

Well, Doc! What is It?

WHILE Congress was trying to make up its mind about the radio bill Dr. Lee de Forest exclaimed: "What can one hope for from a Congress a member of which in open committee recently asked: 'What is a watt?' and 'How long is a wave length anyway?'"

Well, honestly, Doc, I didn't really know either until so many people got the idea that the easiest way to a fortune lay in the ownership of a broadcast station.

Now I know that a watt can be used to ruin a lot of good music, and about three hundred wave lengths are so darned long that we cannot get away from them.

An Orchestral Speaker

AN INVENTOR has produced a loud speaker that employs life-sized facsimiles of every kind of musical instrument one finds in the average orchestra. With this device he contends it is possible to reproduce music that is identical with the original.

Fine! All he needs now is a cabinet to go around the entire ensemble that will match the furnishings of the average home and his fortune is made.

Please Don't, by Request

WILLIAM C. STOESS, the musical director of WLW, is greatly concerned over a substitute for the word "request." Says he: "Some day I'm going to stop announcing 'request' numbers and 'played-at-the-request-of' numbers. I'm going to announce that we're playing it to satisfy the desire of Mr. X, or at the solicitation of Mr. Y. These request numbers will drive me wild."

They did that to a lot of us a long time ago, Bill. Still, I'm afraid your substitutes might lead to complications in these days of freak titles for songs.

Fancy the consternation in some staid homes when the loud speaker without previous warning suddenly exclaims: "We are about to satisfy the desire of Miss X for 'Just a Little Kiss'!"

The Latest in Tabloids

EVERY Sunday evening in Detroit station WJR dispenses with announcers and gives its listeners half an hour of entertainment.

The novel program, known as Twilight Memories, squeezes twenty different numbers into thirty minutes of broadcasting time. A modulation from one key to another transports the listener from melody to melody. During the period almost every musical combination is employed including solo, duet and trio numbers for voice as well as various orchestral arrangements.

On With the Dance

A NUMBER of New York stations remained on the air a considerable time after an S O S call of great importance recently. One of the two most powerful stations in the metropolitan area was more than ten minutes late in signing off after the distress call was sent by the Navy Yard station. The officials of this station later explained that they "waited for confirmation from the Naval Communications Office."

This attitude is probably based on the precedent established by Mr. Nero, who continued to broadcast selections on his fiddle long after the S O S call was sent out from the city of Rome.

It's just after seven o'clock, shore time."

Partington raised his hand to his throat in a queer, frenzied gesture, and:

"My things," said he—"Where are they?"

Stopford, busily polishing his monocle, watched the speaker.

"Your kit's bein' dried, Mr. Partington."

"You know me, then?"

"Somebody on board told me. I haven't hitherto had the pleasure."

The man was sitting up again, glaring wildly.

"Do me a favor," he entreated—"get my cigar case! It sounds absurd!..."

His voice failed him. He was weak as a kitten. But some secret dread drove him remorselessly. "There are—sentimental things in it. I should hate to think..."

"Good enough," said Stopford cheerily—"but do lie down."

Out in the alleyway:

"How's the patient?" said Roscoe.

"Kind of funny, old scout," Stopford replied. "He's peeved about his bits of kit. Most odd. But what's up with you?"

ROSCOE stared hard at the speaker with an expression suggesting that something in Stopford's words had started a new line of thought; then:

"Come along to my cabin," said he.

In the cabin:

"Look!" Roscoe invited. "I found this in the arrested deck hand's box!"

He placed a small badge on the bed cover. It was blue and white enamel with a tiny diamond G underneath.

"Group Master!" Stopford murmured. "But why would this excite you, dear thing? We knew it from the start."

"Look at this!"

Roscoe held up a queer-looking contrivance, and:

"Good God!" said Stopford—"a gas-mask!"

"Also in his kit!" Roscoe added harshly. "And now... where are the things belonging to Mr. Hilary Partington?"

"Good Lord!" Stopford exclaimed, and his expression changed suddenly.

"Dryin' in the cook's galley, I fancy. But—"

They were in the cook's quarters in forty seconds.

When they returned to Roscoe's room, Roscoe threw a glittering badge on to his bed, beside the smaller one.

It represented a large diamond D.

Down below, in a locked cabin, a frantic man was banging on the door.

"Someone! Please tell the captain! I must see the captain. I must..."

"Hi!" interrupted a gruff voice, speaking from the alleyway, "if you see the captain it'll be bad for your health!"

"There is something I must say to him. I tell you—this ship's doomed—doomed!"

"You'll be doomed if you don't shut up."

"Take a message for me! If you are Christian, if you value your life, do as I pray of you..."

Hurrying footsteps sounded. There was a muttered exchange of words. A key was put in the lock. And the door opened.

Drake Roscoe came in, followed by Dr. Stopford. The prisoner sprang forward, but:

"Stand still!" said Roscoe.

The man stood still. Such is the magic of one used to command. The door was closed, and:

"What's your name?" Roscoe demanded.

"Manoel Vara."

"Portuguese?"

"Yes, by birth. But American citizen."

"Group Master of the Zones?"

Vara's eyes narrowed, opened widely, and narrowed again.

"Answer, damn you!"

"Yes."

"Are you a sailor by profession?"

"Yes."

"What are your Zone duties on this yacht?"

"To report the course."

"Have you done this?"

"Yes."

"What is going to happen?"

"I don't know."

"Don't lie!"

"I say—I swear—I don't know! I was told to leave so something will happen."

"How were you going to leave?"

"Jump overboard with a life belt."

"Are you hiding anything?"

"On my life—on my soul—I know no more. I only know this yacht is doomed!"

"Is any other member of the Zones aboard?"

"No."

"Are there explosives hidden?"

"I don't know. All I know I tell you."

"Why was a gas-mask served out to you?"

Vara's twitching face blanched, and:

"Still, I don't know! I don't know!"

he cried desperately. "If I am prevented from leaving the ship I am told to wear it. I know nothing else."

Roscoe watched the frenzied speaker for a moment; then:

"You have been served out with an X radio outfit for this job," he asserted "Where is it hidden?"

Vara dropped his head in his hands. "I knew it must bring me misfortune!" he sobbed. "It is in the prayer book in my box!"

Roscoe started for the alleyway.

"No wonder I missed it!" he snapped. "Lock the door, Stoppy."

Outside the cabin, a distant sound of excited voices reached them.

"What's this?" Stopford murmured.

"Take Partington's kit to him," Roscoe said, tensely. "Don't waste a second. I'll join you in your room..."

Stopford halted, staring. The seabrowned face of Drake Roscoe was oddly drawn. Under the tan he seemed to have paled.

"Old man," he said, "we've played into their hands! The chief enemies of Head Center are aboard this yacht."

We're thirty miles from shore—and the nearest ship to count, La Patrie, the crack Frenchman, is half an hour's steaming away!"

AT ABOUT the time that Hilary Partington was brought aboard Peter Champion's yacht a red light glowed in the vaults below Manhattan.

The woman seated behind the long table did not stir. Then, uncannily:

"Chief Chemist," came in Teutonic accents. "Speaking from airplane base."

"Explain your plan again. Head Center New York understands the method but it is new to me."

"Certainly," came a cheery reply. "The new T. N. Vapor is discharged through a series of tubes fitted below the plane. Being very much heavier than air it falls, as a thick liquid might fall. In still weather—and it is still now and will be so until dusk—a plane operating from a fair altitude could register on an unprotected target of the size of White Hawk with certainty. The discharge is noiseless, and T. N. Vapor is invisible."

Silence ensued, until:

"It is certainly and immediately effective?" the calm feminine voice asked.

"The vapor is destructive of all life, animal and vegetable."

"There is a Zone official on board."

"He has orders to leave the yacht before we act. In the event of accident, he has been served out with a special mask."

"There is no antidote?"

"Oh, but yes! Coma comes, and then a complete rigor. The antidote may be used any time before the rigor."

"How long elapses?"

"From ten to fifteen minutes."

"Have you a supply of this antidote with you?"

"But certainly!" replied the joyous

tones—those of one wedded to his ghastly science and immune from all human emotions. "The unforeseen may occur, you know!"

"Is it necessary for you to supervise operations on White Hawk from plane in person?"

"Not absolutely. My assistant could take charge."

"Instruct Assistant Chemist to take charge," the woman ordered. "Transfer to flying boat G. You will provide yourself with a suitable supply of the antidote to T. N. Vapor. Commander Drake Roscoe is to be brought back alive to base."

"It may be difficult."

"Officer in charge of boat G will be responsible for putting you on board White Hawk. You are responsible for the rest. Disconnect."

A slim finger rested on the switch-board.

"H. Q.," said a nasal voice. "Last order transmitted."

Immediately:

"Instruct base that Airplane A will leave at 6:45, Assistant Chemist on board. Flying boat G will leave immediately, with Chief Chemist, and will cross the course of White Hawk. When operations of plane are completed, Chief Chemist will be put aboard White Hawk. Group Master in charge flying boat will take further orders from Chief Chemist. Divisional Chief A and Group Master 1, Sector 1 A 1, are to be called on X radio at three-minute intervals until touch established. Reports to be instantly transmitted to me. Move."

The red speck disappeared. The map sections covering 40.24 North, 73.59 West became lighted up.

EVERYBODY who could get on deck was craning over the White Hawk's rails. Women's voices spoke excitedly.

On the navigation bridge:

"Some queer craft, sir!" said the second officer. "A flying boat. Must be a naval experiment."

Captain Ransome focused his glasses. "Right on our course!" he muttered.

"Ask Commander Roscoe to step up on the bridge."

A minute later came a rap on the door of Stopford's cabin. As the messenger walked in:

"Your cigar case isn't functioning," Roscoe was saying—addressing the man rescued from the sea. "But I suggest, Mr. Partington, that this prayer book, the property of a Group Master now under arrest, may prove a possible substitute..."

"Excuse me, sir," the newcomer interrupted—"Captain Ransome's compliments, and would you be good enough to step up on the bridge. There's a funny craft ahead of us—and an airplane has just been sighted which seems to be heading our way!"

A queer, faint purring note sounded. "That prayer book," said Stopford, "has been making odd noises at regular intervals since we found it!"

"Give it to me—quickly!" Partington, ghastly, his forehead gleaming with perspiration, stretched out trembling hands. "I throw myself on your mercy... but I think it's too late!"...

AT WHICH moment in Zone headquarters, deep below the city, the woman seated at the long table had drawn the cowl over her head, so that, owing to the dim light of the vault, her features were indistinguishable.

From an uncurtained doorway on the right, the man who so closely resembled Napoleon Bonaparte came in. He bowed. There was a moment of silence. The woman studied the man. The man watched the woman. Somewhere, far off, a subterranean waterfall sent eerie whispers through cavernous space.

"Your speech," the woman's calm voice began, "was good. Two important points were not touched upon. I anticipate your excuse. I accept it. One of your questioners seemed to have inti-

(Continued on page 32)

A WOMAN Wins

**Breaks World's
Outboard Motor
Record*

An Outboard Motor Short Story

By NELSON G. HOLLOWAY

BETTY Blake was excited.

"Jack, I'm going to buy a new outboard motor—and it's going to be one of those New Cailles. Then when Glen Haven stages its outboard motor race I'm going to enter and—"

"Just a minute," interrupted Jack Blake; "What do you know about outboard motors? And furthermore you wouldn't stand a chance against men pilots. They're too experienced. They'd only laugh at you."

"Let them laugh." Betty gave her husband a haughty look. "I believe I could win with a New Caille. Anyway it would be heaps of fun."

"Well, if you want to enter, that's up to you. But let me buy your outboard motor. I'll get one like Ted Franklin's. That's a mighty good motor."

Betty held her ground. "I want a New Caille or none at all. You know yourself that the Lamberts and the Wests claim there's nothing like the New Caille—and they've owned any number of different makes. And the Caldwell's—didn't they demonstrate the New Caille for you? Didn't they show you features that Ted Franklin's motor couldn't compare with?"

Jack was discreetly silent.

Betty got her New Caille.

The day of the race found Betty keyed to a high pitch of enthusiasm. She was out on the water early—giving her speedy little "Orange Blossom," with its powerful New Caille, a final test. In operation it was flawless, streaking along at a terrific pace with an ease which astounded its owner. Betty felt she was ready—prepared to meet and conquer all in the coming event.

Excitement broke out in the great throng of spectators. "Look!—a woman in the race! What chance would she have? Well, you must admire her courage!" Many hoped she would win. Others merely smiled.

The starter's gun barked! Amid a great churning of water the racers leaped forward—ten stern, set faces, eager for victory—and one soft, white face—just as eager.

"Orange Blossom" set the pace. Betty was elated. The crowd was astonished. "She can't hold it," prophesied many. And she didn't.

Slowly, gradually, she was overtaken, first by one, then another, then a third. But Betty was not discouraged. The race had just begun. Time would tell.

Betty's nerve began to show itself. She advanced the spark—"Orange Blossom" responded nobly. It crept up on one of the leaders, drew up beside him, passed him—and was right on the heels of the next. She opened the auxiliary air valves—another burst of breath-taking speed, and "Orange Blossom" overtook and swept past the second pace-setter.

The great crowd of spectators looked on with intense excitement. All eyes were on one boat—"Orange Blossom." How would the woman finish? Could she

maintain that terrific pace? They saw her draw closer to the leader—now abreast of him—now a foot ahead! And look! She continued to widen the gap!

With the end of the race clearly in sight, Betty opened the valves wide! A length—2 lengths—3 lengths—and "Orange Blossom" shot over the finish line like a streak of lightning—far in the lead!

Again "Caille" had won! The judges announced that a new world's Class B record of 28.28 miles per hour had been established

—and a woman did it!

(A proud husband was heard to remark, "I knew she'd do it!")



**This world's Class B Record of 28.28 miles per hour was actually established by Mrs. Genevieve Atwood whose picture appears above. Her address, the place where the race was held, together with complete records of each boat, are in our files. We will gladly furnish them upon request.*

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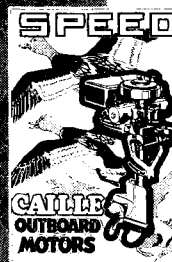
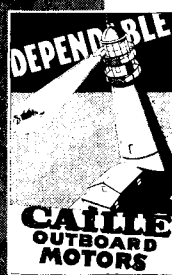
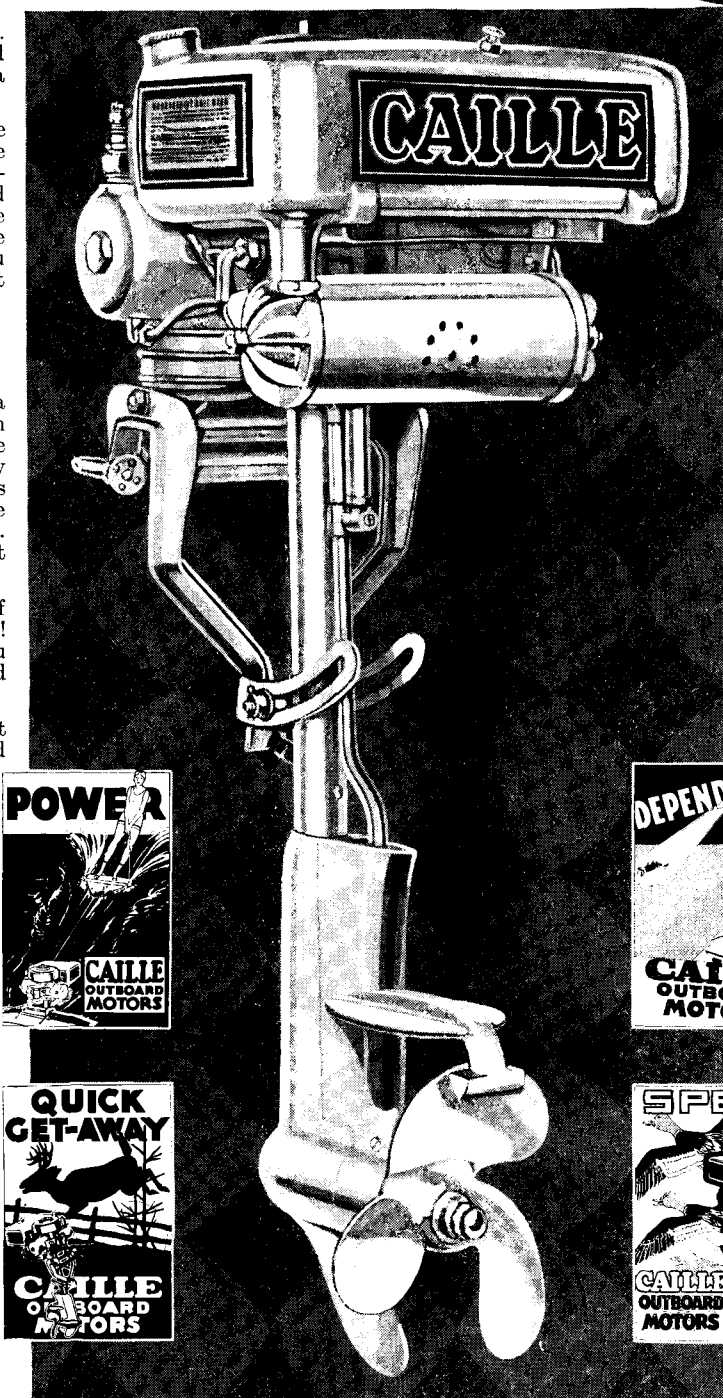
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WATCH CAILLE THIS YEAR



By
EDWIN E. SLOSSON
Director
Science Service

THE MECHANICAL SILKWORM

WHENEVER I get tired of the conventional comment of newspapers and literary magazines on the surface of events, I take a dip into some trade periodical, for there I am sure to find a novel and stimulating point of view. It is like turning over a piece of tapestry or embroidery which reveals what threads are pulled to produce the designs appearing on the show side of the fabric. One day I got a glimpse of the seamy side of life by chancing to pick up a copy of a journal devoted to the manufacture of what is most absurdly called "artificial silk." There I found explained what I had heard discussed from the moral, aesthetic, political and psychological viewpoints—the question of "why the flapper." All the characteristics of this disturbing creature—her lithe figure; her light attire and her actions; her colorful personality; her fondness for dancing and the sort of dancing she is fond of; this new freedom of movement and language; short hair and steps; self-support and self-assertion—all these revolutionary changes in costume and custom, in modes, manners and morals, are plausibly ascribed to the rise of that revolutionary fiber known as rayon.

At the opening of the century this was little known. But last year over 200,000,000 tons of it was made and marketed. More than half of what seems to be silk, and an increasing proportion of what seems to be wool, linen, cotton, horsehair and fur, is now made in the factory. The old-fashioned silkworm chews up mulberry leaves and weaves a silken shroud to be a cradle for the winged creature to come. But the new robot worm chews up forests of trees and spins the logs into endless threads day and night.

A Versatile Spinner

THE machine spinner works cheaper and longer than the caterpillar and never gets tired or sick. Being the product of man's brain, it is more amenable to man than any mere worm can be. The silkworm goes on in the way of its ancestors for thousands of generations, however women may change their minds. But the machine will alter the form of its thread with every hint of a change in taste.

At its first battle with natural silk the synthetic fiber first won by its

brighter sheen and gayer dyes. But in the course of time our eyes have become tired of these jazzy colors, and we demand softer and more subdued fabrics. That makes no difference to this versatile machine, and it is now turning out finer filaments and with surfaces that absorb light instead of reflecting it. Threads of synthetic silk, finer than the silkworm's floss, have been introduced so light that 260,000 yards of it weigh only an ounce.

Rayon suffered from the first by its weakness, for it lost half its strength when it went into the wash, but this defect is being overcome. There are rayon fabrics guaranteed to withstand four and a half hours of boiling.

What the Ladies Wear

AND the mechanical worm, though it is a young thing yet, is able to do something that the old worm has not learned how to do in the thousands of years it has been in the spinning business: it can blow bubbles in its filaments. The thread of this new aerated fiber is as different from solid silk as bread is from hard-tack. The cloth made from it is stronger, softer, warmer and lighter.

A few years ago, when skirts first began to get scanty and short, the British textile manufacturers saw that their craft was in danger from the curtailment of dress goods. With one accord they started to fight for the good old days of fifteen-pound dresses and trains sweeping the ground, but now they have to meet opposition in their own ranks. For the makers of silk and near-silk stockings insist upon the right to exhibit to the world the skill of their chemists and the art of their designers. And recently the opposition to the return of long skirts has been strengthened by powerful financial allies, the makers of gay-colored silk garters.

It looks now as though the rival factions of the clothing trade were going to put over a compromise. They cannot agree on whether the skirt shall rise or fall, but neither objects to the skirts swelling out sideways.

So we may expect a lateral expansion in the form of puffs, ruffles, panels and bustles. That will use up more dress goods and cost more, and so everybody will be satisfied—except, perhaps, the ladies at first. But they will not have anything to say about it. That is determined by how the threads are pulled behind the screen in the factory.

Great Head Center

Continued from page 30

mate knowledge of the Zones. He asked if you had any plans to end this reign of terror which he described as the Black Hand of America! Your reply was noncommittal. But you missed a great opportunity. . . .

A point of red light glowed on the pillar supporting the vault, and:

"H. Q.," a voice announced. "Report of Divisional Chief A just to hand. Caught in storm. Motor failed. Carried off course. Capsized. Took to sea in life belt and swept out by current. Became unconscious. Awakened aboard s. y. White Hawk. Reporting by X radio from Dr. Stopford's cabin on yacht. Difficult. Suspects watched. Timed 7:15. Report ends."

"Report of Group Master 1, Sector 1 A 1, aboard White Hawk," the woman's calm voice demanded.

"No report to hand."

"Connect Sector Captain in charge of planes—immediately."

From the shadow of the cowl, those unflinching dark eyes watched the man who stood before the table, and:

"Fate has stepped in," the woman said calmly. "We cannot afford to lose Divisional Chief A. He will be your successor in New York. No one else knows the City Zones as he does. There is time only for one thing: Recall."

"You may be too late."

The nasal voice which sounded as though its owner were in the vault broke in:

"Sector Captain 2 B 3 on the line."

"Connect him."

"Sector 2 B 3," a voice announced.

"Your report."

"Plane with Assistant Chemist on board dispatched in accordance with order, charge of Group Master 3, this sector timed to operate White Hawk at 7:20—40.26 North, 73.58 West. Fly-

ing boat with Chief Chemist on board reported White Hawk sighted. All clear. La Patrie ahead of time. Due in ten minutes. Report ends."

The dark eyes under the hood were lowered rapidly. The woman was looking at the luminous dial of a small clock before her on the table.

She began to issue an order. . . .

IN a locked cabin on the White Hawk a man was kneeling in fervent prayer. He prayed in Portuguese. In Stopford's room, Partington, his message on X radio spoken, lay, ghastly, on the bed.

"Commander Roscoe will join you in a moment, sir," announced a voice on the bridge.

Captain Ransome didn't hear the voice. He was watching a queer-looking flying boat receding into the sunset, apparently pursued by an airplane, which, coming up from the northeast, was now heading back.

A distant siren sounded its deep, warning note.

"La Patrie!" said the chief officer, "we're dead in her track. . . ."

Captain Ransome lowered his glasses.

"Well," said he, "can you beat it!"

But the inscrutable Force which Omar named The Potter and which the Arab knows as Kismet had that evening saved the future of the United States.

Another adventure of
the Emperor of Amer-
ica by Sax Rohmer will
appear in an early issue

Stop That Noise!

Continued from page 22

the ticket. Within two weeks 35,000 voters had signed. Besieged by reporters, John Lodge issued a twenty-nine-word statement:

"This petition seems to be a cross-section of the city, containing names of all creeds, races and economic conditions. I have no platform, no pledges. That understood, I accept."

Then for three months he sat at a borrowed desk in the office of his friend the city clerk. There were no Lodge banners, no Lodge buttons, no Lodge campaign fund. Only one of Detroit's four newspapers supported him, and that mildly. Business friends opened a one-room headquarters, which John Lodge discountenanced.

His enemies called him a Klansman, without avail. There was a wild last-minute yarn that Mrs. Lodge was a high official of the Kamelias, who are sisters or perhaps kiousins of the Klan. But as there is not and never has been a Mrs. Lodge the accusation fell flat.

The tumult and the shouting arose to a tempest of ballyhoo.

The quiet, elderly man, who declined to go anywhere, to meet anybody or to say anything, was elected.

"It's one of them things you call conundrums," said one grisly war horse of the old political régime. "We figured that we'd have a little fun with this guy Smith, who's a Polish guy and a good scout, runnin' against a quiet, still-faced guy like Lodge. We was all square and set for a real party; the boys all framed to puncture band-wagon tires and bust up meetings at so much a bust, c. o. d."

"But it was all a one-way row. There was no opposition you could see to Smith. His gang did all the shouting. Yeh, but the Lodge folks did the votin'."

"Detroit," said Mayor Lodge, "debunked municipal elections by picking a man it felt qualified to serve as

mayor instead of falling for ballyhoo.

"As I said before being elected, I say now: I have no particular promises to keep. I didn't pledge myself to let Detroit remain wet or to dry it up."

"I'm going to give the citizens of Detroit their money's worth of government. By this time I know how, and they know I know. That's why they gave me the job."

Bossy is Shrewd

THE Lodge system of reticence is not general. There are constituencies which demand oratory. There are candidates who would rather lose than be silent. Newburyport and Mayor Gillis, for example.

"Yep," he admitted, his gray eyes glinting as he spoke. "That's me."

"Give yer friends the gravy and yer enemies the gate."

"I had a rough deal all through life; and when they put me in the cooler for slapping the bird who preceded me—that settled it."

Bossy has been made to appear a slangy clown. Bossy is nothing of the sort. He's shrewd.

"We're goin' to make Newburyport prosperous, and everybody in the place happy, except a few cops and politicians who gave me a dirty deal. They're the bozos whose mugs I stuck up in my vacant lot on the Boston pike in that political cemetery I started when I ran for mayor."

"I took that town by storm," he rumbled. "I knocked the voters cold."

From John Lodge's twenty-nine-word campaign canvas to Bossy's berserk ballyhoo, you have the home-town politics of America essentialized.

Which system is better?

The citizen can always take his choice—for it's his money that makes the mayor go.