

FIRST GENERATION BREATHALYZERS

THE DRUNKOMETER



Developed by: Professor R. N. Harger

Date: 1938

Location: Indiana, USA

The first practical roadside breath testing device intended for use by the police was **The Drunkometer**. The drunkometer was developed by Professor Harger in 1938. Professor Borckenstien (*inventor of the breathalyzer*) also collaborated with Harger and together they established a comprehensive 44 hour long training course for drunkometer operators, which consisted of practical usage and lectures.

The drunkometer collected a motorists breath sample directly into a balloon inside of the machine. The breath sample was then pumped through an acidified potassium permanganate solution. If there was alcohol in the breath sample, the solution changed colour. The greater the colour change, the more alcohol there was present in the breath.

The machine (*pictured above*) was quite cumbersome and was approximately the size of a shoe box. It was more reminiscent of a portable laboratory.

Breath Test Urged For Traffic Cases

Toledo Reportedly 'Far Behind' On Examining Drivers

A recommendation that Toledo adopt a breath test in drunken driver cases was made to Safety Director Edward A. DeAngelo by Lieut. George Kerwin, head of the Police Crime Laboratory, yesterday.

At the suggestion of Municipal Judge Frank W. Wiley, Lieutenant Kerwin made the proposal after surveying 15 Ohio cities on how they test the degree of intoxication of drinking drivers.

Judge Wiley had noted that Toledo was "far behind" other major Ohio cities in the number of convictions for drunk driving and on the number of chemical tests actually given drivers to determine intoxication.

Present Method

In his report yesterday, Lieutenant Kerwin explained that present chemical tests used by local police, involving direct sampling of blood, were accurate, but necessitated a physician's participation and often fairly elaborate preparations.

His survey, conducted by questionnaire, showed that certain standard breath tests, which indirectly analyzed the amount of alcohol in a suspect's blood, were simple, reliable and economical and could be performed by trained officers.

The most popular instrument now being used for breath analysis, Lieut. Kerwin said, is the "drunkometer." Using this test, a suspected driver blows his breath into a balloon. The balloon contents are then tested qualitatively and quantitatively for alcoholic content.

He suggested that Toledo adopt an ordinance patterned on a Springfield, O., law allowing breath tests to serve as evidence in drunken driver cases.

Mr. DeAngelo said he referred the proposal to the city law department for framing of the appropriate ordinance and that he would send Detective Sergt. Ted Kwiatkowski and Detective Patrolman Charles MacFarland to a 2-day seminar at Indiana University on breath-test operations.

They will be used to instruct other officers in the operations, if the ordinance is adopted, he said.

Drunkometer Sought By City

Council To Hear Request Monday

Immediate purchase of a balloon device to test the amount of alcohol on a suspected intoxicated motorist's breath will be asked of City Council tomorrow.

An ordinance to be submitted to Council with the approval of City Manager Arnold V. Finch would appropriate \$450 for purchase of a "drunkometer" and a Voland balance.

Breath Tested

In using the drunkometer, the motorist is asked to blow up a balloon, and his breath is used to weigh the quantity of carbon dioxide in the breath, as a means of determining just how much of the motorist's breath was exhaled into the balloon.

Municipal Judge Frank W. Wiley asked Mr. Finch to submit the ordinance. Edward A. DeAngelo, retiring safety director, advised that the City obtain the equipment last September, but Mr. Finch said then there were not sufficient funds.

Pressing Need Felt

Judge Wiley now feels that the need for the apparatus is so pressing that the special appropriation should be made, rather than have Council wait to include the item in the 1953 budget.

The judge also has suggested that Council adopt National Safety Conference standards in specifying just how much alcohol must be found in the blood if a person is to be considered under the influence of liquor. An ordinance fixing these standards would not, however, be necessary to the use of a drunkometer, he added.

City Will Buy Drunkometer

Device Will Test Motorist's Breath

Purchase of a \$450 drunkometer — balloon device to test amount of alcohol on a suspect's motorist's breath—was agreed to yesterday by City Council.

Acquisition of the device had been urged by Municipal Court Judge Frank W. Wiley and Edward A. DeAngelo, former safety director, for use especially in testing suspected drunken drivers.

Charles Lawton, assistant law director, informed Council, however, that use of the drunkometer would have to be a voluntary basis.

Code Attuned To Drunkometer

Supplement Defines Intoxication Degrees

Preparing for the use of the new drunkometer in cases of persons arrested for driving while under the influence of liquor, the city law department today drafted a supplement to the Municipal Code defining the degree of intoxication for motorists.

The new section provides that persons arrested for such violation should be given chemical tests. The amount of alcohol shown by the analysis shall give rise, according to the section, to the following presumptions:

1—If the test shows .05 or less per cent by weight of alcohol, the alleged offender was not under the influence of intoxicants.

2—If the tests shows .15 or more per cent by weight, the alleged offender was under the influence of intoxicants.

3—Any results between the two percentages shall not be considered as conclusive evidence that the defendant was or was not under the influence of intoxicants. Such facts may be considered with other competent evidence in determining the guilt or innocence of the alleged offender.

The section specifies that its provisions shall not be construed as limiting the introduction of other pertinent evidence.

Thomas W. Christian, assistant law director, who prepared the legislation for City Council's approval, said the formula is taken from a model code issued by the Federal Government.

Breath Test Can Legally Be Refused

Constitution Says Self Incrimination Cannot Be Practiced

"I refuse to breathe, on the grounds that it may incriminate me."

This is the answer that Toledo police may get from the halted motorist who is inebriated, but not so much so that he has forgotten his rights under the Constitution of the United States.

The City is purchasing a drunkometer, a device which makes it possible to figure the alcoholic content of a motorist's blood by having him blow up a balloon and then testing his breath for liquor fumes.

Under an ordinance approved yesterday by Council's Committee-of-the-Whole, a person will be regarded as not intoxicated if the drunkometer reveals that there is less than .05 per cent alcohol in his blood, and will be presumed to be under the influence of liquor if there is more than .15 per cent. If the alcoholic content is between .05 and .15 per cent, the findings of the drunkometer may be used as contributory evidence, not final.

But Charles Lawton, assistant city law director, told Council that the police will not be able to compel a motorist to breathe into the drunkometer balloon. That, Mr. Lawton said, would amount to forcing a man to incriminate himself, and as such would be unconstitutional.

Driver Cleared By Alcohol Test

Ill Woman's Car Hits 2 Other Autos

A Toledo woman, involved in a double auto collision, yesterday afternoon, submitted to a drunkometer test to convince police that she was not under the influence of liquor.

After proving her point, Mrs. Eleanor Ahlf, 42, of 2232 Glenwood Ave., explained she had been ill and was en route home from her physician's office at the time of the accident about 1 p.m.

Her car collided with another at Monroe and Thirteenth Sts., then continued out of control until it struck a second vehicle at Monroe and Fourteenth Sts.

Patrolmen Thomas Sass and Richard Smythe asked Mrs. Ahlf to accompany them to the Safety Bldg. after noting that she was shaky and could not account well for the accidents.

After reaching the Safety Bldg., where the drunkometer was being demonstrated to the four Municipal Court judges, the patrolmen suggested the alcohol test. The test indicated Mrs. Ahlf had not had any alcohol, Detective Sergt. Ted Kwiatkowski said.

Drunkometer, Inventor Flayed In Trial Of Toledo Motorist

Counsel Of Man Charged In Driving Case Attempts To Discredit Detection Device

Findings of the police drunkometer against William A. Stephens, 50, of 2492 Maplewood Ave., were upheld today by a Municipal Court jury despite an attack by Mr. Stephens' counsel on both the mechanism and its inventor.

After 23 minutes of deliberation, the jury returned a guilty verdict against Mr. Stephens, who was charged with driving while under the influence of liquor May 14 when his car was involved in an accident at Monroe and Superior Sts.

The trial started yesterday and defense counsel, William L. Kreutz, spent almost a day at

tempting to discredit drunkometer evidence and the meter's inventor, Dr. R. N. Harger, chief biochemist of Indiana Medical School, University of Indiana.

The attack was made during the questioning of Sergt. Ted Kwiatkowski, police chemist, and dealt with statements made by Dr. Harger and other American scientists on early experiments involved in perfecting the drunkometer.

Sergeant Kwiatkowski was questioned also about use of the machine in determining the condition of other defendants who have submitted to such tests since the drunkometer went into

use here in months ago.

Motorist Loses His Appeal Over Drunkometer Test

Conviction of George D. Kosztak, 2219 Caledonia St., on a charge of operating an auto while under the influence of liquor has been affirmed by Common Pleas Judges John M. McCabe, Thomas J. O'Connor and Harvey G. Straub.

Mr. Kosztak appealed from a 3-day workhouse sentence and a \$25 fine imposed last Nov. 12 by Municipal Judge Frank W. Wiley. He had contended that evidence against him was not conclusive, since employees of the Toledo police department, who had administered a drunkometer test after his arrest, were not chemists.

The judges found no error in the case and remanded it yesterday for execution of the sentence.

Science Sours Motorist's Stomach Plea Drunkometer Links Fermentation With Alcohol, Not Food

Science changed the picture for Jess W. Jackson, 41, of 309 Oliver St.

Mr. Jackson was charged by Maumee police on Oct. 16 with driving while under the influence of liquor after an accident at Detroit Ave. and Anthony Wayne Trail.

Sergt. Don Simmons said Mr. Jackson denied he had been drinking, but claimed a stomach condition caused fermentation of food which raised the alcohol content in his blood.

Mr. Jackson pleaded guilty after Mayor George F. McIntyre, a pharmacist, explained that studies by the Toledo police laboratory showed that Mr. Jackson could not have consumed enough food to register the alcohol content as displayed on a drunkometer test.

Mayor McIntyre fined Mr. Jackson \$100 and costs.

I'm OK, Officer . . . Lie!

City's Drunkometer Wins 1,016 Cases In Making Alcohol Test On Drivers

Examination Used By Toledo Police To Corroborate Facts

Ten out of 11 persons, who last year submitted to drunkometer tests, should have held their breath.

Capt. Ted B. Kwiatkowski, head of the police crime laboratory, said that of the 1,100 motorists who submitted to the mechanical test for determining the lack or the degree of intoxication, exactly 1,016 were convicted in Municipal Court on the charge of driving while under the influence of liquor.

Captain Kwiatkowski said most of the remaining drivers, who were able by this mechanical means to prove that their behavior was not attributable to alcohol either were released after the tests or placed in court on lesser charges.

Used For Corroboration

He pointed out that Toledo policemen do not rely solely on the breath-type test for evidence, but rather use it to corroborate facts or circumstances, which they find at the scene of an accident or at the place of arrest.

Generally, persons charged with being drunk and disorderly are not given the breath test, but several have been at their own insistence. Police said the cases of such persons establishing that they aren't intoxicated have been rare.

In 1954, after a year of its operation, the drunkometer had lost only one case in Toledo.

In that case, Municipal Judge Frank W. Wiley ordered a dismissal after the arresting officer testified "he had no opinion as to whether the defendant was under the influence of liquor."

Another driver, a woman, was absolved of a drunken driving charge after submitting to the test immediately after an accident in the downtown area.

.15 Of 1 Per Cent

The hapless motorist was able to prove that her near collapse, wobbly gait and suspicious breath were really the result of medication administered in a visit to a physician's office shortly before the collision.

Captain Kwiatkowski said that under Ohio law, if a person's blood contains .15 of 1 per cent alcohol by weight he is considered under the influence of alcohol and such determination can be made by analyzing the blood itself or the breath—as in the case of the drunkometer.

Captain Kwiatkowski said it has been determined that such a reading in either blood or breath examination requires that the person has consumed the alcoholic equivalent of six bottles of beer or six one-ounce shots of liquor.

Although some of the nation's police agencies use blood and breath tests in determining whether a sick or unconscious man is intoxicated or ill, orders to Toledo police are contrary to such procedure.

Orders Physical Exams

As a result of a series of city jail deaths in 1952, William H. Kirk, then safety director, ordered that before an ill or unconscious prisoner could be booked in a Safety Bldg. cell, he must first be given a physical examination in a hospital.

The order has resulted in considerably fewer deaths of police prisoners, and in the most recent one about a year ago, it was found that the 38-year-old inmate had been given such an examination six hours before he was found unconscious on the floor of his cell.

He died later that day while



—Blade Photo

TAKING A BREATH ISN'T ALWAYS RELAXING
Patrolman Howard Schlegel watches Sgt. Kenneth Ramsdell

undergoing brain surgery in another hospital.

Captain Kwiatkowski said the blood-type analysis of determining intoxication is usually used locally in cases where the person is either dead or for some other reason is unable to inflate a balloon which expels the trapped breath into the drunkometer.

The official said police labo-

ratory technicians last year conducted 157 such blood tests and most were confined to traffic fatalities, suicides and other homicides in which alcohol was believed to have been a factor in the investigation or crime.

Captain Kwiatkowski said both type tests can be conducted only on living persons with the latter's permission.

County Asked To Purchase Drunkometer

Deputy Trainees For Device Sought By Prosecutor

Purchase of a drunkometer for use in the County Jail was recommended today by Harry Friberg, prosecutor.

He said it had been called to his attention that township constables frequently have difficulty obtaining use of the Toledo city police drunkometer for testing motorists they have arrested.

To help them out, Mr. Friberg asked Sheriff William Hirsch today to have three or four of his deputies trained in the administration of the so-called balloon test for drunk driving.

Police To Cooperate

He said Ted Kwiatkowski, of the Toledo police crime laboratory, had indicated a willingness to train the deputies and advise the county on the purchase of equipment.

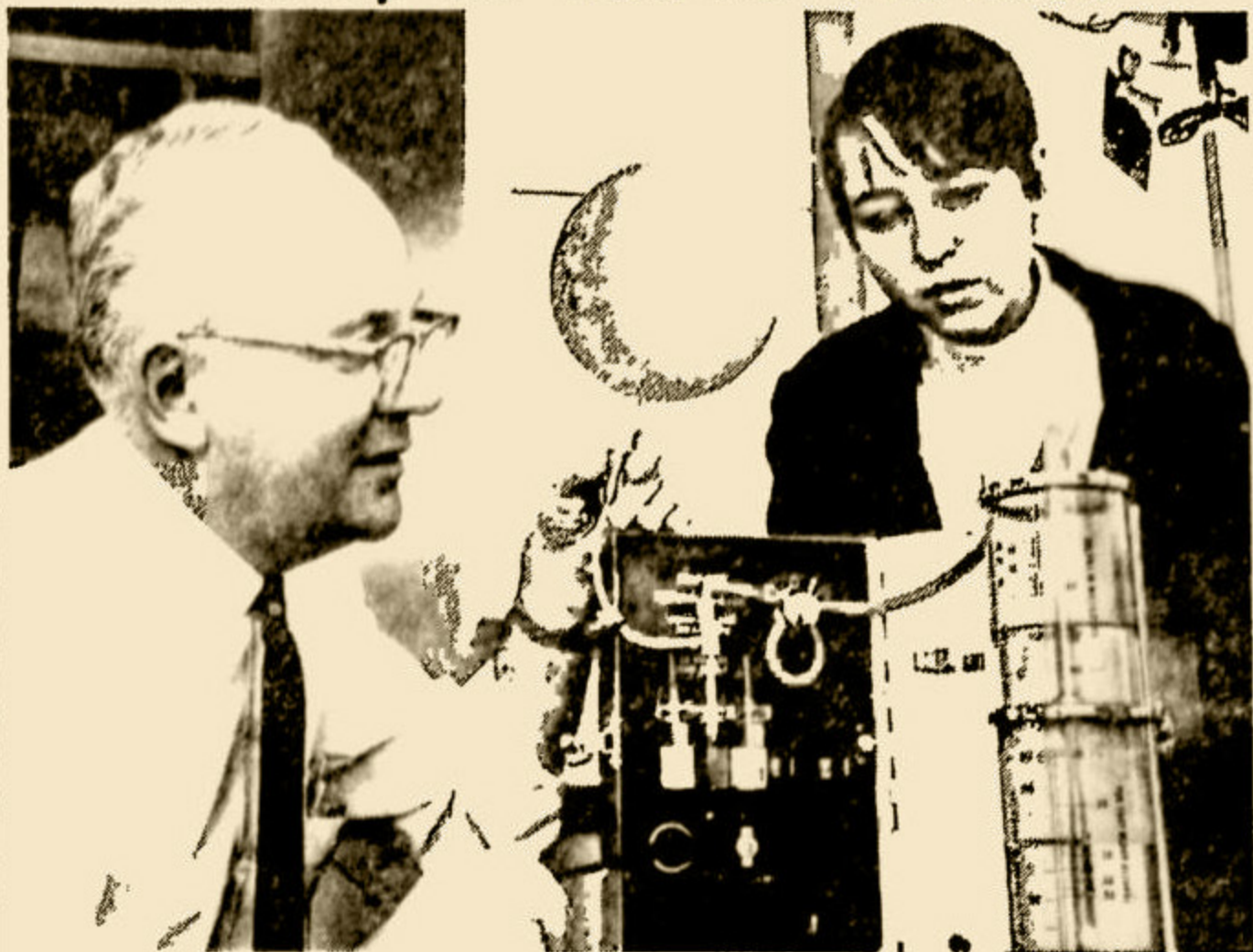
Sheriff Hirsch said 'crime laboratory technicians administer drunkometer tests on prisoners brought to them by his deputies or state highway patrolmen, but apparently had a rule against giving the service to constables.

Mr. Friberg said he could understand the reluctance of city police to concern themselves with township cases, because of the additional work load for which they in no way would be responsible.

Sheriff Agrees

The sheriff agreed with the prosecutor's plan and said he would endeavor to have sufficient deputies trained for drunkometer operation so that at least one man would be available for this type of work on each shift. The county drunkometer presumably would be located in the County Jail and would be available for deputies and state highway patrolmen as well as constables.

Follow-Up On 'One For The Road'



—Blade Photo

STATE HEALTH OFFICIAL WATCHES DRUNKOMETER OPERATION
Captain Kwiatkowski demonstrates machine for Mrs. Karnitis

City's Drink Tests Draw State Eye

Ohio Aid Applauds Police Training Plan In Use Here

The Toledo police division's training program for administering drunkometer tests could be adopted statewide as the result of a visit this week by a state health department official.

Mrs. Laima Karnitis, a chemist with the state health department, said she was returning to Columbus impressed with the training program of Capt. Ted Kwiatkowski and his staff, Lt. Edward Clancy, Sgt. Kenneth Ramsdell, and detective Richard Zielinski.

Captain Kwiatkowski said he thought Mrs. Karnitis' visit to Toledo was to examine and certify the 115 command officers in the police division who already are qualified to administer the drunkometer tests under the division's own program. Such certification and licensing now is required as a result of Ohio's new "implied-consent" law which went into effect Monday.

No Criteria

However, when Mrs. Karnitis arrived, she said no criteria for testing has yet been decided upon for statewide use and she was interested in finding out how Toledo has prepared its policemen for administering the test.

The Toledo division has used the drunkometer machine since 1952, and only a few of the command officers have not taken the 15-hour training course which authorizes them to operate the machine.

Instructs Course

Captain Kwiatkowski authored and instructs the training course, which includes lectures and demonstrations of the machine's applications.

The implied-consent law calls for a six-month loss of license for a person who refuses to take a drunkometer test after being charged with drunken driving. The law says that a driver, by assuming control of an automobile, is indicating his consent to be tested if he is picked up on suspicion of driving under the influence of alcohol.

Implied Consent Law Boosts Drunkometer Tests

Only 25% Refuse Liquor Exam

By MARY ELLEN WOLFE
Blade Staff Writer

Drunkometer testing is booming in Toledo under Ohio's controversial new "implied consent" law, aimed at curbing drunken driving.

Only 25 per cent of those arrested for driving while intoxicated refuse to take sobriety tests now, compared with 60 per cent previously.

A corresponding increase has been experienced in the number of drivers who plead guilty or no contest when they are brought into court and confronted with results of their sobriety tests

1,388 Arrested

The "implied consent" law provides that a person who obtains a driver's license implies at that time that he will submit to chemical tests in case of suspected drunken driving. If he

doesn't, the state suspends his driver's license.

Since the law went into effect Jan. 1, Toledo police have arrested 1,388 persons for drunken driving. Of these, only 349 have refused to take the test.

Police Capt. Ted Kwiatkowski said, however, that he thinks the success of the law should be measured by its carryover into the courts and the acceptance of test results by persons arrested.

In Toledo Municipal Court, a dramatic impact was immediately evident during the first month of operation of the new law. Only seven persons arrested for driving while intoxicated fought the charge. Pleas of guilty were entered by 56, and 22 took no-contest positions.

Easier To Handle

Ray Block, municipal clerk of courts, reports that 835 driver intoxication cases got to court by Nov. 25, and only 39 petitions were filed by persons who refused to take the test. The latter

were appealing suspension of their drivers' licenses.

Joseph Jordan, chief prosecutor for the city says the new law has made it much easier to handle driver-intoxication cases.

"A great majority of those who take the test score more than 0.15 per cent, the level at which a person is presumed under the influence of alcohol," Mr. Jordan reported.

"It has been rather infrequent, but we do have cases in which the tests show the accused was not intoxicated. Where there is that kind of result, it works to the benefit of the accused."

Maumee has had four persons refuse to take a sobriety test out of 93 arrested. Municipal Judge Daniel McKenna reports appeals there can be counted on the fingers of one hand.

One, however, may be precedent-setting in that the court held that a person on whom police used mace (liquid chlo-

rical) in making the arrest should be deemed incapable of giving consent for a test. The defendant was arrested in Toledo, but appealed in the Maumee court under a provision of the law that appeals are to be filed in the person's place of residence, rather than the place of arrest.

Sylvania Police Chief Arthur Cole believes the new law has put the officer a little more on the ball, knowing his personal judgment of the driver will be checked against a technical test.

Resent Taking Test

Certain people resent having to take the test. Most of them do take it due to the fact the officers explain they could lose their operator's license," Chief Cole said.

"As a whole the new law probably has helped. It has assisted law enforcement officers in taking some drivers off the road that should be taken off."

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Liquor Tests

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Lawyers, on the other hand, are not overjoyed with the new law, which has its counterpart in at least 24 states.

Although the Toledo Bar Association is not making any study of the new law, John J. Callahan, first vice president of the bar association, expressed this personal opinion:

"I feel the implied consent legislation has a basic uncertainty because it places the burden of proving they were sober on the defendants, whereas it should be the other way around."

Law Under Fire

Mr. Callahan called the new law "bureaucratic legislation enacted by the legislature for the convenience of a bureau."

Licenses are suspended by the Ohio Bureau of Motor Vehicles, with drivers given 20 days to appeal. The Lucas County prosecuting attorney's office handles these appeals at local level for the state.

Homer Hall, Jr., administrative assistant for the bureau of motor vehicles, reports 2,264 drunken driving cases were referred to the state between Jan. 1 and Nov. 3. There were 491 appeals filed in connection with these cases.

So far there have been 37 reversals of license suspension notices, including two involving Toledo Municipal Court and two in Maumee.

The appeals are heard Wednesdays in Toledo Municipal Court. Other courts in the county schedule appeals as cases arise within their jurisdiction.

'Not Very Popular'

"This is not a very popular law with bar associations to begin with," Mr. Hall said.

"It involves a man being forced to give evidence against himself. However, it will release just as many drivers . . . if they are not intoxicated."

A Columbus Municipal Court judge ruled this month that the bureau of motor vehicles form used in drunken driving arrests is meaningless.

"The decision will have little effect in Toledo," Mr. Hall said.

"We have already changed the form. One statement was not in the proper place. It is a very highly technical situation."

Revised forms issued in October are now in use here. These forms include a statement to be signed by an officer and a witness that a warning has been read to the alleged offender about consequences if he refuses to take the test.

Statement Omitted

This statement was omitted from the previous form. However, Toledo police typed a supplementary statement on the back of the state form when the omission was noted here. Maumee has revised the statement even further.

Ray Block, Toledo Municipal Courts clerk, said no appeals have been filed here involving use of the illegal form.

The appeals have been based on other grounds such as: failure of the arresting officer to check whether the test given was a blood, urine, or breath test; claims of unlawful search and seizure; the contention that the law forces a person to testify against himself

Harold M. Steinberg, who handles the appeals cases for the county prosecutor, cites some apparent shortcomings in the infant "implied consent" law:

► A snag regarding tests for persons too drunk to consent or to dissent from taking the tests.

► Permitting appeals in defendants' home courts runs up court costs by making it necessary to transport witnesses great distances.

► An original provision, now amended, called for appeals to be made in Columbus.

Judge McKenna summarizes the "implied consent" legislation thus after nearly a year in operation:

"On the whole, the new law is working all right. We have to see how it works for three or four years before we really get it stabilized."

Drunkometer Out, Breathalyzer In

Police, Chemistry, Technology Arrayed Against Topsy Drivers

By PETER NAVARRE
Blade Staff Writer

TOLEDO POLICE, as with other law enforcement agencies across the nation, soon will use a Breathalyzer machine to determine the influence of alcohol on an arrested driver. The machine, which measures the alcoholic content in the blood through a breath test, will replace the outdated Drunkometer, better known as the balloon test.

Capt. Edward Clancy, head of the police crime laboratory, says the Drunkometer is no longer manufactured because the Breathalyzer has proved more accurate.

ROOM temperatures and light conditions can influence the Drunkometer. Its value also depends somewhat on the operator's ability to detect color change.

The self-contained Breathalyzer, however, has a constant temperature of 100 to 120 degrees Fahrenheit and has its own colorimeter.

The Breathalyzer consists of three principal phases: collecting a sample, passing the sample through a solution of potassium dichromate and sulfuric acid, and measuring the amount of potassium dichromate required to oxidize the alcohol. The solution changes in color from pale yellow to light blue as the dichromate is reduced to potassium chromate.

The Breathalyzer uses a known quantity of breath to measure the alcohol content. The Drunkometer uses a known quantity of alcohol and measures the amount of breath it takes to equal that amount.

FOR 18 years the police division has used the Drunkometer in analyzing blood alcohol.

For the Drunkometer, the arrested person blows up a balloon which is then connected to a glass tube and into an ampule of a solution of about 2 teaspoonfuls of sulfuric acid and drops of potassium permanganate.

If alcohol exists in the breath, the mixture will turn from purple to pale yellow.

CAPTAIN Clancy says the color sight of the operator sometimes is challenged in court, but the Drunkometer is a proven blood alcohol test accepted by all courts.

Veteran policemen recall that the courts initiated the Drunkometer in Toledo. As is still the case, the driver is arrested on the basis of symptoms witnessed by the police-

men. The Drunkometer or the Breathalyzer is used to make sure the symptoms are not caused by injury or illness.

To understand the principle behind the Breathalyzer, one must first understand what alcohol does in the human body. Alcohol passes into the stomach and then to the small intestines.

Absorption into the blood takes place partly from the stomach wall but principally from these small intestines. It travels through the blood vessels which drain the stomach and intestines. These vessels lead to the portal vein which carries the alcohol-laden blood to the liver, from where it is circulated throughout the body.

The blood then imparts alcohol to the breath when the

CAPTAIN CLANCY
Outlines new procedures

blood makes contact with the lungs. Twenty-one hundred parts of deep-lung breath contain the same amount of alco-

hol as one part of blood, according to medical findings.

THE AMOUNT of influence the alcohol has on a person depends how much the person absorbs and how fast the body can destroy the alcohol.

The Breathalyzer instruction manual, written by Robert Borkenstein, chairman of the department of police administration, Indiana University, states the difference between the amount absorbed and the amount destroyed will be distributed in the fluids of the body. One ounce of stored alcohol in the body will raise the blood alcohol of the average 150-pound person five hundredths of one per cent.

The percentage of alcohol remaining in the body fluid, particularly in the brain and other portions of the central nervous system, is a measure of the degree of alcoholic influence.

Some persons could be under the influence with one tenth of one per cent blood alcohol, but extensive tests have shown that all persons will be influenced to some extent by 1½ times this concentration. This is the point at which a person can be prosecuted under a city ordinance and state law for driving under the influence.

CAPTAIN Clancy, who majored in chemistry at the University of Toledo, emphasizes that no longer is the driver arrested for "drunk driving" but that an arrest is made for being under the influence of alcohol.

"It would be unsafe to wait until a person is drunk in the ordinary sense," he explains. "It could be too late by then."

Upon arrest, a driver will be advised of the procedure for taking the Breathalyzer test. He has a right to refuse the test or he can demand that a doctor take a blood sample and run a blood alcohol test with the sample.

Through the state's implied consent law, a driver is subject to having his license suspended for six months if he refuses to take a blood alcohol test.

LEARNING TO USE THE BREATHALYZER MACHINE
Sergeants Larry Praslawski, left, and John Potrzebowski

A Breathalyzer Test For The Topsy Driver

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Further state amendments dictate, however, that if the driver who refuses the test pleads guilty to the charge of driving while under the influence of liquor, within 10 days after the refusal, the state will not suspend the license and will leave the punishment to the courts.

WHEN A driver agrees to the Breathalyzer test, a qualified operator is called to administer it.

Several police command officers will serve as operators. Captain Clancy, Lt. Kenneth Ramsdell, and Detective Richard Zielinski, all of the crime laboratory, are certified by the state as senior operators and will serve as instructors for the others.

Each operator must have at least eight hours of classroom

training, then must pass state examinations before a Breathalyzer operator's permit is issued.

WITH THE Breathalyzer warmed to required temperatures, the subject blows with force into a heated plastic tube, which is part of the Breathalyzer. The breath is retained in a chamber, which is vented to allow only the last portion of his breath to stay inside for testing.

Before an analysis of the breath is made, a test ampule of solution is balanced photometrically against another ampule. A light is concentrated on the ampules and adjusted until both ampules are receiving the same amount of light.

The colorimeter lets the operator know when the lighting is exact. When the machine is tuned to analysis, the reading light is again turned on, this time to an ampule containing potassium dichromate. A tube is connected to the breath chamber from the potassium dichromate.

If alcohol is present, the color of the potassium dichromate will change, allowing more light to pass through that ampule and will in turn cause the colorimeter to be unbalanced.

The distance the colorimeter must be moved for balance is in direct proportion to the amount of potassium dichromate reduced by the alcohol, and the scale is calibrated in per cent blood alcohol.

UNLIKE the Drunkometer, the Breathalyzer is tested after every nine uses, to make sure the instrument maintains accuracy.

In addition, state officials make unannounced periodic checks of equipment and operators.

The Breathalyzer cost the city \$967, with the Federal Government paying half under the Highway Safety Act.

—Blade Photo
SGT. VIC MILLER
Tests Breathalyzer



