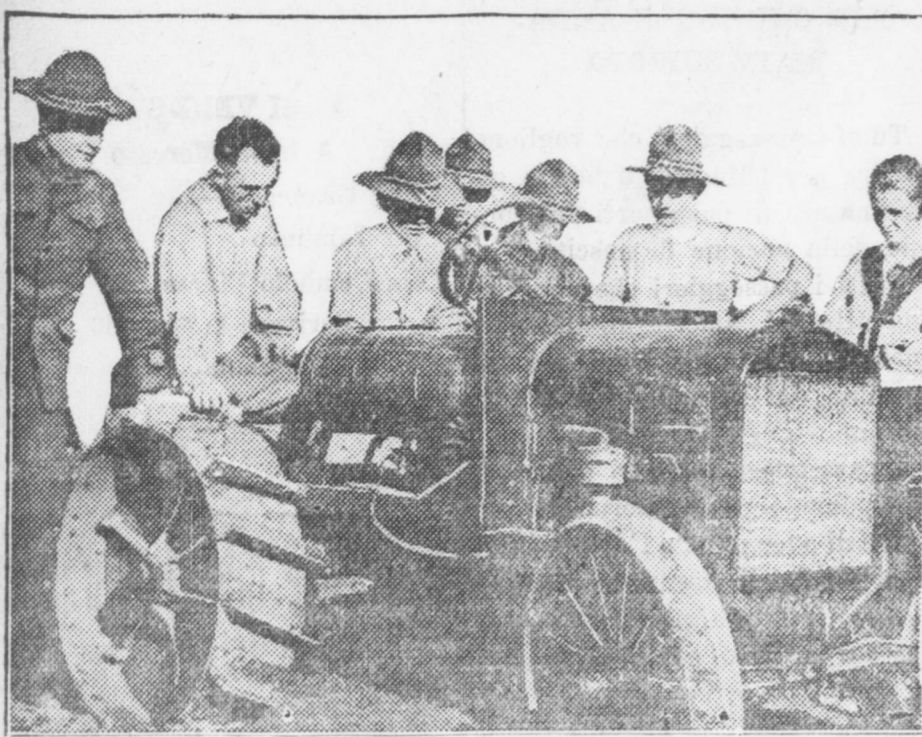


HIGH SCHOOL CHILDREN BUILD TRACTOR



Enterprising high school youngsters of the Pacific coast have completed a motor tractor which they are operating on one of the war gardens. The photograph shows the completed tractor as it first appeared on the school grounds.

MOTORISTS FACE PROBLEM OF GAS

Automobile and Petroleum Men Must Get Together in Close Harmonious Co-operation.

INCREASE IN MOTOR CARS

Said to Be Possible to Construct Internal Combustion Engines Which Will Consume Much Less Fuel of Inferior Kind.

"The perennial fuel problem will never be solved until the automobile industry and the petroleum industry get together in close and harmonious co-operation," says Mark L. Requa, general director of the oil division of the United States fuel administration, in an interview, which appears in Motor, the national magazine of motoring.

"The motor fuel problem is not only a possibility of the future," continues Mr. Requa, "but even an actuality of the present, as will be understood by anyone who takes the trouble to make even the most cursory examination of the situation. In 1912 our production of petroleum was 222,935,044 barrels of 42 gallons. In 1916 the output of this basic producer of motor fuel was 300,767,158 barrels, an increase in four years of less than 30 per cent. On the other hand, in 1912 there were about 1,000,000 motor vehicles in the country, while in 1916 the motor population of the United States had risen to 3,541,728. This represents an increase of over 300 per cent in four years. With one side of an equation growing less than 30 per cent and the other side increasing more than 300 per cent, the ultimate situation is not hard to foreshadow.

Engine Uses Less Oil.
"I am not an automobile engineer, so I cannot speak from personal knowledge, but I have been informed that it is possible to design internal combustion engines which will consume much less fuel per mile than is now being consumed, and of a much inferior quality. If this is a fact and the automobile industry faces the situation in co-operation with the oil men to effect this saving, while these latter are devoting their best effort to increasing production, it would seem that we might cut enough off each end of our problem to solve it.

"We seem to be only at the beginning of the gasoline era; a few years ago gasoline was a wasted by-product; today it is the most important product of petroleum, amounting to almost 50 per cent of the total value of petroleum products. With the record of the past as a guide, it would seem that the two great industries so interdependent upon each other should co-operate in bringing about the most efficient consumption of gasoline and the most intelligent understanding of each other's problems."

CARE OF WINDSHIELD GLASS

Application of Strong Soapsuds Will Prevent Fog or Rain From Obscuring Vision.

Strong soapsuds made from automobile soap and rubbed on the glass of the windshield and allowed to dry will prevent fog or rain from obscuring the vision through the glass. Kerosene is sometimes used for this purpose, but it does not last as long as the above, and glycerin is also recommended.

AVOID FORMATION OF RUST

If Car Is Used in Bad Weather Tires and Rims Should Be Wiped Clean With Sponge.

If the car owner, after being out in bad weather, will take the trouble to wipe the tires and rims clean with a sponge and then wipe them dry, especially along the beads, he will do much to prevent the formation of rust.

Not to Come Back.
An authority says, "Wet the cat with camphor and water, and the fleas will leave at once." So will the cat.—Minneapolis Journal.

HANDLE BATTERY WITH CARE

Motorist Should Economize on Current and Keep Engine Tuned to Start on Second Turn.

The man who has trouble keeping his battery charged will find that difficulty largely can be overcome by careful handling. In other words, he should economize on current. He should keep his engine tuned up so that it starts on the second or third turn. Thus he can minimize the amount of current used in starting, and, remember, this is very large. The current required is 200 to 600 times as much as required by an ordinary 16-candle power house light.

He should also be economical with his lights. He should use his headlights only when absolutely necessary. He should determine the car speed at which his cutout relay makes connection with the battery and operate the car as much as possible above this speed.

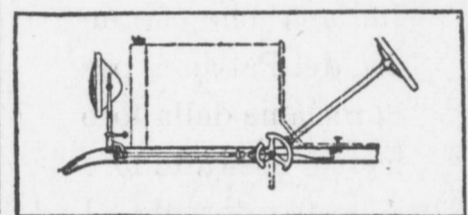
If he drives much in a congested city district and stops his engine many times he will find that his battery can be kept more nearly charged by changing gears in traffic whenever necessary instead of trying to do it all on high gear, the reason being that by changing gears he boosts his engine speed so that his battery is charged, while if he tried to pull slowly on high he gets down to a speed at which charging stops due to the opening of the cut out.

NEW HEADLIGHT FOR MOTORS

Nevada Inventor Provides Mechanism for Operating Lights Around Curves in Road.

The Scientific American, in illustrating and describing a dirigible headlight operating mechanism, the invention of E. C. Smith of Fallon, Nev., says:

This inventor provides a mechanism for operating the headlights of motor vehicles whereby they may follow the



Dirigible Headlight Operating Mechanism.

curves and turns in the road in illuminating the same, incorporating means whereby the headlight operating mechanism may be thrown into and out of operation at will. He provides a mechanism coupled with the steering gear and movable into and out of operable relation therewith, in order that if desired the light may be kept stationary while the vehicle is traveling.

DELICATE CAR DOOR POCKETS

Wooden Strips May Be Securely Fastened by Using Blue, Round-headed Screws.

Many cars are afflicted with "delicate" door pockets, those which are made of inferior material or are improperly fastened. These are apt to tear loose at the corners since they are merely tacked on wooden strips attached to the door. When this happens they may be securely fastened by using round-headed screws, which should have blue heads when the material is black. These same screws can be used to advantage in fastening the linoleum flooring to the boards, especially at the corners.

FIND LUBRICATING FAILURE

Car Owner Should Emulate Example of Locomotive Engineer by Using Hand to Find Trouble.

The locomotive engineer frequently uses his hand to determine lubrication failure, and this is a hint that the car owner can put to good use. Failure of lubrication permits excessive friction, and friction generates heat. Any part which is discovered to be too hot to the hand held near it is probably suffering from faulty lubrication.

Music Not His Strong Point.

The leader of a volunteer orchestra was greatly annoyed by the "cellist, who repeatedly at a rehearsal was in error; finally he stood near him, listening. "Why, man," he exclaimed, "your 'cello is not in tune!" The player screwed at the pegs, but a few moments later the discord was repeated. "Can't you tune your instrument?" demanded the conductor irritably. "No!" said the stout "cellist, "not always." Then his face brightened. "But you should see how I can skin fish!" The skinning of fish was his trade, the orchestra his side line.

Invisible Airplane Wings.

Wings of cellulose acetate, being transparent, make an airplane invisible at the height of a few thousand feet, also increasing the operator's field of vision. Sheets one one-hundredth-inch thick are about as strong as the ordinary wing cover, and the weight of nine ounces to the square yard is but slightly greater. The rapid spread of a tear when started is a disadvantage that may be overcome with a re-enforcing of loosely woven silk.

Daily Thought.
Promise is best given when the least is said.—George Chapman

The Seventh Day

By JULIA RICHARDSON

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David Stirling, lieutenant-to-be, climbed the hotel steps wearily, acknowledged mechanically the greetings of the usual porch squad of people, and dropped into a chair—comfortable, but far from the maddening crowd. Seven times he had repeated these motions with the same dejectedness, the same absent-minded manner, the same weary dropping into a chair.

Immediately afterward, the heads of the rocker brigade would meet, and the buzz of whispering voices arise, some sympathetic, some mildly angered. Scraps of sentences drifted to Dave's ears, such as, "Too bad! Poor fellow. It must have been her fault." "I wonder what the quarrel was about anyway." Some maintained that it was not her fault, but his fault. David tried to remember their names for future reference.

In the meantime, on this seventh day, Dave lit a cigarette and stared moodily out over the sea and sky, spread lavishly before him as if to console him with their beauty. For a time, the poetic half of his nature responded enough to isolate him from his disturbing thoughts. The sky was like turquoise, he thought, the sea like sapphire, the clouds and foam were pearls—but at this point his mind wandered to diamonds—engagements—girls—one girl in particular. And he was back again in the world of his troubles. For the seventh time Dave reviewed the chain of events. Two weeks ago he had come to spend a month at the quiet summer resort in Maine to be near Carol Thatcher, his fiancée, before he left for the Southern training camp.

The first week had been Elysium, Utopia, and heaven all combined. Every night marked the end of a perfect day. Bathing, boating, fishing, walking on soft grass or cool pine needles or luxuriant white sand, not on hot pavings or cobblestones. And then—**one day he was to meet Carol in their favorite spot, a large, cleared spot in the woods called the Cathedral, with moss for carpet and straight pines and spruces for pillars.** As he approached the place, he heard voices, one masculine, the other Carol's. Dave could not be seen through the thick growth of trees.

The masculine voice said, "Then I am to have the pleasure of marrying you?"

Carol's laugh rang out, "You certainly are if I have my way about it, John, you old dear. Why, I've planned it for the last four years, ever since you entered, you know."

Dave did not quite understand the last sentence, but the first had been sufficient. He thought he understood that perfectly. Waiting to hear no more, he turned abruptly and made his way back to the road.

That evening a bellboy had given him a small package and a note, the package containing Carol's diamond, the note a frigid one to Mr. Stirling, saying that his unexplained failure to keep the appointment that afternoon seemed to the writer sufficient reason for discontinuing their betrothal.

"A mere alibi," muttered David, "She wants to be free for the other man, of course." Thus began his gloomy days on the porch, preceded by a brisk walk or a swim every morning. Carol had been playing with him, evidently, for the sake of the good times, his companionship—and of course, the diamond. All the while for four years she had loved this other man John, curse him! Dave was through with women—absolutely!

During the week the two avoided each other persistently, a fact soon noticed and recorded in the porch annals. Carol, just to show that she did not care, flirted outrageously with young and old alike.

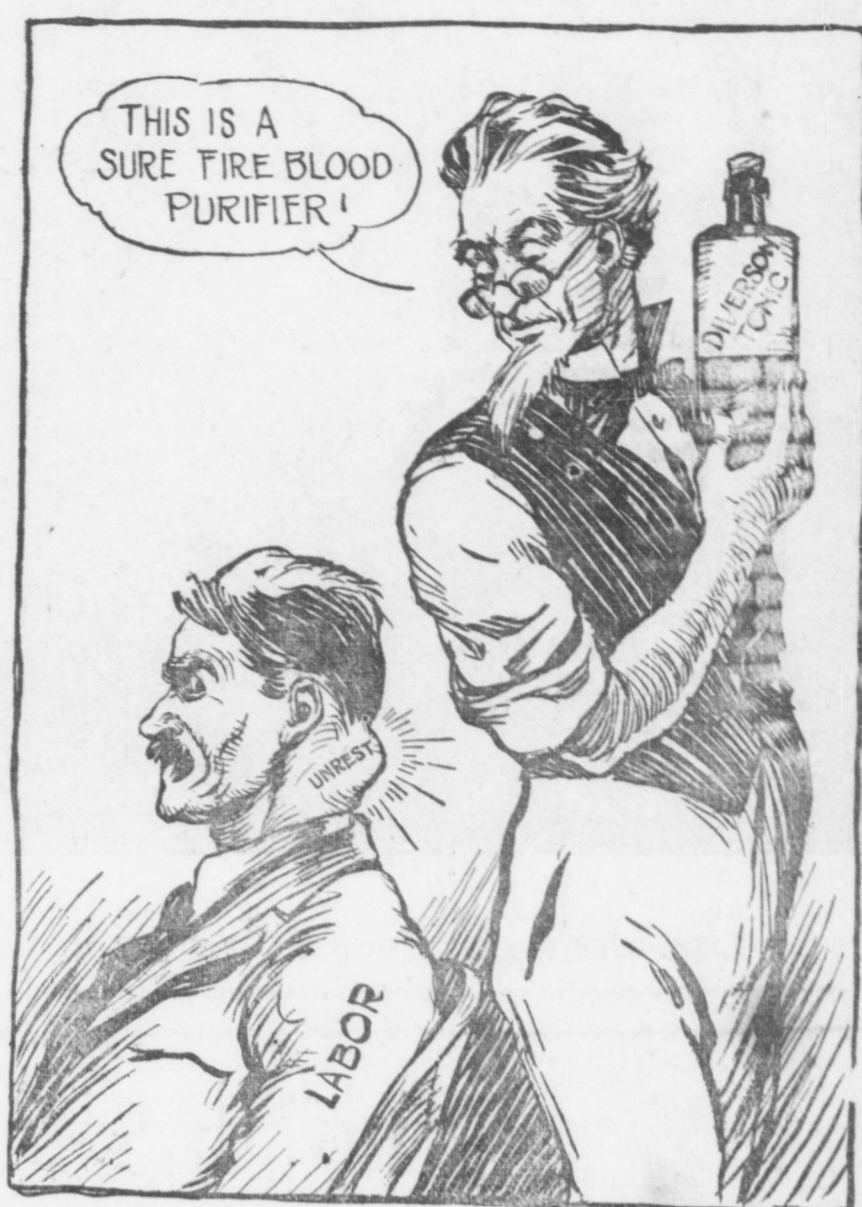
David left the hotel rather early, taking a longer route to avoid meeting anyone he knew. As he entered the Cathedral from one path, a figure in white entered on the opposite side. It was Carol.

"Good evening," she said coldly. "Good evening," replied David in the same tone. "Allow me to congratulate you on your coming marriage." It was the last thing he had intended to say, but in his confusion the words were spoken. Carol's eyes opened wide. "I'm sure I don't know what you mean, Mr. Stirling," she replied, trying to appear casual and indifferent. This was the first time the two had been together for a whole week—moreover the moon was shining, the setting ideal for romance. What each wanted most was to fly into each other's arms. But they had quarreled—hence the brave attempt at distant formality.

So David explained. As he explained, Carol's eyes grew happier and happier, merrier and merrier until they twinkled with laughter. "David, you goose, do you know who that was? 'John' was John Flockton, an old playmate of mine. Four years ago he entered a school of theology and now he's a full-fledged minister—just received his degree. He's stopping a few miles from here and had motored over that day for a short call. Of course, I want him to marry me, that is—marry us. Do you understand now?"

"I do," said David, happy for the first time in seven of the longest days of his life.

REAL SPRING TONIC



THIS IS A SURE FIRE BLOOD PURIFIER!

Lucille's Cousin

By HELEN W. HERRICK

(Copyright, 1918, by the McClure Newspaper Syndicate.)

"Lucille, it's time you finished that sweater for Jack Winthrop; you've been working on it fully three months, and Jack goes to France within two weeks."

Mrs. Whitney addressed her pretty but slightly spoiled daughter, who was comfortably settled in a couch hammock with a book and a box of chocolates.

"Well, mother, I'm glad you are so very enthusiastic over Jack Winthrop. For my part, I am not in the least interested in an old cousin of yours who is such a distant relative that you couldn't trace the connection with a six-foot pole. I do not intend to finish that sweater, so there!"

Whereupon Lucille arose from her seat, and with a decisive nod of her fluffy brown head, accompanied by a flash of her big brown eyes, she bounced down the steps toward the street.

"What shall I do with that child?" thought her mother as she watched the attractive girlish figure disappear down the street. "She has had her own way so long that she is becoming quite stubborn."

"I suppose I ought to have told her that Jack is coming for a brief visit before going 'across,' but she seems so disinterested in him that it would only make matters worse to tell her. He is such a fine looking chap, too. I'll bet she changes her mind when she sees him."

While Lucille's mother was turning matters over in her mind, Lucille was likewise turning a few over in hers.

"Just imagine! Why, I've never seen the fellow in my life. Why is it that mother thinks I should care anything about him? Likely as not he's as homesy as a hedge fence. If only he—My! What a fine looking soldier!" Lucille almost exclaimed aloud as a tall, nicely built officer swung into view.

"Gracious! I hope I look all right, I'd like to make a good impression." As he drew nearer she remarked under her breath: "If Jack Winthrop looks anything like him, I'll finish that sweater in a jiffy. I wonder if—Heavens!" she thought. "Is he talking to me? Why—er—yes. This is Smithfield avenue," she stammered to his question.

"Could you tell me where Mrs. Robert Whitney lives?" the handsome soldier asked, tipping his hat. "I believe the number is 250. I'm Jack Winthrop, and— Why, what is the trouble?" "Jack Winthrop!" Lucille fairly screamed. "Well, isn't this the funniest? I'm Lucille Whitney, and I'm real glad to see you," she said, extending her hand. "Come right home; mother will be delighted to see you. You came rather unexpected, didn't you?"

"No, indeed," he answered, smiling. "I'm sure you mother expected me, for I wrote her a letter saying that I was coming. I'm going across in two weeks so I thought maybe she'd like to say good-by to me. You know she is my nearest relative, since mother died," he added, with a catch in his voice. Guilty thoughts of an unfinished sweater flashed through Lucille's mind as she studied Jack's boyish figure and tried to imagine the long, lonely nights he had spent in camp without a mother's cheerful and loving letters of encouragement.

"To be perfectly frank," Lucille began, "I've never been very anxious to find out much about you. Mother often mentioned your name, but I had no idea as to what you looked like. I must say you present a very striking appearance in your uniform."

"And I must say," Jack answered, laughingly, "that I have a very amusing, as well as pleasing little cousin. Ah, here we are; your mother is coming out to meet us."

Mrs. Whitney, of course, was rather surprised, and all the necessary explanations for both sides were speedily given. Jack finally agreed to spend the remaining two weeks before sailing at the Whitney home, and the two "distant" cousins soon became very much interested in one another.

Mrs. Whitney was inclined to believe that there was something more than mere friendship in their attentions to each other, and Mrs. Whitney proved herself a good guesser.

One day, after the visit came to an end and Jack had bidden good-by to Lucille and her mother, Mrs. Whitney caught Lucille unawares diligently knitting on a dark-colored object.

"Why, Lucille, dear," she said, when she recognized the unfinished sweater, "whatever possessed you to finish that sweater?"

"Oh, mother," she answered, looking up shyly, "my views towards Jack have changed considerably in the last two weeks, and, oh, mother, you know how it is! I love Jack and Jack says I'm the only girl in the world for him so when the war is over we're going to get married." And she proudly held out her left hand with a diamond solitaire glittering on her third finger.

"I thought you'd change your mind when you saw him," Mrs. Whitney murmured as she embraced her daughter.

Spending Money Lost.

Wayburn—My uncle left \$1,000 yesterday.
Woodlot—Left it to you?
Wayburn—No; left it on a street car.—Judge.

Oldtime News Service.

In 1832 James Watson Webb, of the New York Courier and Enquirer, established an express-rider service between New York and Washington which gave his paper valuable prestige. In the following year the Journal of Commerce started a rival service, which enabled it to print Washington news in New York within 48 hours of its occurrence. The most notable express-mail service of all was the "pony express," which carried messages by relays of riders across mountains and deserts and through hostile Indian territory from St. Louis to San Francisco, covering 1,900 miles in 10 days.

Deeds and Words.

Deeds are greater than words. Deeds have such a life, mute but undeniable, and grow as living trees and fruit trees do; they people the vacuity of time and make it green and worthy. Why should the oak prove logically that it ought to grow, and will grow? Plant it, try it; what gifts of diligent judicious assimilation and secretion it has, of progress and resistance, of force to grow, will then declare themselves.—Carlyle.

Production Wins.

Wealth does not come by the most diligent saving, but by the most diligent producing. Men and nations who pinch the pennies hardest are never the richest.

Pope's Poetry.

His poetry is not a mountain-tarn like that of Wordsworth; it is not in sympathy with the higher moods of the mind; yet it continues entertaining in spite of all changes of mode. It was a mirror in a drawing-room, but it gave back a faithful image of society, powdered and rouged, to be sure, and intent on trifles, yet still as human in its way as the heroes of Homer in theirs.—Lowell.