THE MALIGNED GAS METER.

NO ONE BELIEVES IN ITS INTEGRITY EVEN UNDER PROOF.

When the Machine Does Go Wrong the Gas Company Gets the Worst of It—If People Would Learn to Read the Meter Dials Interesting Revelations Would Follow.

"Oh, gas may burn and gas may burst,
And vanish in noise and flame;
But the meter hand in its quiet way
Goes grinding onward day by day,
And gets there just the same."

"Probably there isn't a more maligned and misunderstood recording machine in the world than the gas meter," said the gas man. "The way the poor, inoffensive thing is lied about is appalling. The prejudice against it is almost as universal as its use, and although its construction is so simple that even a child can readily understand the principle on which it works, not one consumer in 10,000 knows how it keeps tabs for the company or how to read the figures on its dials. Children are taught to tell time almost as soon as they begin to talk, but whoever heard of teaching a child to read a gas meter? Yet in a city like New York meters are almost as plentiful as clocks. In spite of their general use and simplicity of construction, they are looked upon as something beyond the grasp of the ordinary intellect. Consumers go right on swearing at them month after month and declaring that they are at best but lying allies of swindling gas companies, by means of which they are able to rob patrons at will.

"It is a curious fact that men and women, too, who are sane on every other subject in the world, go raving, stark mad when the gas meter is mentioned. This monomania is quite as common among intelligent, right-thinking people, as among the most densely ignorant. Not even the trusts come in for so much unmerited vituperation and abuse. It is one of the few subjects on which argument is not tolerated. Any attempt to explain that when the meter goes wrong it is found in seventy-five cases out of a hundred to rob the company instead of the consumer is generally met with a response something like this:

"'Now look here, you can't fool me. Everybody knows that the gas companies are swindlers. Why, last December our bill was only $3.40 and we were burning gas all over the house. Used a gas stove, too. In January my wife and the kids were away from home most of the time and we didn't burn any gas at all. Yet the bill was $6. Now,' triumphantly, 'how do you explain that?'

"Of course you can't explain it, because you can't very well call the man a liar. As a matter of fact he didn't mean to lie. He had heard so many people say the same thing, with slight variations to suit individual cases, that he really believed he told the truth. The instant he saw the bill he leaped to the conclusion that the gas company was trying to swindle him, instead of thinking the matter over and trying to find a reasonable cause for the increase. He forgot that his wife was the household economist, that when she was home no gas was wasted and every one went to bed at a reasonable and regular time. He also forgot that she never permitted all-night poker parties in the flat or allowed mere men to cook Welsh rarebits and other dainties on the gas stove. But the gas meter is inexorable. Nothing goes through it without leaving a record, and if the prejudice against it were not so widespread, the wife might find in its dials a sure indication of what went on at home during her absence. Instead of looking at it in that light, she joins her husband in denouncing the gas company as a robber and goes forth to tell her neighbors all about it. Thus the ill fame of the meter spreads.

"Although I have been in the business many years and have made a pretty careful study of the meter question in all its phases I am still in the dark concerning the genesis of this widespread popular distrust of our methods and our measures. Its origin is shrouded in mystery. We generally attribute it to ignorance, and most gas men agree that if the ability to read meters were as common as the ability to tell time consumers would practically cease to kick and the bill for gas would be looked upon merely as a necessary evil, just like bills for groceries and meat. Yet the solution is not so satisfactory as we try to make ourselves believe. Look at the incandescent electric light business, for instance. Its growth in ten years has been fabulous. At first the companies charged so much a month for each light, but they soon saw that, in order to do justice to all parties and at the same time put the business on a sound and sensible basis, bills would have to be made out according to the amount of electricity used. So the electric meter was invented. Its use became quite general, but whoever heard anything like a popular uprising against the electric meter. Whoever saw a joke about it in the comic papers?

"Perhaps the gas companies have treated too lightly the complaints that have poured in upon them and haven't taken proper steps to disabuse the mind of the public of its false notions about the business. The reason for this is plain. We gas men judge our own business by the same standards as other businesses are judged by the community at large. We know that we are just as honest as the butcher, the baker or the candlestick maker and that we are at least twice as careful about our accounts as either. For instance, the butcher in weighing your meat first puts upon his exceedingly sensitive scales a piece of paper weighing an ounce or two. Then he charges you for bones and fat which you never get.

"We, on the other hand, are exceedingly careful to charge for nothing except the amount of gas which the meter records. Yet you never dream of questioning the honesty of the butcher, while you have nothing but hard words for the gas man. You stand by complacently and watch the butcher charge you for meat, paper, bones, fat and all and pay the bill as a matter of course. Yet when the gas bill is presented you rave and storm at the collector and declare you will not pay, no, not even if you have to burn tallow candles for the rest of your life. Not infrequently you call at the gas office and give the cashier a piece of your mind. You even threaten to carry the matter to the President of the company who is a friend of a friend of yours, in which event you assure the cashier that you can see his finish as well as that of the collector who dared to present such a bill.

"In the end, of course, you pay the bill, but the transaction implants a bitterness in your heart against the company, which grows with the passing years. The gas men feel, in the majority of such cases, that the complaint is preposterous and absurd, and that an attempt to set you right would be a waste of breath. They are reasonably sure that the bill is right to a hair and they know they can't make you believe it. So what's the use of arguing about the matter? Personally, I do not believe it is good policy to treat any complaint, no matter how absurd, with contempt; but they do try our patience and sometimes they make us laugh. The Secretary of a company for which I once worked was called to the telephone one day.

"'Hullo, there!' said a business-like voice on the other end of the wire. 'Can you tell me when the entries for the races close?'

"'Races? What do I know about the races?' answered the Secretary. 'This is the gas office.'

"'That's right,' said the voice. 'You're the man I'm looking for. You see, I've got a gas meter down here that I want to enter in the races. It's the fastest thing on earth. Say —' But the Secretary had fled from the telephone.

"Another friend of mine in the business who is now near the top of the heap, was once described by a consumer, whom he had won over from kerosene, as 'a pillar of brass by day and a pillar of gas by night.' A most curious superstition that we have buried at us very frequently is that gas companies force wind through their mains and meters and make the consumer pay for it. This complaint is handed up to us as often as twenty times a month. If you have ever watched a gas stove burning you know the effect of air on gas. The burners of these stoves are made in such a manner as to take in a certain proportion of air, consuming it with the gas. Now you know you couldn't light a room with a gas-cooking stove for the simple reason that the flame has no illuminating power. The air destroys that. So, how in the name of a bunch of sixes could we force air into them even if we wanted to?

"The legends and fairy stories that have grown out of the gas business would form a respectable annex to the new City Library. Probably the most popular of these tales is the one about the man who closes his house and goes to Europe for a year or eighteen months. When he comes back the gas company presents him a bill for $680. This is told to illustrate the industry of the meter, which is generally supposed to work quite as well when you don't burn gas as when you do, and it has a wide circulation throughout the United States. It is generally fastened on one of the most prominent citizens of the town.

"Then there is that other yarn about the saloon keeper up the State who 'doctored' his meter so that the hands on the dials couldn't budge, although he was burning gas night and day. Every time the indexer came around the saloon man gave him the merry ha! ha! One day after the meter had been penned up for nearly a year the saloon keeper heard an odd noise in the cellar. When he went down he found the meter working like a steam engine. The hands went around so fast that he grew dizzy watching them. Finally they stopped and the story they then told made the saloon keeper look like Confederate money. The meter had recorded every foot of gas burned since the day it was doctored. The end was that the company took the saloon for its pay and the man who monkeyed with the meter went back to carrying the hod.

"Of course, there isn't even the shadow of truth in any of these stories. They are more absurd than the wildest tale in a yellow journal. But it is simply wonderful how many people regard them as gospel truth. That is why I say that it would be an excellent thing for both companies and consumers if everybody who burned gas could read the meter. The halo of mystery surrounding the business would soon disappear and consumers would cease to complain without legitimate cause. The companies couldn't very well start schools of instruction, but meter reading could easily be taught by means of printed circulars. After all it is a very simple matter to tell just how much gas you have burned. Seventy-five per cent. of all the meters in use are of the sizes known as three-light and five-light. All such meters have four dials, three in a row and one surmounting them. The dial at the top is called the two-foot hand. Pay no attention to it, for it is only used when the meter is tested. The other dials are marked 100,000, 10,000 and 1,000 respectively.

"Now if you will fix in your mind the fact that while the 100,000 hand and the 1,000 hand revolve from right to left the 10,000 hand travels from left to right, you will have mastered about the only puzzling thing about meter reading. Let us suppose that the 100,000 hand of your meter stands between 5 and 6 on the dial. That is 50,000. (It isn't 100,000 until a complete revolution has been made.) The 10,000 hand is between 7 and 8. That is 7,000. The 1,000 hand is between 2 and 3. That is 200. Now add them together and you will find that the correct index of your meter is 57,200. Always take the figure on the dial which the hand has passed, not the one it is approaching. When the record reaches 59,900 the next turn of the recording machinery will bring it around to 60,000—that is, the 100,000 hand will be fairly upon the figure 6 and the hands on the other dials will be at 0 or slightly passed it. When 100,000 feet have been recorded that is when the 100,000 hand has made a complete revolution—you start all over again to avoid carrying superfluous figures. For instance, the 100,000 hand is between 10 and 1, the 10,000 hand between 2 and 3 and the 1,000 hand between 5 and 6. The meter then reads 2,500. Actually it reads 102,500, but the company drops the first figures because they are useless. Of course, the very large meters, such as are used in factories, business houses, hotels, &c., have additional dials and the figures are carried up to 1,000,000 or more, because in many cases more than 100,000 feet are burned in a month.

"A meter consists principally of lungs—that is a pair of sheepskin pouches which are placed in the lower part. In the upper part, which contains the recording machinery, there are two valves which open and close automatically, so that when one of these pouches is filling the other is emptying itself through the outlet of the meter. In this way the flow is always kept steady. As these pouches fill they are expanded and it is their action on the gearing of the recording machinery that moves the hands. The cubic contents of each pouch at its greatest expansion is the basis of measurement. Gas companies do not build meters. They buy them from manufacturers or their agents, generally the latter, and when they receive them they are hermetically sealed so that even the employees of the companies cannot get at the works unless they pull the meters all apart.

"So great is the desire for accuracy in these machines that each meter has to go through four or five tests at least before it is put into use. In the first place there are two tests at the factory. Then there is the State inspector's test or the test by the Department of Public Buildings, Lighting and Supplies. Next the agent or distributor has his own little test, because it is to his interest to have all machines leaving his hands in perfect condition. Finally the gas company itself tests the meter and if it passes through all these ordeals safely it is ready for business.

"The method of testing a meter is as simple as it is reliable. The machine used is a small gasometer, a minature gas tank, holding, say, ten feet. Of course its cubic contents have been calculated with extreme accuracy. The gasometer is equipped with a scale and a pointer, something like a thermometer, which indicates the number of feet passing out of the tank. A hose is stretched from the outlet of the tank to the inlet of the meter. Another hose connects the outlet of the meter with a rack of burners. When the tank is filled the gas is turned into the meter and passes out through the burners, which are lighted. If the meter is correct the two-foot hand will record exactly as much as the scale on the gasometer indicates. If fast or slow the fact will be revealed by comparing the two.

"Now the law says a meter is correct which is not more than two points out of the way, that is, it may be 2 per cent. fast or slow. But no gas company in this city, at least, would send out a meter that wasn't right to a dot, and no manufacturer or distributer would knowingly sell such a machine. The principal thing that makes meters such accurate recorders is that the movement of the machinery is positive—that is, it is all straight gearing with no springs. But when they do go wrong the tendency is all toward slowness—that is, recording less gas than passes through them. This fact has been demonstrated repeatedly by both public and private tests. Years ago there was a great howl in one of the big cities about the inaccuracy and general cussedness of meters. It was charged on all hands that the gas company was practising extortion through the agency of the swiftest set of meters the world ever saw. Finally the company consented to have a test made under the direction of the authorities of the city. The result showed that 76 per cent. of all the meters in use there were slow, 8 per cent. were fast and the balance were correct. Of course, the gas company replaced all the slow meters with machines that recorded correctly and once more virtue was its own reward.

"Meters are made in many sizes, from the modest three-light, which hides itself away in the coal hole of your happy little home, to the monster at the works which records all the gas made there. All are made in the same way except the station meter, which is sealed by water. The latest thing—although no longer a novelty—is the slot meter, into which you pay your money before the gas is delivered. Drop in a quarter and the gas is turned on. When a quarter's worth is burned the meter shuts off the flow and no more gas can pass through it until another quarter is fed into the slot."

CHUNK PURCHASES CUT ICE.

A Young Wife Demonstrates to Her Husband That He Is a Mere Theorist.

They had been married six weeks. He had delivered daily lectures on the expense of the dove cote. It is not unlikely that she had acted upon her own judgment. Evidently she knew more about some things than he. Looking up from his newspaper, in manipulating which he overturned his cup of coffee, he said:

"I see that ice has been reduced to 40 cents."

She was engaged in pouring his second cup. He repeated his remark.

"Yes, dearie," she replied, "I heard you."

"Then there is a small reduction there. My sainted father, to whose financial acumen we are indebted for a good many things in this apartment, used to say to me when I was a boy that it was the spigot saving which offset the waste at the bunghole, or something of that sort. You know where the spigot is, of course, sweetheart."

"I have seen it diagrammed," was the reply.

"Of course, because ice has been reduced from 60 to 40 cents is no reason why your girl should be allowed to chop the ice to powder, or to use it more recklessly. That would not be economy. If she did that it would make no difference to you whether ice was 40 cents or a dollar. You get the drift? It is applicable to all expenses."

"What is the weather forecast, dearie?"

"I haven't seen it. I was talking about our household expenses. I hope you heard what I said about this ice business."

"Why, certainly I did but I did not know it called for special reply."

"I only want you to cultivate the financial hints which I throw out, because I cannot look after details of the house and watch the ticker at the same time."

She was busy with her pencil.

"Making out your order for the day?" he asked.

"No, dearie, I was thinking of a little problem in geometry—one of the last we had in our class."

"What nonsense! A woman has about as much use for geometry as a hen has for a life preserver."

"Wont you look at these figures, dearie. I have drawn them hastily," and she shoved over a sheet of paper on which there were three squares, the first being the biggest. He gave the drawings a hasty glance and said he supposed they were correct, but he hoped she would permit herself to think of more practical matters.

"That is what I thought I was doing, dearie," she replied, with a slight tremolo in her voice. But in spite of it she proceeded to demonstrate:

"Let the largest square represent twenty-five pounds of ice when the price was 60 cents. Then let the second square be equivalent to the first when the price was 50 cents. Then according to the rule of ratio the smallest square will represent the chunk of ice I receive after the congealed necessity has been reduced to 40 cents. I have forgotten the geometric formula, dearie, but you get the drift. In other words, dearie, what difference does it make to a housekeeper who buys by the chunk, whether ice is 60 or 40 cents?"

As he had less than nine minutes to make the last express he had no time to discuss her demonstrations, but he admitted to his partner at luncheon that no woman was fit to be a housekeeper unless she was proficient in higher mathematics.

Matters of Interest Concerning Horses are more fully and ably treated in THE SUN'S news columns than in any other medium. Advertising thus becomes more valuable in THE SUN for obvious reasons. Remember this.—*Adv.*

IT IS NICE TO BE WOLCOTT.

EX-TANK NO 11 THE VICTIM OF A MISTAKE IN CHICAGO.

A Resemblance to the Colorado Senator Good Enough for Breakfast and a Plunge on the Board of Trade, to Say Nothing of Introductions to Distinguished Citizens.

"One lukewarm summer morning about ten years ago, without the rebate, I got into Chicago from Cincinnati on the Big Four, all out and wabbling on the wire," remarked Ex-Tank No. 11 of the Harlem Club of Former Alcoholic Degenerates. "I had only batted 'em a little in Cincinnati, and Cincinnati hadn't turned the left cheek to me after I landed a short, easy one on her right. In fact, when I got pocketed there and no chance to pull up and go around the field, Cincinnati tried to give me the Farthest North gaze, and I didn't feel like standing for that—not from any Class Y, minor league town like Cincinnati, anyhow, I didn't. So I bunted for the first sack, which was Chicago. That sprint was my distance, anyhow, for when I shook myself up after getting into Chicago the subdued tintinnibulation in my change pocket only announced me 58 cents to the right, and the coffee and rolls still unbought.

"A combination of grewsome circumstances had rendered it necessary for me to leave my trunk and portmanteau behind in Cincinnati. When I stepped off the train in Chicago, however, I had more or less of a ready-money look, wherefore I surveyed myself with some grimness. Fifty-eight cents, hey? and a light Scotch tweed suit on that'd cost me $70, a maroon fancy waistcoat, a made-to-order straw bonnet, and a pair of toothpick patent leather skates that had macerated a fifteen-dollar note to pulp—and 58 cents to make good for all that make-up! Ha! ha! said I to myself, in a real sepulchral way, thinking about the idiocy of it all, and then I lavished 15 cents on a 'isky sour, another 15 on a shave and a brush-off, and sauntered over to the Auditorium Hotel to sit down for a while and begin a-guessing. I pulled a leather chair up before one of the big rotunda windows, swished at my toothpick kicks with my cane—which I brought from Cincinnati from force of habit—and looked out over the pellucid waters of Lake Michigan—that is, when an Illinois Central train wasn't breaking the focus. I was sore laden, and that's no ancient mariner's phantasy. I felt like sixteen splits to the box and all bets coppered.

"'This,' said I to myself, 'is where I am turned the wrong way of the post, and no show to overtake the bunch. This is where the flag's caught me flatfooted. I have arrived at the point where I'm going to be set down and have a permanent mount on the ground for incompetency. This is the real, dyed-in-the-wool, blown-in-the-bottle——'

"'Well, Senator, when did you make port?' some one said at my left elbow.

"The young man had an easy manner, and he had already drawn up a chair. He was a nice, clean-looking young fellow.

"'Just an hour or so ago,' said I. 'You've a shrewd eye, son, for recognizing people.'

"'Oh, I don't know, Senator,' said he. 'I think we had the best cut of you this morning. What do you think of it?'

"He spread out the morning paper that he had in his hand so as to show up the first page, and he pointed to a large column cut of United States Senator Wolcott of Colorado. The cut was planted in the middle of a column despatch from New York, telling how Senator Ed Wolcott had soaked one of the Long Branch faro banks to the tune of $25,000 a few nights before, and how on the next night he had sloughed that back to the bank and $32,000 more. The despatch wound up by stating that Senator Wolcott was on his way back to Denver by way of Chicago.

"'Yes, that's a pretty fair cut,' said I, handing the paper back to the nice, clean-looking young man.

"'They've all got pretty good cuts of you this morning, at that,' said the young man. 'Now, Senator, would you mind telling us all about it? You sure must have rapped 'em pretty hard that first night you fumbled with the tiger, eh? I know it's a matter a gentleman of your position wouldn't naturally care to discuss very amply, but Colorado's pretty far on the other side of the big river, and a Senator from out that way, where manners and conditions are different, can divert himself, I suppose, differently from——'

"'My boy,' said I, 'let us converse on other matters. I am not a believer in post mortems.'

"What for should I have told the lad that he was mixed? The cut did, for a fact, look a heap like me, but that wasn't up to me. I was so sore on the game, anyhow, that it wasn't bothering me whether I lost my identity or not.

"The young man was on his way back to his office, he said, when I got up and strolled along Michigan avenue, and he walked along with me. Passing the Hotel Richelieu the young man nodded at a little man with a white mustache who was standing at the entrance, and then he turned to me and said:

"'Do you know "Cardinal" Bemis, who runs the Richelieu?'

"I told him nay.

"'Let me introduce you to him, then,' said the young man, and the next minute United States Senator Ed Wolcott, not, was shaking hands with the little man with the white mustache.

"'I was just about to sit down to a bite of breakfast, Senator,' said "Cardinal" Bemis. 'Wont you join me?'

"Oh, would I! Not that I betrayed any huge anxiety in the matter. I told him I had breakfasted, in fact; for it was then 12 noon, whereas I'd stopped short at the 'isky sour for lack of the—er—time—but I yawned slightly and told him that I didn't mind.

"Put him right? What for? I thought, as I sat down at his private table—which his own private waiter immediately began to cumber with the right things—that maybe I'd put him right after breakfast—and maybe, again, I wouldn't. Moreover, I figured that I was helping Wolcott. When Wolcott came along he wouldn't be identified, and they'd let him alone; I calculated it that way.

"There was a breakfast with quarts on the side! I told my host that the attractiveness of his breakfast was a stimulus to an already partly appeased appetite—but for all that, I fancy the little man with the white mustache must have thought to himself that I was a Gargantuan trencherman. They have wine at their noon breakfasts out in Chicago. I only dawdled with a quart. Perhaps it didn't reach the place where it belonged!

"'I think,' said I to myself, at the conclusion of the breakfast, 'that I will now laugh gayly, clap this kindly little man with the white mustache resoundingly on the back, emit a little preliminary airy persiflage, tell him what a huge joke I have on him, and then, with boisterous merriment, inform him that I'm no more Senator Ed Wolcott than I'm Apache Kid or the Koenig of the Solomon Islands.'

"The think passed right there, however. What for? Wasn't I helping Wolcott? And I remembered an occasion, too, when I hadn't got an even break at the hands of Chicago. No, I would say nothing, I concluded. Why not Wolcott, as well as anybody else? For a little brief time the tide was being shovelled my way. It was all up to the mixed ones, anyhow, and it wasn't up to me. Why should the game all fall Wolcott's way, and not mine, at that—just because he was Wolcott?

"So, unsuccessfully endeavoring to suppress another made-to-order yawn, I pushed my chair back, lighted a large, black, fat smoke from the box on the table, and, with appropriate remarks, passed out.

"'Not going to assault the tiger here, eh?' said the little man with the white mustache, winking slyly, as I passed out, but I vouchsafed him no reply other than a wise, affable shake of the head.

"'What a thundering good time of it this Wolcott man must have as he journeys through life!' I thought, as I walked along. I liked being Wolcott.

"I had my chest out real far by this time, and as I swung along I noticed a lot of men turning around and looking me over. It had happened about right for me that Wolcott's picture was in nearly every newspaper in Chicago that morning. On top of all the other good things of life that the Lady Fortune had bestowed upon Wolcott, how fortunate it was for him that, in addition, he looked like me, I thought!

"This think carried me—I was just strolling along, feeling about right, even if I didn't have anything in sight—over to Clark street, where I again met the nice, clean-looking young man of the press who had so quickly identified me a few hours before.

"'Have you talked with any other newspaper men?' he asked me, anxiously.

"'No,' said I.

"'Then,' said he, his face lighting up, 'I've got a scoop talk with you on national politics in the afternoon edition.'

"'Poor Wolcott!' I thought.

"'Is that so?' I asked him. 'I hope you've quoted me correctly.'

"'Sure,' said he. 'Made three-quarters of a column of it, leaded. Didn't touch on the Long Branch affair. That was covered in the morning edition, anyhow.'

"Here the nice, clean-looking young man stopped off short, nudged me, and pointed out a pretty swell-looking man coming our way.

"'Did you ever meet Ed Dodridge, the Board of Trade plunger?' he asked me, mentioning the name of a man I'd only read about—and I wasn't just precisely Dodridge, at that. 'Here he comes. Let me introduce you.'

"'Here's hoping Mr. Ed Dodridge doesn't know Wolcott,' I thought, and the next minute United States Senator Ed Wolcott, nix, was having his right mitt cordially pumped by a gentleman who wouldn't look out of the slants of his eyes at a deal in the pit unless there were sundry and divers millions in it for him.

"Put him right? For why? Could I help it if I wasn't Wolcott? Wouldn't I be Wolcott if I could? Hadn't the burg of Chicago given me a bum break previously any how?

"Mr. Dodridge dragged me to the café of the old Grand Pacific, where he virtually made me split two quarts with him—the man actually made me do it!—and then he linked arms with me and took me down to the Board with him.

"'Want to make you known to some of the gang,' said he.

"'Inside of twelve minutes from date,' I reflected, 'I'll be in a 6 by 8 at the Harrison street station, with "false pretences" opposite my John Hancock on the blotter.'

"Oh, I only met about thirty-seven millionaires, that's all. And I only had to do my end of it toward about thirty-seven more quarts, that's all. It was plain to me by that time that Mr. Wolcott hadn't stamped around Chicago very much up to that time, for the bunch all took me for the trade-mark article of Wolcott.

"'Old man,' said my friend Dodridge, tugging me away from the crowd after a while—he had been at his office for a few minutes—'wheat's going to soar in a few minutes. Want me to shove along a few for you?'

"I shook my head amiably.

"'All of my recent speculative efforts have been disastrous,' I said to him, and he gave me the roguish twinkle of his lamps, and murmured something about Long Branch.

"'Come along and watch the circus, anyhow,' said he, and I went. I knew as much about speculation in wheat as I did about the art of glass blowing, but I sat in my friend Dodridge's office for a few minutes, while he rushed out. He returned with an oleaginous smile on his face, sat down at his desk, yanked a check-book out of a drawer, scribbled a check for $1,700 and handed it over to me.

"'Your profit on that little deal, you know,' he said.

"I shook my head at him real archly while he explained that, knowing it was a cinch, he'd pushed a few thousand along for me on his own responsibility on the rising market, just to show me how foolish it was for me to dally with faro bank, when the game he himself was engaged in was such a good thing. Yes, I shook my head at him real archly. Then I walked around with him to his bank and cashed the check. Then I emitted a 'Tut! tut!' and remarked that I was neglecting my family at my hotel, made an appointment to meet him on the morrow and was away.

"I went into one of those alley cabinet saloons so numerous in Chicago, so that I could get a chance to give myself the cinnamon hug.

"'Of course,' said I to myself, 'I'll send this $1,700 back, together with a quippy, humorous letter, when they begin to run right for me again; meanwhile——' and the remainder of that think was lost in a series of low, exultant gurgles.

"I was under full sail for a Turkish bath, where I wanted to give myself a good thaw-out before starting back this way to tell 'em all around here where the good things lived, when once again I met the young gentleman of the press who had the shrewd eye for recognizing folks.

"'By the way, Senator,' said he, 'did you ever meet Gene Field?'

"I told him no, and that I feared my family must be missing me sadly. I had a hunch that Mr. Eugene Field, the Little Boy Blue man, must for a sure thing have met Ed Wolcott out there in Colorado.

"My hunch was correct. I couldn't get away from the man who knew distinguished strangers at a glance, and I was taken to Mr. Eugene Field's office. It was all very cordial and nice. The young man who was my sponsor went away after awhile, leaving me there with Mr. Field. Mr. Field gave me a slow smile as soon as the young man went out.

"I returned the slow smile. We understood each other.

"'My boy,' said the lovable Little Boy Blue man—there've only been a few like that one on top of the ground—'my boy, did you ever happen to meet up with Ed Wolcott?'

"'No,' said I, 'and with the grace of God and the help of a good pair of legs and the other side of a dark street I never shall. The greatness has been thrust upon me.'

"He held out his hand, gave me that slow smile again and said:

"'Well, I think Ed would be damned glad to know you.'

"Three days later I was back in New York, and——"

"Say," inquired Ex-Tank No. 7, the parliamentarian and kicker, jumping up, "did you ever send back that $1,700?"

"Back to your dray!" chorused the Harlem Club of Former Alcoholic Degenerates, and the meeting was at an end.

AT HOME IN A BOX CAR.

The Vicissitudes of a Young Couple With Paris-Made Gowns and Cob Pipes.

From the Chicago Times-Herald.

FORT SCOTT, Kan., June 16.—Mrs. C. B. Hammond, daughter of a Butte, Mon., millionaire and a bride of but a few months, has just packed her trousseau of twelve costly Parisian gowns, loaded them into a freight car on the Kansas City, Fort Scott and Memphis road in this city, and taken up her residence in the car with her young husband. Though Mr. Hammond was but a section hand on the railroad during the several months of their residence here, they lived in good style, and their recent departure is an incident from which Fort Scott society can hardly recover.

The romance that culminated in the marriage of Mr. and Mrs. Hammond last fall is less interesting than the unique circumstances attending their early married life. Millionaire Barrett of Butte took his wife and daughter to Hot Springs, Ark., early last fall to spend the winter. The daughter was but 19 years old and fairly pretty. They took apartments at the Park Hotel. Young Hammond, who is the son of General Superintendent H. H. Hammond of the Kansas City, Fort Scott and Memphis road, was at Hot Springs recuperating from an injury sustained in a runaway. He had been an operator for the railway company at a small town near West Plains, Mo.

At the hotel he met Miss Barrett and they became friends. A mutual affection developed with unconventional rapidity. Her parents frowned upon him, but without avail. Finally they consented to a marriage and concluded to make the best of the circumstaces by giving an elaborate wedding at the hotel. A trousseau was ordered from one of the fashionable modistes in Paris, and it was one the richness of which was beyond the anticipation of most fashionable brides. That they were to be worn in a few short months by a section hand's wife or to occupy a wardrobe in a box car was most foreign of all the thoughts of the expectant couple.

But meantime something happened that caused Miss Barrett's parents to desire a less formal wedding and the order for an ostentatious service at the hotel was countermanded. Nobody here seems to know what this something was. Young Hammond and his affianced were not pleased with this change and shortly thereafter they were clandestinely married at one of the other hotels. Mr. and Mrs. Barrett were greatly mortified by this incident. They immediately went to the Arlington Hotel, and, it is said, refused to see the daughter. It is understood that they have not only persistently refused to see her or correspond with her, but that they have disinherited her.

After their marriage Mr. and Mrs. Hammond went to Kansas City. His father was equally disappointed by the marriage, and proposed to help him in a business way only on condition that he commence at the bottom of the railroad business and master it by hard, actual experience. This was agreed to by young Hammond, and he was assigned to a section gang in this city under Foreman Sullivan. It was understood, of course, that he was to be advanced as rapidly as practicable. He was made a "straw boss," or an assistant to the foreman over a gang of a dozen or fifteen section men with salary about the same as a section hand. Every workday for months he was seen with the gang at work in the yards here and every time he rode by the station on a load of dirt or ballast some one would point him out to an interested company of spectators. He wore overalls, a jumper and a broad-brimmed hat, and was soon smoking a cob pipe, but was easily distinguished from the other section men by his more refined features.

While he was thus engaged Mrs. Hammond was at their apartments in a fashionable boarding house, receiving some callers and refusing to see some, whom she disdainfully declared as beneath her social station. At first many of the prominent ladies of the city went to see her. Not a few of them were attracted through curiosity, no doubt, and this fact may have caused her to seem less appreciative of the attentions shown her. She declined all invitations out, but was frequently seen at the theatre in gowns that invariably proved a greater attraction for feminine eyes than the scenes on the stage.

Recently young Hammond concluded that he had learned the business of road making and his father made him second man in authority on a work train, which is now stationed at Garland, Kan., cutting down a grade. A small box car was fitted up for him especially as a living car. Ventilation windows were cut in it and a bright coat of red was applied. Its interior conveniences are very crude, but the young son of the general superintendent and his fashionable young wife have adapted themselves to the circumstances and expect to make it their home until he merits aother promotion. They have no other apartments and carry all their personal effects with them.

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AMERICA'S DIAMOND HUNT.

SEARCH FOR THE SOURCE OF THE GEMS ALREADY FOUND.

Record of the Discovery of Diamonds in This Country and Possibilities It Opens Up—Other Precious Stones Found in This Country—The Returns Inconsiderable so Far

Science is constantly striving to determine what precious stones lie hidden in the soil of this country. Thus far the returns have been inconsiderable except along a few lines, notably the turquoise and garnet mining industries. Nevertheless, a score of species of precious stones have from time to time been discovered in various parts of the United States, and mineralogists are not without expectation that the natural wealth of the country will one day receive vast accessions from crystal treasures that are now scattered amid worthless gravel and dirt. Something of the progress of discovery in this line is told in the recent pamphlet published by the Department of the Interior from the twenty-first annual report of the United States Geological Survey, under the misleading title "The Production of Precious Stones in the United States in 1899,"—misleading because the pamphlet does not treat of the production of these gems, which took place thousands of years ago, but of their discovery. George F. Kunz, the leading authority on precious stones in this country, is the author.

Few persons know that diamonds have been found in the United States. The output has been so small as to be unimportant from a commercial viewpoint, but it opens up great possibilities. These gems have been found in the morainal belt in Michigan, Wisconsin and Ohio. In all seventeen of these stones have been found, one of which, the Kohlsville, Wis., stone, weighed twenty-one carats, and another found in 1897 in Ohio by two little girls is a pure and brilliant stone of six carats. Mr. Kunz quotes Prof. Hobbs, who has made an exhaustive study of the diamond belt and believes that the gems were deposited by glaciers on the line of the moraine of the later ice sheet. The area of distribution is 600 miles long by 200 wide and of eight localities where discoveries have been made six are within an area 200 miles square, the centre of which is Milwaukee. Prof. Hobbs believes that for every diamond found there are a thousand left in the drift, and he thinks it very probable that there are unsuspected diamonds in collections of farmhouse pebbles and curios. At present he is trying to rouse interest and stimulate search among the farmers of the region by distributing notices to them. Geological work has been instituted to determine the direction of the glacial movement in the country south of Hudson Bay, as it is from that region probably that the diamonds came originally, or perhaps from Labrador. Search will be made further eastward, along the moraine line also, in Ohio, Pennsylvania and this State.

A fine diamond has been found in Tennessee. The finder was Charles Waller of Union Crossroads, Roane county, and the stone weighed three carats when found. Cut, it weighed a carat and a quarter and its quality is shown by the fact that it was sold for $150, a price which a diamond of that size does not bring unless of fine color and flawless. In the auriferous gravel of California diamonds are occasionally found, but they are mostly small and their presence is revealed generally only in fragments found after the destructive work of the stamp mills on the hard pan gravel. A diamond from Cherokee, Cal., is valued at $250 and a dozen crystals have been found in the vicinity of Placerville that are reckoned to be worth from $50 to $250 each. A two-carat stone found at Nelson Point, Plumas county, last summer is not of very good color and was sold for $75. It is fortunate for America that the demand is not restricted by the national supply. In 1899 the total value of diamonds and other precious stones imported into this country, the greater part of the importations being diamonds, was more than $17,000,000.

Corundum in various forms is found in the Cowee Valley in North Carolina. Small rubies, good specimens of the purplish pink garnet and considerable corundum not of gem quality are also found there. Extensive alteration of corundum into non-precious forms by hydration and combination has left its traces.

"It is surprising," writes a mineralogist who has been studying the mineral deposits of the valley "to see the positive evidence of the former existence of hundreds of pounds weight of ruby and other corundum where to-day only a few ounces of fragments or flakes remain."

In Plumas county, Cal., also, near where diamonds have been discovered, corundum has been brought to light, but no gems or clear crystals have been found. Further explorations are now under way there.

Montana sapphires have been known for a number of years. They are found in the float material on Granite Creek, the prevelent form being the "Montana green." Dr. Jankower is now making investigations among the hills surrounding the placers where the float prevails and hopes to find the original source of the gems. From the fact that the matrix still partly adheres to most of the stones it is thought that the source is within a few miles of the foot of the hills. As a number of stones of various colors have been found interspersed with the green, it is also thought that beds of separate colors may be found. The Montana sapphires, while not very valuable, are brilliant, particularly the red ones, and are more brilliant in artifical than in natural light.

Beryls are found in North Carolina, Connecticut and New Hampshire, in all of which States mines have been established. In the North Carolina mines beryls of a fine aquamarine tint weighing twenty carats have been found. Golden beryls have been found in the last year in the mine at Merryall, Conn., together with some very fine garnets. Beryls have been found for years at Grafton, N. H., and the locality is now being further developed, as good indications of beryl and garnet have been found. Recent finds of white, red, blue, and green tourmaline in crystals of slight gem value are reported from Pala, Cal. Rock crystal in large transparent masses has been found lately in the vicinity of Bay City, Ore., by W. D. Wood. Additional wealth from the golden Yukon district in the shape of amethyst is reported by gold hunters; also in the American territory near Dawson City. These stones are reported as being of a very rich purple hue, like the output of Maine and of the Ural Mountains. Recent finds of amethyst are noted from Cripple Creek, Col., Divide, Mon., and Adair, I. T., the last find being a splendid crystal, two and a half by one and three-quarters inches. A beautiful blue quartz, well adapted to use as an ornamental stone has been found in the crystalline rocks of southeastern Pennsylvania along Pennypack Creek, and brilliant blue pebbles have been picked up in the drift on the Schuylkill River at Gibson Point.

Precious opal is reported from Hornbeck, La., but in grains too small to be of commercial value. Semiopal has been recently found in Arizona, Nevada and Wisconsin. Golden opal is the name given to the fireless, reddish, yellow, and brown opal masses found with the rich fire opals at Queretaro, Mex., and it is now being facetted for sale in this country at several dollars a carat, though it has hitherto been regarded as practically worthless. It is not so hard as glass. In an old extinct crater in the El Paso range of mountains in California a rich deposit of chalcedony of various colors has been found. Other places in that State where chalcedony is reported are Upper Spanish Creek and San Diego. A blue chalcedony has been found in the Bad Lands in South Dakota, southeast of the Black Hills. This mineral has also been found abundantly on the shores of Popoff Island, Alaska.

In his pamphlet Mr. Kunz denies the oft-repeated report that a trust has been formed to control the turquoise output in this country. All the mines are still being worked independently, he says. Water-worn pebbles of bone turquoise have been found in Brown county, Neb., some of the pebbles being as big as hazlenuts. Many fine bits of carved turquoise in the shape of tadpoles and frogs have been found by the F. E. Hyde anthropological expedition which explored the aboriginal dwellings in the Mancos Cañon in 1899. Jet carvings were also found.

Among the other precious minerals reported in the pamphlet are garnet at Avondale, Pa., rhodonite near Sitka, Alaska, chrysocolla of a fine blue color in Kern county, Cal., catlinite in the form of Indian ornaments in this State, amber in Kansas, bloodstone and heliotrope in California, and silicified wood in California and Connecticut. Of emeralds Mr. Kunz notes but one occurrence: the emerald mine in Mitchell county, N. C., the output being mostly small crystals. He mentions, however, some interesting facts in regard to the unprecedented demand for this stone that has made itself felt recently and its effects on the market in the United States of Colombia. He writes:

"The demand for emeralds was so great that the United States Consul at Bogota, Colombia, Mr. McNally, states that at least seventy-five foreign dealers visited that city at one time; that all business in regard to emeralds came to a standstill; that owners of the shops exposed their wares in the street, accepting bid after bid from the vender until a sale was made, at prices frequently ranging over 100 per cent beyond those ever paid before; and as the principal mines were virtually at a standstill, there is apparently an absolute dearth of emeralds in Colombia, as those of every quality, even to the very poorest, were purchased.

"The excitement has also led to illegitimate attempts to obtain emeralds in various ways, and it is reported that church treasures, statues of saints, &c., have been robbed of emeralds with which they were set. In the vicinity of the Muzo mine some of the natives have turned their chickens loose around the workings, with the intention of killing them in due time, in the hope of finding small emeralds in their crops; and other surreptitious devices have been employed for the same end.

"The demand for and scarcity of emeralds has resulted in a search for them in every part of the world, including exploration and opening of the old mines at Habachthal, in the Tyrol; the opening of the mine at Takawaja, in the Ural Mountains, and of the Egyptian mines mentioned in the last report, as well as further search at the Emmaville mines, New South Wales.

"The high price of emeralds and the advance of more than 100 per cent. caused many to dispose of old stones of fine color, great purity, and large size, so that, although emeralds have never commanded so great a price as during the year 1899, there never has been a time when it was possible to obtain finer stones."

PUNISHING A BURGLAR.

The Zero Weather Cure for a Robber Tried in Northern Pennsylvania.

"I had a funny experience with a burglar once," said a Government official whose home is in northern Pennsylvania when he is not serving his country. "My house is three miles from the city on a fine piece of road, and though there is a good deal of passing that way, I have never been troubled with marauders about my place except for the usual raids on my orchard and this one occasion about which I am telling you.

"It was on a winter night about 1 o'clock that I was disturbed by some one falling over a chair in the room next to mine. This was the dining room, and my room was the only one on that floor which was occupied at night. I thought it might be somebody who had no business there, and getting into my trousers and taking my revolver I proceeded to investigate, having waited long enough for the burglar, if it was a burglar, to think that the noise he had made had not wakened anybody.

"I slipped along the hall to the parlor in front and came back through the parlor to the dining room door, which was ajar. I could see a dim light coming through the doorway, which I knew was out of the ordinary condition in that room at that hour, and expecting to have a scrap I nerved myself for it by standing stock still for a minute and wondering what the dickens anybody wanted to be robbing houses for and giving the inmates all sorts of disagreeable feelings. Did you ever tackle a burglar in the dead of the night? No? Well, you'll never know what it is like until you've been there. Knowing that if I made any noise, the burglar would turn his eyes and perhaps his gun to about the place where he thought a man's head ought to be when he came through a door, I got down on my hands and knees, and crawled up to where I could peep in. He did not hear me, and I could see him, over in the corner where the sideboard was, taking a bite to eat preparatory to loading what swag he had collected in the shape of silver spoons and other bric-à-brac into his bag. A lamp, turned down low, was on the sideboard beyond him and I had a good look at him. I wanted to shoot him on the spot, but that didn't seem to be quite fair, so I rose to my feet with my gun on him, and ordered him to throw up his hands. I don't know which one of us was more scared at that moment, but I had the advantage, and he let his hands go up, and begged me not to shoot. I told him I would use my own pleasure about that, and went over and turned up the light.

"He was not a bad-looking burglar, as burglars go, a man of thirty, perhaps, and evidently not an old hand at the business, or he never would have stumbled over that chair. The only weapon he carried was a small, four-barrelled pistol, which I still have as a souvenir of the occasion, and after I had got him in a helpless condition I began to wonder what I was going to do with him. It was a bitter cold night, and I didn't want to drive to town with him, neither did I want to sit up all night with him, and we had no telephone. He begged me to let him go, he was only a beginner and would swear off forever if I gave him a chance.

"After thinking the matter over I concluded to give him the chance, although I was going to do it my own way. I told him I had no wish to spoil his future, and that upon his solemn promise to reform I would let him go. He went down on his knees, swearing that he would never do so any more, and I told him to get up and take off his coat. He asked me what for, but I said that was my business and to do what I told him. He obeyed me, and I followed with orders to take off his waistcoat and his collar. He objected when I told him to take off his trousers, but I got a buggy whip standing in the corner, and a lick or two with it convinced him that he had better obey orders and file his objections at some later period. It required a few more licks with the whip to get his shoes and shirt off, but after that he submitted, and presently he was ready for the bath. He was a clean-limbed, clear-skinned, healthy chap, and I felt quite certain in my mind he was equal to the stunt I had arranged for him.

"I made him put his shoes on now, leaving off his socks, and then I conducted him to the front door, which I had noticed he left open in order to facilitate his departure in case of emergency. He shivered when he came out into the draft, but I did not offer him an overcoat.

"'For God's sake, mister,' he asked as his teeth chattered, 'what are you going to do with me?'

"'I'm going to let you go,' I responded, 'and you've got to go like thunder or you'll freeze to death. It's three miles to town, but the road is smooth, and you have on your shoes, and are not carrying any extra weight. The mercury is down to zero, and if you stop to loaf along the way you'll be frostbitten, so you had better hustle pretty lively. Get out now, and get quick,' and I opened the door wide, hit him a cut with the whip and he went out and off the porch with a jump. He never stopped to look back, but went down the gravel path to the gate like a sprinter. The moon was shining and I could see him for a quarter of a mile down the pike, going like a scared rabbit. Then I returned to my virtuous couch feeling as if I had done a great work of reform and wishing I could catch a burglar about three times a week.

"The morning paper had a notice in its last edition of the capture of a clotheless man at 1:45 A. M. by the police who chased him half a mile straight away on a bicycle. It was not known whether he was a lunatic or not, and he was held on suspicion. I went around to the station house about 10 o'clock to see the prisoner, and he recognized me at once and got white with fright. Of course he thought I was there to put the finishing touches on him, but I soon convinced him that he could trust me. I told the police people a war tale about his being a hired man of mine who was subject to fits, and got him off all right. I gave him his clothes and $5 for pin money, and told him to get out of the neighborhood as fast as he had got over the pike the night before. He laughed and said he couldn't, for there wasn't a locomotive in that part of the country could make the time he did for the first two miles and a half. He left though as soon as he could, with many thanks to me, and I heard from him three weeks later in Buffalo where he had got a good job in a machine shop and already had a bank account of $25, a check for five of which he enclosed to me."

The Commonest Cause of Broken Windows.

The breaking of windows is due to many causes; one of the most familiar of which, for instance, is found in the accidental throwing of balls against them in play. But a glazier said he thought that perhaps the most common cause of broken windows would be found in the settling of houses; with the result not of smashing the glass out, as would often happen if something were thrown against it, but of cracking it. This would, however, amount to the same thing, a broken window.

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CHARMS OF AUTOMOBILING.

WHY THE MOTOR CARRIAGE IS GETTING SO STRONG A HOLD.

It Marks a Reaction Toward Individualism, Gives a Sense of Freedom and Abolishes the Limitations of Animal Traction.

From the Spectator.

The motor car unquestionably exercises an extraordinary charm upon those who come within its "sphere of influence." It is worth while, then, to say a word or two in explanation of that charm, and to make the public realize that the motor-car enthusiast is not a mere crank swayed merely by fashion and novelty, but has reasons for the faith that is in him.

The essential and controlling charm of the horseless carriage is that it increases one's freedom of action and reduces the friction of life. A metaphysician might describe it as forming part of a reaction toward individualism and simplicity of action engendered by the temporary triumph of collectivism as applied to transport. The railway train is necessarily collectivist. A passenger train starts and reaches its destination owing to the combined volition of a large number of people who want to travel from, let us say, Bath to London, or between places along the Great Western Railway. But in order to satisfy those volitions and make them executive they have to be marshalled and organized, and so in a sense shackled. A railway train, with its guards and drivers, and fixed places of stoppage, is a creature of strict rules, and those who travel in it must temporarily surrender their private wishes, or a part of them, in order to coöperate with others. The man who takes out his motor car and drives it along the road is, as it were, a freeholder, with all the freeholder's freedom—though, doubtless, also with some of the freeholder's limitations and weakness and isolation. Still, the charm of freedom remains, and allows him to start when he likes, stop when he likes, and be independent of his fellows. This charm, of course, belongs also in theory to any carriage from a donkey cart to a landau, but in practice it does not operate in such cases except over very short distances. The lust of time-saving is too powerful and gives the advantage to the train. No horse can go at the rate of twelve miles an hour for three consecutive hours, and at the end of the three hours be ready and able to go on for another three or eight or ten hours. It is its tirelessness which makes the motor car quite a different mode of transport from a horse and gives it its superiority. In the case of a motor car you have a method of moving from place to place as tireless as a train, one which for short journeys and cross journeys is as quick as the train and yet one which is individualistic and independent.

In the abstract this explanation of the charm of the motor car may sound fantastic and real, but put a concrete case of a person living either in the town or in the country and it can easily be proved. Let us suppose A to live in the country and be anxious to make a cross-country journey to a place some thirty miles off. Unless he is very exceptionally placed he will, to accomplish that journey, have first to drive to his local station, and then to take his ticket and go a journey which will very likely take him an hour and a half's travelling, and half an hour's waiting at junctions, and then another drive from the railway station of arrival to the house he wants to visit. In all probability the whole cross journey by train will take him at least three hours, and will require to be taken at one time, and one time only, in the day, and must, therefore, cause him a good deal of trouble, friction and annoyance. He could not possibly avoid this worry by using a horse carriage, for no horse could go sixty miles in a day without injury. If, however, he has a motor car he can do the journey in two hours and a half, and be able to start when he pleases and return when he pleases. Who can deny that such freedom has a charm? The reason for this charm may be explained yet in another way. Though the country is covered by a network of railways, we do not, unless we are stationmasters, live on the railways. The road is, as it were, the first wife of man, and though some sixty years ago he took a new wife home, he never discarded the first, and she has in reality always remained nearest to him and has always held his home. Nothing can take that away from her. We live on the roads and they are part of and parcel of our daily bread. We look down the road for the home-comer or the new-comer. Our gates open on the road. The road is always with us. But the motor car belongs to the road and makes us free of it and able to use it for our pleasure, or our convenience, or our profit in a way which we could not attain before. Or, to be more correct, the motor car has restored the road to us. While railway travelling was so immeasurably quicker and easier than road travelling, we were forced to give up the pleasure our fathers had taken in the road, for mankind in general cannot or will not lose time. Now, however, the road has been revived. To go back to our metaphor, the motor car has given the road a crown of price that has once again made her find favor in the eyes of her lord and master. The second wife has come to look old fashioned and dull, and the first wife, never really rejected, renews her charms. Especially is this the case in a country like England, where the roads are veritable storehouses of emotional force.

The English roads are like wood-fringed rivers that run twisting and turning through their villages and towns. No one can travel down fifty miles of an English road without coming upon a hundred beautiful and unexpected things and seeing those things in the best possible way and as they ought to be seen. When we see scenery from the railways, or, at any rate, the near-at-hand scenery, we are, as it were, looking at the brocade of the landscape on the wrong side. We see the pattern awry and upside down. We cut across the roads, not wind down them. We see the old church or the old manor house not in a picture composed by centuries of usage and of kindly human courtesies. Things as seen from the railway are for the most part set on wrong, face the wrong way, and, as it were, "grate on the sensitive ear with a slightly mercantile accent." The coal shed or the chimney of the heating apparatus is turned toward [illegible] in the train, and not the best line of gables or the old lych gate. Of course these things have always been seen by the users of the road, [illegible] not in the same profusion as they will now owing to the use of motor cars. To put it plainly, the dweller in a country district, even when he uses a bicycle, does not really know the roads for more than a radius of fifteen miles from his home. With a motor car he will have a knowledgable road radius of at least thirty miles. The person who does not bicycle has, of course, an even smaller radius. Ten miles there and ten miles back is generally the driving limit.

But we must not be content to deal only with the charm of the motor car by reason of the freedom of movement which it confers. The "motor-carist"—to use a hideous but convenient word—has to consider which form of car, both as regards shape and method of propulsion, confers the charm in the greatest perfection, and on this we would say a word or two. Opinions will, of course, differ, but we believe that the most useful shape is that of the victoria. A victoria with a good hood, a little seat that can be put up, and a regular box seat for two, gives almost all that can be desired of comfort and practical convenience. The owner can, when he likes, sit on the box and drive himself. When he is tired of that, or too busy, he can sit inside at his ease, and is able to get in and out with the rapidity only possible in a victoria. But granted the victoria is the best all-round shape, what is the best method of propulsion? He would be a bold man who would venture to try to decide such a question off-hand; but this much may be said: If the storage of electricity could be made easier and quicker and generally improved, electricity would, without question, be the ideal driving force. A car charged with electricity can be driven by a child. There is practically nothing to get out of order or go wrong. A hard-working goblin has been imprisoned in the accumulators, and for the number of miles which he is condemned to serve the car is bound to run. Nothing is easier than to drive a properly made electric motor car. Unfortunately, however, the accumulators can as a rule only be charged to run some fifty miles, and when that period is reached the car must rest five or six hours while the electricity is being resupplied. But this means that the car is not tireless, but capable of exhaustion and requiring rest—defects which go to break the charm of freedom which is specially delightful in a motor car. Some day, no doubt, electricity will be properly broken in to the work, but as yet man has not mastered the lightning.

The other forms of force are the steam engine and the gas engine. Very possibly the steam engine will triumph, but as yet, although there are some good steam cars, the best results do not belong to the steam but to the gas engines. Propulsion obtained by utilizing a series of explosions of "petrol" at present holds the field. The motor car driven by "petrol" produces not only the highest speed, but is the most practicable and the most trustworthy. The "petrol"-driven car does not want to rest like the electric, but will run as long as it is wanted, provided only that the tanks of "petrol" can be filled up from time to time. For the present, then, "petrol" is the best source of power and will be generally employed by those who wish to be able to make long journeys at a quick pace, and to be independent of external help, other than the purchase of oil. But, as we have said above, the ingenuity of the inventor will no doubt very soon greatly improve both electric and steam propulsion.

Probably in the end all three forms will prevail, and will be employed each for the purpose to which it is best adapted—just as we have traction by horses, donkeys, mules and ponies. No one method will have a monopoly. In the same way, no doubt, horse traction will still go on for very many years, though it cannot but dwindle in amount. The motor car has, as we have said, come to stay, and we may be certain that it will gradually become the normal method of transport for distances up to, say, fifty miles, for the very good reason that it so greatly increases individual mobility. The motor car will, in fact, do more fully what the bicycle began—i. e., give the nation back its roads.