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Patent Office
a National
Disgrace

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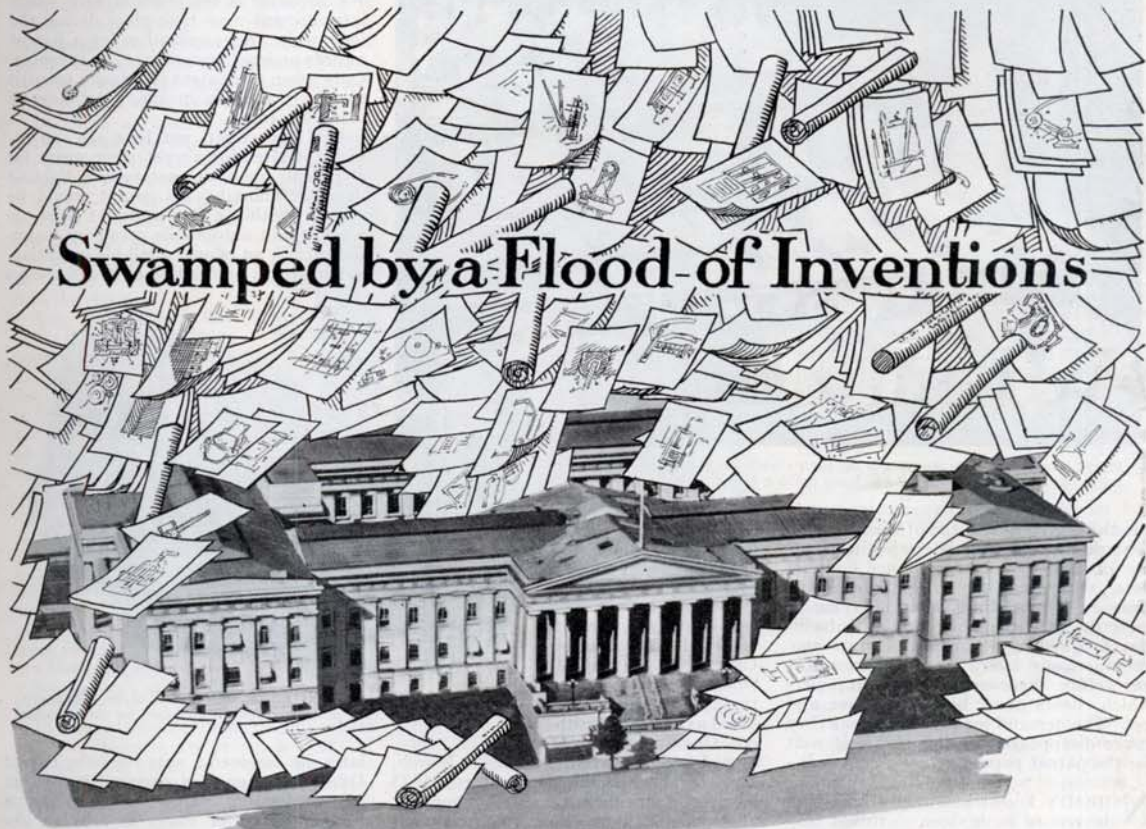
Amos 'n'
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Explained

WHY 2,000,000
AMERICANS
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Gliding
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Swamped by a Flood of Inventions

The Patent Office Has Become *A National Disgrace*

THE Patent Office, in Washington, D. C., recently sent to a workman in a chemical factory in the Middle West a \$100,000 piece of paper that wasn't worth a cent.

It represented a patent on a machine he had invented two years before. Factory officials, at the time the application was made, estimated that the invention would be worth \$100,000 to them as soon as a patent was obtained. The workman visioned himself on Easy Street. But he reckoned without delays at the Patent Office.

His application was sent in on February 16, his patent attorney told me. Spring came and went. The Fourth of July passed. No word from Washington. The chemical industry was moving fast. New processes were appearing all the time. Unless he could get his patent soon, changes promised to make his invention valueless. He wrote to the Commissioner of Patents. A letter came back telling him that work was so far

By **EDWIN W. TEALE**

behind it would still be months before the examiners could get to his application.

It was nearly Christmas when a letter arrived from the examiner asking for information that required the revision of one of the claims. The inventor replied at once, expecting to get his patent immediately. Again dragging months passed. Again he wrote asking the cause of the delay. He was informed that the examiner's request for additional information automatically put the application at the end of the list, and it could not be considered again until all the applications that had come in during the ten months it had waited before its first examination had been disposed of.

The following fall, nearly two years after the first application was made, the patent was granted. By then, changes in the particular branch of the chemical industry to which it applied made the invention worthless.

This is only one of many examples of how inventors are



Patent attorneys search the records for their clients. In this room, they can examine patents already issued but can learn nothing about the 118,000 cases on file.

handicapped and cheated of their rightful rewards through long delays in the granting of patents. Undermanned, out of date, with inadequate equipment, the United States Patent Office is trying to meet the conditions of today with facilities designed for the needs of years ago. In practically every large patent attorney's office, there are on file patent papers which clients never bother to come and get. The demand for the inventions they cover disappeared during the long wait for the patent papers.

NOBODY knows how many American inventors have seen fortunes slip through their fingers because of tardiness at Washington. The number must reach into the thousands. If others are to be spared similar experiences, drastic action is necessary to speed up the machinery of the Patent Office.

As this is written, there are nearly 118,000 applications for patents piled up in Washington in the greatest jam of history. And new ones are pouring in at the rate of approximately 2,000 a week. In the last four years, the number of applications awaiting action has leaped from about 41,000 to nearly three times that number, about 118,000. These piled-up applications contain more than twenty-three acres of paper.

At present, the staff of examiners is gaining on this accumulated mass of applications at the slow rate of about 250 a week. Even if they continue to work at top speed, without vacations, it is estimated that it will take the present staff until 1942 to catch up with their work so they can give the inventor a reasonably prompt decision upon his application. As it is now, forty-five percent of all patents, or approximately every other one, take

longer than two years to obtain. Some take several times that period.

I have before me, as I write, the current issue of the Official Gazette of the Patent Office, a weekly bulletin in which patents are listed as they are granted. Opening it at random, I find one patent, granted in March, 1930, had been applied for in March, 1923—seven years before. Application for another had been made in November, 1922, eight years before; and a third had been waiting final action since July, 1919—for eleven years! Scores of others had been lying in the Patent Office from five to seven years.

It has been estimated that the average inventor does not receive enough money from his invention to pay the forty dollars in fees charged by the Patent Office. These fees, paid at the time the application is filed and when the patent is issued, are, of course, additional to the fees which the inventor must pay his patent attorney. One of the contributing reasons for this situation is the delay in getting the patent.

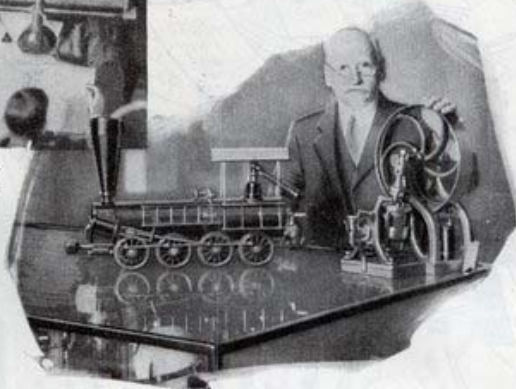
AN EXAMPLE of the injustice of the present system is seen in the experience of a Brooklyn, New York, mechanic, related to me by his patent attorney. He invented a ventilating device and was promised backing by a man who had money to invest. However, after waiting a year to have the patent granted, the investor declared he could wait no longer and abandoned the enterprise.

Another patent lawyer told me of a

similar experience. A Pennsylvania inventor was promised \$10,000 for the promotion of an improved type of wrench which he had designed. After two delays of ten months each, the backer met financial reverses and the possibility of getting someone else to finance the invention, when it finally gets out of the patent mill, seems remote.

BUT even more discouraging to the inventor is the freedom with which infringement may take place during the long wait. An application for a patent affords no legal protection to an inventor. Only when the patent is actually granted can he prosecute in the court anyone using his idea.

In Connecticut, not long ago, an inventor waited for almost three years for a patent upon an automobile lighting device. Thinking his patent would be granted within a few weeks at most, he wrote to an automobile accessory manufacturer in an effort to sell his invention, submitting a description of it. A few days



Commissioner Thomas E. Robertson with models of early locomotive and engine. Now their inventors would wait years for their patents.

later, he received a note from the Patent Office. It suggested certain changes in his application papers. This meant a further delay of many months in obtaining the patent. All during this time, the manufacturer to whom he had submitted his device made and marketed a similar appliance, applied for a patent on it, and labeled his product with the words: "Patent Pending." The inventor was helpless. He could not prosecute until his patent was granted. When it was, the manufacturer ceased making the device. Had he continued its manufacture after the patent was issued, the inventor could have sued him for infringement. Even then, under the present law, the inventor could not have collected damages for the use of his idea before the day his patent was granted. His right to sue for infringement began when he received his patent, not when he made his application.

IN STILL another way, the piled-up arrears in the Patent Office increase the difficulties of the American inventor. Suppose you have finished working out an idea for a patent. The first thing your lawyer does is to make a search to see if there are any similar inventions recorded among the more than a million and a half

patents already granted by the United States. He finds none, so you file your application.

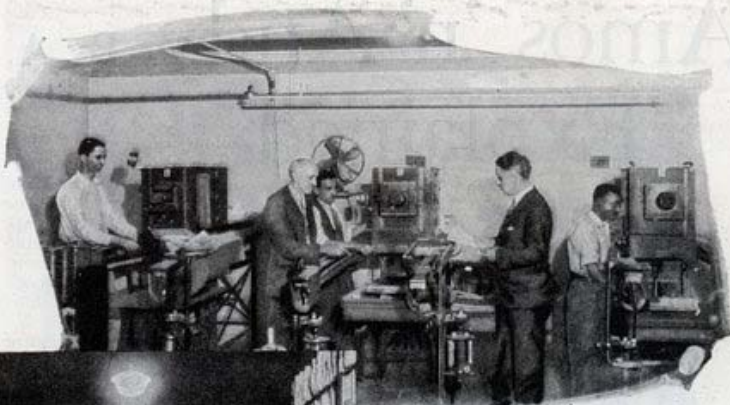
This does not mean, however, that another person has not sent in an application for a patent on the identical idea before you. It may be among the 118,000 applications awaiting examination. No one in the world, not even the Commissioner of Patents himself, knows what inventions are described on those acres of paper. When your application is finally taken up by the examiner, you may learn that a patent had been applied for on the same idea nine months before you and the other application had not been reached when you made yours.

In such a case, the twenty-dollar application fee you paid the Government; the search fee, anywhere from five to a hundred dollars, which you gave the lawyer; and the attorney's fee might as well have been thrown into the street.

Yet, while the Patent Office has been giving poorer and poorer service and has been losing money for American inventors, it has been piling up for the Government a profit of more than six million dollars!

In fact, it is one of the few Federal bureaus that operates at a profit. Over a long period of years, its income has far surpassed its expenditures, although recently it has been running behind. However, from fees paid by inventors alone, \$3,000,000 was collected by this office last year.

In the photostat department, where copies of patents are made, a profit of \$42,000 was made in 1929. In these rooms, eight machines operate from morning until night, turning out between 3,500



The photostat department of the Patent Office clears \$40,000 a year, but this profit cannot be used, under the law, to reduce the patent jam.



A small part of the twenty-five miles of shelving, holding printed copies of patents. Left to right, Congressman A. H. Vestal, Chairman of the House Committee on Patents, J. A. Brearley, Chief Clerk of the Patent Office, and Commissioner Robertson.

and 4,000 photostats. Every time they click, the revenue of the office is augmented by twenty cents. The 118,000 applications, awaiting action at this time, represent an investment in fees by inven-

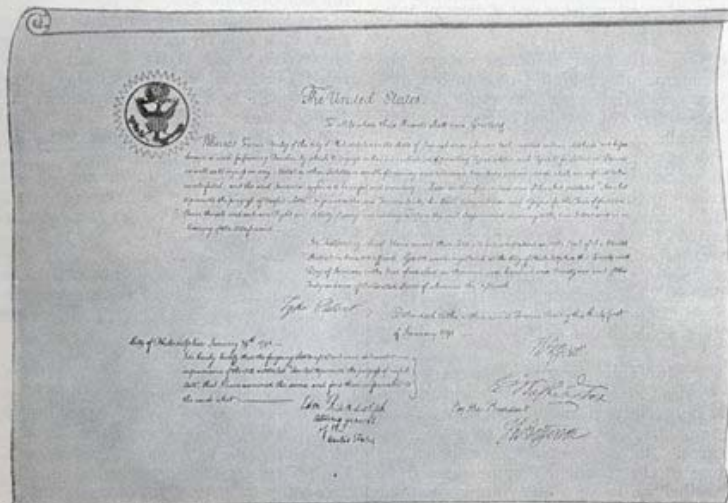
tors of more than \$2,000,000—an investment with admittedly insufficient returns.

If the Patent Office is making money, why doesn't it hire enough men to do its work? That is a natural question, one of many mystifying angles of this patent muddle for which I have sought the answer. I have talked with the Commissioner of Patents, Thomas E. Robertson. I have discussed the situation with many men employed at the Patent Office. I have interviewed lawmakers who have investigated the work of the Office and patent attorneys who have been dealing with it for years. And the result is the belief that the present disgraceful conditions will continue indefinitely unless the readers of POPULAR SCIENCE MONTHLY and others who are interested demand Congressional action that will give American inventors the service to which they are entitled.

In answer to the question above, I found that not one penny of the millions of dollars profit made by the Patent Office has been available for improving the service of the organization or for providing better equipment. The law provides that any money surplus at the end of the year must be turned over to the United States Treasury. Thus the Patent Office has never been able to put its profits to work. It has been dependent upon the whim of Congress for the amount of money it could spend.

A BILL is now before Congress to increase the number of examiners by one hundred and ten. In order to do this, it is proposed to raise the filing fee for patent applications from \$20 to \$25 and the final fee a like amount. This means that the inventor will have to pay \$50 instead of \$40, plus the necessary attorney's fees and other expenses, to get his patent. If it also means that delays will be eliminated, no one will object. But does it?

Everyone with whom I talked in the Patent Office agreed that the hiring of the new examiners would be of little immediate aid in clearing up the colossal "log jam" of applications. It will be two and a half years, at least, before they will be of much help. In fact, some thought that for that length of time, because of their inexperience, they will (Continued on page 132)



Reproduction of the oldest patent grant in the files at Washington. It is signed by George Washington and Thomas Jefferson and was issued to one Francis Bailey, of Philadelphia, in January, 1791.

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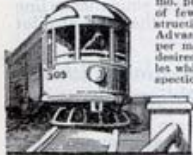
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Patent Office A National Disgrace

(Continued from page 21)

be a definite hindrance, delaying still further the work.

To understand this, we must look at the manner in which the examiners work. At present there are about 650 of them, but the number varies almost from day to day. There are from eight to ten resignations a month. Every two and a half years there is a fifty-percent turnover in the employees of this department of the office. The main reason is the small pay. An applicant for a place as examiner must pass a two-day examination. He must understand French or German. He must have training in reading mechanical drawings. He usually is required to have three years' college work, majoring in such subjects as physics, chemistry, and mechanical engineering. He must have completed a course in mathematics through differential calculus. Besides, he has to pass a physical examination. And his initial salary is \$2,000 a year. Before he can advance to a position as head of a division, he must have a law degree as well!

MOST of the examiners are students just out of college. They look upon the work as a stepping-stone to a career in engineering or patent law. And, in most cases, just about the time they are trained and begin to be of value, they resign. During the first two and a half or three years, their work must be checked by an older examiner. So, for that period, they not only accomplish about half as much as an experienced man, but they consistently hinder the capable ones by demanding much of their time to go over the work they have done to be sure that nothing has been overlooked.

Even then, sometimes an inexperienced examiner will cause the inventor trouble. Consider the case of the California mechanic who waited patiently for nearly two years to get his patent. Then, after it was issued, he discovered that the examiner, in searching the previous patents, had overlooked one which should have been called to the inventor's attention. His lawyer thus worded his claims to cover more territory than he was entitled to, and his patent was held invalid for this reason. To gain the protection to which he was entitled, the inventor had to have his patent reissued. This meant starting at the beginning again and going through the whole process, thus getting a double dose of the irritating delays.

AREN'T applications ever taken up out of order? Only under three conditions, I discovered. When an application has been in the Office longer than three years, the examiner is privileged to take it up out of its turn in order to clean up the case. If the head of one of the Government departments, such as the Secretary of Agriculture or of the Navy, requests the Commissioner of Patents to give immediate attention to an application which will be of value to the work of that Department, it is usually done. The third condition is when it can be shown that the granting of the patent will result in the employment of a large number of men. Thus, if a corporation can prove that as soon as the patent is issued, it is ready to make a large investment and begin manufacture, special action results.

Probably the best way to understand the difficulties that confront those who are trying to solve the present muddle is to follow an application on its slow progress through the patent maze.

When it arrives in Washington, a clerk in the mail room of the Patent Office stamps and dates the application and sends a receipt slip to the sender. Then the petition is sent on to the application room. Here it is given a serial number and the date of filing is recorded. The application clerk carefully examines the petition to decide what kind of a thing has been

invented. It is often two or three days before this is accomplished. Inventions are placed in sixty-two classifications by the Patent Office and the application clerk sends the petition to the head examiner of the division to which it belongs. He looks it over again and decides into which subclass it fits. Each main division is divided into subdivisions called "arts." Thus, for example, "chairs" might be split up into a "swivel chair art," a "Morris chair art," etc. All patents granted are similarly divided into classes. Where it might take a week to look over all patents on chairs, those under a particular subhead can be gone over in possibly half an hour.

WHEN a correct classification of the application has been found, it is turned over to the clerk of its particular division who records the application in a large ledger. Finding the correct pigeonhole for the petition and recording it may take three or four days more. Then it is placed in the files to await its turn. It remains there from one to ten months—the average is seven—before the examiner in charge of the "art" to which it belongs gets around to it. He takes it out again and begins his search to see that the idea is not covered by any previous patent.

He examines not only all the American and foreign patents on similar devices, but he tries to make sure that the idea has not been published in any newspaper or magazine prior to two years before. Each examiner is supposed to become an expert upon his particular "art" or "arts." He goes over technical publications and magazines, such as POPULAR SCIENCE MONTHLY, which print descriptions of new devices and machines. Whenever he runs across a new idea that falls within the range of his work, he clips it out for future reference. No patent is granted upon an idea that has been described in a publication either here or abroad more than two years before the application is made. Copies of the patents already issued, together with such clippings, are kept in drawers that line the walls of the examiner's rooms like the boxes in a shoe store. Each box covers a particular subdivision and each division has from three to five rooms lined with these "shoe boxes."

THE average output of an examiner is about fifteen applications a week. However, in the case of a complicated invention, such as a calculating machine, which sometimes requires sixty sheets of drawings, the examiner may put in a solid month upon it before he can decide whether to grant the patent. Not infrequently the application has to "change horses in the middle of the stream," when one examiner resigns and another takes up the work. This resulted in additional irritations for a professor at Columbia University, New York City, recently. After he had waited for months for some action upon his application, he received a letter from the examiner saying that his invention could not be patented. He filed an objection. After the usual delay, a new man replied, the first one having left the employ of the Government. The new examiner was enthusiastic. He said he thought the professor's invention one of the best ever submitted to the office, but suggested that one of the claims be slightly amended. Two weeks later, the enthusiastic one also resigned. Now the application is waiting to be considered by a third examiner!

When the search is completed, the examiner sends a letter to the inventor or his attorney allowing or rejecting the application. If it is rejected, six months are allowed for the applicant to appeal the decision, and if it is allowed the same length of time may elapse before the final (Continued on page 133)

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Patent Office Has Become A National Disgrace

(Continued from page 132)

fee has to be paid. In fairness to the Patent Office, it should be pointed out that lack of promptness on the part of inventors in replying to letters and in paying fees often lengthens the time required to get a patent. The "long distance record" in this respect is the noted Fritts case, in which thirty-five years, from 1880 to 1916, elapsed between the filing of the application and the issuance of the patent. The commissioner who considered the case began by saying: "The inventor is dead; the patent attorney is dead; and the only question now to decide is whether the case is still alive." While the inventor, himself, had been responsible for some of the delay, the commissioner declared that much of the fault for the thirty-five-year wait lay with the Patent Office. Such delays must be made impossible.

Even after the final fee of \$20, which it is now proposed to raise to \$25, has been sent in, there is always an additional month of waiting before the patent is actually granted. The rule is that four weeks after the final fee is paid, the patent is allowed.

IN THE last twelve months, Commissioner Robertson has received approximately 500,000 letters from inventors in all parts of the country. A goodly share of them ask if something cannot be done to remedy the present intolerable conditions. This, POPULAR SCIENCE MONTHLY believes, must be accomplished if one of the country's greatest assets—its inventive spirit—is not to be stifled.

The first step in remedying present conditions is a realization that the problem will not solve itself. In the past, even patent officials believed that the flood of inventions would soon ebb. Today we realize that the attitude of Thomas A. Edison was more nearly right when he told a newspaper reporter: "We don't know one millionth of one percent of anything." The inventive period of the world has just begun. And the future program of the Patent Office must be geared to that realization.

During the last ten years, more patents have been granted in the United States than during the 100 years from President Washington's inaugural in 1789 to President Harrison's inaugural in 1889. In 1929, 114,496 applications for patents, trade-marks, and designs poured into the Washington office. And thus far in 1930, there has been a twelve percent increase over the record-breaking flood of last year. Besides mechanical inventions, the Patent Office passes on about 5,000 designs and 20,000 trade-marks a year. Recently, the requests for trade-marks has increased 100 percent.

APPROXIMATELY one half of the applications are granted. Thus each year there are about 50,000 more patents placed on the twenty-five miles of shelves which hold all those issued in the Washington office. This adds an average of nearly 1,000 apiece to the sixty-two divisions into which all inventions are classified and through which the examiners make their search. As a result, the time required for such a search increases every year.

No other nation has done as much along the lines of invention as America. With one sixteenth of the world's population, it holds one half of all the world's patents. In the United States, an average of one patent for every 150 persons has been taken out. It was the first nation to have an established patent office. Other countries had given protection in the form of monopolies, but the American patent laws set the pace in protecting the poor inventor. An American does not have to forfeit his patent because he is unable to manufacture it, as is the case in other countries. Neither does he

(Continued on page 134)



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have to pay taxes upon his invention, as in other nations.

American patent laws have aided the inventor and stimulated invention, and to this fact the nation owes much of its astounding advance along mechanical lines. As the richest nation in the world, and with much of its wealth derived from the products of its inventors, America must take immediate and adequate steps to meet the needs of the present patent situation.

When the new building of the Department of Commerce is completed in about a year and a half, the Patent Office will move into new quarters in one wing. This change will provide sufficient room for present needs, but officials declare it will allow little chance for expansion. What must be demanded of Congress is a forward-looking program that will keep step with inventive progress.

A FORMER Commissioner of Patents has declared that there is no reason why an ordinary application should remain in the Patent Office longer than one week without being taken up for consideration. That goal, welcomed by all inventors, will be achieved only when the present system is altered to allow salaries high enough to retain good men as examiners and appropriations large enough to provide enough men and sufficient facilities for taking care of the volume of business which is increasing yearly. The number of examiners that can be hired and the equipment that can be provided depend upon the size of the appropriation allotted the Patent Office each year by Congress. Thus the Patent Office is dependent upon Congress, and Congress must be made to realize its needs. All those who wish to see progress in this direction should write to this magazine or to their Congressmen, and they should stir up public opinion and agitate for patent reform!

The above program must constantly be urged upon those in authority if the Patent Office is to cease to be a national disgrace and to fulfill again its primary function, as defined recently by President Hoover: "to stimulate and protect American ingenuity and inventiveness."

Why 2,000,000 Americans Are Dope Fiends

(Continued from page 45)

that a dope user lives from a few to thirty years. His weakened condition makes him an easy prey to disease and infection of all kinds. Dr. Hobart A. Hare, famous drug authority, tells of several cases in which the systems of women addicts were so permeated with the drug that their new-born infants collapsed on the second or third day owing to lack of their customary doses.

Few of those who begin using narcotics are fully aware of the aftermath. All narcotics demand larger and larger doses as time goes on. One eighth of a grain is sufficient at the start. But by the end of six months to a year, to obtain the same reaction, the addict requires from two to three grains. The average dose of the average morphine addict is from ten to thirty grains a day. Some dope fiends use as much as 250 grains a day—nearly four teaspoonfuls—an amount sufficient to kill five hundred normal men!

AND the cost of this habit is enormous. An ounce of morphine or a similar narcotic smuggled into the United States is worth \$150; seven times its weight in gold. At the European sources, the price is about fifty cents. It costs the average addict

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