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A Decade of Prohibition

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A NEIGHBORHOOD such as ours affords an epitome of the results of general un-enforcement of the prohibition regulations in Chicago, as in other American cities. Very interesting experiences in the last ten years at Hull House center about the Eighteenth Amendment. Our neighborhood has sheltered the boot-legger in his earliest activities, witnessing his rapid rise into power. It knew the adventurous hi-jacker and can trace the humble origin of the political liquor rings. It was filled with pride when Diamond Joe entertained the United States Senator.

Previous to 1919 the neighborhood was largely composed of southern Europeans, with whom excessive drinking has not been habitual. The Italian saloon, as it was somewhat incorrectly called, was used largely as a legitimate club, as were the Greek drinking houses, frequented by men who had immigrated in great numbers without their families. Such places sold much more wine than hard liquor, and are continued, so far as their social utility is concerned, as Italian *trattoria* and Greek coffee houses. The regular corner saloons were largely patronized by the Irish and other Americanized immigrants. Some of these saloons, notably one opposite Hull House on Polk Street, had no crime and disorder ever connected with them, although others in the neighborhood were notorious centers of dubious activity. Most of the saloons had no seats and the patrons were not allowed to loaf. One

square mile on our side of the city numbered four hundred saloons. The boss of our ward controlled numerous saloons in the ward and owned two saloons down town. His control was partly established by lending money to the saloon keepers and by securing them special patronage because he made these saloons the base of his political operation. He distributed favors from them and all the appointments with himself or his henchman were made in saloons. The entertainments given by the politician to his constituents and his friends in halls of various sizes and degrees of elegance, largely depended for their success upon the amount of liquor which was distributed.

In the winter of 1911 the Juvenile Protective Association of Chicago made a very careful investigation of the 328 public dance halls then open in the city, and found that 86,000 people frequented them on a Saturday evening, of whom the majority were boys between the ages of sixteen and eighteen and girls between fourteen and sixteen—the very ages at which pleasure is most eagerly demanded as

the prerogative of youth. One condition they found to be general; most of the dance halls existed for the sale of liquor and dancing was of secondary importance. At the halls where liquor was sold, by 12 o'clock practically all of the boys, who in many halls outnumbered the girls, showed signs of intoxication.

Peculiar dangers were to be found in connection with masquerade and fancy dress balls where the masks encourage undue license, and where the prizes awarded for the best costumes

Forty years ago this fall Miss Addams and her early associates took up their residence on Halsted Street. In the decades since, we have all come to look to Hull House as a coign of vantage from which has issued some of our most searching interpretations of American life. "Twenty Years at Hull House" evaluated the epoch of settlement pioneering. Now Miss Addams is scanning the Second Twenty Years and the Survey Graphic is fortunate in sharing with its readers advance chapters.

were usually a barrel of beer to the best group of men, a dozen bottles of wine to the best group of girls, and a quart of whiskey for a single character. At one hall it was found that a cash prize of one hundred dollars had been offered to the girl who at the end of the month had the largest number of drinks placed to her credit.



A Hull House court yard

As the owner of the hall lived and thrived by the sale of liquor, the dances were short—four to five minutes; the intermissions were long—fifteen to twenty minutes; thus giving ample opportunity for drinking. There was but little ventilation; in some cases the windows were boarded up, apparently on the theory that the hotter it was the more thirst would be superinduced and the more liquor would be sold. They secured a special bar permit for which they paid six dollars each time. This permit allowed the sale of liquor from three o'clock in the afternoon until three o'clock the next morning, while under the city ordinances saloons were obliged to close at one o'clock. Because of this regulation, the patrons of the local saloons swarmed into the dance halls at midnight, paying of course an entrance fee and freely buying drinks. It was between these hours that the conduct became most obnoxious and that the dangers for young people were most apparent.

The carelessness of the city toward such social conditions was the more astounding in that we all know that public dance halls offered then as now the only opportunity open to thousands of young men for meeting the girls whom they will later marry. Nature, always anxious that human beings shall reveal themselves to each other, at no time makes the impulse so imperative as at that period when youth is dreaming of love and marriage. The imaginative powers, the sense that life possesses variety and color, are realized most easily in moments of pleasure and comradeship, and it is then that individual differences and variations are disclosed. All day long the young people work in factories where every effort is made that they should conform to a common standard; as they walk upon the streets they make painful exertions to appear in the prevailing mode of dress and to keep conventions. Only in moments of recreation does their sense of individuality expand; they are then able to reveal, as at no other time, that hidden self which is so important to each of us.

The owners of the dance halls were themselves sometimes touched by the helplessness of these young people who came to them in such numbers, and asked for help. In turn, the Juvenile Protective Association, at the request of individual

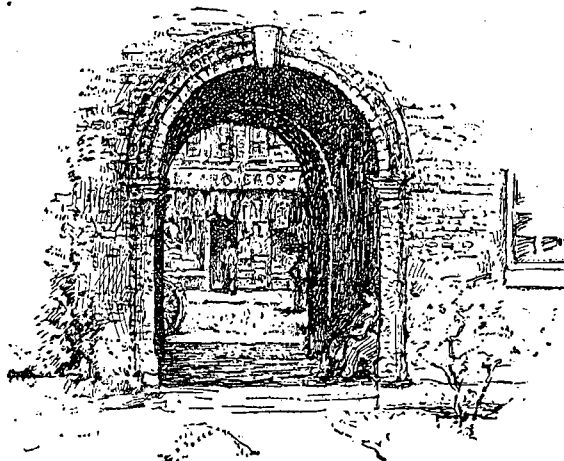
dance halls, appointed social workers who with the aid of specially designated policemen endeavored to watch conditions in the halls. Not until after prohibition was established in 1919, however, was it possible to do this for all the public dance halls within the city-wide association of dance halls. Every boy and man who pays an entrance fee is examined by an officer for a flask; if a flask is found, it is taken away from him and in his presence the contents are poured down the sewer. At one of the large dance halls a few months ago, in one evening, out of forty-five hundred people examined, only three were found carrying flasks. Such a regulation of course would have been impossible unless the sale of liquor had been made illegal. The entire dance hall situation has been affected by it. Since there is no profit to be made from selling liquor, most of the public dances conducted by private organizations have been discontinued, public dancing is more and more conducted in large halls by professional dance-hall promoters.

ONE of the worst features of the pre-prohibition dance halls was drunkenness among the patrons, men and girls, who left the festivities late at night and whose condition was utilized by "runners" for houses of assignation. In many cases the men on the dance floor itself were procurers who had as far as possible placed their intended victims under the influence of liquor.

Drink was of course a leading lure and a necessary element in houses of prostitution, both from a financial and a social standpoint. Many students of the subject believed that professional houses of prostitution could not sustain themselves without the "vehicle of alcohol." Although the red light district of Chicago has been abolished, there are still of course many well-known houses, and it would be interesting to know how far their existence even now is dependent upon the liquor sold and consumed in them.

But if alcohol was associated intensively with these gross evils, it was also associated with homely and wholesome things. A certain type of treating had a social value which has disappeared, and doubtless large family parties have been less frequent, with the lure of drink and the consequent element of hilarity removed. Callers were often regaled with beer brought from the corner saloon, often illegally sold to a child who was hurriedly sent to get it for the visitor. Impecunious neighbors, it was said, sometimes called for the sake of the beer hospitality, and neighborliness has doubtless declined in those houses in which drink has disappeared. The Italians consider a wedding at which there is no wine for drinking the health of the bride to be an absolutely unnatural affair, and the substitute of "soft drinks" to be most unsatisfactory. Nevertheless, Bowen Hall, belonging to Hull House, is used almost every week-end for a large Italian wedding party, although no alcoholic drinks are allowed there.

It is hard to exaggerate what excessive drinking did in the way of disturbing domestic relations and orderly family life. I knew for



Through a Hull House gateway

years a very charming Irish woman who with her three children led a dog's life because her recurrently deserting husband, when he returned from prolonged absences, always sold the accumulated household goods and clothing and reduced the family to absolute destitution and terror so long as he remained at home. Not until after his death, which occurred in a seizure of delirium tremens, was the capable mother able to establish a stable family life and to free her children from a fear which had actually stunted their growth. But sometimes the mother of a family was not able to carry alone the burden of respectability and sobriety. I remember a wife and daughter who fell into drinking habits with the husband and father, and all three came to a disgraceful end. The father died in the so-called "delirium tremens ward" of the Cook County Hospital and the daughter in the venereal

disease ward, the poor old mother surviving the loss of her family but a few months. This is a striking example of many similar family tragedies, not so often among the immigrants from southern Europe as among the families representing an older immigration.

In any discussion of the economic effects of prohibition it is always difficult to generalize because years of general prosperity followed the war. Doubtless there is a great change in the standards of living, and many of our old neighbors have left the vicinity of Hull House in search of better houses. As we meet them from time to time, they are obviously buying better clothes and enjoying more recreation. The forest reserves, which have been recently thrown open, are made use of by immigrant families in surprising numbers. The excursion implies the use of an automobile, but it is an unusual family who cannot boast of a brother-in-law or a cousin who owns a car. If this was true of the more prosperous family who had moved away, and of those whose business as merchants kept them in the neighborhood, the noticeable well-being of the others may have been due to the fact that the mothers' pensions are more liberally administered and that a more generous relief policy has been inaugurated by all the charitable organizations who have adopted and accepted a higher standard of living for the families under their care. Certainly since 1919 the usual family has received the envelope of wages more nearly full than was possible under the old treating system. The man coming home from work with his own crowd, would stop in a saloon and treat six or eight or even ten men, each one of whom would in turn treat him with the others. It would end in each man drinking more than he really wanted and paying much more than he could afford.

I recall a characteristic and striking example of improvements in family conditions during these years between 1919



The main entrance of Hull House

means of support of her mother and herself and although they still own the house, it is impossible to keep lodgers because of her mother's habits. The daughter is gifted, and looks back with keen regret upon her two years of release from sordid care when she could "really give attention to music."

DURING those first two years, beginning with 1919, we were all elated by the marked decrease in so-called "disorderly conduct." A large section of the City House of Correction was closed, and the so-called "tremens ward" of the county hospital. It was said by temperance enthusiasts that the doctors complained that they did not have enough cases of delirium tremens for clinical purposes. The local drink-cure establishment closed for lack of patrons. Our neighborhood registered a general lack of street disorders and also of family quarrels, which had so often put a mother and little children into the streets, turned out by a drunken father, sometimes in the middle of the night. From our first years at Hull House, we had had such forlorn families seeking refuge behind our brick walls.

In those halcyon days of the early prohibition period factory managers said that industrial accidents were doubtless fewer, but their statement was more emphatic in regard to the increased efficiency of the workers and especially the elimination of "blue Monday." The personnel department in many concerns had long refused to take on even an occasional drinker for any responsible position involving the use of valuable machinery, but they stated that under these conditions their task of selection had become much easier. Our own experience, corroborated by the teachers in all the local schools, confirmed the reports throughout the country, that the increased prosperity of the parents kept the children in school and that many more of them were sent to high school.

It is hard to tell just when we began to observe the social changes, due to lax enforcement or to the general conviction that it was possible to "get away with it." Of course we quite early began to detect increased prosperity in neighborhood families due to bootlegging. One mother was brought into court under "the Contributing to Delinquency Act" because the home had become a distributing center for bootlegging products. The charge did not include drunkenness, but merely disorderly conduct on the part of the purchasers. The mother came to the Settlement offering to make any arrangement for the care of her children, such as boarding school or living with relatives, which the Settlement thought best, saying that she couldn't possibly give up her "business" and that she was making enough money to care for the children properly. She had, of course, no intention of giving them up, and was devoted to them. I could easily cite dozens of similar instances, which increased in number and variety as bootlegging increased in volume and extent.

THE building conditions of our neighborhood easily lend themselves to this traffic. Along the south branch of the Chicago River the property owners are waiting to sell their old houses and barns, disused stores and small factory buildings, believing that the sites will be used for railroad terminals, garages and warehouses, which are already displacing the old buildings. These dilapidated houses and the somewhat casual population now tenancing them—Mexicans and gypsies—afford good hiding places both for the manufacturing and storing of liquor and for the hi-jackers and others who openly prey upon the illicit industry. A hi-jacker is one who holds up a truck of booze, frightening the driver with his gun until he induces him to desert his load. The driver dare not call upon the police to protect his illicit freight, and when he is obliged to abandon it, can only telephone to his gang and try to intercept the hi-jacker later and in turn terrify him with guns in order to recover the precious stuff. If the original owner of the "booze" later calls upon the police at all, he can make a charge only for the stealing of the truck without daring to mention what was loaded upon it, for of course "booze" is not legitimate property. From time to time we have found abandoned trucks in the alley back of Huli House which have evidently been left there because it was dangerous for the hi-jacker to keep them near his own house. Of course the profession of a hi-jacker is highly lucrative. He obtains his booze with all the profit it stands for without even the difficulty and expense of manufacturing it. He sometimes operates directly upon the manufacturing still and empties the store room of its contents. Such places are also easy victims of the regular hold-up men, and this accounts for the fact that many of them are equipped like small arsenals. Of course the owners of places which have been robbed are filled with vengeance and unending raids are thus started. There is in all this warfare an element of old-fashioned business rivalry, what used to be called "cut-throat" competition.

BOOTLEGGING, in its economic aspect, is a great industry. Production, formerly carried on in factories, if we may thus designate the distilleries and breweries, has become decentralized and has gone back into the home industry stage. This is just the reverse of what has happened in other industries. But we find the exploiter trying to get

control of all the stills within a given area, creating a situation comparable to that in the Pennsylvania oil fields years ago. Almost any man who had a piece of land where a well could be dug, could produce oil after a fashion, but for selling it he was dependent upon rival companies. Unless one company could gain control of a given section, it was at a great disadvantage because the mere collecting of the oil meant crossing and recrossing a given territory and because of the necessity of focussing the oil at a given point for final transportation into the outside world. As one company gained control of a certain section, and impinged upon the territory belonging to a rival, the competition became more and more intense, until one company won the field. The bootlegging situation came to resemble that in the early Pennsylvania oil fields not only in its economic structure but in its ruthlessness and widespread terrorism.

The production of alcoholic drinks, by going back from the factory to its domestic beginnings, quite naturally first fell into the hands of those who had never gotten very far from the domestic type of industry. These actual producers exhibit many of the characteristics of simple people, but the new industry, in the selling end, from the very first attached to itself shrewd business men, trained in an age of complicated commercialism, who also understood the necessity for political protection. We had grown accustomed during the last decades to the idea that great vested interests connected with the manufacturing of alcoholic drinks were bringing to bear continuous pressure on Congress and very often on the state legislatures as well. We had at one time our own "whiskey ring" in Illinois with headquarters at Peoria. But the pressure formerly brought to bear on Washington and upon state capitals has now been transferred to the simplest unit of government, the patrolman on his beat. The federal officials detailed to enforce an unpopular law are subjected to temptations of the most flagrant sort.

THE development of political corruption in connection with the manufacture and sale of liquor follows a direction the reverse of that of the industrial change from factory to decentralized small scale production. The old national "whiskey ring" came first, for it was in General Grant's administration that the secretary of the treasury unearthed frauds in the collection of internal revenues for certain distilleries which were operating in collusion with high officials, who thrived upon the profits. The wholesale corruption of petty government officials came much later with the decentralization of the industry when business opportunities on an unprecedented scale had been opened to simple peasants who have an opportunity to make money such as they had never even dreamed of before. It is not difficult to understand that the barrier of illegality was a frail one and easily went down before this onrush of avarice.

In the first days of the home-brewing and kitchen-distilling, rival bootleggers found it essential to control a given area, and they made to anyone discovered operating within that area a fifty-fifty proposition. They gave police protection and selling advantages in return for half the output. If a man resisted, his still was broken up, and if he was persistent, he would suffer personal violence. But he was in the end obliged to conform or to go out of business. In fact, however violent his opposition to the monopoly, he could not go on without protection and there was the added

danger that his neighbors would "squeal to the police" if he were selling to a rival. From the beginning these home-producers realized that it was the transporting and selling end of the business which was difficult and perilous, and so there inevitably developed a hostile rivalry between two sets of men who were not producers, but sellers. They were not, of course, carrying on a purely economic rivalry, for the situation was enormously complicated by the fact that both the manufacturing and selling were illegal and absolutely dependent upon successful corruption. Even if the federal official did not collect money for protection, some one would probably do it in his name, and if the policeman on the beat was perfectly honest, politicians who pretended to control police organizations, collected for him. The law-breaker, of course, always subjects himself to an unending series of blackmail. There is also the grave situation when bootleggers come to count upon immunity from the very people whose business it is to report them. In a very real sense, the people who represented the administration of the law became as much a part of the criminal situation as the so-called criminals themselves.

IN the very earliest days of the 1920s, the illicit making of liquor entered the stage of the small factory or shop although small copper stills were piled high for sale in the outdoor markets of the neighborhood. Strictly family manufacturing was going out and larger stills were owned by groups of bootleggers who employed men from the neighborhood. The enterprises housed in old barns and basements used gasoline for heating the mash and operating the still, the whole outfit rather expensive and requiring a man capable of running it as well as one who would be courageous if the police appeared. There was also a real danger from escaping fumes if the matter were carelessly handled. Sometimes the volume of business was quite large—a still recently raided in our neighborhood was producing 200 gallons a day. The building housing it was a comparatively small barn for the vats were in the basement sunk into the ground itself. The "stuff" is moved sometimes in a dilapidated old grocery wagon, sometimes in a motor truck. In our neighborhood it is usually handled in two gallon cans. The inhabitants of a street near the Settlement were accustomed to seeing a man sitting on a front seat beside the driver on an old Ford truck with a shotgun wrapped up in newspaper lying across his knees; another armed man would walk casually along the pavement. This was to secure protection from hi-jackers as well as from police interference. During one half year our neighborhood was filled with bootleggers coming from various parts of the city, added to those from our own vicinity, because the local police captain had the reputation of being easy to deal with.

This political protection produces great cynicism among the immigrants who say quite openly "you can do anything in America if you pay for it." What must be the effect of an incident like the following? An Italian

drinking with his gang one evening came home late at night and was shot in his own kitchen by a drunken companion. There was sufficient proof to indict the wife for complicity in the murder. She acknowledged that she was "fed up" with the abuse of herself and her family, and had promised to divide the insurance money with anyone who would get rid of her husband, who was himself supposed to be something of a gunman. Although it was shown in court that the insurance money had been divided with the gang, she was acquitted through the political power of the gang in a determination to save itself from exposure. A year later, the city was astounded when an assistant state's attorney was shot and killed in an automobile in company with a man whom he had tried for murder but who had been acquitted. The assumption was that the assistant state's attorney had been collecting from the gang of men with whom the criminal was connected. Two juries failed to convict the murderer. It was said that the official had been "bumped off" for political reasons totally unconnected with bootlegging. Without a verdict, it is impossible to know the situation, but there was no doubt that the incident gave an increased consciousness of political power to the bootlegging community.

The Sicilians in Chicago have an unsavory reputation for desperate measures in connection with bootlegging, partly because of the dramatic history of six Sicilian brothers, three of whom lost their lives in a prolonged war with a rival gang. The story, which in many respects is a typical one, may be outlined as follows:

JIM, the oldest of the six brothers, who came to the United States fifty years ago, operated a restaurant and a speakeasy; Angelo quickly reached the heights of an extortionist, and when Sicilian turned against Sicilian, in an aldermanic election, he killed his man, and thereafter had a standing as a gunman. Sam, more diplomatic in training and temperament, acted as a political agent for his brothers. Antonio was the gentleman of the family, the opera patron, and man about town. Peter was a saloonkeeper, and Michael was well fitted to do the rough bidding of his brothers. They formed a united family and gained a foothold in the alcohol business. They put stills in the home of every Sicilian whom they were able to dominate. In a short time they controlled much of the home-made alcohol in the city and were able to undersell all competitors. The combined credit rating of the family at one time was five million dollars, each one of the brothers almost a millionaire. Indeed, it was necessary to have capital in this business. In the fall of 1923 it was discovered that one Italian bootlegger had a payroll for chauffeurs, truckmen, bootleggers, guards, killers, lawyers and general handymen, of \$2500 a week.

The troubles of the brothers came at length from a savage outbreak with the rival gang, in which three of their men killed the hated leader of their competitors. Swift vengeance followed. Angelo was the first of the



A street market displays both fruit and stills

brothers to be killed, and Mike was next, although he was actually shot by the police as he was running away from a rival who had tried to kill him. Then, a few weeks later, Tony was shot down as he grasped the hand of a supposed friend who lured him "to the spot." These brothers had the reputation, even in the old country, we were often told, of being able to live without working, a remark very sinister in its implications. A certain type of Sicilian for centuries had a training in taking care of his own affairs outside of the law. The island was full of banditry and the vendetta survived there more than in any other part of the world. A man so trained easily goes over into the selling of booze, ready for all the desperate measures which may be involved. If a rival "muscles in," as the bootleggers laconically phrase it, on the territory and trade of his gang, he is ready to punish him. His very training in illegal activity and in dealing with his enemies for himself, becomes economically useful in the peculiar situation obtaining in Chicago in "the third decade of the twentieth century," as our newspapers put it. If he can go through the form of a trial and "walk smilingly out of court," so much the better. These two gangs of Sicilians almost exterminated each other, and the entire Sicilian population of helpless immigrants, living in Chicago, suffered in the process.

BUT in the last analysis, it is big money that makes Chicago gang wars so murderous. The city holds the key to the rich trade of the West and Northwest in whiskey, wine, gin and beer, exactly as it does in wheat, hogs, furniture and more staple commodities. Bourbon now comes from Canada and is cleared through Chicago, arriving on motor trucks, steamers, freight cars, and aeroplanes, from Detroit and other points along the border. Supplementing the Canadian ale and beer with the product of its own breweries, Chicago re-distributes the lighter beverages as well. Certain Chicago citizens point out, almost with pride, that if other cities have escaped the bootleg wars, it is because they are less strategically located than Chicago in the scheme of liquor distribution. The most optimistic citizens, however, could scarcely be proud of the role the police play in the Chicago situation, and their connection with the massacre of February 14 in which seven men were killed is but a flagrant example.

The residents in a settlement, like other good citizens, are much concerned as to the effect of all this law-breaking, upon the young. There is no doubt that a spirit of adventure natural to boys in adolescence has been tremendously aroused by the bootlegging and hi-jacking situation. It is as if this adventurous spirit were transferred from the wild west into the city streets. A boy was recently arrested in Chicago, who had come from Indiana for the express purpose of seeing "the brave men who were able to keep the police at bay." City boys in bootlegging neighborhoods have many opportunities to participate and even to collect hush money or at least to help by guarding secrets as to location of bootlegging outfits. They are quite often used as outposts, and are expected to give an alarm if a policeman or a hi-jacker appears to "be wise" as to the location of the hidden activity. If word is given that the police are on the trail, everything is set in readiness for protecting the plant. Everything depends upon who shoots first, for shooting is inevitable and a matter of self-protection on both sides. How general the carrying of arms by boys, for one reason or another, has become, is shown by the recent killing of a police

officer when he was arresting five boys who had been drinking and were evidently out for mischief. They told him to let them off or they would shoot him, and they finally succeeded in doing it because they outnumbered him in firearms.

BOOTLEG liquor is integrated with vice and crime quite as liquor always has been. Roadhouses where liquor is sold are notorious for their prostitution, and automobiles make it possible to transport patrons quickly to these disorderly roadhouses, also affording concealment for the intoxicated young people returning together. In addition to a boy's natural love of automobiles is the association of banditry. An automobile bandit is more successful and more dangerous than the romantic wild west robbers of fifty years ago, or the bands so recently to be found in remote parts of Sicily, Spain and of Mexico. A boy in the state reformatory tells how easily he and his gang, who owned a Ford, used to hold up young people who were returning from the road houses, finding it easy to take their money because they were always more or less intoxicated.

How inextricably this new type of crime and indeed the whole prohibition question are involved with the development of the automobile it is impossible to describe. Chicago, with only one-third of the population of New York, covers four times as much territory—prairie territory opening by hundreds of outlets into the country on every side—and this too affects the local situation.

In pre-Volstead days happiness and release from reality were associated with drinking, and much of the social life for men centered around drinking together. There is no doubt that more wholesome outlets are gradually being substituted in spite of the fact that many young men are very eager to demonstrate their superiority to law, and consider this demonstration a very sporty thing. We know indeed that a great many young people are drinking at the present moment solely from a sense of bravado. Each generation looks for a method with which it may defy the conventions and startle its elders. The present generation seems to have settled upon the obtaining and consuming of illicit liquor. The motive is so cheap and superficial that it is almost impossible to place the situation in the area of morals or any other human field. Unhappily their elders often imitate and abet them, although they live in homes in which liquor was never used in the pre-war days.

There is a general impression, however, that this braggadocia movement is spending itself and that a reaction has set in among the young people themselves. Many flappers are afraid to drive with men who carry hip flasks. Automobile accidents are multiplied, not only by the man who is intoxicated but even more by the man whose few drinks have made him recklessly eager to take chances and evoked within him a certain exhibitionism of daredevil courage. If it ever comes to a forced choice between automobiles and liquor, there would be a little doubt, I imagine, as to which would be preferred.

THIS attempt on the part of the Federal Government "to interfere with the drink situation" has certainly not met with the same vigorous opposition which an earlier one did, when, in 1791, the United States Government passed the first legislation connected with the imposition of a federal revenue tax on manufactured liquor. The Whiskey Rebellion, which occurred in 1794, (Continued on page 54)



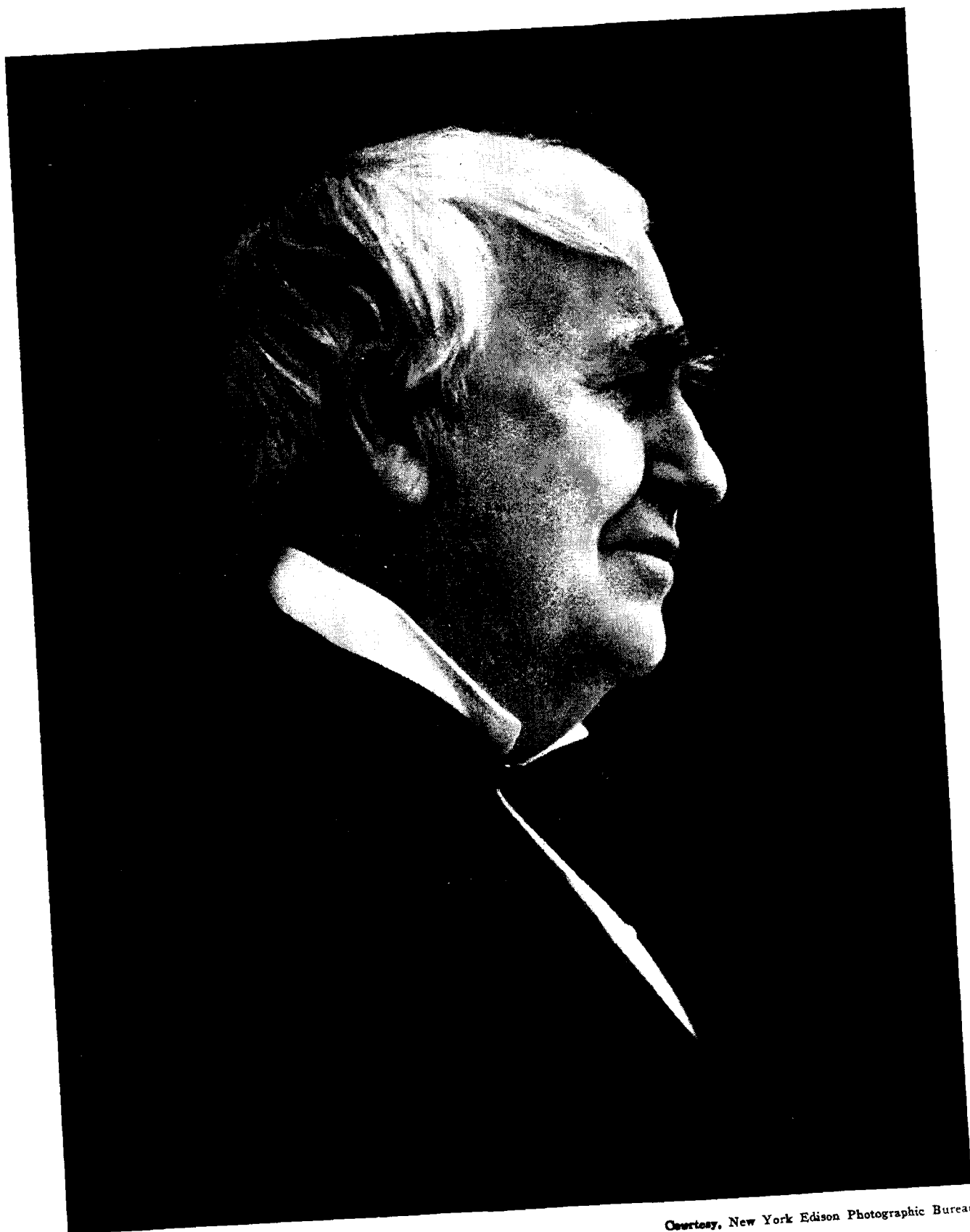
THE FLAME

Courtesy, Weyne Gallery
ROCKWELL KENT

The New Conquest of Light

FROM the legendary rim of human history fire has symbolized to mankind not only warmth to sustain life but light to make it safe and bearable. Just fifty years ago a group of scientists looked with feverish excitement on a bit of charred thread glowing in a vacuum, symbol of a new era, the lamp without flame. Thomas A. Edison did

not invent the incandescent lamp, but his light of 1879 started the train of efforts that made its use commercially feasible and brought the far wider enslavement of electricity for homes, schools, factories and community life which is described in the two articles on the following pages by Waldemar Kaempffert and Martha Bensley Bruère.



Courtesy, New York Edison Photographic Bureau

THOMAS A. EDISON

"We owe to Edison far more than the incandescent lamp—the immensely greater achievement of enslaving electricity in the service of mankind."

The Light of Edison's Lamp

By WALDEMAR KAEMPFERT

ON October 21, 1879, in what is little more than a barn in Menlo Park, New Jersey, but the finest electrical laboratory of its day, sits an intensely restless man of thirty with long, black hair swept aside from a fine forehead and the deep-set, burning eyes of a fanatic—sits and stares with half a dozen assistants at a little glass bulb in which a charred thread glows. A veritable frenzy of experimenting has led to the bulb, the thread and the glow. For whole days and nights he has not left the laboratory. His food, pushed through windows, has been wolfed down. Time and time again he has slept on a bench and pillowed his head on a resistance-box. Never was a result striven for so fiercely. Such eminent scientists as the Englishmen Preece and Tyndall have declared before learned societies that the "sub-division of the electric light," after the manner of gas, is an inventor's will-o'-the-wisp. Yet there is the lamp—a charred cotton thread glowing in an exhausted glass bulb, a triumph of sheer will, ingenuity, and empiricism over scientific theory.

"We sat and looked," said Edison years later, "and the lamp continued to burn. The longer it burned the more fascinated we were. None of us could go to bed, and there was no sleep for forty hours. We sat and just watched it with growing elation. It could not be put on the market, but it showed that electricity could be used for incandescent lighting. I spent about \$40,000 in bringing the investigation up to that point, and yet in a way this was only the beginning."

Yes, only a beginning. Instead of forty hours a commercial lamp must have a life of many hundred. The now epic quest for the perfect filament began, a quest that cost \$100,000, that took emissaries of the restless Edison all over the world, and netted 6,000 materials, including some hairs plucked from the red beard of a certain MacKenzie. And all these fibres, grasses, threads and hairs had to be tested with the same fine fury that had demonstrated the feasibility of subdividing the electric light.

A painting, a symphony, a poem, an invention is the product not only of a man but of its time and of the race—a product of what the Germans call *Stimmung*, a certain atmosphere, a certain psychological and social pressure. Edison had behind him a vast technical heritage. Discovery had been piled on discovery for five hundred centuries. Discoveries acquire momentum as they roll on. They also acquire a tension which must find an outlet, like energy under restraint. Something like a short circuit through a human mind occurs. In the case of the electric lamp there were several short-circuiting minds. Goebel and Swann were but two who were working simultaneously and independently along lines similar to Edison's, and Swann, the Englishman, devised a lamp which, so far as its filament was concerned, was better than Edison's. Jazz and futuristic painting could not have been produced in Lorenzo the Magnificent's

Florence. Neither could the incandescent lamp. It is so very much the product of its time that it was destined to appear about the year 1879. Yet it may be doubted if electric illumination (something very different from a cold lamp) would have been so rapidly introduced had it not been for Edison's feverish and thorough experimenting. Only through genius can social pressure manifest itself in a work of art or an invention.

A lamp was not enough. What made the filament glow? Heat—electric heat. A current had to be supplied to the lamp. There were dynamos even in the days of '79 and '80, but the most potent source of electric energy in New York was the Western Union Telegraph Company's battery of 2,000 cells. To illuminate a small section of a city with a gigantic battery was technically absurd. The unflagging Edison was constrained to design a generator, a distribution system, junction-boxes, suitable bases into which lamps could be fitted, meters, in a word the whole paraphernalia of the modern central station—something that historians of invention are apt to overlook. Power houses today differ radically from that which Edison equipped in Pearl Street in 1881. Yet that historic brick offense to the eye was the nest in which the enormous electric light and power industry of today was hatched. To be sure, it was Westinghouse who brought about the adoption of alternating current, the kind now generally supplied, which Edison opposed. Central station practice nevertheless began in Pearl Street, and for no other purpose than that of enabling the electric lamp to compete with gas. We owe to Edison far more than the incandescent lamp, the immensely greater achievement of enslaving electricity in the service of mankind.

WITH the central station the electrical age became a visible, incandescent reality; the generation and distribution of electricity on a large scale resulted not only in cheap lighting but in the means for driving factory-wheels and street-cars, washing household linen, churning butter, milking cows automatically, and sucking dirt out of carpets. In his own lifetime the nestling of the man whom newspapers hailed as the "wizard of Menlo Park" grew into so powerful and ferocious a bird that it had to have its wings and talons clipped. Public service commissions had to be created, and the public or private ownership of great utilities became an issue over which we are likely to quarrel as long as there are differences of political and economic opinion. Three years after the electric lamp was commercially introduced, that is, in 1885, the public was already complaining that the electric light companies were making too much money, while the representatives of these same companies at their first convention in Chicago were looking none too hopefully into the future.

The first social effect of the incandescent lamp was a child-like wonder. By the end of 1879 several hundred lamps had been installed to light Edison's laboratory, house,