



WHAT THE DICTOGRAPH IS

THE TINY "DETECTIVE'S EAR" THAT BROKE DOWN THE MCNAMARA DEFENSE
AND THAT HAS CONVICTED OTHER CRIMINALS

BY

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ONE day in May, 1911, during the session of the Ohio state legislature, two men stood in a room in the Hotel Chittenden, at Columbus. One of these men held a roll of bills in his hand; and he said that he wanted to get senate bill No. 256 out of committee. The other man was Rodney J. Diegle, sergeant-at-arms of the Ohio state senate. He said that he could get four votes for that purpose, at \$200 apiece, provided he himself got \$100 for the job. The first man counted out \$100. Diegle started to take it. Then he walked to the door of the closet and opened it and looked carefully within. Then he got down on his hands and knees and looked under the sofa. Then he walked back and took the money. And in June — two months later — Diegle was sentenced to three years

in the penitentiary. He had made the fatal mistake of being six weeks behind the times: he had looked for a man under the sofa — he should have looked for a dictograph. For a dictograph hung under the sofa, and a stenographer sat in the next room with a receiver at his ear and scribbled down the words that sent Diegle "across." And the Supreme Court of Ohio, in February of this year, sustained the admissibility of the evidence obtained by the dictograph.

The dictograph broke down the McNamara defense in the Los Angeles *Times* dynamiting case; from November, 1911, to February 15, 1912, the dictograph got the evidence in the headquarters of the International Iron-workers' Union that led to the arrest of President Ryan and of forty-four other union leaders throughout the United States; in October, 1911, the



A COMPLETE DICTOGRAPH OUTFIT
TRANSMITTER, EARPIECE, AND DRY BATTERY

dictograph procured the conviction of Mayor Thomas E. Knotts, of Gary, Ind., on a charge of receiving a bribe of \$5,000.

What is this mysterious dictograph?

It is a tiny sound magnifier and transmitter. Sounds are gathered by it and are multiplied many times in intensity, by the peculiar construction of the vibrating disc that receives the shock of the sound-waves. These vibrations are transmitted over wires to a receiving ear-piece on the same principle as by ordinary telephone. The novelty of the dictograph is in the extreme sensitiveness of its sound gathering and sound transmitting device — a device the technical construction of which its inventor declines to explain.

The transmitter of the dictograph is enclosed in a round, flat, black, vulcanized rubber case, three inches in diameter and three quarters of an inch thick. The other parts of the apparatus are an ear-piece two inches in diameter, and a dry battery cell about two inches wide, three inches long, and three quarters of an inch thick. The entire apparatus can be held in one hand, and altogether weighs a little less than one pound.

The dictograph is efficient. In the laboratory at Jamaica, Long Island, in which it was perfected, I stood by the side of Mr. K. M. Turner, the man who invented it. At his direction I took up an ear-piece from a work bench while he turned a switch. Then Mr. Turner, speaking merely into the air as if he were talking to another man in the same room, said, in an ordinary conversational tone:

"Mr. Haff, there is a gentleman on the line here in the laboratory who wishes to have you demonstrate the detective dictograph. Will you please talk to him and show him how it can be heard through various materials?"

At once I heard a perfectly distinct voice answer:

"Certainly, Mr. Turner. I am now talking in an open room, with no obstruction between me and the transmitter, though I am standing about four feet from it. Now I shall turn a switch and talk to you through another transmitter that is enclosed tightly in a wooden box." Here the voice began to sound more remote but exactly as distinct as before, as it continued: "I shall now switch to still another transmitter that is imbedded in a solid block of cement," and now the voice seemed very far away, but still perfectly audible and distinct. I asked the voice several questions and received its answers. Then Mr. Turner led me out of the building in which the laboratory is, across a yard to another building, and there introduced me to Mr. Haff, who at once continued the conversation that we had just broken off and showed me the wooden box and the concrete block containing the several transmitters.

The detective dictograph is an outgrowth of the commercial dictograph,

which is, perhaps, an even more remarkable device. Mr. Turner had been for many years — and still is — the successful manufacturer of an apparatus that was designed to assist the deaf to hear. He applied the sound gathering and intensifying principle of this apparatus to an intercommunicating telephone system for convenience in his factory. The result was the commercial dictograph. It is a wooden box in which, side by side, are a transmitter and an opening that corresponds in its use to the horn of a phonograph. Below is a row of keys, each marked with a name. Standing in front of his desk in his private office, Mr. Turner pressed down the key marked "Engineer." In a moment a marker flew up before a glass above the key, and Mr. Turner now pressed the key upward and began to walk about the room with his hands in his pockets. A voice called out of the opening beside the transmitter, loud enough to be heard all over the room, and said:

"Good morning, Mr. Turner."

"Good morning," Mr. Turner replied, still strolling about the room. "Do you hear me plainly?"

"Perfectly," answered the voice.

"Will you please bring me a Turner telephone? I want to have it photographed."

"All right, sir," the voice replied, "but I hope you can wait about ten minutes for it, as none of those here has a name plate on it."

At Mr. Turner's suggestion I entered the conversation, sitting in a chair six feet from the instrument. Later, he called up two men in different buildings at the same time, and the three discussed a business letter that all of them had seen the day before. No mouthpiece nor earpiece was used by any of them. By the time they had finished and Mr. Turner had shut off the connection, a man had brought in a Turner telephone. It, also, utilizes the same transmitter as the detective dictograph, so that it requires no mouthpiece, but it does require an earpiece.

So, from these three devices — the acousticon, the commercial dictograph, and the Turner telephone — the detective dictograph was evolved. Its opera-

tion is perfectly simple: the transmitter is readily hidden — as in the concrete wall of Ortie McManigal's cell in Los Angeles; or as in the space between the back panel of a desk drawer and the back of the desk, in the Ironworkers' headquarters in Indianapolis — and the fine wires that lead to the ear-piece are as easily carried away through a hollowed table leg and a tiny hole in the floor, or by some similar device. In a room of ordinary size it gathers every sound, even whispers from the farthest corner, and



HOW A DICTOGRAPH IS HID
SHOWING THAT IT IS SMALL ENOUGH TO BE CONCEALED BEHIND THE BACK OF A DESK DRAWER

transmits them, magnified in volume, to the receiver. In ordinary detective use the receiver is in a room next door or on the floor below, but in one case the Burns detectives have used it over a wire a mile long. In such cases, of course, the circuit has to be connected with one or two extra batteries like the small dry cell that is used for short distances.

The dictograph has been employed for other such odd uses as these: by Professor Frank Perret to study the minor activity of Mt. Vesuvius between eruptions; by Mr. William Boyce, of Chicago, during an expedition in the jungle of Africa, to hear the sounds made by wild beasts when undisturbed by men; in the Metro-



MR. K. M. TURNER

THE INVENTOR OF THE DICTOGRAPH, DICTATING A LETTER TO A STENOGRAPHER IN ANOTHER ROOM BY WAY OF THE COMMERCIAL DICTOGRAPH THAT STANDS ON HIS DESK

politan Opera House and in the Hudson Theatre, New York, to enable the managers to hear the rehearsals on the stage from their private offices; to enable Representatives in Congress, while sitting in their rooms in the office building, to hear the debates on the floor of the House.

But the most promising field for the detective dictograph is in aiding the execution of the laws. Mr. Turner, the inventor, has this theory about the obtaining of evidence: Reverse the old method of working up confessions of criminals. That method was to put the accomplices in separate cells and then to

criminal with the literal record of his most secret conferences, and he will break down.

There may be abuses of the dictograph as well as worthy uses. It has been used in one instance to steal stock market quotations from a broker's office. It could be used for blackmail. For this reason, the detective apparatus cannot be bought; it can be leased only, and by no one except persons who prove their character and motives to be above question. Practically, its use is limited to reputable detective agencies and to officers of the law. To such persons it is rented for \$100 a year, or, for shorter periods, for \$25 a month.



ONE OF THE PARENTS OF THE DETECTIVE DICTOGRAPH
OUTSIDE AND INSIDE VIEW OF A TURNER TELEPHONE. EXPERIMENTS MADE TO PERFECT THIS DEVICE,
THE COMMERCIAL DICTOGRAPH, AND THE ACOUSTICON, LED TO THE DEVELOPMENT
OF THE DETECTIVE APPARATUS

deal with them one at a time, telling each that the other had given way and urging him to get even by telling his story on the other. The new method should be to imbed a dictograph in the concrete wall of a large cell, put the accomplices together, and have the officers keep away from them, but to let their friends and kinspeople visit them freely. Sooner or later, when they are alone, they are certain to talk of their crime, and to give plenty of clues from which conclusive evidence may be worked up. Human nature cannot endure to keep such secrets locked in silence. And when they talk, a stenographer in the warden's office can take down every word they say. Confront the

Such, then, is the detective dictograph. It has armed the law with a new weapon for the preservation of the peace. Almost literally, it becomes the voice of conscience made audible in speaking tones. Even experimenting with it one feels a sense of fear and danger as if in the presence of a foe against whom there is no defense. Its terrors for breakers of the law may be imagined from that dramatic moment in Los Angeles when it made the stout hearts of the McNamara's fail, buttressed though they were by the sympathy of millions of workingmen, by the skill of great lawyers, and by the power of almost unlimited money — when a whisper had wrecked a national conspiracy.