HORSELESS CARRIAGES.

THEIR GROWING POPULARITY AND THEIR FUTURE.

Advantages of Their Use — What Has Been Done to Replace the Horse in England and France—Range of Prices and Styles Abroad.

If one can judge truly of the trend of human preferences by the manner in which France, and particularly Paris, is taking to the automobile or horseless carriage, the world is a step nearer the era when most muscular labor, whether of man or beast, will be superseded by the work of arms of steel, driven by the force of steam, electricity, compressed air, explosive gases, or some of their equivalents.

The invasion of the field of the horse by the automobile carriage began in Paris only about five years ago, and today it is said that there are 2,000 such vehicles in public service, besides many more in private use. Fifteen hundred were said to be in use there previous to July 1, and the last 500 were to be added at that date, or as soon after as they could be made ready. How many there are in all France, it would be difficult to compute from any information which is at hand in this country, but it is known that there are thousands and there is a public service of such carriages in Rouen, in Lyons, and in fact in a great many of the smaller cities. From France the use of these new vehicles has spread into Germany, where it is of considerable consequence, and now England is full of interest for the horseless carriages and New York is learning to use and like them.

The use of these carriages has been almost a counterpart of that of the bicycle, as far as its geographical history is concerned, and there seems to be good reason to believe that

THE NEW CRAZE

will spread just as did that for the wheel, until the horseless carriage will be in common use in every part of the civilized world. As in the case of the wheel, it seems as if the one thing needed to make the new vehicle practicable and convenient for common use is to set ingenuity to work in perfecting it.

If such vehicles are or can be made in such a manner that they will do their work with certainty and economy and can be cared for and handled by an ordinarily intelligent man, there can be little doubt of their extensive adoption for business and pleasure, especially in cities. Their advantages over the horse and wagon are in many respects obvious. They can be stabled in less than half the room needed for horses and in places where horses could not be kept. A doctor might have his brougham always where he could step into it from his office door or a family could keep a carriage under the front stoop.

Tradesmen could keep their delivery wagons on the premises with their business. When the wagons were on the street they would occupy in length only half the space required for a horse and wagon, and traffic would be less congested. The noise of horses' iron-clad hoofs on paved streets would be abolished and the greatest source of fouling the streets would be removed.

The manufacturers of England and the Continent advertise many styles, or self-propelled vehicles, ranging all the way from bicycles and tricycles for one or two riders, to passenger omnibuses and heavy freight vans. These may at once be divided into three general classes according to their sources of power. There are the steam-driven carriages, those driven by naptha, kerosene, or gas, and those which use

ELECTRIC STORAGE BATTERIES.

Half a dozen electric cabs, seating two passengers each, were put into use there in April, and since that time the number has been doubled. The passengers' compartment occupies the front of the cab with its seat over the front wheels, which are the driving wheels. A square, ventilated box, carried mostly by the hind wheels, holds the storage battery cells, and the driver's seat is over this, so that he overlooks the cab top. The passengers are shut in by a double hinged wooden apron, which the driver opens and shuts by means of a lever. The hind wheels do the steering, each being hinged just within the arm of the axle and being turned together by means of a lever which goes to the driver's hand. The tires are of rubber. These carriages are let for 50 cents an hour, or at the regular municipal rates for distance travel, and they have proved popular. Other styles of wagons, to seat three or four persons, are to be added to the outfit soon. They weigh 2,500 pounds and cost $2,500 each.

In Europe less progress has been made in the development of the electric carriage than in either of the others. The favorite carriages in Paris appear to be those driven by naptha or petroleum engines for the lighter traffic and those driven by steam for the heavier work. The most successful of those which use steam appear to be such as are provided with the Serpollet boiler. This is an ingenious arrangement which is really not a boiler at all in the proper sense. It consists of a series of heavy tubes, each of which has been crushed until the opening in it is only about 1-25 of an inch wide. These tubes are heated by a coal fire, and when power is wanted water is infected into the tubes by a pump. The water is turned instantly into steam, and the amount of steam wanted is got by increasing or decreasing the throw of the pump. Street cars, omnibuses, and many other forms of motor carriages are run by this power. The greater number of carriages of all forms are however, made with

NAPTHA OR OIL ENGINES.

These seem to have the same advantage for carriage service, that they have proved to have in this country for small pleasure craft. In one of these the engine is started when the carriage is wanted for use, and it is ready in a few minutes to develop its full power, and the engine is not stopped or interfered, with until the carriage is put away again, unless some long stop be made. The engine runs on, whether the carriage is standing still or going and the driver has means at hand through a lever or two of stopping the carriage or fixing its speed at any one of three or four rates. All of the engines may be run at high speed and the connections are made between them by belts, cog-wheels, or chains, and sprockets.

Among the smaller of the carriages suitable for the road about which the advertisements give any information is the Arnold "sociable." This seats two persons, one of whom drives it. It might be called a motor buggy. It is 7 1-2 feet long, 4 feet wide, and 4 feet high, and weighs about 600 pounds. Its price in London is about $650. Carriages which are built to take the places of those now in regular service drawn by horses are, however, much larger, heavier, and costlier than this. The lightest of these meant to carry two is at Carpentres and the fourth forms passengers and the driver, may weigh perhaps 1,200 to 1,400 pounds and cost about $1,100 each. Such wagons are provided with engines of three horse power. In heavier carriages carrying three or four passengers the engines are of four horse power and the weights vary from 2,500 to 3,000 pounds, according to the style of top and finish. Such wagons cost from $1,500 to $3,000 each.

Perhaps as fair a range of prices as any can be got from the catalogue of the English Daimler Company. This begins by showing a four-horse motor complete with wheels and all other working parts but with no body. The price of this is £294. Upon this frame can be built any style of body and top from a two-seated cab or dog cart to a parcels delivery wagon. The prices quoted for such carriages complete are: Dog carts, £316 and £319; phaetons, £331 and £335; wagonettes £335; victorias, £330, and parcels vans £325.

A PRODIGY ON A WHEEL.

Makes a Bicycle Do Any Trick He Feels Like Accomplishing.

The cleverest boy bicycle rider is Willis Trent, ten years old, of Trenton, N. J. His genius with the bicycle is undisputed, for he not only performs all the tricks of the adult riders, but constantly originates new ones of his own.

It really seems as if there were nothing the lad cannot do. The machine seems to be endowed with life and the power of obedience to human will when he is manoeuvring with it. He can make the machine stand alone, and then, placing his right foot on the top of the frame, he will assume an upright position and maintain his equilibrium. He says there is no difficulty whatever in balancing himself, and that it tires him no more to do this sort of thing than it does to ride the wheel in ordinary fashion.

Most riders find the handle bars an absolute necessity in the matter of guiding the machine. Not so with Willis Trent. He frequently removes them entirely, and rides the "bike," steering altogether with his feet. He prefers to steer with his feet, anyway, and declares with emphasis that to a good rider the handle bars should never be a necessity. He says also that it is nonsense for persons to say that they can ride faster by bending forward on the wheel, and that that idea, so prevalent, is all imagination.

This boy will ride the wheel either backward or forward with equal facility. The more odd the fashion in which he can ride his wheel the better pleased is Willis Trent. Occasionally he will take a trip sitting on

THE SPROCKET WHEEL

and make the pedals go round at a very rapid rate. When in this location he maintains himself in an upright posture by clinging to the handle bars and resting his head against the frame of the wheel. He can make better time in this position than most riders can when seated on their wheels in the usual fashion. Lameness never results with him, and he says there is a sort of exhilaration in riding the wheel in this manner which one never gains otherwise.

Sometimes he will place his feet on the pedals and, putting both hands behind him, seize the front of the handle bars. He then permits his body to drop forward until the front wheel is between his knees and the upper portion of his body almost touches the front wheel tire. He will ride very rapidly in this posture also, and has never yet met with an accident while doing it.

His favorite amusement is riding the bicycle with his legs clasping the forward part of the frame while he clings tightly to the handle bars. He pedals lying in the other direction, for he is constantly moving backward, and thus the difficulties and dangers of riding are in this way double. He rides like this on the boulevards of Trenton and never collides with anything nor gets a fall.

The speed he can make is astonishing. In fact, so rarely is Willis seen riding his wheel in ordinary fashion that Trenton people are as much astonished to catch a view of him mounted on his wheel as most people ride as they would be to see most persons trying to perform tricks.

Experts who have watched his performances say that in the days to come Willis will perform such wonders on the bicycle as no one ever believed possible. If experience and money will help him he certainly will be able to do do.

REGARDED THE WISH.

First Actor—Many a time my poor old father implored me not to become an actor.

Second Actor—Don't worry, old man—you didn't.

MANY RELICS OF CHRIST.

WHERE THEY ARE ENSHRINED AT THE PRESENT TIME.

Objects Touched by Our Saviour Treasured by Churches — Mementos of Calvary — Where and What They Are.

The forthcoming exhibition of Christ's sandals has renewed interest in the various holy relics connected with the name of Christ, and has given rise to a number of enquiries as to the nature and number of these relics now in existence. To these enquiries M. de Mely furnishes a satisfactory answer in a report which he made the other day to the Academy of Inscriptions and Belles-Lettres in Paris. The most famous relics he shows us are those which were discovered about the year 330 by the Empress Helena. It was the custom of the Hebrews to bury all the implements of torture with the bodies of those condemned to death, and in this way Saint Helena found not only the cross on which Christ was crucified, but also the crown of thorns, the nails, the sponge, the spear, which pierced his side, etc. She found two other crosses at the same time, and, wishing to ascertain which was Christ's cross, she caused a corpse to be brought and touched it successively with each of the three crosses. Nothing happened when the first two crosses were touched, but when it came in contact with the third the corpse suddenly became alive!

THE FOUR NAILS.

Saint Helena took the four nails of the Passion to Constantinople. Constantine thereupon placed one on his helmet as an ornament, and made horses bits out of two others, and Saint Helena, the story goes, threw the fourth into the Adriatic Sea in order to prevent storms. That this story is legendary seems to be generally admitted. The other great relics remained in Jerusalem until 614, in which year the city was taken by Sharbaraz. Hoping to save the relics the high priest placed them in a golden box, which he hid in a field of vegetables. A traitor, however, unearthed the box and took it to Sharbaraz, who forthwith sent it to his master, Chosroes.

First, however, he opened it, and, taking the point of the spear, he made it a present to Nicedas, who sent it with the sponge to Constantinople. The golden box was subsequently given to Herodinus by Siroe, Chosroes' successor. So, gradually, all the relics found their way to Constantinople, and there they remained until the tenth century, when many of them were brought to the west after the fourth crusade.

TWO KINDS OF RELICS.

The relics are divided into two classes, one comprising parts of Christ's body and the other comprising objects which belonged to him, or which had touched his person. Of Christ's body all that remains are the hair and the blood. The former is preserved at Corbie, Namur and Saint Denis, and the latter at Alberstadt, Lienies, Paris, Rheims, London, Saint Quentin and Bruges. Saint Athanasius tells us how this blood was obtained. According to him, certain Hebrews were crucifying an image of Christ, and, when one of them pierced the side of the Crucified One with a spear, blood began to flow, whereupon all the Hebrews gathered around the cross became Christians. Every drop of blood was piously collected, and in time the vessels containing it were spread throughout Christendom.

The other relics comprise, first, the clothes worn by Christ, the sandals, the tunics, the swaddling clothes, the manger, etc; second, the relics of the Lord's Supper, such as the bread, the communion cup, the cloth, the dish, the table, the basin for washing the feet, and the linteum; and, third, the relics of the passion, which include the stone on which Christ slept in the Garden of Olives. Herod's staircase, the pillar, at which the scourging took place, the whip, the rope, the sceptre, the crown of thorns, the purple vestment, the cross, the inscription, the spear, the sponge, the pincers and the nails.

RELICS IN MANY PLACES.

The sandals are at Corbie, Treves and Alberstadt; the swaddling clothes are at the Sainte Chapelle, in Paris, Clermont, Courtrai, Namer, Toledo and Vizille; the tunics are at Argenteuil, Treves and Aix-la-Chapelle, and there are also fragments of them at Corbie and Toledo, and a portion of the manger is at Saint Denis. The relics of the Lord's Supper are more widely scattered. The cup is in Genoa.

Though popularly supposed to be of emerald, it is said to be simply fashioned of superb green coloured glass. The table is at Prague, and the basin and dish which were preserved at Troyes, have disappeared since the time of the revolution. The bread crumbled away at Constantinople and has also disappeared. Of the linteum there are fragments at Soissons, Clermont, Namur and Vizille.

A small portion of Herod's staircase is at the Escurial, and the remainder is at Rome. The column at which the scourging took place is also at Rome, in the Church of Saint Praxede, which the exception of some fragments which are at Venice. The present whereabouts of the rope, whips and sceptre is not quite clear. All we learn is that the rope was at Carlstein in 1515, that the whip was treasured at Constance, and that Soissons, Courtrai and the Sainte Chapelle of Paris held the sceptre for a long time. The crown of thorns, which was given to Saint Louis by the Emperor of Constantinople, is now in Notre Dame at Paris. Thorns have been taken from it and are objects of veneration in many places. Of the purple vestments, some are in the Church of Bucoleon at Constantinople, and others are at the Sainte Chapelle in Paris.

THE CROSS AT ROME.

The largest portion of the true cross is at Rome. Very many small pieces have been taken from it, and are distributed throughout the world. The inscription on the cross has disappeared. The spear is at the Church of Saint Maurice, in Vienna, and there, too, is one of the four nails. The sponge which was discovered in the year 330, disappeared from Constantinople in 614.

The pincers were still at Jerusalem in 1190, and finally of the four nails one, as has been mentioned, is at Vienna, another is at Milan, a third port of an iron crown at Monza.

M. de Mely has been studying this subject for many years, and consequently his paper on the holy relics, from which these facts are taken, has aroused widespread interest.

REWARD OF 10,000 MARKS.

GERMAN GOVERNMENT WOULD LIKE TO MAKE RAIN.

European Scientists at Work Trying to Solve the Problem—Some of the Methods Now Employed.

The scientists of Europe have taken up the problem of rainmaking. The German government has already offered a reward of 10,000 marks to any one who shall successfully demonstrate that a downpour of rain can be caused at a fairly moderate expense, and the chances are that before many months the world will see a practical test of what may come nearer success in the way of rainmaking than anything ever before accomplished.

There is also another feature of the problem which the European scientists are discussing that has not previously been brought up to any great extent, and that is a plan for countries where rain falls incessanttly to stop such a fall. It is much like considering the two points of the compass, and yet savans declare that as much benefit will result to the world by the discovery of how to stop rain from falling as by the discovery of how to make it fall.

Of the two, it is easier to deal with the attempts made to stop rain, because less has been done in this direction. There is indeed a patent the object of which is to deal with tornadoes, and to rob them of their evil effects by means of an explosion in the midst of the tornado itself. But it would be unfair to science not to admit that if it has done nothing to prevent continual rain, it has done much to mitigate the evil effects that floods bring in their train.

TO MAKE RAIN FALL.

The number of attempts that have been made to induce rain to fall is legion. Money has been spent lavishly with this end in view, and a good investment it would be if the success were commensurate with the expenditure. Scientific men have given their evidence for and against the success of the experiments that have been tried and yet the question remains unsettled. There is always the doubt of simple coincidence of events to disturb the judgment on the point of strict cause and effect. The area, too, over which the experiment is to be tried cannot always be satisfactorily defined, either with reference to the results obtained or the benefits conferred.

The wind bloweth where it listeth, and it may be that the rainmaking materials, supposing them to be effective, are wafted to a considerable distance before they become operative, or before they meet with the necessary conditions that insure precipitation.

METHODS OF RAIN COAXING.

Those efforts to produce rainfall which approach to scientific method may be grouped under the following heads:—First, noise. It has been contended that the firing of cannon and the din of battle have generally been followed by rain. But when statistics are carefully sifted there does not seem to be much ground for the belief, and no one would probably care to risk his peace and comfort in the very uncertain hope that a great uproar would bring down the needed rain.

Second, the explosion of balloons filled with dynamite or other explosive, some distance above the ground, has been advocated and repeatedly tried, with what measure of success it is difficult to say. Nearly allied to the concussion method is the attempt to chill the atmosphere by the rapid evaporation of some highly compressed gas.

Then again, it is asserted that the establishment of an electrical connection between a cloud and the earth by means of a kite will induce rain to fall. Such a means evidently supposes the existence of a cloud; but inasmuch as periods of drought are liable to be accompanied with a long continuance of blue sky, the method, even if successful, cannot always be applied, and in point of general application falls below the level of the other suggestions.

Condensation is the result of chilling the air. The ascent of the lower strata of the atmosphere into the higher regions and the consequent expansion and loss of heat is the most probable cause of rain, and it is not impossible that the air near the ground, being made to rise by being artificially heated, might tend to produce the desired downpour.

NO DANGER OF A REBELLION.

British East Indians Say that There will be no Revolution in India.

A London cable says: There has been something like a scare about India, but without apparent reason. Journalists have been writing as though another mutiny was imminent because two British officers were murdered in Poonah and the police were compelled to fire upon the rioters in a suburb of Calcutta. No Sepoys have been concerned in these affairs, and there is no ground for apprehending an outbreak of a military nature.

Since 1857 India has been a military monarchy too strong to be overthrown. It is evident that the people of India are discouraged rather than irritable or resentful. The native races are temporarily disheartened by plague and famine, but their unrest is not considered dangerous by British veterans in London, who have spent their lives in India.

WHAT UNCLE SAM IS AT.

ITEMS OF INTEREST ABOUT THE BUSY YANKEE.

Neighborly Interest in His Doings—Matters of Moment and Mirth Gathered from His Daily Record.

Buffalo has twenty-six railroads.

Vanderbilt boasts a $75,000 fireplace.

Grand Rapids factories expect to turn out 30,000 bicycles the coming season.

A company of Spokane, Wash., citizens is organizing to emigrate to Siberia.

Of the six voters of Marion, Ky., three are Democrats and three Republicans.

Mrs. M. Young, of Woodburn, Oregon, has completed a bed quilt of 4,376 pieces.

William Stoiber, the newest Colorado millionaire had his wife for a business partner.

Municipal ownership of the electric light plant in West Springfield is being considered.

There are two families on one street in Bangor in which four generations are represented.

The State taxes for the coming year will reach the highest aggregate ever known in Vermont's history.

It has been estimated that 1,250,000 pounds of wool was clipped from the 250,000 sheep in Alabama last year.

The faculty at Yale proposes to adopt severe measures with the students who carouse around the streets at night.

Wheat is so scarce in the Springfield Mo., market that the local mills have been compelled to shut down temporarily.

A Boston barber advertises "a separate room upstairs for dying," ignorantly omitting the letter "e" from the last word.

While chopping wood a farmer living near Stangfield, Ontario, was struck in one eye by a chip and made wholly blind in both eyes.

Miss Jessie Ackermann, now in Baltimore, will soon enter upon her duties as assistant pastor of the Fourth Baptist church of Chicago.

ern States have expended $80,000,000 for In the last twenty years the South-negro schools. Nearly every dollar of this vast sum was furnished by the white people.

A Chicago burglar, recently arrested, boasts that with the aid of electricity he can cut into any safe in the city, and without making enough noise to waken a cat.

David O'Donnell, who was ordained to the Roman Catholic priesthood in Boston, is the first graduate of the academic department of Yale University to enter the Roman Catholic priesthood.

Professor Charles Lane Poor, of Johns Hopkins University has just finished a construction of an equatorial telescope, which he will take with him to the north next summer in order to photograph the stars.

Mrs. Phoebe J. Clymer, of San Francisco, who had been totally blind for thirty-six years, last week recovered her sight. Her family believes that this was a divine dispensation granted to them in response to constant prayers.

Two hundred and fifty-eight stone and iron monuments now mark the boundary line between the United States and Mexico from the Rio Grande to the Pacific, 700 miles. Most of the monuments are of cast-iron, but the principal ones are of stone.

Madstones which are said to have come from the maw of a Rocky Mountain goat more than fifty years ago and to have been applied to 1,000 mad-dog bites, successfully in every instance except one, are still in service in the counties of Casey and Lincoln, Ky.

Stealing a calfskin from one store at Augusta, Me., a 13-year-old boy took it to another hide dealer and sold it to him, and managed at the same time to steal from the purchaser a sheepskin, which he boldly carried back to the first store and sold to his first victim.

Mrs. N. Lehman and daughter of Jacksonville, Fla., driving in a buggy with a single horse, started to cross the F. C. and P. railroad tracks, when an engine under high speed tore the horse from the waggon and killed it, leaving the women seated in the buggy uninjured.

There is an old gentleman in Harrison County, Ga., who is 80 years of age and has never ridden on a railroad train or taken a meal at any kind of public house. His son died in an adjoining town last week and he refused to attend his funeral because he would have had to ride on the cars.

John Lawder, nicknamed the "Water Crab," a hermit 65 years old, who for forty-five years has lived alone, dealt in old books and picked rags and bones at Baltimore, died there last month. All the year round he would rise at 2.30 o'clock in the morning and forage before dawn. He was the son of a lawyer.

The appropriation for the New York Police Department for the year 1897, as authorized by the Board of Estimate and Apportionment in the provisional allowance is $6,981,589, as against $5,925,410 for this year, an increase of more than $1,000,000. The sum asked for by the department was $150,000 more than this allowance.

There is a cat that goes hunting at Hoisington, Kan. It makes its home in a roundhouse where a railroad man placed it to get warm one day when he found it half frozen in the street. The men made a practice of shooting birds for it, and now the cat will follow for a mile or more any man who carries a gun, and at sound of shot will run for the bird.