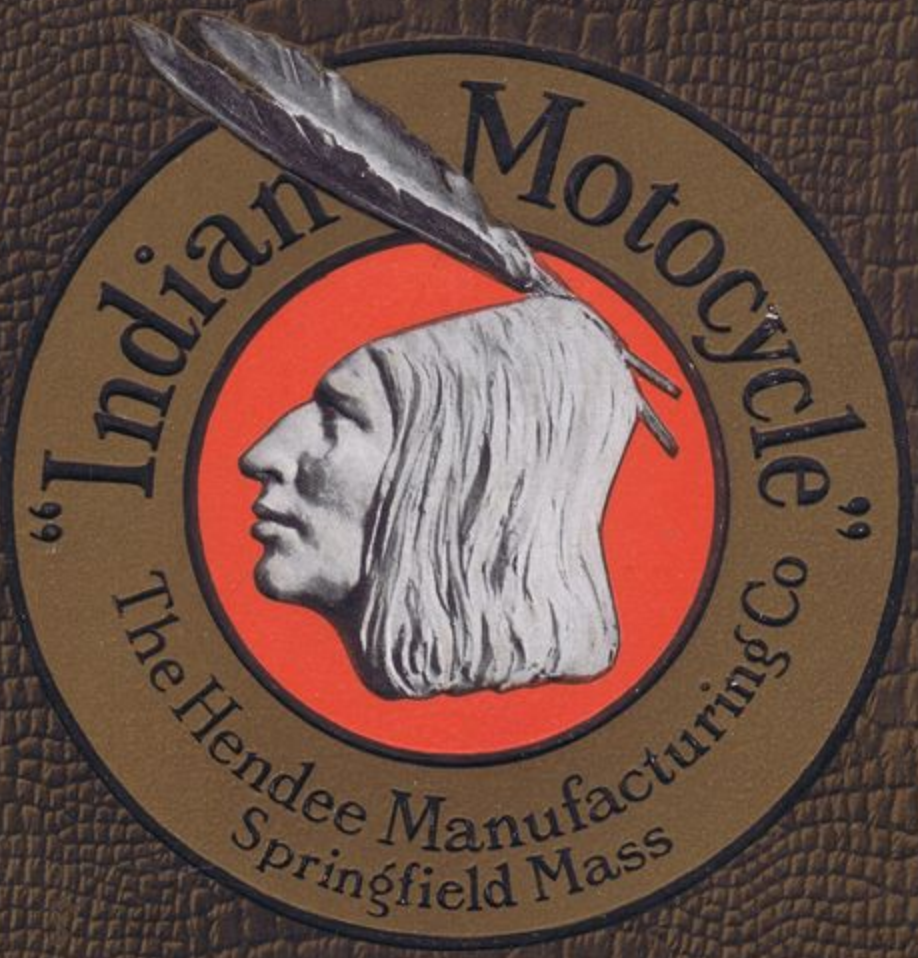


THE SILENT INDIAN

INDIAN

MOTOCYCLES

1912

The Hendee Manufacturing Co.

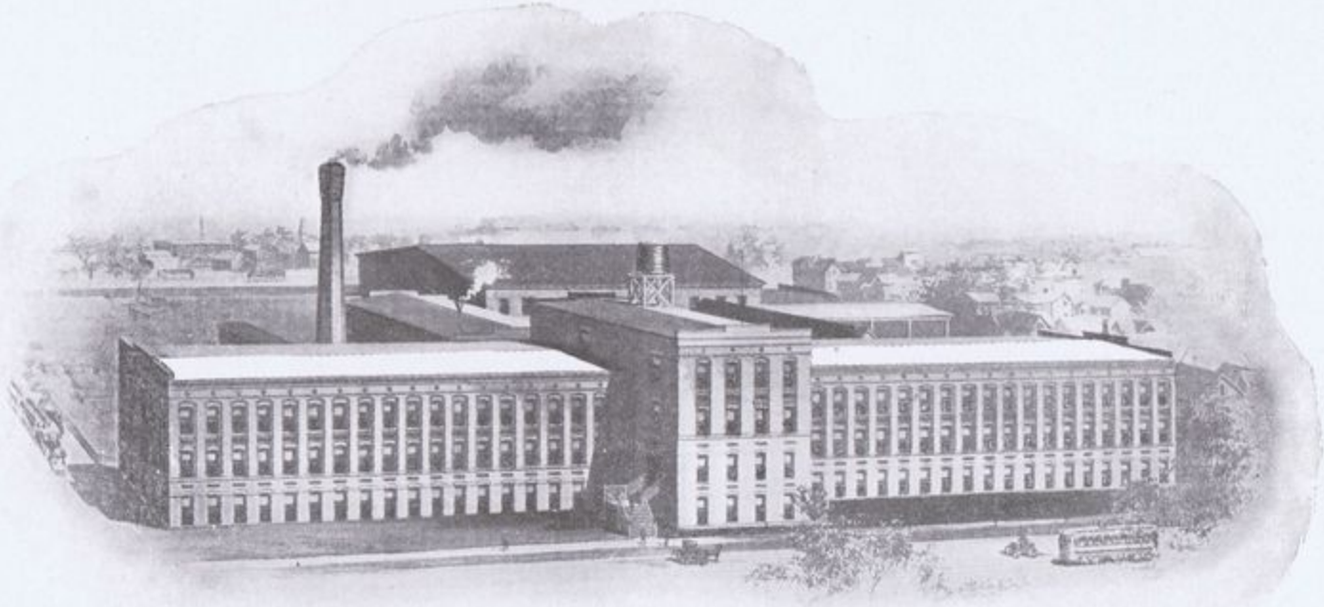
SPRINGFIELD : MASSACHUSETTS

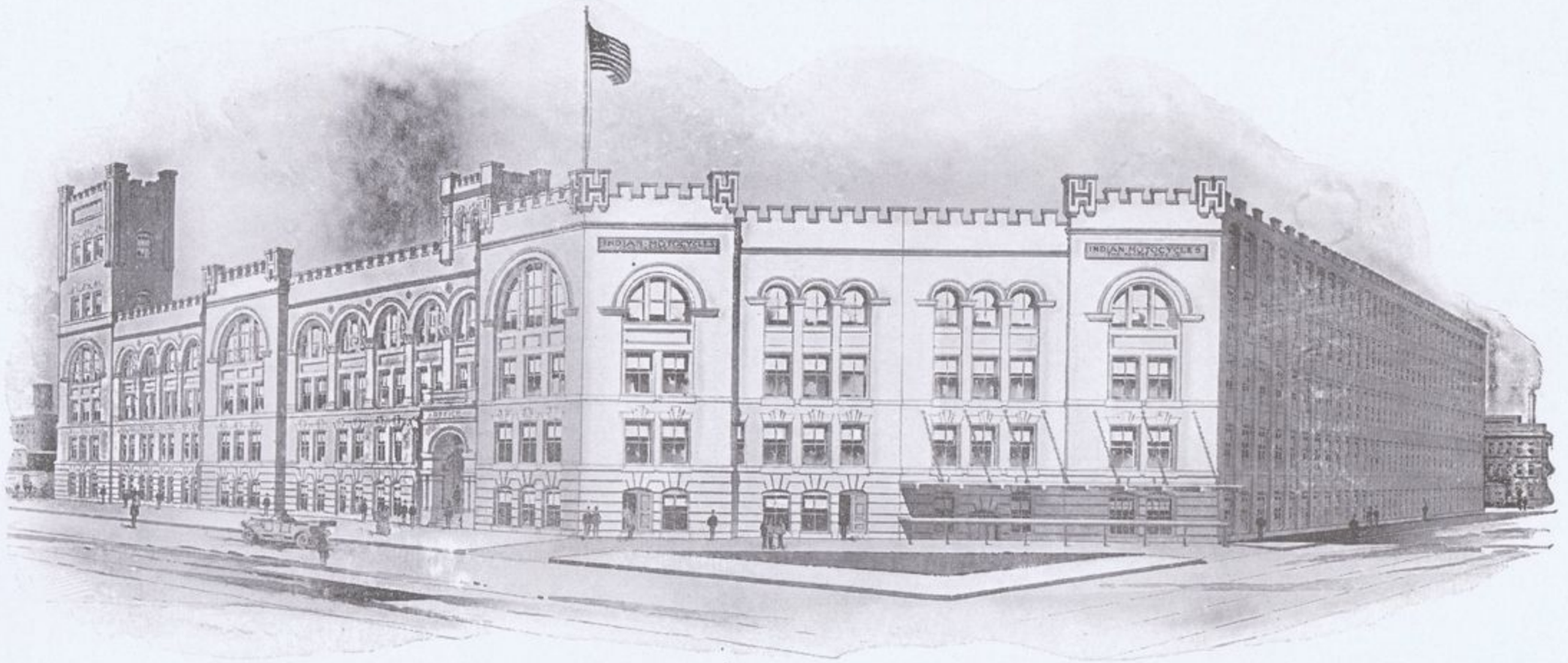
CHICAGO BRANCH
1251 Michigan Avenue

PACIFIC COAST BRANCH
234 Van Ness Avenue
San Francisco

DENVER BRANCH
138 16th Street

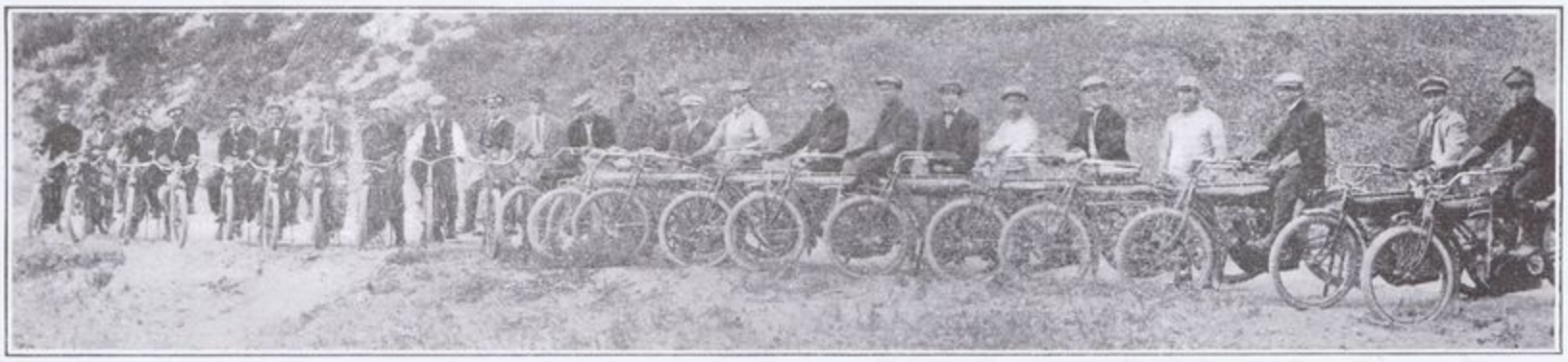
LONDON DEPOT: 178 Great Portland Street, W.





FACTORIES OF THE HENDEE MANUFACTURING COMPANY

Largest Producers of Motorcycles in the World



INDIAN MOTOCYCLES. 1912

THE HISTORY of the Indian is alone sufficient to establish its superior quality and position as the leading motocycle, not only of America, but of the world. No other establishment in this country has been so successfully engaged in building motocycles, nor occupied such a commanding position for so many years.

The manufacture of the Indian was begun in 1902, and it at once proved itself to be superior to anything known at that time. It has maintained this enviable position ever since because it has always been the best. No effort nor expense has been spared to improve the Indian and keep it far in advance of all others as the science of building motocycles has developed. The Hendee Manufacturing Company has never been satisfied to build something "just as good," but always has insisted on something better than anyone else has produced.

Ten years is a long time to maintain such high standards as have been established by the Indian, but with the facilities for manufacturing, and the business methods adopted by The Hendee Manufacturing Company, such results are but natural, and the standard set by the Indian has done much to compel improved methods of motocycle construction, both in this country and abroad.

The wide, practical experience and knowledge of its builders has given the Indian a great advantage over all competitors. The President of The Hendee Manufacturing Company, Mr. George M. Hendee, has been connected with the interests of two-wheeled vehicles ever since the day of the old high wheel bicycle, both as a practical rider and a manufacturer. Mr. Oscar Hedstrom, Vice President and Mechanical Engineer of the Company, has also devoted his life to the same lines; and the knowledge and experience collected by these men, not only in America, but by extensive study of foreign methods, has been of a character possessed by no other manufacturers, and has placed them in a position to foresee possible improvements, and enable them to devise and successfully incorporate everything that was best in the Indian Motocycle far in advance of all competitors. That such a combination of abilities should be not only invaluable, but essential to the production of a really high grade motocycle is very evident, for innumerable practical problems constantly arise that are never dreamed of in the drafting room, and a motocycle that is built on paper can never be satisfactory, as has been demonstrated many times.

Features of Design

In designing the Indian, it was recognized that a motocycle must possess certain essential features, and that the machine that combined these features in the greatest degree of perfection would be the most successful and satisfactory for the pleasure rider, but would prove itself superior for every use to which it could be put.

The Tourist Trophy Race.
Up Snaefell Mountain

The motor should deliver the greatest power that can be obtained from the size of cylinder used. If it fails in this, it lacks efficiency. The Indian motor delivers more power than any of its size and class in the world. Next, the entire machine must be extremely simple, not only for the convenience of the user, but because a simple machine will run better, last longer and work with much greater certainty than one which is complicated or carelessly designed. Experience and comparison has shown the Indian to be unequalled in this respect. And again, strength and rigidity, without undue weight, must exist in every part; for not only does the safety of the rider depend on this, but the endurance and life of the entire machine.

Quality, Material and Workmanship

Intimately connected with each of the above features is the question of the kind and quality of the materials used in construction, and the character of the workmanship. A material may be good, but not suitable. Thus, there are many different kinds of steel, all valuable for special purposes; but many of them are not suitable for any part of a motocycle, while others may be excellent for one part, but entirely unsuited for the work required of another part. Even the most scientific designer cannot say from general knowledge what material will be the best for a particular part of a motocycle. He must learn from many experiments and long experience. This is a most important point in the manufacture of motocycles in which the designer of the Indian has the advantage of ten years of experience and opportunities of studying thousands of machines.

The workmanship that is put into a motocycle combines all of the other essential elements and, if of a sufficiently high character, makes these elements efficient. Without good workmanship the best designed motor cannot develop its full power; neither will there be real simplicity nor actual strength. It is in this quality particularly that the Indian has excelled all competitors; for, although many attempts have been made to imitate the Indian, no one has ever succeeded in putting in the material and workmanship that was necessary to equal the Indian.

Superior Quality Demonstrated

The magnificent workmanship of the Indian has aroused the admiration of experts in both America and Europe, and it has reached a degree of refinement that only an accomplished mechanic can properly judge and appreciate. But there are standards by which the general public can easily recognize and understand the superior quality of this world famous motocycle, and these are the innumerable and exceptional performances of the Indian in the hands of actual riders under most varying conditions. Everybody can understand such demonstrations, a single one of which means more than all imaginative statements or extravagant claims that are so easily built up on paper.

A complete history of the remarkable performances of the Indian, extending as they do over so many years, cannot be included in this catalogue; but a limited number of tests, such as no other machine has ever undergone, prove the assertion that the Indian is by far the greatest and best motocycle the world has ever seen.

A Few Things the Indian Has Done

The Tourist Trophy

THE TOURIST TROPHY

Undoubtedly the greatest test any motocycle has ever undergone, and one that included the most varied conditions, was the Tourist Trophy contest, held on the Isle of Man, England, in July 1911. The course was a circuit of 37½ miles, covered five times, a total of over 187 miles. It was over the ordinary roads of the island, full of turns and kinks, with a surface much below the usual English standard. Besides numerous ordinary grades, Snaefell Mountain, a climb of four miles, with a corresponding descent, was surmounted on each circuit. For this great contest fifty-nine machines entered, the best that Europe could produce, and in whose construction many months were consumed; and of these only twenty-eight survived, eloquent evidence of the immense severity of the task. Among the starters were five Indians, and not only did every one of the five finish, but THE INDIAN CAPTURED THE FIRST THREE PLACES. Such a performance is unprecedented, and the most wonderful showing ever made by any motocycle. To cover this long course without a falter, at the tremendous speed necessary for success; to survive the continuous strain of rough roads and hard driving without a single mechanical failure; to climb the miles of steep mountain roads without a sign of burning out are demonstrations of efficiency, endurance and mechanical perfection that have never been equalled, and will never be surpassed.

ACROSS THE CONTINENT

In 1906, L. J. Mueller rode a single cylinder Indian of 2¼ h.p. from San Francisco to New York in 31 days, 12 hours, and 15 minutes, a record for the distance that bettered the one man automobile record by 35 hours. This performance has never been equalled by a machine of its size, and splendidly demonstrates the excellence the Indian had arrived at over five years ago.

In 1911, Volney Davis, mounted on a 7 h.p. twin cylinder Indian, established a new record, covering the same country from ocean to ocean, a distance of 3,746 miles, in 20 days, 9 hours, 1 minute. What this means can but faintly be appreciated even by reading the story of this journey, which was published last summer.

It may be noted also that this same rider has, besides his record trip, made three other journeys across the continent on Indian motocycles for pleasure.

OTHER AMERICAN ENDURANCE CONTESTS

In 1902, three Indians entered the first great American endurance run, from Boston to New York, and all three won gold medals for perfect scores.

In 1903, the Indian entered the second great run, from New York to Worcester and return, and captured the only gold medal offered.

In 1904, the F. A. M., which had then been organized, took charge of these annual contests, and again the Indian captured all of the principal medals.

Since that time the Indian has taken part in all of the F. A. M. competitions, and in every year it has taken a prominent place, in every instance capturing medals.

In 1908, the Indian team won the great Touring Competition from New York to Chicago, being the only team, out of six entered, to make a perfect score.

The New York-Chicago time record of 3 days, 9 hours, 40 minutes was established on a 3½ h.p. Indian in 1908, which record still stands.

In 1909, an Indian established the record from New York to Cleveland, of 24½ hours, and this record, also, is the only authentic one.

CONTESTS IN ENGLAND

In 1907, an Indian entered the great Six Days' Reliability Trials of the Auto Cycle Union, in England, and made a perfect score.

These great annual English trials cover courses of not less than 1,000 miles, and are conducted with great strictness. Each year since 1907 the Indian has been represented in these trials, and has always won its certificate for a perfect score, in competition with the best British machines. No other American motocycles have ever attempted to enter these long and thorough competitions.

For three years the Indian has entered the historical reliability runs from London to Edinburgh, a distance of 400 miles, which must be covered within 23 hours; and each year it has gone through on time.

Besides these contests, the Indian has taken part in many other events of a trying nature in England, always with signal success.

HILL CLIMBING

The supremacy of the Indian on hills has been so thoroughly established that this form of competition has been practically abandoned. This is not surprising, for in no way is the efficiency of a motor so thoroughly demonstrated as in its ability to maintain its power and speed on steep grades. On all of the great test hills in America the Indian has established records which no one has even attempted to lower.

Mt. Washington. In 1905, a twin cylinder Indian made the 8-mile ascent, under adverse conditions, in 20.59⅕, only ⅘ of a second slower than the largest automobile. And a single cylinder Indian established the record of 26.24.

Lookout Mountain. This climb is 4.9 miles long, with sixty-eight turns and an elevation of 2,400 feet. The twin Indian did it in 6.50⅖; and the time by a single cylinder Indian is 6.54⅕. These are wonderful examples of the sustained power of the Indian.

Giants Despair. For this famous automobile test hill the twin Indian holds the record of 1.41⅗; while the single cylinder Indian did it in 1.55.

Winners of the 1835 Mile Elimination Run of the Cleveland M. C. C.

PIKE'S PEAK. This tremendous mountain is not only a supreme test of power, but of the strength and durability of the machine; for it is 14,147 feet high, and a distance of 29 miles over the steepest, roughest and most dangerous roads in the world. In 1910, three Indians, one of 7 h.p. and two of 5 h.p., made the ascent in 6 hours, 30 minutes, without a mishap, and with absolutely no mechanical troubles.

SPEED RECORDS

Speed records have been left to the last for the reason that the number of riders who desire a purely speed machine is small compared with those who want the best all around motocycle. Nevertheless, speed records, as established by the Indian, are most valuable evidences of the efficiency of Indian motors; and as in the case of the Indian speed is largely a matter of the gear used, a rider who owns an Indian knows that the qualities that give it its remarkable speed are, when utilized by means of a low gear, of particular value to him in surmounting hills and pulling through a heavy road.

The Indian has established and holds more records for speed than any other motocycle ever produced. And these records are not merely confined to short sprints, but cover all distances up to twenty-four hours. Indeed, at anything like record speeds no other machine has ever survived the hour; while the Indian, a 5 h.p. machine, has covered the remarkable distance of over 1,093 miles in 24 hours, and in the last hour of this test the machine covered over 58 miles. This is an unprecedented demonstration of endurance and efficiency, and no other motocycle has ever survived the long continued heating that the Indian stood with safety and ease. This absence of over-heating is a characteristic and most valuable feature of all Indian motors, and is one of the reasons why they maintain their power so splendidly on long, hard runs.

The Indian for Business

One of the strongest evidences of the universal excellence and adaptability of the Indian Motocycle is its wide adoption for practical business purposes. To be successful in such uses a motocycle must possess a very wide range of qualities in a high degree of excellence; for every possible variety of service is demanded, and under every possible condition.

That the Indian is the best motocycle for business purposes that has ever been produced is easily demonstrated by the number of machines that are in everyday practical service. Over one hundred Police Departments are using Indian machines, many of them having used them for over five years, and are constantly adding new machines to their equipment.

One of the most remarkable evidences of the universal adaptability of the Indian is the fact that one telephone company alone uses one hundred and fifty Indian Motocycles for linemen, inspectors and other outdoor employees. The Indian was selected and adopted after a most exhaustive and careful investigation, covering every feature of service and maintenance. The Indian service was adopted several years ago, and the outfit has been steadily increased as the result of satisfactory service.

In the rural free delivery field the Indian has been equally successful, and is fast displacing other machines of inferior quality and efficiency.

Municipal departments are learning the value of the Indian Motocycle for inspectors, foremen and other employees; while many traveling salesmen, doctors and ministers have found that the Indian enables them to perform their work in a way that could not be done by either horse or automobile.

Advantage of Riding an Indian

One tremendous advantage that riders of Indian machines have over all others is the service they get from the business organization of The Hendee Manufacturing Company. There are 1,200 loyal Indian Agents scattered throughout the length and

Indian Motocycle Squad of the Winnipeg Police

breadth of the United States, from the Atlantic to the Pacific, and from Canada to the Gulf. These agents are all working zealously in the interests of the Indian, and can always be relied upon to lend a helping hand. And moreover there are Indian Service Depots in Chicago, Denver, San Francisco and London where the interests of both agents and riders are cared for. The majority of these agents carry a supply of parts, and as a result, riders of Indian machines are always sure of assistance wherever they may find themselves.

Popular Prices

Heretofore a large portion of the profits from the sale of the Indian has been spent in enlarging and improving the factories and equipment, in order to reduce the cost of production.

It has long been recognized that to make motocycling the popular sport that it should be, machines must be furnished at a lower price, and The Hendee Manufacturing Company has for a number of years been making preparations with a view to supplying motocycles at popular prices. To accomplish this object by the slightest reduction of quality, either in material or workmanship, would be contrary to the principles upon which the business of The Hendee Manufacturing Company has always been conducted. Nothing but absolutely the best has ever been permitted to leave the factory, and the standard of the Indian product for 1912 will be maintained with stricter care, if possible, than ever before. We challenge the world to show the slightest depreciation either in material or workmanship in our 1912 models, or to produce a machine of higher quality.

Great Manufacturing Facilities

To sell at a low price the manufacturing cost of an article must be correspondingly low, and to secure this the article must be manufactured in very large quantities, and the processes and machinery employed must have been developed to a high state of perfection. It is in these directions that The Hendee Manufacturing Company has been steadily working for a number of years, and it now possesses not only the largest motocycle factory in the world, but one that is most complete and elaborate in every detail to an extent that is seldom reached in any manufacturing establishment.

A favorite boast among manufacturers is in regard to the size of their factory. Those who have personally inspected the motocycle establishments, not only of America but of Europe, are well acquainted with the systematic misrepresentations that are constantly being made both in this and in many other matters connected with motocycle manufacturing. The illustrations on the second page of this catalog show what the Indian Factory actually is, a magnificent establishment that requires no exaggeration.

The Indian factories comprise practically four large buildings. Three of these are five stories in hight, and the fourth is three stories high. Besides these, there are several smaller buildings containing furnaces for tempering, annealing, and other special heat treatments, blacksmith shop, acetylene welding department, engine and boiler rooms, the whole covering a floor space of four and one-half acres, every inch of which is devoted solely to the manufacture of Indian Motocycles.

The Hendee Manufacturing Company is justly proud of its splendid factory, and invites everyone in any way interested in motocycles to visit Springfield, inspect its establishment, and see just how the Indian is built.

It is not in size alone that the Indian factory excels, for its most important features are found within. It is easy to obtain ordinary machinery; but money cannot buy the outfit of special machinery, special tools and special fittings found in the Indian plant. A large portion of these special tools were designed and built in the factory by its own corps of experts. It requires years to learn the best way to perform the various exact operations necessary to produce an Indian Motocycle, and it has taken still longer to design and build the special tools which we use. Indeed, the special tools have cost more than all of the general machinery contained in the factory; and there is absolutely no question but that The Hendee Manufacturing Company is the only establishment in the world that is equipped to build motocycles of the highest quality in numbers sufficient to enable them to be sold at the prices now asked for Indian machines.

These facts will explain to you why it is possible for the Indian to offer such a magnificent machine at such popular prices; and the only way these prices can be met in competition must necessarily be by giving inferior quality.

It is evident that at the prices that will prevail in the future, quality will be a most important factor, and only in the Indian is the name a guarantee of quality.

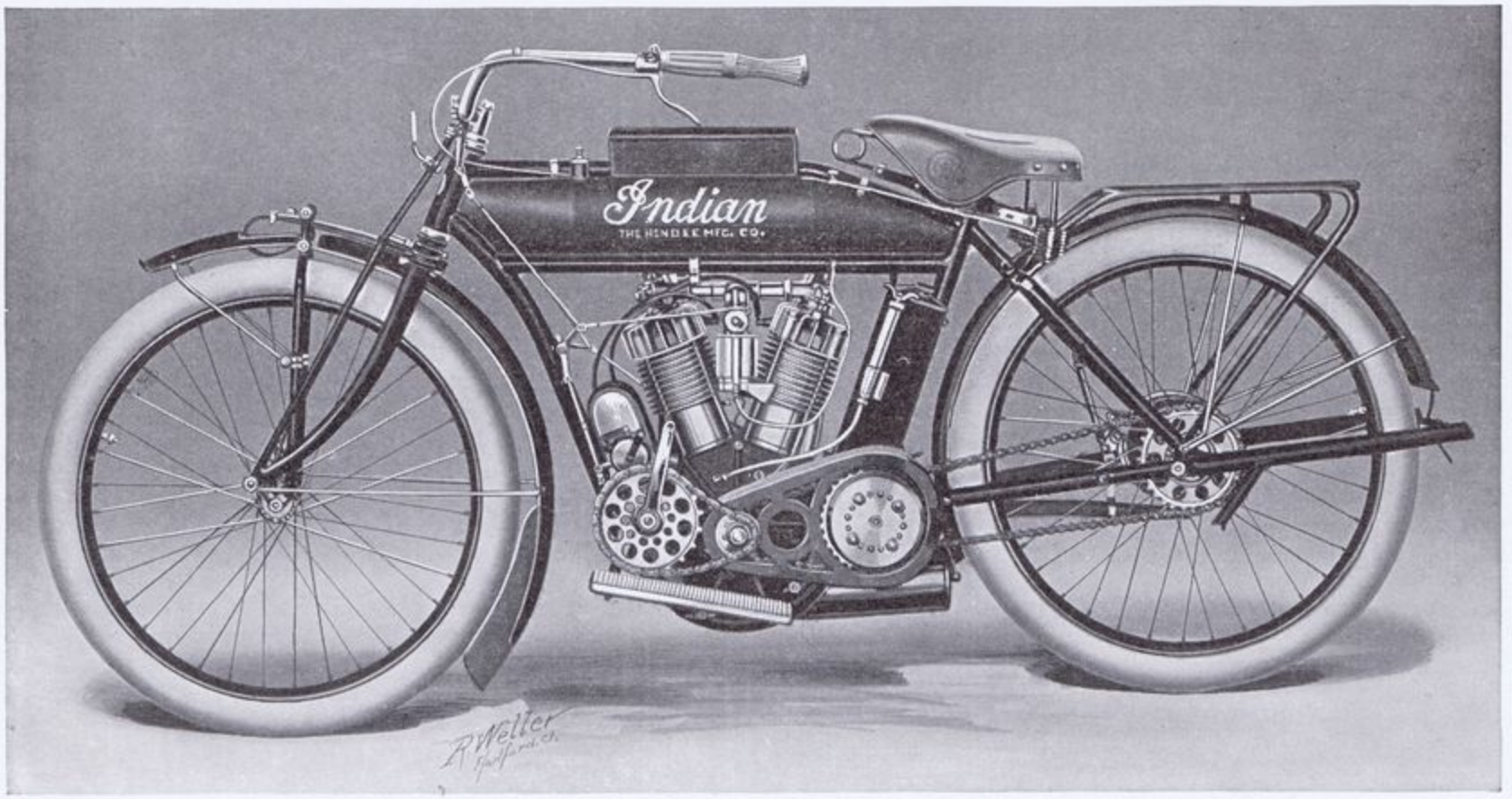
1912 Improvements

It is a very costly process to keep a motocycle fully up-to-date, as it means frequent modifications of details, necessitating new patterns, new tools and new machinery. Most manufacturers are satisfied if they make some slight change, which will constitute a "talking point," once in three or four years, but the machines are not changed in any essential feature. The Hendee Manufacturing Company, on the contrary, is constantly studying possibilities for real improvements, and adopting these as fast as they prove their worth. In following up this custom the Indian Motocycle has always been kept so fully up-to-date that there are no radical changes in the appearance of the regular models for 1912, neither have any meaningless attachments been tacked on for the purpose of sensational advertising. In details, however, there are very many points where advantage has been taken of opportunities to make it a better machine, and give riders the benefit of every possible refinement.

1912 Models

The Indian for 1912 will be built in 4 and 7 h.p. sizes only, but each of these sizes will be produced in several different models. There will be the regular model, in the 4 and 7 h.p. sizes, with chain drive; and also a belt driven model of the 4 h.p. size.

Besides the regular models, there will be the Tourist Trophy model in both the 4 and 7 h.p. sizes, either of which may be had with the two speed gear. All T. T. models are chain driven.



T. T. Model. 7 H.P.—61

Tourist Trophy Models

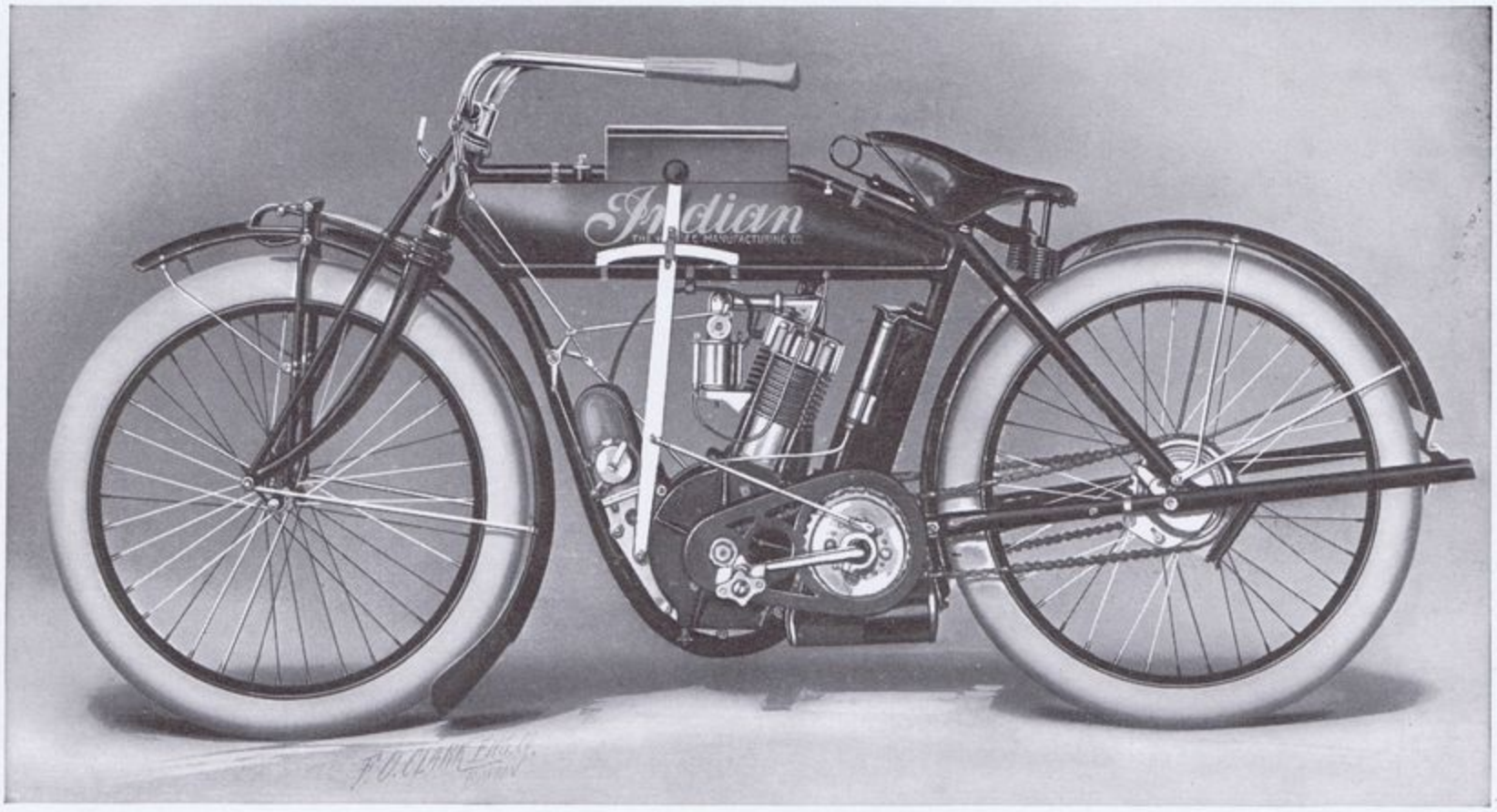
For the great Tourist Trophy Race in England machines were prepared which contained special and valuable features. These machines were so phenomenally successful, and met with such favor in England that a strong demand developed. It has been decided to build this model, with some additional features, for those who desire to have the very latest thing in motocycles, and it will be found to be a most elegant and complete machine for critical riders. The Tourist Trophy models will be built in both the 4 h.p. single and 7 h.p. twin cylinder sizes, chain drive only, and both sizes will be fitted with the two speed gear if desired.

The striking characteristic of the T. T. machines is that they are provided with a foot starting device which is a model of convenience and ingenuity, and enables the rider to start his machine by a light kick of the foot upon a lever.

A new double brake has been designed for the T. T. models, which has an internal brake band expanding within a brake drum, and operated by a foot lever conveniently placed, and also a second brake band which contracts on the outer circumference of the same brake drum, and is operated by a grip lever on the left handle bar. Either one of these brakes is more powerful than anything at present fitted, and is so absolutely simple that there is nothing to get out of order.

Another valuable feature of this model is the improved rear hub. This is of extra large size, and runs on improved roller bearings which are absolutly frictionless. In both front and rear hubs a knockout axle is used, which enables the wheels to be removed without interfering with the adjustment of the bearings.

It will be noted from the illustrations that the T. T. models have no pedals, but are provided with comfortable foot boards upon which to rest the feet. These foot boards are hinged so they can be folded up out of the way to economize space in storing.



4 H.P.—30.50. Regular Model

Specifications for All Single Cylinders

MOTOR: Hedstrom improved, air cooled. 30.50 cubic inches, (4 h.p.) bore 3¼, stroke 3 43-64 inches.

CARBURETER: Hedstrom improved, automatic, compensating, with auxiliary jet.

VALVES: Mechanically operated.

IGNITION: Improved high tension Bosch armored magneto.

SPARK PLUG: Hedstrom mica plug.

MUFFLER: Indian latest improved. Quiet and efficient

LUBRICATION: Automatic, constant, positive feed, by mechanically operated pump.

OIL GAUGE: Direct sight, opening to improved oil reservoir in base.

CONTROL: Indian patented leverless, double grip, "twist-of-the-wrist" system.

HANDLE BARS: Long handle bars with "rough rider" grips are regular equipment. Option, Indian drop racing bars, $5.00 additional.

TRANSMISSION: Indian roller chain drive, with new Free Engine Clutch. Chains and sprocket efficiently protected by guard. Pedaling gear, 50 inches. Drive gear, 5 to 1. Options, see gear table. Chain, ¼-inch roller, ⅝-inch pitch. Option, belt drive with flat belt and Free Engine Clutch.

TANKS: Gasoline capacity, 2½ gallons. Improved sure-tight gasoline cut-off built into tank, and priming syringe stopper. Oil capacity, 2 quarts.

FRAME: Special steel tubing, **reinforced throughout its length.** Hight, 19 inches.

FORK: Indian Cradle Spring Fork, powerfully braced, and with long, luxurious spring of highly tempered chrome vanadium steel. Fork crown, drop forgings.

WHEEL BASE: 53 inches regular models.

WHEELS: 28 inches, 36 spokes front and rear. Rims, heavy single clinch, finished to match frame. Heavy spokes.

GUARDS: Improved wide, beaded mud guards, front and rear. Extended front guard and splasher.

TIRES: U. S. or Goodyear, studded, 2½-inch, detachable.

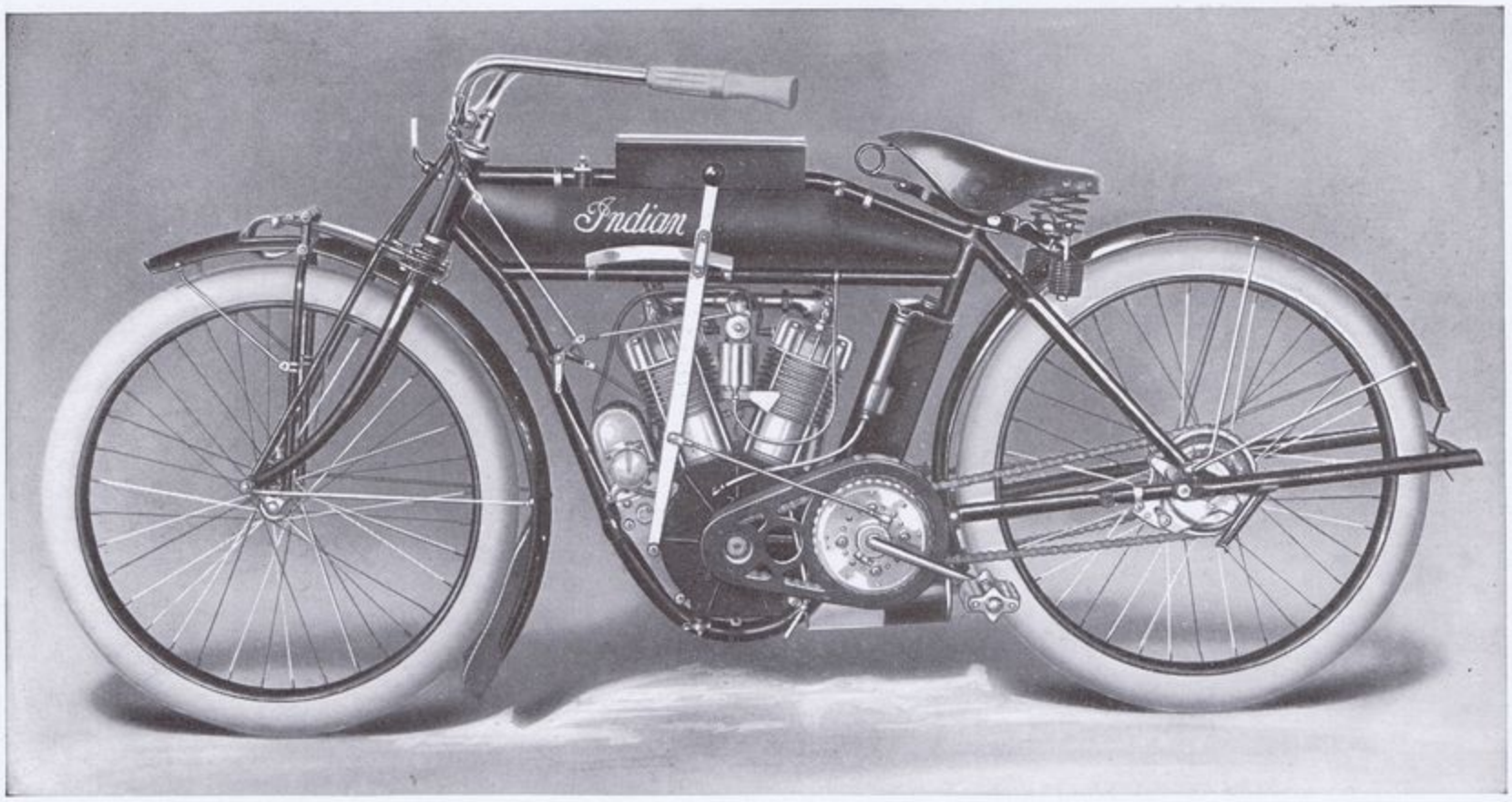
BRAKE: Improved Corbin-Indian **Coaster Band Brake.**

STAND: A substantial folding stand fitted on all models.

SADDLE: Improved Indian-Mesinger, with compound springs and shock absorber. Option, on all T. T. models, Mesinger Cavalry No. 4.

FINISH: Indian red. All bright parts nickeled on copper. Option, Royal blue.

TOOL BOX: Large metal tool boxes, attached to top bar of frame, containing necessary tools and repair outfit



7 H.P.—61. Regular Model

Specifications for All Twin Cylinder Models

MOTOR: Hedstrom improved, air cooled. 61 cubic inches, (7 h.p.) bore 3¼, stroke 3 43-64 inches.

VALVES: Mechanically operated.

CARBURETER: Hedstrom improved, automatic, compensating, with auxiliary jet.

IGNITION: Improved high tension Bosch armored magneto.

SPARK PLUGS: Hedstrom perfection mica plugs.

MUFFLER: Indian latest improved. Quiet and efficient.

LUBRICATION: Automatic, constant, positive feed, by mechanically operated pump.

OIL GAUGE: Direct sight, opening to improved oil reservoir in base.

CONTROL: Indian patent, leverless, double grip "twist-of-the-wrist" system.

HANDLE BARS: Long handle bars with "rough rider" grips are regular equipment. Option, Indian drop racing bars, $5.00 additional.

TRANSMISSION: Indian patent chain drive, with new enlarged Free Engine Clutch. Chains and sprocket efficiently protected by guard. Pedaling gear, 50 inches. Drive gear, 3½ to 1. Options, see gear table. Chains, ¼-inch roller, ⅝-inch pitch.

TANKS: Gasoline capacity, 2½ gallons. Improved sure-tight gasoline cut-off built into tank, and priming syringe stopper. Oil capacity, 2 quarts.

FRAME: Special steel tubing, **reinforced throughout its length.** Hight, 19 inches.

FORK: Indian Cradle Spring Fork, powerfully braced, and with long, luxurious spring, highly tempered, of chrome vanadium steel. Fork crown, drop forgings.

WHEEL BASE: 53 inches.

WHEELS: 28 inches, 36 spokes front and rear. Rims, heavy single clinch.

GUARDS: Improved wide, beaded mud guards, front and rear. Extended front guard and splasher.

TIRES: U. S. or Goodyear, studded, 2½-inch, detachable.

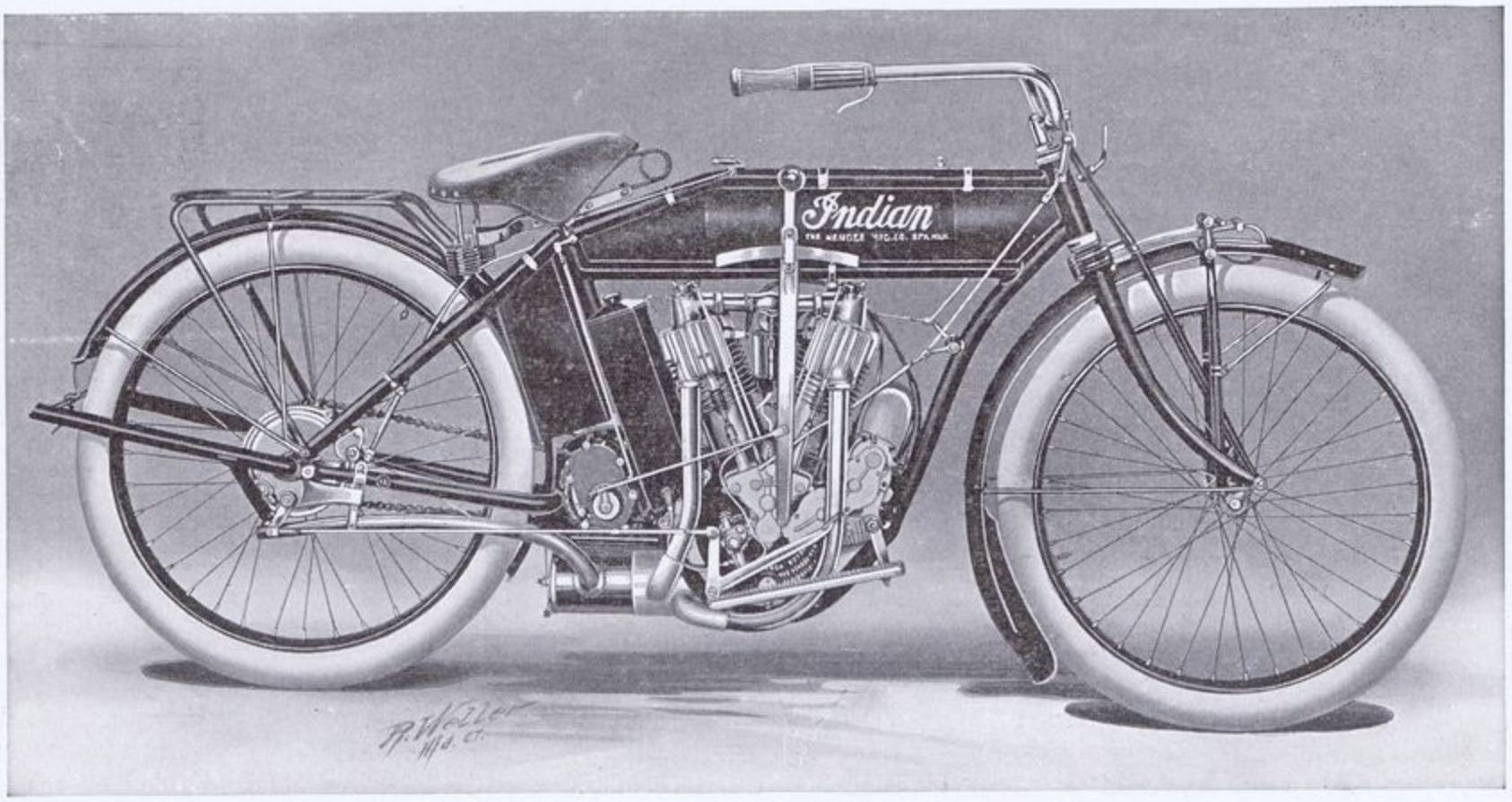
BRAKE: Improved Corbin-Indian **Coaster Band Brake.**

STAND: A substantial folding stand fitted on all models.

SADDLE: Improved Indian-Mesinger, with compound springs and shock absorber. Option, on all T. T. models, Mesinger Cavalry No. 4.

FINISH: Indian red, all bright parts nickeled on copper. Option, Royal Indian blue.

TOOL BOX: Large metal tool boxes, attached to top bar of frame, containing necessary tools and repair outfit.

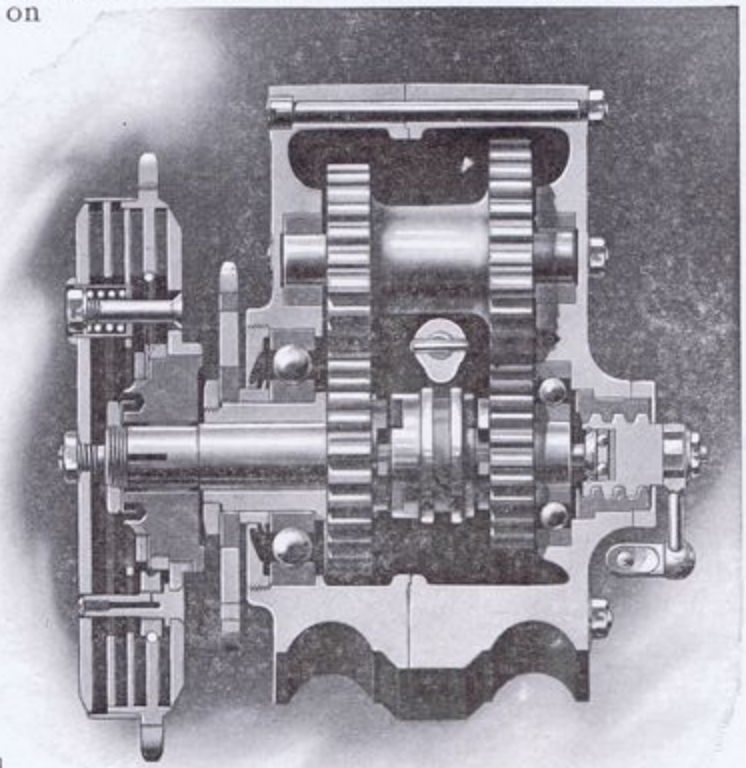


T. T. Two Speed Model 7 H.P.—61

The Indian Two Speed and Free Engine Clutch

The Indian two speed and free engine gear has been in practical service for three years, and has proved not only its convenience and desirability, but has thoroughly demonstrated its efficiency and durability. It has been widely used with the utmost satisfaction, and has practically distinguished itself in competitions where other machines of its class were present.

Indian motocycles fitted with the Indian two speed gear took part in the great English Six Days Reliability Trials in both 1910 and 1911, and made perfect scores on both occasions. The machine used in 1910 was a 4 h.p., and in the strenuous climb of the notorious Amulree Hill, the English papers gave it credit for making the best ascent of the day, when many other machines utterly failed. In 1911, a twin cylinder two speed Indian with side-car attached took part in these trials with great distinction.

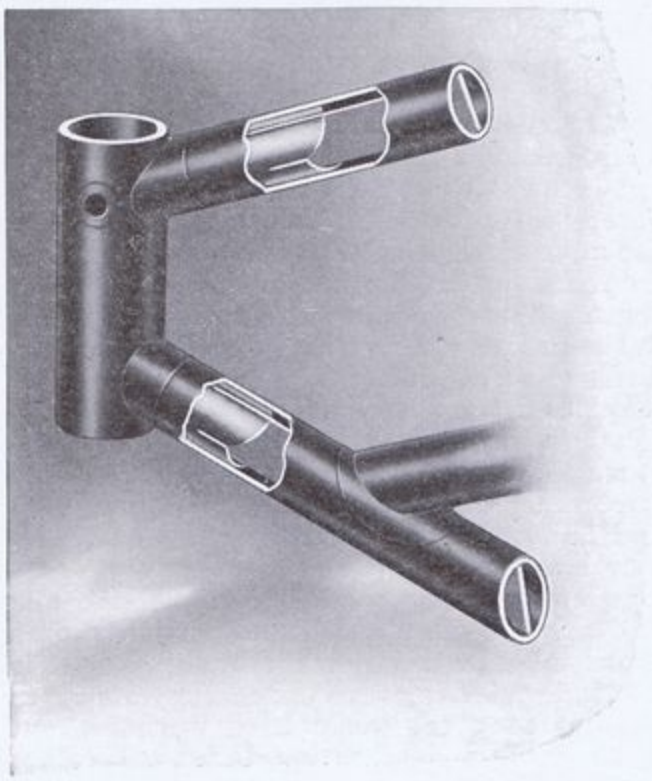


A recent demonstration in this country was in the endurance and elimination trials conducted by the San Francisco Motorcycle Club in November, 1911, when a twin cylinder machine with two speed gear was the only survivor in the private owners class, having covered 1,779 miles.

In the Indian two speed device the gears are always in mesh, which entirely overcomes liability of breaking when shifting the gear. As the gears are of large size, broad face and heavy construction, they are unusually durable, amply strong for their work, and can always be absoutely relied upon. The shifting of speed is accomplished by a double dog clutch with heavy steel blocks, which, sliding on the main shaft of the gear, can be engaged with either of two gear wheels to produce a direct drive on high gear, or a reduced drive on low gear. This clutch is operated by a small lever mounted on the top bar of the frame, convenient to the right hand of the rider. The Indian Two Speed gear provides for a reduction of 40% between the direct drive and the low speed.

The regular Indian free engine clutch is combined with this two speed gear, and its operating lever is located on the right hand side of the machine close to the speed changing lever. This enables the rider to make his changes rapidly and conveniently.

The Indian Two Speed gear is supplied on the Tourist Trophy Models only, but can be had in either the 7 h.p., twin cylinder, or the 4 h.p., single cylinder size. As the two speed gear requires a special frame, it will be necessary to specify it when the machine is ordered, as it cannot be fitted to machines with the regular frame after purchase.



The Frame

The frame of a motocycle is one of the most important parts, as on its strength and rigidity not only depends the safety of the rider, but it is the foundation of the entire machine. The Indian was a pioneer in introducing the drop frame construction that gives the rider the low saddle position so desirable, both for balance, and enabling him to place his feet on the ground when necessary.

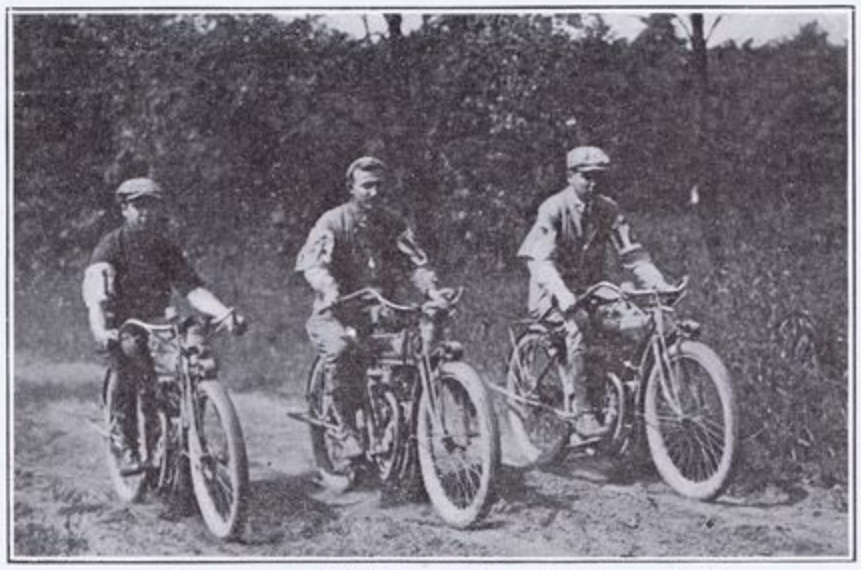
Another important feature of the Indian frame is the loop form given to the lower tube, which rigidly supports the motor, without putting the strains on the motor base that are unavoidable in the straight diamond pattern. This loop also acts as a protection to the motor base on rough ground.

The most important feature of the Indian frame, besides its modern form and smart lines, is its extreme strength and rigidity. Not only is it built out of a superior quality of tubing, but this tubing is reinforced throughout its length by a vertical girder plate of steel, welded within each main tube. In addition, the various sections of the tubing are joined by drop forged connections specially designed so that the brazed joint embraces not only the tube ends, but the reinforcing plate as well.

This is a patented construction, invented by Mr. Hedstrom, and since its adoption three years ago, not a single Indian frame has broken. This is an Indian feature that should be carefully remembered, for the failure of a frame when traveling at high speed is a serious matter.

Warning

The parts supplied by The Hendee Manufacturing Company to be used for replacements or repairs are made at the same time, with the same exactness and care, and of the same chosen materials as the parts which go into the original machine; and these parts are furnished at as reasonable price as is possible, considering the quality of workmanship put into them. Parties using the genuine Indian parts can be perfectly confident that they are the best that can be made, that they are the best for use in repairs and replacements, and the cheapest in the long run, as they are fully guaranteed by their makers, who stand behind everything produced in the Indian factory.



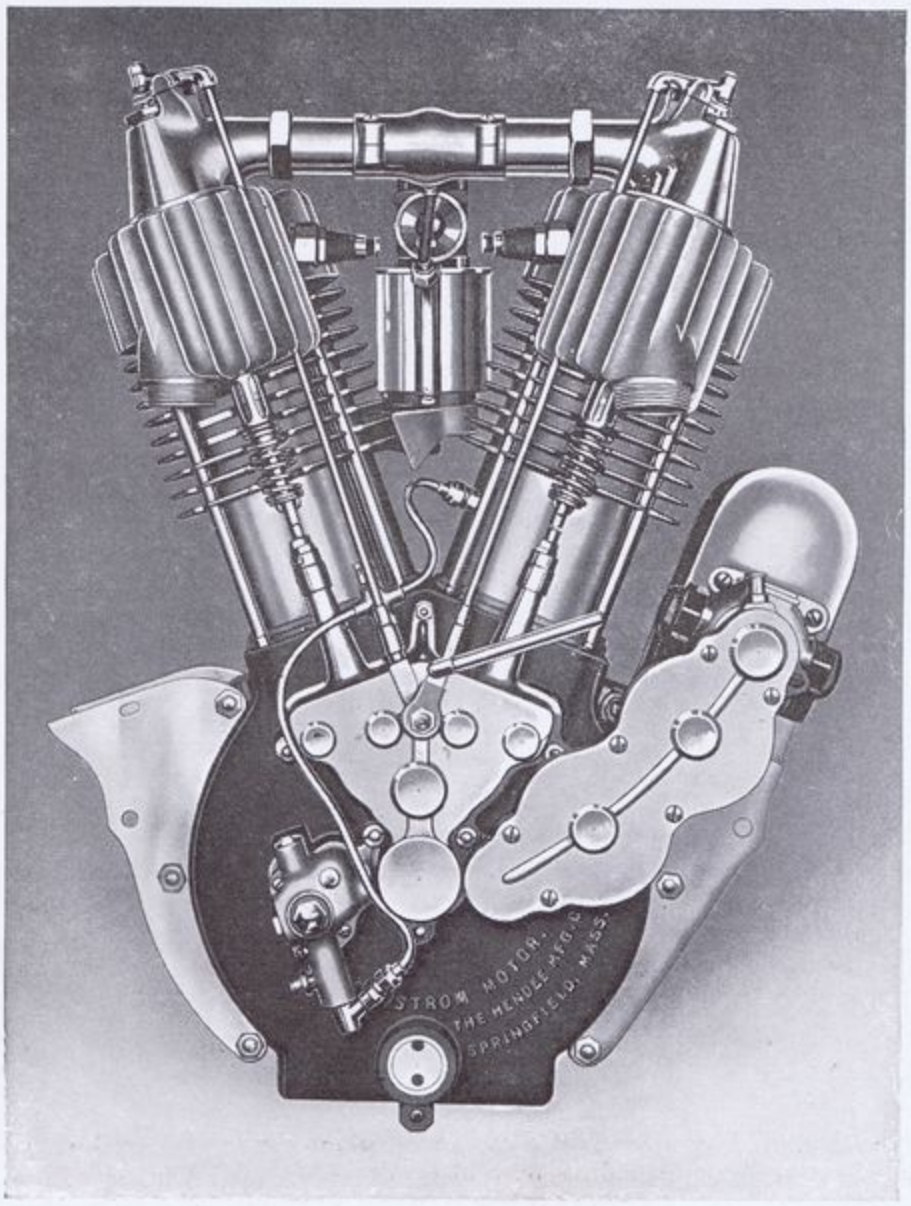
Winners of "Examiner" Cup, 1911

This warning is given because there are being offered cheap imitations of Indian parts, and all agents and riders are warned that they will use such parts at their own risk.

In cases of defect or failure of such spurious parts, The Hendee Manufacturing Company is in no way responsible, and will not make replacements under any circumstances. Moreover, if the use of such parts results in injury to any part of the genuine mechanism of the Indian Motocycle, The Hendee Manufacturing Company will not be responsible for replacements or repairs on any parts damaged under such conditions.

Riders of Indian Motocycles will consult their own interests if, when having repairs made, they will insist that only genuine Indian parts shall be used. If genuine Indian parts are not obtainable in your locality they can be had promptly from the factory at Springfield, or of any of its branches.

The Motor



The Hedstrom Motor, used on all Indian Motocycles, is one of the most powerful, flexible and efficient in the world, as has been practically demonstrated in innumerable trials and tests, including not only speed, but hill climbing, long distance and endurance tests of every description. This motor has twice broken the record from San Francisco to New York, and has held that record since 1906. Other performances by these motors will be found on another page of this catalog.

In superior mechanical construction and workmanship nothing so perfect has ever been put into a motocycle, but what interests the general rider is the results he gets. One of the most vital points in a motocycle motor, is its reliability and endurance, and in these respects the Indian has never been equalled. It has proved itself superior in all of the long distance tests, and while the average rider may not desire a racing machine, the demonstrations made by the Indian in long distance speed tests bring out a point of vital importance, for not only in its various hour and hundred mile records, but in its twenty-four hour record as well, the motor was running as smoothly and efficiently at the end of the trial as when it started. This not only shows the durability of the motor, but it is a wonderful demonstration of its ability to perform long continued hard work without suffering from overheating, burnt-out valves and piston rings, loss of compression or the many other ills to which the ordinary motor is commonly subject. As a matter of fact, the Indian is the only motocycle in America that has ever been able to cover a full hour at racing speed without failure of the motor.

Every portion of the Indian motor is built with most scrupulous and exact workmanship. To go into every detail would require more space than is available, but a few items illustrate its qualities.

The cylinder of the Indian motor is of a special high grade of fine gray cast iron, and in its making the cylinder is first roughly bored on the inside, and is accurately turned on the outside. This is a method of construction seldom adopted in motocycles, but it has the advantage of making the cylinder wall of uniform thickness throughout every portion. This is of great practical importance, for it insures that when the cylinder becomes heated in working, the expansion will be even and regular and that the cylinder will not warp out of shape. This result is impossible where a casting is not finished on the outside as well as on the inside, as in the ordinary method of construction. After the cylinder has reached this stage it is carefully annealed by long heating in a gas furnace, which relieves and equalizes all strains in the metal, and prevents any tendency to warp later on when heated. The cylinder is then rebored, to insure that it is true throughout, and ground to an absolutely smooth and finely polished surface by machines specially designed for that purpose.

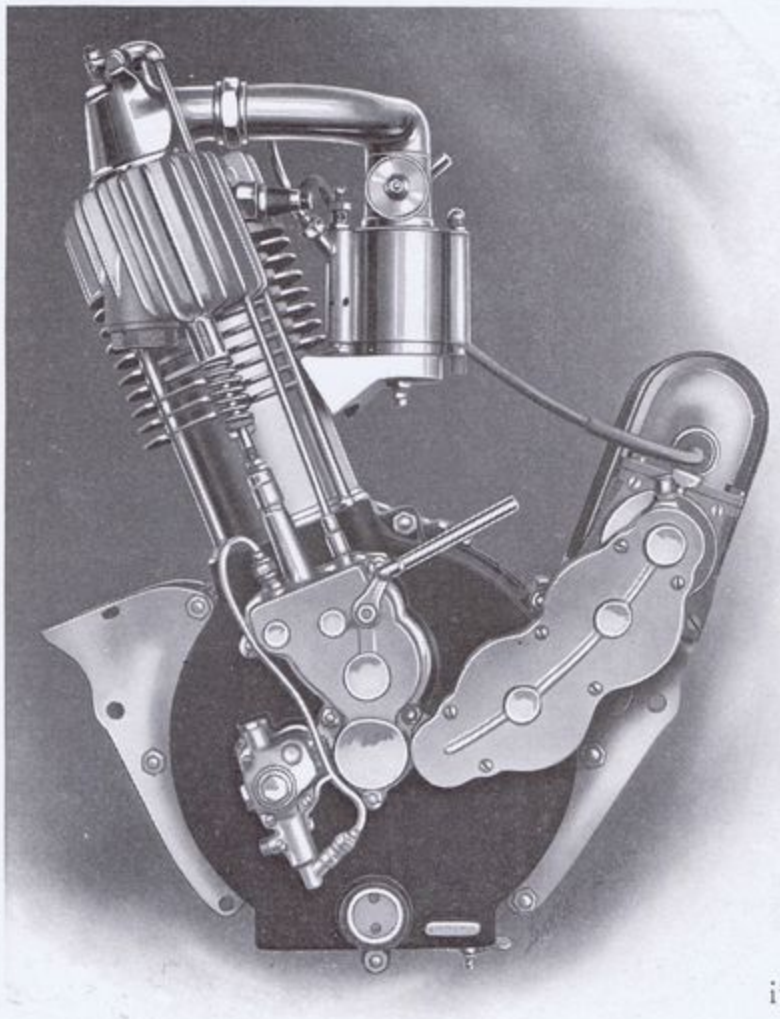
The piston is as carefully made as the cylinder, and is provided with two accurately fitted compression rings, carefully turned to shape, and then ground to bring them to the exact required size and perfect finish.

The connecting rods are of drop forged steel, of a grade specially suited for the work required, carefully machined, and tempered to secure great toughness and rigidity.

The main shaft, crank and wrist pins are all of special steels, which have been put through special processes of heat treatment that give them an extremely hard surface, while retaining great toughness in the interior. These are then ground by special machinery to absolute accuracy in size and finish.

All bushings are of ample size, and are made of special phosphor bronze that has proved its superior qualities. This construction has been adopted by the Indian after long experience as giving the best results in actual use.

A very notable feature of all Indian motors is the accessibility to every part. Many riders know how difficult it is to get at a valve or renew a piston ring. In many cases it is necessary to remove the motor from the frame before these simple operations can be performed. With the Indian motor both valves can be reached



within a few minutes, and the parts easily replaced and adjusted. It is fully as simple to remove a cylinder head for cleaning, or a cylinder for the examination of a piston. There are very few adjustments that have to be made by the rider, and these are easily understood and as easily made. Even if it is necessary to remove the motor from the frame this can be easily done by anybody inside of ten minutes.

A priming tap, with a protected cup, is fitted to each cylinder, and these are convenient for injecting gasoline to prime the motor, or to cut the heavy oil when starting in cold weather.

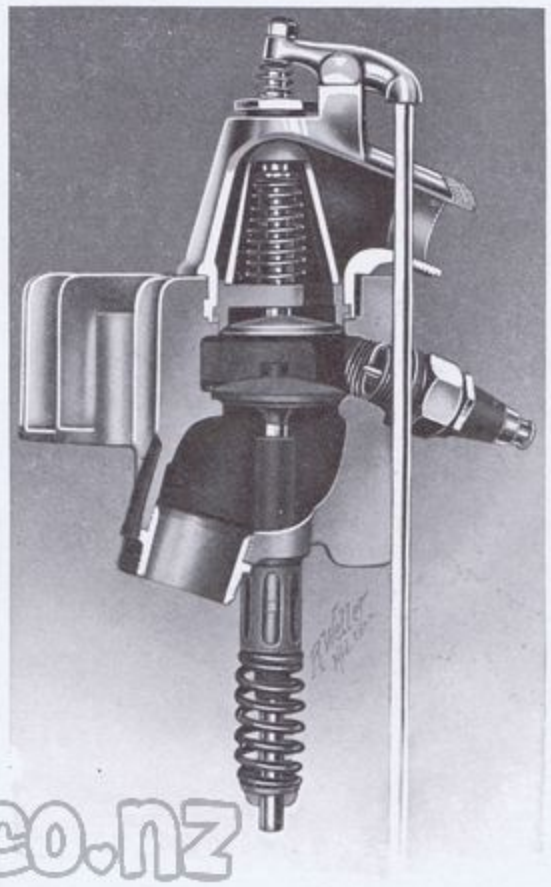
The Indian motors all use the same size cylinders, having a bore of 3¼ inches and a stroke of 3 43-64 inches. This gives the single cylinder motor an actual piston displacement of 30.46 cubic inches, which is rated at 4 h.p. and develops considerable over this amount.

The twin cylinder motor uses two cylinders of exactly the same size, giving a combined actual piston displacement of 60.92 cubic inches, and rated at 7 h.p.

The motors of all Indian machines contain exactly the same mechanical features, and are of the same design, the only differences between the single and twin cylinder models being such as are necessary to provide for this variation in model. Only one quality of motor is built at the Indian factory, and that is the best that modern methods and material has made it possible to produce.

Indian Mechanical Valves

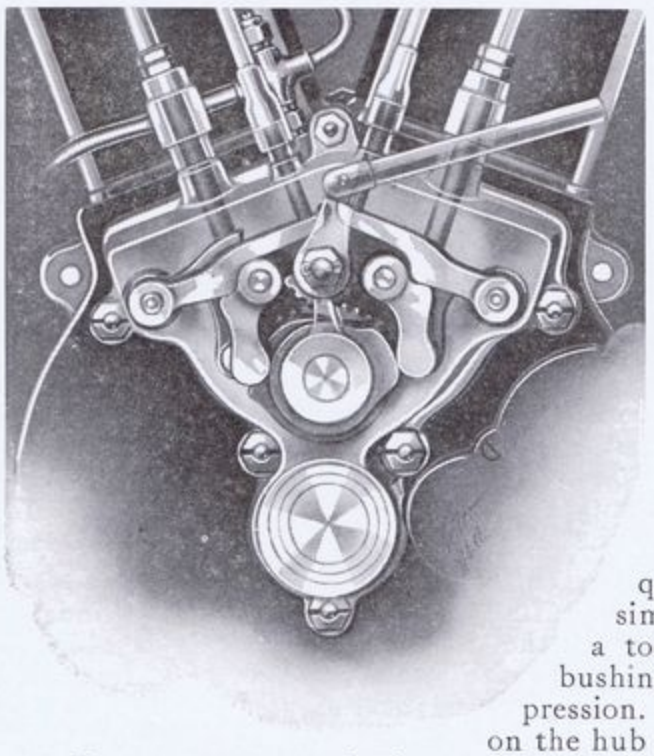
The Indian was one of the first motocycles to adopt mechanical operation for both the inlet and the exhaust valves, and the immense superiority of this system has long been recognized by every builder of every class of internal combustion motors who pretends to produce a first-class machine, as it insures the positive and regular action of both valves under every possible condition of speed and power, and makes them entirely independent of the constant uncertainties which result from depending upon the action of a spring, as in automatic valves, which is constantly changing from heat and wear.



Both the valves in the Indian motor are placed in a single compact valve chamber, which is so designed that it is exposed all around to the cooling influence of the air, and is so small in size that there is but a very small amount of dead compression space, a matter of considerable importance in motors of the size used in motocycles. The valves used in the Indian motors are of unusually large size, those for 1912 being still larger than have been used heretofore.

The illustration shows a section of the Indian valve chamber, and it will be seen that the inlet valve is located directly above the exhaust valve. The cold mixture coming from the carbureter passes over the exhaust valve, assisting very materially in keeping it cool. The practical result of such an arrangement is shown by the fact that a broken valve is almost unknown in the Indian machine. Part of this result is due to the fact that the valves themselves are of a special construction and material which makes them unusually durable.

The valve dome, containing the inlet valve, is secured in the valve chamber by a simple bayonet joint, and may be removed by turning it one third way around, after loosening the lock nut on the top of the dome. This lock nut is the only fastening required for this construction, and after the dome is placed in position, a few turns of this nut not only secures it there, but insures an absolutely air tight joint. The inlet valve, with its seat, springs, etc., is removed with the dome.



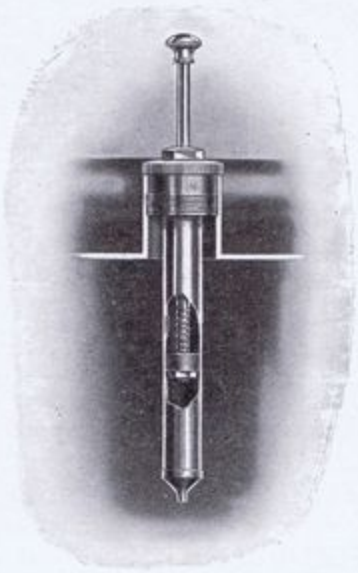
from which it can be withdrawn by the fingers. When the dome is removed the exhaust valve is fully exposed for inspection, regrinding or replacing. No other motocycle ever built is so simple in construction, or permits its valves to be as quickly and easily inspected or replaced.

The inlet valve is operated by a small rocking lever, mounted on the valve dome, which carries in one end a small screw by which the amount and time of opening of the valve can readily be adjusted. A decided improvement in the construction of the inlet valve is a new collar and a key of the split ring type, an arrangement that entirely overcomes loose or broken keys.

The illustration of the Indian valve operating mechanism shows the interior of the cam case of a twin cylinder motor, and fully illustrates the efficient mechanism by which the valves are operated. The cam in the foreground operates the inlet valve by its action upon two levers. This combination not only gives a straight lift to the tappet rod, but gives a quick opening and closing. The cam in the background, in a similar way, operates the exhaust valve, while a third cam plate, with a toothed edge, mounted on the projecting end of the cam shaft bushing, lifts the exhaust valve when it is desired to release the compression. This toothed plate is operated by a segment of a pinion cut on the hub of a lever, the arm of which is connected with the grip control.

Dust caps protect both tappet rods, and prevent dirt from getting into the cam case; and on the head of the tappet rod operating the exhaust valve an adjustable screw, with lock nuts, admits of proper adjustment to compensate with all wear.

Tanks

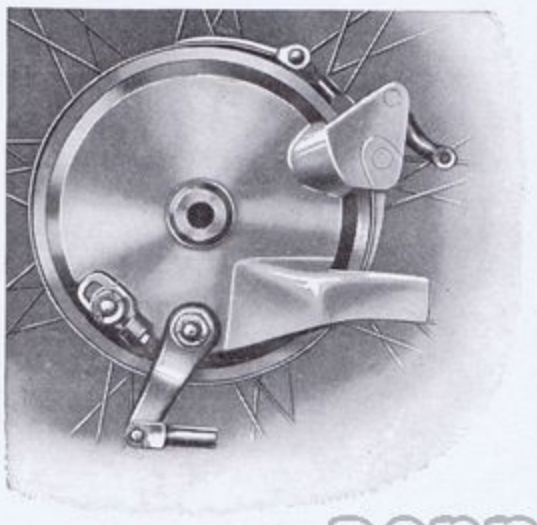


The gasoline tank has been enlarged for 1912, and all models will be fitted with tanks carrying 2½ gallons of gasoline. This increased capacity will be appreciated by all riders, as it will enable them to carry supplies for a much longer journey.

The general outlines of the tank have not been changed, but a most convenient fitting will be found in the priming syringe which has been designed to fit in the filler opening, and serve the purpose of a filler cap. By means of this syringe gasoline may be conveniently injected into the cylinder for easy starting or to soften the oil around the piston when it is stiffened by cold weather. This syringe will also be found useful for drawing small quantities of gasoline, either to clean the tire in repair work, or for other purposes. The needle valve shutoff is the most perfect device of its kind as it may be closed absolutely tight, and there need be no fear of leakage.

The oil tank contains two quarts, which is sufficient for several hundred miles running.

A convenient hand pump is permanently attached to the oil tank for use in replenishing the oil reservoir in the motor base, and furnishing the additional oil necessary when a machine is driven at high speed for long distances.



T. T. Double Brake

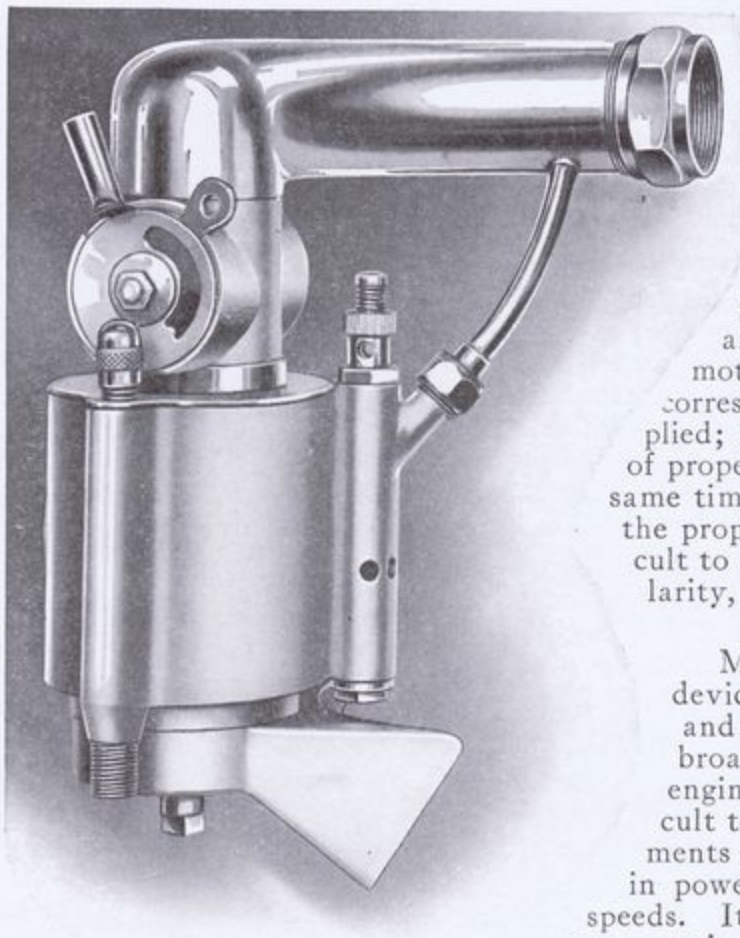
Brakes

On all regular models the excellent coaster band brake, heretofore used, will be fitted.

The Tourist Trophy model called for two brakes, and to provide properly for this an entirely new and special form was designed, which proved most efficient, and this double brake is being placed on all 1912 Tourist Trophy machines.

The new design is in the form of a large brake drum on the rear hub, upon which work two flat brake bands. One of these brake bands acts on the outer circumference of the drum, and is operated by a grip lever attached to the handle bar. The other brake band expands within the drum, and is operated by a foot lever on the left side of the machine. These brakes may be used separately or both at the same time, and either one is most powerful in itself. The construction of these brakes is so simple and there are so few parts, that it is absolutely impossible for them to get out of order.

Carbureter



The Hedstrom Carbureter has for many years been justly celebrated as one of the most perfect that has ever been devised. The carbureter of a motocycle is the mechanism which supplies the gas that operates the motor, and is a most important element in the success of a motocycle. No matter how perfect the motor may be it cannot give satisfactory results without a good carbureter. The gas used in a gasoline motor is a mixture of vaporized gasoline and air, which must be mixed in very accurate proportions to give the best results, and the quantity of gas is determined by the speed of the motor. Every variation in the speed of the motor makes a corresponding change in the amount of gas that must be supplied; and it will be readily seen how difficult is the operation of properly meeting all of the changes in quantity, and at the same time preserving accurately the quality of the mixture, for the proportion of the gasoline required is so small that it is difficult to accurately measure it and supply it with absolute regularity, as is done in the Hedstrom Carbureter.

Much of the success of the Indian is due to this remarkable device; but an improvement that was introduced last year, and which will be fitted to all 1912 models, has greatly broadened the usefulness of this carbureter. When motocycle engines were small, and speeds were moderate, it was not difficult to so adjust the carbureter that it would meet all requirements at every speed. Modern motors have greatly increased in power and size, and consequently are capable of much higher speeds. It will be evident that with such delicate adjustments as are necessary in any carbureter it is practically impossible to so adjust one that it will work efficiently at sixty miles an hour, and also operate steadily at six miles; and this is especially difficult with the big twin cylinder motors now so popular. To overcome this difficulty a new variation of the Hedstrom Carbureter has been devised, consisting of an auxiliary or pilot jet, which is most valuable for starting the motor, when running at very low speed, and when it is desired to let the machine stand for a few minutes with the clutch thrown out and the motor running. This pilot jet, or auxiliary carbureter, is a very compact device attached directly to the main carbureter, and drawing its gasoline from thence. It has its own separately adjusted jet, a separate air supply; and the mixture from it passes directly into the induction pipe, and thence to the motor, without passing through the throttle. It will be seen that this auxiliary jet is always in operation, and requires practically no attention from the rider.

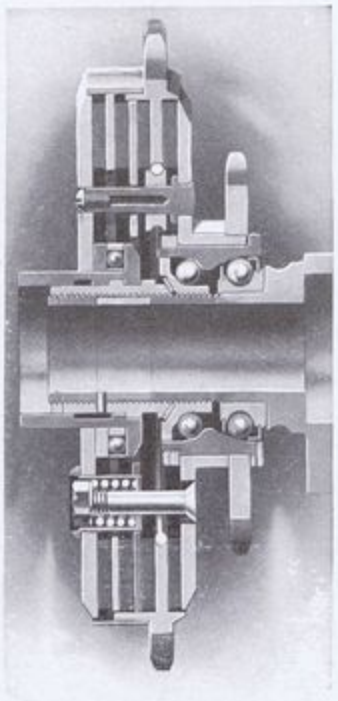
The only adjustment required on the Hedstrom Carbureter is in relation to the air, and this is necessary because the condition of the atmosphere varies from day to day. To permit of this regulation an adjustable air shutter is fitted on the end of the throttle valve, and by means of it additional air is admitted to the carbureter until it is found that the mixture has reached its most perfect stage. After this adjustment has been made very little more attention will have to be given to the carbureter for the entire day. A similar air regulation is provided for the auxiliary carbureter.

All of the other adjustments, accompanying the changes of speed of the motor, are automatically provided for by most simple and ingenious devices within the carbureter; and while riders of other machines often experience trouble from their carbureters, in the Indian machines such troubles are practically unknown, the only occasion being when dirty, unstrained gasoline is used, and even then it will have to be very dirty indeed before it interferes with the proper operation of this carbureter.

The Stand

The Indian stand is strongly built of "D" section tubing, and has been found to be entirely satisfactory. The pivots upon which this stand swings are placed forward of the rear axle, which makes it possible to remove the rear wheel without interfering with the stand.

The Indian Free Engine Clutch and Chain Transmission



The Indian free engine clutch has proved itself one of the greatest improvements ever put into a motocycle. That a clutch was desirable has long been recognized, and many crude attempts have been made to construct one. The Indian clutch, however, is the first that has been entirely successful, and the year it has been in service has not only proved it practical, but that it is indispensable on every first class machine. The Indian clutch enables the rider to regulate his speed in the same way as is done in an automobile, and the clutch, together with the simple and practical Indian grip control, gives the rider absolute control over his machine under every possible condition.

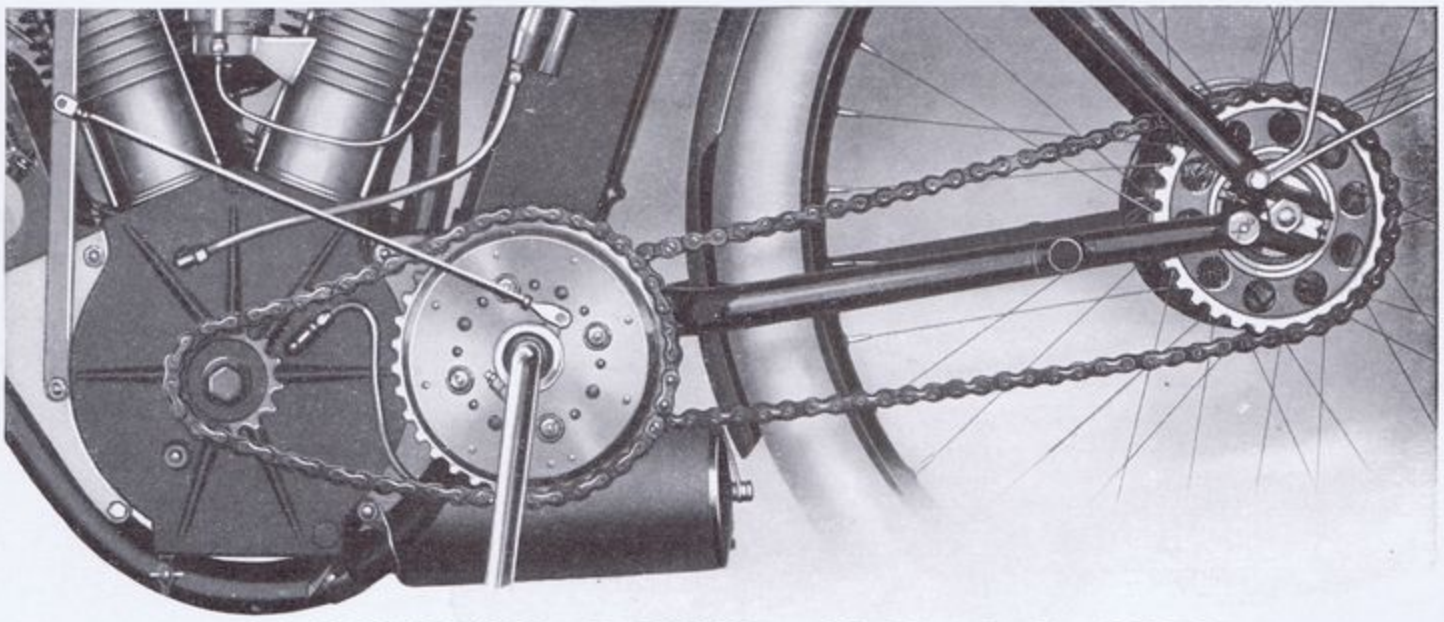
In the traffic of the city street the machine can be checked to its slowest possible speed, or stopped entirely, without stopping the motor; and the machine can again be started immediately by simply letting the clutch in again. On rough roads, in sand, and on hills, the speed can be regulated as necessary; and, by skillfully slipping the clutch, the motor may be kept running at its most effective speed while steadily pulling the machine over difficult places. Moreover, by the aid of this clutch, the machine can be started anywhere, on hills, or in other places, where, without it, starting would be impossible.

The Indian free engine clutch is built on the disc principle, with steel plates in contact with fiber friction rings, the various discs being held in adjustable contact by strong coiled springs. This construction gives a smooth and certain clutch action with a minimum amount of wear, and also enables the operator to obtain a wider range of clutch action than is possible with any other device of the kind, for he can run the machine as slowly as it is possible to maintain a balance, or at any other rate within the ability of the motor.

The Indian clutch has been proved out by over a year of general use, and among other notable contests, it was used on the machine which made the transcontinental record, and was also used on a number of other journeys of the same kind.

The standard transmission of the Indian machines is the chain drive, which has been demonstrated the most efficient for every condition of service, and especially in bad weather. Unanswerable evidence of this efficiency is the fact that all of the world's great speed records have been made on chain driven machines, and also all hill climbing records; and it is well known that the machines produced by rival manufacturers to compete with the Indian are all chain driven, and some have even been built of genuine Indian parts. The free engine clutch gives the necessary smoothness in operation, and this removes the only valid objection that has ever been raised against the chain drive, namely, that it was harsh of action in starting. The smooth, gradual engagement of the clutch entirely overcomes this objection, which was met in former Indian models by the efficient compensating sprocket.

The clutch fitted to the 7 h.p. twins, and all Tourist Trophy models, has been enlarged for 1912, the increased diameter making the clutch action more gradual, and giving greater holding power.



The Cradle Spring Fork

It has long been recognized by practical builders of both bicycles and motocycles that most of the disagreeable shocks and jars result from the concussion of the front wheel against obstacles and inequalities of the road. Consequently a front fork which will overcome these shocks is essential to a comfortable riding machine, but it has also been demonstrated that the long leaf spring as used on the Indian gives the strongest and smoothest action; and the reversed "C" shaped end of the Indian spring not only has the result of giving a longer spring, but it greatly assists in softening and eliminating the rebound of the spring.

The Indian cradle spring fork has been in successful use for two years, and has proved itself most efficient and satisfactory. The main portion of the fork is an unusually strong and rigid truss, thoroughly reinforced. The wheel is carried by a pair of bell crank levers attached to the fork, and rods extending from the extremities of these levers connect the same with a long and flexible spring attached to the crown of the fork. This spring is made up of flat leaves of highly tempered Chrome Vanadium steel, which gives a velvety smoothness to the action that entirely absorbs all shocks, and banishes the discomforts of rough roads.

This system of mounting is extremely strong, as the wheel works on the acceptably correct castor principle, and all shocks are transmitted backward and upward, a direction which minimizes wheel shocks both to the fork and to the machine.

All joints in this fork are thoroughly lubricated, and the construction entirely prevents any side movement of the wheel.

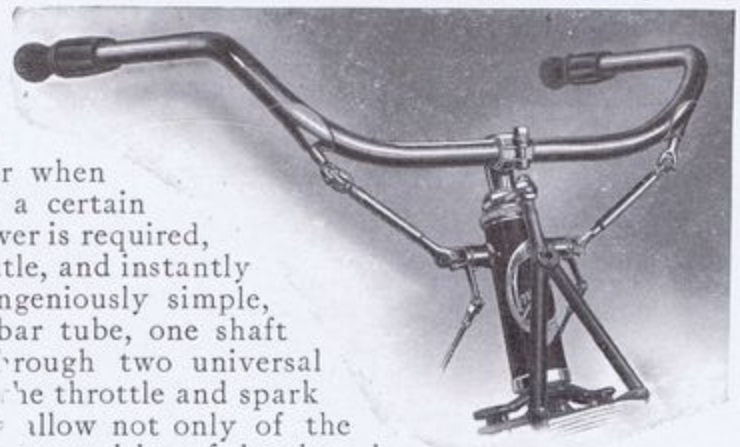
Ignition

The superiority of magneto ignition has long been recognized, and it is so much more desirable than battery ignition that it has been decided to make it the standard for 1912 Indians. The celebrated Bosch magneto is used, and is placed on all Indian machines without extra charge.

The Bosch magneto is not only the best produced in the world, but it is the most expensive instrument of its kind, and the fact that the Indian is fitted with a magneto of this class without extra charge shows the policy of The Hendee Manufacturing Company in the production of Indian Motocycles—to furnish the best material, workmanship and fittings that can be obtained, irrespective of cost.

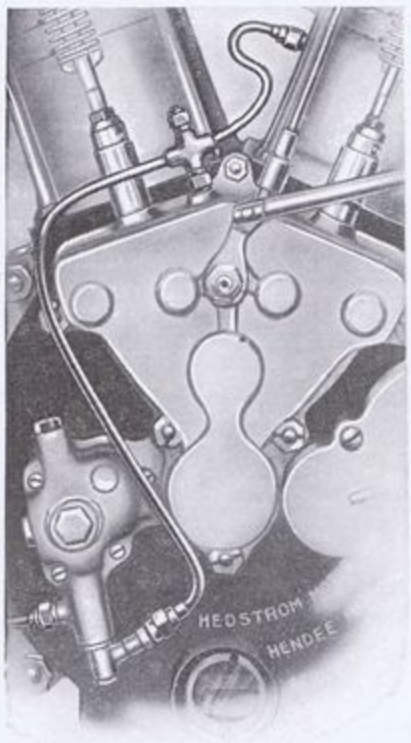
The Double Grip Control

The control of a motocycle is a most important matter, as it must be simple, positive, and instant in action. The Indian grip control, which was the original device of this class, fills every requirement, and includes no awkward levers, wires, chains or other makeshifts constantly liable to derangement and requiring adjustment. A twist of the wrist, turning the grips, without removing either hand from the handle bar, does everything necessary for operating the machine and controlling its speed. The right grip—a twist of the right wrist—switches the spark on or off, and operates the exhaust valve lift to release compression when starting or when coasting. It starts and stops the machine, and up to a certain point regulates the speed. When more speed or more power is required, the left grip—a twist of the left wrist—operates the throttle, and instantly increases the power. The Indian double grip system is ingeniously simple, consisting merely of a flexible shaft within each handle bar tube, one shaft connecting with each grip. Each shaft is coupled through two universal joints and telescoping connections with rods which operate the throttle and spark advance levers, respectively. The telescoping connections allow not only of the turning of the handle bars in steering, without affecting the position of the throttle and spark advance, but also allow for changing the height of the handle bars without requiring any adjustment whatever.



Lubrication

Proper lubrication is one of the most important points in motocycle construction, for the speed of all moving parts is so great that they must be kept constantly and thoroughly lubricated. Improper lubrication not only means excessive wear, but serious danger of actual damage.



Long experience has fully demonstrated that no form of drip feed can be relied upon. Fast running motocycles require a heavy lubricant, and even under the most favorable conditions these heavy oils cannot be relied on to feed with proper regularity or certainty in any such device, especially in cold weather, and they are only retained in motocycle construction because of their cheapness.

The only safe method of lubrication is by a positive feed, and this has been provided for in the Indian by a slow running plunger pump which positively forces a continuous stream of oil to the motor. In the single cylinder machines the pump feeds all of the oil in the cam case, where it keeps the cam constantly flooded. From here the oil flows through a hole in the main shaft to the gears, and flowing over them, it then passes to the crank case where an efficient splash system provides for the lubrication of the piston, connecting rod and all other internal moving parts.

In the case of the twin cylinder machine an adjustable by-pass valve is placed in the oil pipe, which divides the flow of the oil between the forward cylinder and the cam case, and can be easily adjusted to send any desired proportion to either part. This arrangement is adopted because, on account of the direction of rotation of the fly wheels, the forward cylinder does not get its proper proportion of oil with the splash system, and the method adopted in the Indian twins fully corrects this deficiency.

For emergencies, and when the machine is used for racing purposes, a hand pump is attached to the oil tank, and within convenient reach of the rider in the saddle, where it is always ready to use. This is useful also for injecting a fresh supply of oil into the reservoir, which is formed in the bottom of the motor case, after the dirty oil has been drawn off. A window in the side of the crank case allows the amount of oil within to be readily seen.

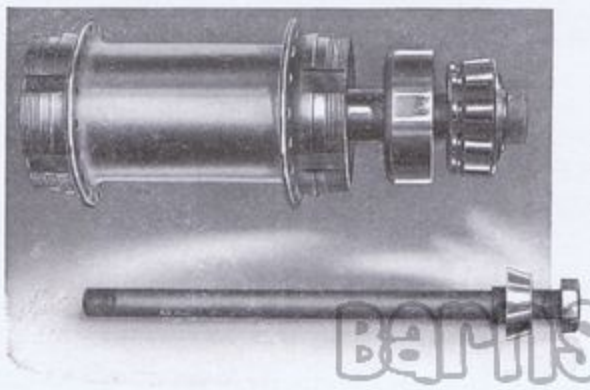
The Indian oil pump is adjustable, and can be very easily set to feed any desired amount of oil, and this amount should be determined by the average speed at which the rider is accustomed to drive his machine.

Finish

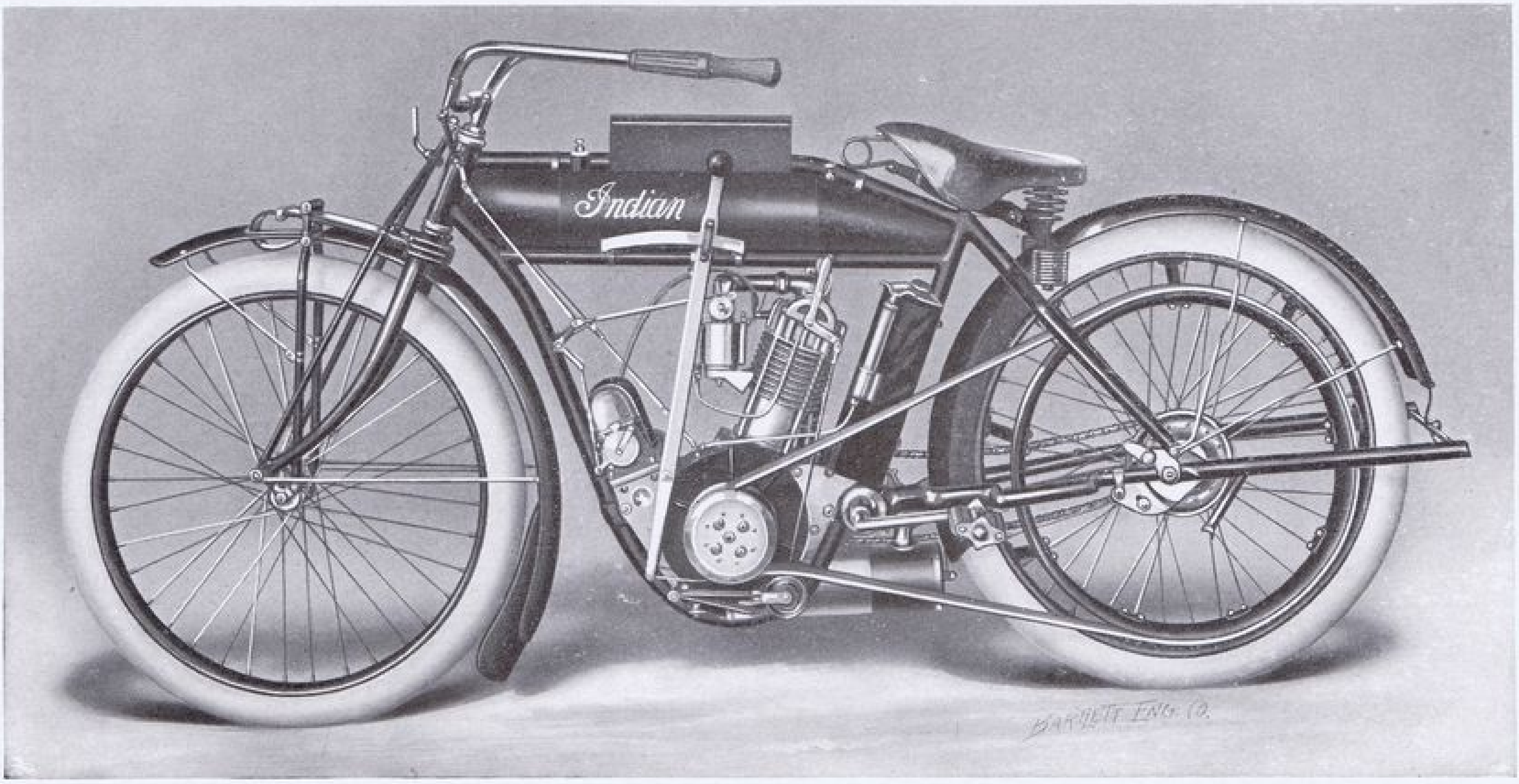
Durability of finish, as well as elegance of appearance, are of importance in a motocycle, as a poor class of work in this direction soon commences to show defects after the machine has been put into use. All bright parts on Indian machines are first copper plated, and then heavily nickel plated, giving a durable and rust proof finish. The enameled work is unusually handsome and tough, for it is supervised by one of the best experts in this line in the country.

The finish of the Indian machine is in keeping with its quality in every respect, and any owner of an Indian machine may well be proud of the appearance of his mount.

The T. T. Rear Hub



The powerful double brake designed for the T. T. models requires a strong hub to carry it, and this has been made of unusual size, not only for strength, but to accommodate large Timken roller bearings which will easily bear all shocks thrown on it by the brake, but it is also practically frictionless. The bearings are carried on a sleeve, and the heavy axle is of the knock-out type which permits the wheel to be removed without disturbing the adjustment of the bearings. The hub is also constructed in such a way that the rear sprocket may be easily changed.



Belt Drive. 4 H.P.—30.50

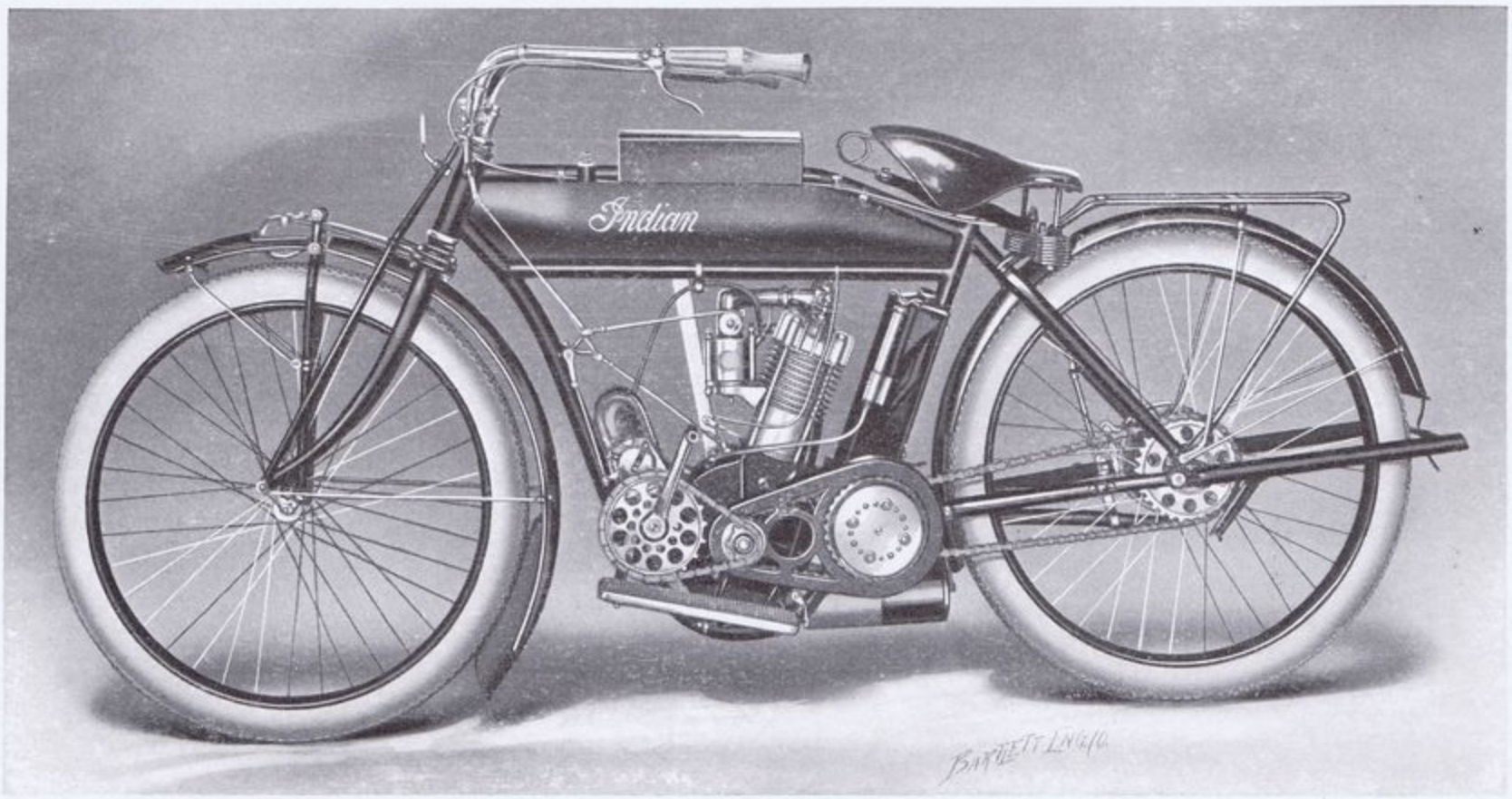
The Belt Drive Indian

The single cylinder Indian with flat belt drive, introduced last year, has proved itself eminently satisfactory to riders who insist on this type of transmission, and this model will be continued during 1912 in the 4 h.p. size only. The Indian motors develop such a great amount of power that to apply belt drive satisfactorily to the twin cylinder machine would require a belt of inconvenient proportions, which would necessitate such wide pulleys that the machine would be too awkward to meet with public favor, and consequently no twin cylinder belt machine will be supplied.

The Hendee Manufacturing Company does not believe in producing a cheap and slip-shod article, and consequently will not tolerate the makeshift of slipping the belt on the pulleys which is usually adopted. In the Indian belt drive machine an efficient clutch is incorporated in the engine pulley, which enables the machine to be controlled with a most perfect nicety without tearing the belt and pulley lagging to pieces by permitting the belt to slip to assist in maneuvering the machine.

As varying road conditions make it desirable to vary the tension of the belt, and to provide for a reasonable amount of stretch, an improved spring mounted idler pulley is applied to this machine. This is most conveniently operated by a small lever and quadrant mounted on top of the cylinder, and within easy reach of the rider's hand.

The above construction of the Indian belt drive, with free engine clutch and spring mounted idler, is the most conveniently operated and efficient machine of its class ever introduced; and in competitions from one mile to one hundred miles with other belt driven machines it has proved itself in every respect superior.



T. T. Model. 4 H.P.—30.50

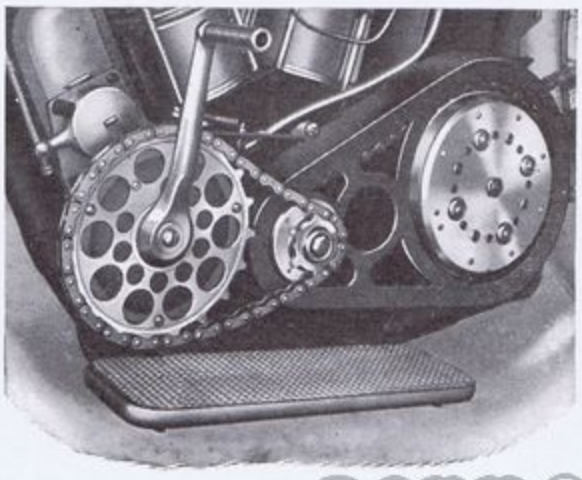
Wheels and Wheel Base

Twenty-eight inch wheels will be used on all Indian models as usual, as this is the smallest practical size that can be used for smooth riding. For 1912 both rims and spokes have been increased in size and strength to meet the strain which continually increasing speeds produce.

The standard Indian wheel base of 53 inches will be maintained on all models, except the T. T. models fitted with the two speed gear and these have a wheel base of 55 inches.

The large front hub with knock out axle, adopted in 1911, has proved most satisfactory, and the same style will be used this year.

The Indian Foot Starter



The Indian foot starter is the most original and perfect improvement introduced this year. The difficulty of starting a motocycle with a hand crank is not only the exertion of turning the machine over fast enough, but the great liability of the machine to back-fire under these circumstances, and to injure the operator.

The Indian starter is operated by the foot and only requires a single thrust to turn the engine over about two and one-half times, which is ordinarily sufficient to start. As soon as the engine starts the small sprocket is automatically thrown out of engagement with the engine shaft. If the motor back-fires an ingenious arrangement of ratchets instantly throws the large sprocket wheel from the pedal and absolutely avoids all back kick on the crank. It is believed that the Indian foot starter is the only one introduced which makes this very necessary provision against injury from back-fire.

Prices of Indian Motocycles for 1912

4 h. p. single cylinder, magneto ignition, (chain or belt drive)	$
7 h.p. twin cylinder, magneto ignition, (chain drive only)	
4 h.p. T. T. model, magneto ignition, (chain drive only)	
4 h.p. T. T. model, with two speed, magneto ignition, (chain drive only)	
7 h.p. T. T. model, magneto ignition, (chain drive only)	
7 h.p. T. T. model, with two speed, magneto ignition, (chain drive only)	

THE INDIAN FREE ENGINE CLUTCH AND IMPROVED ARMORED MAGNETO ON ALL MODELS WITHOUT EXTRA CHARGE

Guarantee

Each and every Indian Motocycle is guaranteed to be free from imperfections in workmanship and material, and any part which proves defective within the year of its manufacture, when sent to us, transportation charges prepaid, will be replaced free of charge, subject to our inspection and decision. The damages for which we make ourselves liable in this guarantee are limited to our replacement only of defective parts. If machines or assembled parts are sent to us in which labor is necessary to insert replaced parts, a reasonable charge for the labor will be made. In each instance a letter giving full and detailed particulars should be sent us, giving the number of the engine, to avoid delay in identifying consignment. As motocycles are liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse, abuse or neglect. We do not guarantee any parts of the equipment or specialties not of our own manufacture, such as Tires, Coils, Magnetos, etc., as these parts are guaranteed by their respective manufacturers; and should they develop defects, should be sent direct to such manufacturers. Every Indian Motocycle sold by others than our recognized dealers is sold without our guarantee, unless otherwise provided.

Horse Power and Cubic Measurements

Believing that the term, horse power, as used to designate the efficiency of gasoline motors, is a much abused caption, and, furthermore, believing that the only true way of rating an engine of this type is by the cubic measurement of its piston displacement, we have adopted this method of distinguishing our different models. At the same time, we also, for convenience to our customers, have retained the horse power rating, in accordance with our custom of former years. The term horse power has been applied by various manufacturers to their engines without regard to actual power developed, and consequently, has been a deception from the start. With the cubic measurement as a basis, true comparison can at all times be made and a uniform standard maintained, not only one machine with another but one make with another.

Telegraph Code

Bind	Indian 30.50 (4 h.p.) single cylinder, regular model, chain drive.
Bolt	Indian 30.50 (4 h.p.) single cylinder, regular model, belt drive.
Brisk	Indian 61.00 (7 h.p.) twin cylinder regular model.
Broad	Indian 30.50 (4 h.p.) T. T. model.
Brook	Indian 61.00 (7 h.p.) T. T. model.
Braid	Indian 30.50 (4 h.p.) T. T. Two-Speed model.
Bulk	Indian 61.00 (7 h.p.) T. T. Two-Speed model.
Call	Indian Blue Finish.
Camp	Indian Red Finish.
Deaf	Indian Mesinger Saddle, Standard No. 4.
Deal	Indian Mesinger Saddle, Cavalry No. 4.
Elapse	Gear for hilly country.
Elope	U. S. Studded Tread Tires.
Elude	Goodyear Studded Tread Tires.
Figure	Ship by Freight.
Flint	Ship by Express.
Fair	Ship by Freight—Draft attached to B/L.
Foam	Ship by Express—C. O. D.
Fog	Sent by Mail.
Gay	Send a supply of Catalogs with order.
Get	Answer by Wire.
Glad	Answer by Mail.
Glide	Shall we Ship?
Glue	How soon can you Ship?
Good	Have you Shipped?
Hall	Have you Received?
Head	Was shipped by Freight.
Hedge	Was shipped by Express.
Hide	Have written you today.
Hinge	Will Ship at once as directed.
Hop	Machine has not arrived.
Hot	We are sending Tracer today.
Hour	Order received; if nothing prevents, will ship.
How	Have not in stock.
Just	Can fill order promptly with.
Keep	Why don't you ship?
Kit	Shipment delayed on account of.
Lamp	Ordered on the
Lens	Shall we enter order for?
Lumber	We expect to.
Meek	See our letter of

Selling Agents will find this code of great value in reducing cost of telegrams.

Indian Gear Table

Engine Sprocket	Clutch Sprocket	Counter Shaft Sprocket	Rear Wheel Sprocket	Ratio of Gearing
12 teeth	32 teeth	20 teeth	27 teeth	3.6 to 1
12 "	32 "	20 "	31 "	4.13 to 1
12 "	32 "	20 "	35 "	4.66 to 1
12 "	32 "	20 "	39 "	5.2 to 1
12 "	32 "	20 "	43 "	5.73 to 1
12 "	36 "	20 "	27 "	4.05 to 1
12 "	36 "	20 "	31 "	4.65 to 1
12 "	36 "	20 "	35 "	5.25 to 1
12 "	36 "	20 "	39 "	5.85 to 1
12 "	36 "	20 "	43 "	6.45 to 1
14 "	36 "	20 "	27 "	3.47 to 1
14 "	36 "	20 "	31 "	3.98 to 1
14 "	36 "	20 "	35 "	4.5 to 1
14 "	36 "	20 "	39 "	5.0 to 1
14 "	36 "	20 "	43 "	5.52 to 1

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