

UNCLE SAM'S PATENTS REACH THE MILLION MARK

Francis H. Holton of Ohio Granted the Coveted Patent No. 1,000,000 for a Tack-Proof Pneumatic Automobile Tire---The First Patent Issued Was Also for an Improvement to the Wheel of a Moving Vehicle.

A FEW days ago the world paused long enough to note the fact that the United States Patent Office down in Washington has issued to an Ohio inventor the one-millionth patent. It was for a peculiarly up-to-the-minute invention, this millionth tribute to American genius, being indeed for nothing less than a non-puncturable automobile tire, one of the crying necessities of this modern world.

But what of the first patent? How great a span lies between it and Uncle Sam's official red seal on the sheet of paper which will enable Francis H. Holton of Akron to sell his tack-proof pneumatic, if he can induce anybody to buy it? Is the gap as great as that between the wheelbarrow and the aeroplane? Does it typify an era of human progress as impressive as that between the discovery of electricity by Franklin and its application to domestic science by Edison?

Not at all. The millionth patent is for an improvement to the wheel of a motor vehicle, and so was the first one issued to John Ruggles of Thomaston, Me., on July 13, 1836. This is a coincidence as interesting as it is remarkable: interesting because man ever seeks the occult explanation for matter-of-fact occurrences; remarkable because it shows that to-day the talents of our Yankee minds are being directed to the improvement of transportation, just as they were seventy-five years ago.

Between Ruggles and Holton there lie 1,000,000 tributes to American pluck, perseverance, industry, and brains. From the time the Government awarded to the

Akron, bases his claims for a patent comprise about one thousand words descriptive of his invention. The specifications are of the usual technical character, so worded as to give the closest possible description, minutely, of the invention, and designed for its protection when the manufactured article shall be placed upon the market. Briefly, the invention is that of a pneumatic tire having a core of relatively solid material to enhance the ability of the tire to withstand puncture.

The records of the Patent Office show that between patent No. 1 and patent No. 1,000,000 40,737 patents have been issued on inventions connected with railway appliances alone. This does not include patents issued on automobiles. About 4,500 automobile-tire patents alone have been issued. At the present time about 800 patents are being issued a week, so that by the time announcement of the millionth patent was made the energy of the American inventors had already increased the number of patents issued and pending, ready for issue, by several hundreds.

At the present rate of 800 a week it is estimated that the 2,000,000 mark will be reached in 1936, 100 years after the date of issuance of patent No. 1. But this is not allowing for growth in the inventive industry of the country, and experience has shown that this is a factor which must be reckoned with.

The first half-million of patents were issued between 1836 and 1893, or during a period of fifty-seven years. But the country was growing. The population was spreading westward rapidly. New lands were being taken up. And-and-



Francis H. Holton, of Akron, Ohio, Who Was Awarded the One-Millionth Patent.

sources and compelled to create and invent new things to meet the requirements of life. The first decade of the period of fifty-seven years which produce 500,000 inventions was the least productive, the last decade the most productive of this period.

Steadily, increasingly, so far as numbers of product was concerned, the American mind lent itself to the discovery of appliances to enable man to keep abreast, if not a little ahead, of the times. The last half of the million patents issued up to Aug. 8 last, 500,000 of them in round numbers, were issued during the last eighteen years, as against a period of fifty-seven years during which the first half-million were issued.

So, if inventors continue to ply their trade in the future as they have in the past, increasingly so with the growth of population, the two-million mark will

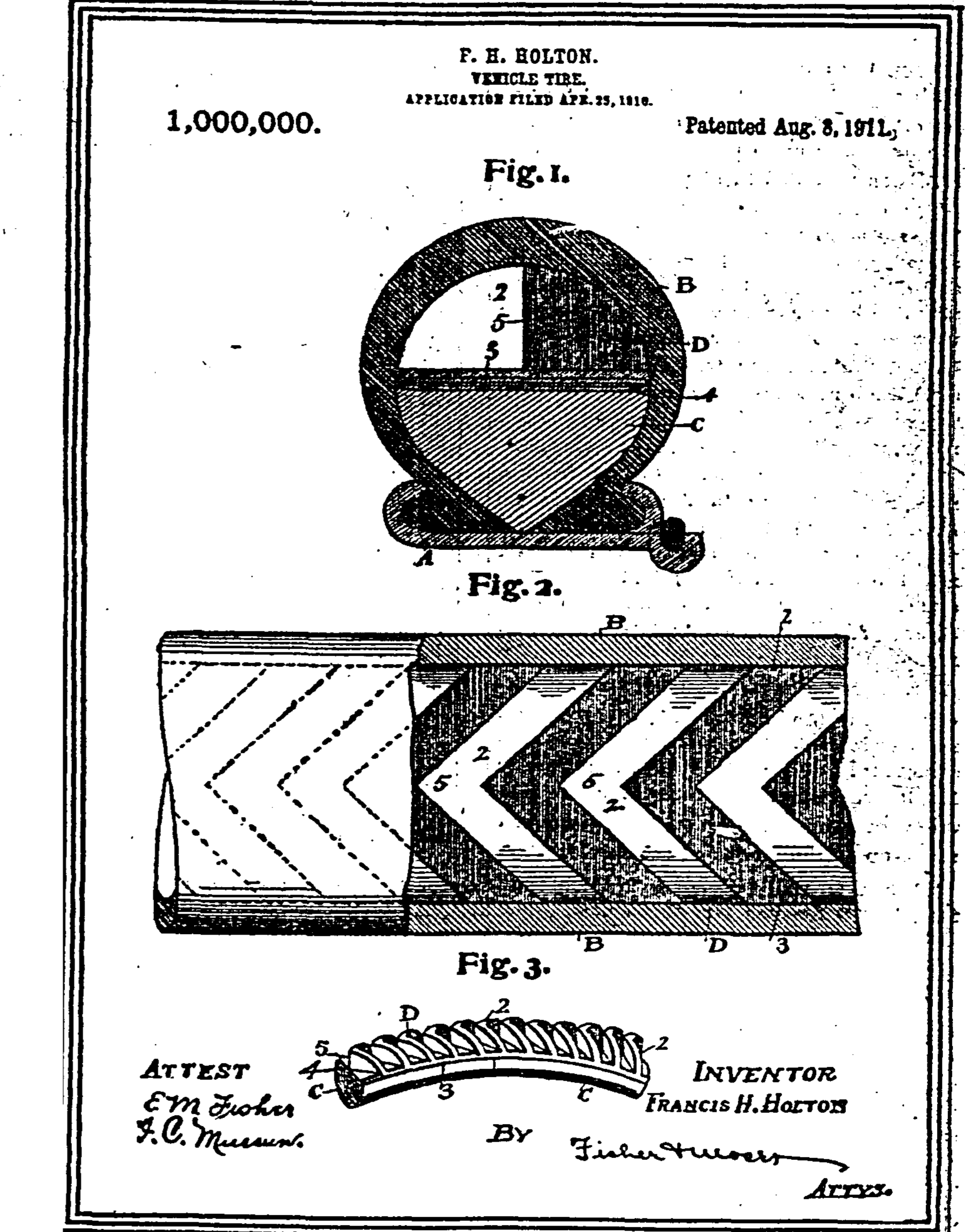
be reached in such short order that those reading of the clamor raised over the issuance of Patent No. 2,000,000 will well remember Mr. Holton, and may even be equipping their portable hangars with his non-puncturable tires!

According to the experts of the Patent Office the men whose duty it is to examine carefully into the merits of every invention presented to them for Uncle Sam's official O. K., the inventive germ infects the greater part of the population of the United States. Against the million patents issued might be set a record of hundreds and thousands "turned down" for one reason or another, infringement of existing rights, futility, impracticability, and what not. Included among these, latter are freak patents for such things as perpetual motion machines and other visionary imaginings of the warped inventive mind. The records of the Pat-

ent Office are voluminous enough as it is without their being burdened with the wild schemes of lunatics.

No one at the Patent Office believes that the end of invention has come yet. Instead the officials and those who pass upon the merits of inventions and upon whose final say-so depends the fate of thousands of struggling men, and women, too—for women are becoming quite ingenious nowadays—declare that there is no reason to believe that all of the good things have been discovered. On the contrary, they expect to see in the next few years a greater development than has been noted in the marvelous age in which we are living, an age which has seen the issuance from the Patent Office of patents for devices for talking across space without the aid of wires and for flying through the air like a bird.

Great development is looked for in the



Copy of Patent No. 1,000,000 Granted to Francis H. Holton for a Tack-Proof Pneumatic Tire.

art of aviation, and this science alone, in the opinion of the Patent Office, will be productive of hundreds of important inventions. In fact, the official view is that the important patents of the future will be largely concerned with the development and improvement of rapid transit, a subject with which both patent No. 1 and patent No. 1,000,000 dealt.

The present decade has witnessed the perfection of the wireless telegraph and to a less complete extent of the wireless telephone. Communication of thought from one part of the world to another is now accomplished in the twinkling of an eye.

But the time must surely come when a letter or package mailed in New York will be delivered in San Francisco not after traveling a week across the continent, but in a day. Though now a dream, there is an invention which has been patented which may be developed to accomplish this remarkable result. This is an electric loom, the magnetized shuttle being thrown backward and forward through a tubular coil by the simple switching on and cutting off of the electric current across a distance of four feet at the rate of 180 times a minute. This shuttle could be made to traverse many times more than 720 straight feet a minute, as there would be no loss then by the alternate switching on and cutting off. And if this distance, why not, with a more powerful current, clear across the continent with the speed of a comet? We are perhaps nearer to this than was Ruggles, in 1836, with his scheme to prevent locomotives from slipping down hill, to Holton, in 1911, with his puncture-proof automobile tire.

John Ruggles is himself not entirely without a claim to fame. His invention, the first of which the Government has record, doubtless was hailed as a great thing in his pioneer day. He strove to make the railroad a success. In those early days, when he received No. 1, the railroad was in its very infancy. The Harrisons and Huntingtons of those times didn't know as much about the elimination of grades as we know nowadays. When in the course of railway con-

struction a steep hill was reached, the cars had to go over the top of it or not go at all, and this had its objections. Half way up the hill, puffing and wheezing, the whole train was likely to change its mind and after frantic but ineffectual appliances of the primitive brakes, slip down again. Ruggles set about, and this as far back as 1836, when the railway was in its colic stage, to discover something which would overcome this retroactive movement.

He thought he had solved the vexing problem when he obtained a patent on what probably was known as "Ruggles's non-slipable locomotive wheel." He conceived the idea of placing along the railroad tracks a notched plate, running parallel to the track. Then he provided the locomotive driving wheel with cogged teeth or pins, which fitted into the notches on the rails. They were so arranged that the engine could proceed forward, but not backward, and thus the aggravating tendency of the 1836 model locomotive to back-track constantly was overcome. Doubtless with this contrivance the Ruggles train, which fitted into the notches at the terrific rate of four miles an hour, the marvel of all who beheld it.

The same idea is used to-day on railways climbing steep mountains, notably the White Mountains, although the cogs are on a third rail and not along the two outer tracks.

From the day of Ruggles to the day of Holton what tremendous progress has been made! The automobile, capable of making fifty, eighty, or a hundred or more miles an hour without the use of tracks, represents the perfection of land conveyance, and is challenged by the entire field of transportation only by the aeroplane, now in its Ruggles stage. In the days when Patent 1 was the very apex of inventive genius in this field ten miles an hour was regarded as a frightful pace.

Scarcely two or three years before this patent was issued a State legislator at Harrisburg, during consideration of a bill to grant a charter to the Pennsylvania Railroad, said he believed the time would come when a man could take his breakfast in Harrisburg and his dinner that night in Philadelphia. He was hooted from the chamber. Now, in effect, a man, if he be a Fletcherite, may take his dinner on a dining car, and, beginning with soup in Harrisburg, be leisurely finishing his after-dinner cigar as he pulls into Philadelphia.

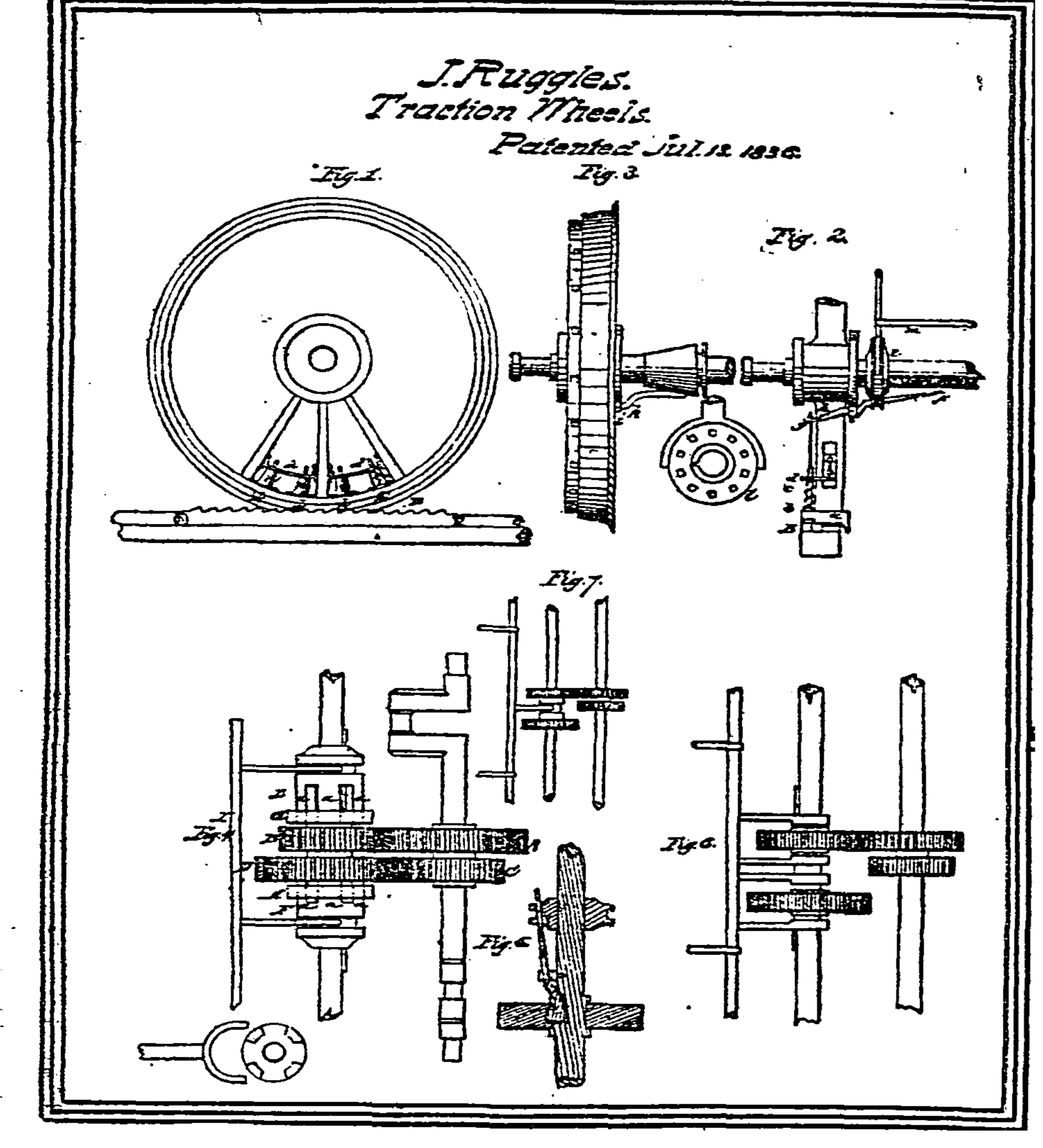
Yet even before Ruggles of Maine with his Patent 1, enterprising Americans were puzzling their brains over short-cuts and time-savers. Perhaps what might with justice be called the first patent—although it is not so termed by the Patent Office—was issued on July 31, 1790, to Samuel Hopkins of Philadelphia. It was for an invention for making "pot and pearl ashes," otherwise potash. He was really the pioneer, the great-great-grandfather of Edison and Bell and the Wright brothers.

Unfortunately everything pertaining to this patent has been destroyed except the mere record of its having been issued. This record is written in one of the time-stained ledgers of the old Patent Office. It shows that the inventor of "pot and pearl ashes" machinery was honored by having his patent issued under the signature of John Jay of New York, Secretary of State, certified by Edmund Randolph of Virginia, Attorney General, and promulgated by George Washington, President of the United States. Such was the impressive formality attaching to the issuance of a patent to a genius in the year 1790. Patents are issued directly by the Commissioner of Patents now.

A fire in December, 1893, destroyed the entire Patent Office and all the records, including that of the original patent to Samuel Hopkins. It also destroyed the records of other historic patents, including that of J. Ruggles, which had been issued a few months prior to the conflagration, but the Ruggles and other records, being recent, were restored by the expedient of writing to the patentees for their copies. The Ruggles patent record is preserved in hand writing in Vol. I of the restored records of the Patent Office. Prior to 1836 the patent laws were exceedingly defective. In fact, certificates rather than patents were issued. Inventors had none of the protection they now enjoy. The burden of proof was placed upon an inventor in the event of his invention proving a "good thing" and being infringed. Under the old system of "registration" 9,937 patents were issued.

In 1836 Congress adopted more modern patent laws, effective to-day in greatly amended form. A system of numbering patents was then adopted for the first time, and to J. Ruggles fell the honor of being No. 1.

And now the million mark has been reached. The country is growing—some-



Copy of the First Patent on Record at Washington, Granted to John Ruggles of Maine, for a Device to Keep Wheels from Slipping.

Maine inventor a patent on his device for preventing the wheels of locomotives from slipping off the tracks of the primitive railways of his day to the time the present Commissioner of Patents awarded an official diploma of originality to the Ohio inventor, the United States has increased from 13,000,000 to 100,000,000 of people. Nearly all of them, in one way or another, have tried their intellects on invention, and the Patent Office groans with the paper burden of their product.

So far as the Ruggles patent and the Holton patent, both for the improvement of the wheels of motor vehicles, being numbered respectively 1 and 1,000,000, it is really a coincidence. The millionth patent was issued in the ordinary course of business on Tuesday, Aug. 8, Tuesday being the day upon which each week the patents for the preceding seven days are announced. It was accident entirely and not design which gave to Mr. Holton the honor of receiving the millionth patent, and the fact that his invention was remarkably similar to that awarded to the first patentee was not discovered until several days later.

When it became known that the mills of the Patent Office in their ceaseless grinding were about to turn out the millionth bit of grist there arose a demand from inventors all over the country for the honor of receiving this numeral placed upon some one of their patents. This demand became insistent. Commissioner Moore was swamped with requests. The American mind, for much the same reason doubtless that induces the saving of cigarette cards, stamps, and campaign buttons, conceived an almost unanimous passion for the possession of that cabalistic insignia. Part of this demand arose, no doubt, from the hope that the award of the millionth patent would attract public notice and advertise the device so honored and set apart from its less fortunate brothers who happened to be 999,999 or 1,000,001.

Unwilling to be placed in the position of attempting to show partiality the Commissioner refused to grant preference to any one. On the day the patents for last week were to be promulgated a great bundle of them were taken into the office of the Chief Clerk in the customary way, placed upon his desk, and a clerk with a stamp began at the top and went through the pile affixing their numbers in regular order.

Finally the millionth patent was reached. It was Holton's, and, in the estimation of his fellow citizens, who dearly love the odd, the unusual, the spectacular, the freakish, he was immediately elevated into a position of honor. He was No. 1,000,000. The chances are he will never outlive this fame, and it will doubtless go thundering down the ages to bring disaffection to his progeny.

The printed specifications upon which Mr. Holton, who is a manufacturer of,