

## HOW THE BALLISTIC BUREAU OF THE NEW YORK POLICE DEPT. HELPS IN SOLUTION OF CRIME

(New York Sun)  
The Ballistics Bureau of the Police Department, which has just rounded out its fourth year, is today firmly established and recognized as one of the most important police adjuncts in the solution of crimes in which firearms figure.

Referring to this bureau, which was started as an experiment, Assistant Chief Inspector John J. Sullivan, head of the detective division, said, "I do not know what we would do without it today. It is a scientific laboratory in which slugs and firearms are made to talk out loud. The bureau has made many concrete contributions which have materially helped in the solution of crimes and the conviction of prisoners. Through its daily scientific routine it is continually piling up useful information — it is a growing asset."

The bureau was started by Acting Sergt. Henry F. J. Butts, a "gun bug," who has spent practically all of his thirty years of police service in the detective division. He was one of the five members of the original Homicide Squad and is today recognized as one of the outstanding ballistics authorities in the country. Sergt. Butts has testified as an expert in more

than 700 cases in which firearms figured, within and without the State. The bureau annually makes 100 examinations for the police of upstate cities and neighboring States.

Prior to the inauguration of this bureau ballistics was more or less of a sideline for the Police Department's recognized authority on firearms. They were obliged to do the ballistic work in conjunction with their regular duties. Today the men assigned to the bureau do nothing but ballistic work, study powder markings, microphotography, study and classify clugs under high powdered microscopes. No two "guns," the police vernacular for a revolver or a pistol, when fired will engrave on the bullet like or identical characteristics. Consequently, under favorable conditions, the markings on the spent bullet are as trustworthy as fingerprints.

The Ballistic Bureau is at Police Headquarters and is never closed. It has a personnel of nine detectives and two chauffeurs. Regardless of the hour a detective is dispatched to the scene of every shooting in the city no matter if any one was injured or not. His work is strictly ballistic, making diagrams of the scene and the recovery and safeguarding of ballistic evidence.

Every bullet or shell recovered at the scene is studied, classified and filed away after comparison with all the other filed specimens in the bureau. The same procedure is followed with slugs removed from victims in hospitals and morgues. The results have been gratifying. Also every illegal gun coming into the hands of the police is sent to the bureau where it is fired and the slugs tested against the filled bullets and compared with other data. The tracing of ownership of illegal guns from the factory down through the trade comes under the domain of the bureau.

Since the bureau has been inaugurated the percentage of convictions in which firearms figured has been greatly increased. Sergt. Butts does all the testifying in homicide cases resulting from firearms within the city and is frequently called by outside authorities.

The trustworthiness and reliability of spent bullets for identification purposes is dependent upon their condition when recovered. If flattened or badly battered from impact they are practically worthless, but the ballistic expert's work is far from complete if he has a spent shell found at the scene of a crime for comparison with the suspected firearm. On the same principle that no two guns engrave on bullets like or identical characteristics so no two guns leave the same firing pin indentations or breech block markings on shells. Though the process of machining firearms in the factory is identical

nevertheless each barrel and other part of the firearm possesses individual characteristics due to the wear on the cutting edge of the tools used in machining. Further characteristics are developed on leaving the factory through moisture, rush and handling. Prof. Frank Whittier, who held the chair of pathology at Bowdoin College, was one of the pioneers to point out the differences in firing-pin and breech-block markings through microphotography. His shell identification work long preceded the study and classification of slugs which has made great strides since 1918.

## THE MAKING OF FRUIT JELLY

(Experimental Farms Notes)

Three substances are essential to a good jelly. They are pectin, sugar and acid. Pectin is the primary jellying agent. It varies considerably in fruits both in quality and quantity. Analysis of small fruits, in the chemical laboratories of the Central Experimental Farm, has shown how readily pectin deteriorates. To retain their maximum jellying capacity, these fruits should be picked when just ripe and should be used as soon as possible after picking.

Sugar plays an important part in jelly formation. Texture, flavour and yield of jelly are largely determined by the amount of sugar added. Ordinarily, the best jellies contain about 66 to 68 per cent of sugar in the finished product, but the necessary amount of sugar to be added will vary with the composition of the fruit. Too much sugar in proportion to pectin and acid is one of the most common causes of failure in jelly making. Other things being equal, a weak jelly results from the addition of too much sugar and a tough jelly from the addition of too little.

The acid content or more correctly, the active acidity of fruits is the third essential of jelly formation. It is too high, "sweetening" will occur. If it is too low, the jelly will not "set". All fruits contain acid in varying amount. In general the acid in the fruit provides sufficient active acidity for the making of a good jelly, provided that sufficient pectin and sugar are present.

Investigations in the chemical laboratories have shown how important it is to obtain a proper balance between pectin, sugar and active acidity to produce the best jellies.

## WIFE'S RETURN CAUSES THE CAT'S SUBSIDENCE

(New York Sun)

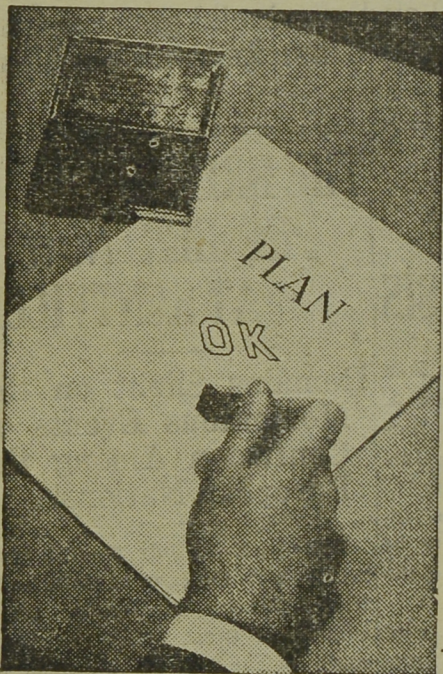
The commuter's wife and children had just left for a short vacation leaving him peacefully alone—except for the cat. Of course, it was no particular pleasure for him to get his own meals, wash dishes, and look after certain other household duties to which his wife attended when at home, but the commuter could stand these. The cat, however, was a problem which was gradually getting the better of him.

The cat was restless—he missed his family. He howled and yowled most of the time, and constantly paced the floor, particularly at night. Also, he would jump on one window sill, peer out and then jump down, only to repeat this performance at all of the other windows. As the commuter tried to read an evening the ever present tabby paced back and forth before him like a panther—silent on foot, but loud of voice. The harassed commuter tried various remedies from gentle cajolery to well-aimed swats but, alas! to no avail. The cat had got his goat.

At last his family returned. The cat quieted down—lost his unusual restlessness and stopped his yowling. This was most gratifying to the nerve-racked husband, who thought that, perhaps, the best part of his family's return so far as he was concerned, was the fact that it made the cat subside. But he said nothing about this to his wife, who, innocent creature, thought that her husband's exceedingly joy at her return was caused solely by affection for his loved ones.

It is pleasant to record the fact that the commuter soon became himself again, regained lost weight, and even petted the cat. This was the final triumph of the end of single blessedness.

## Associated Gas and Electric Company Plan of Rearrangement of Debt Capitalization



60,000 HOLDERS  
HAVE DEPOSITED  
OVER \$140,000,000  
OF DEBENTURES

A MAJORITY of holders have deposited more than half of the amount of outstanding debentures of the Company, under the Plan. These debenture holders have taken this action as a means of protecting their investments against the uncertainties affecting the utility business.

More than 60,000 holders have deposited more than \$140,000,000 of debentures.

2,034 banks, 876 investment houses, 81 insurance companies, 205 institutions, including associations, churches, and schools, have deposited for themselves or for customers.

Annual interest savings of \$2,758,383 have resulted from the Plan, based on deposits made by May 31, 1934.

These interest savings are substantial. However, they may be insufficient, unless business improvement continues, to prevent a deficit, on a consolidated basis, for fixed interest on the debentures of the Company during 1934. This is because of rate reductions and increased outlays for taxes and for labor and materials.

### Plan Offers Protection

Considerable doubt was expressed as to the necessity of the Plan when it was first proposed. Unfavorable developments since the announcement of the Plan such as rate reductions and increases in taxes and prices, have largely removed this doubt. It has become apparent that the soundest and most conservative course for holders of Company debentures to follow is to exchange them for debentures of the Corporation.

Holders of Company fixed interest debentures by depositing in exchange for Associated Gas and Electric Corporation debentures under the Plan protect their own interests and help make successful a readily available means of insurance against future adverse conditions.

The fact that 60,000 holders of Company debentures have deposited under the Plan should suggest to other holders that they act likewise to protect their investment.

Debentures should be sent to Transfer and Coupon Paying Agency, 61 Broadway, or The Public National Bank and Trust Company of New York, 76 William Street, New York City, depositaries.

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61 BROADWAY

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