

NEW-HUDSON

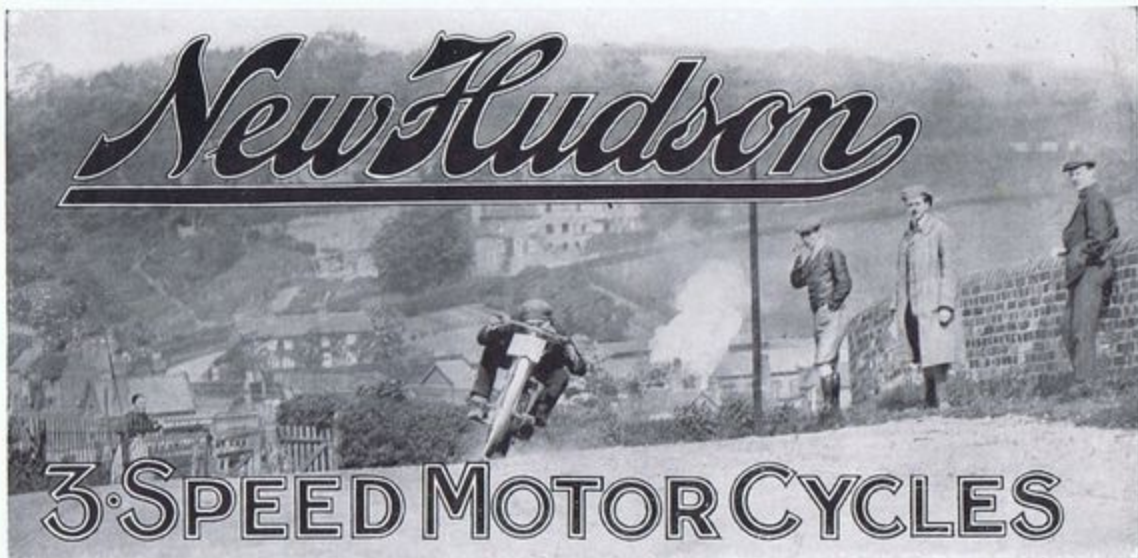
3 - SPEED

MOTOR
CYCLES



BARNSTORMERS.CO.UK

New Hudson



3-SPEED MOTOR CYCLES

G PATTERSON, Jun., on his New-Hudson Three-Speed, jumping the bridge at Coalport.

[By permission of "Motor Cycling,"

The New-Hudson Cycle Co. Ltd.

Birmingham, England.

Registered Office:
Summer Hill Street.

Telegrams:
"WONDER,
BIRMINGHAM."

Telephone:
6523 (4 lines) Central.

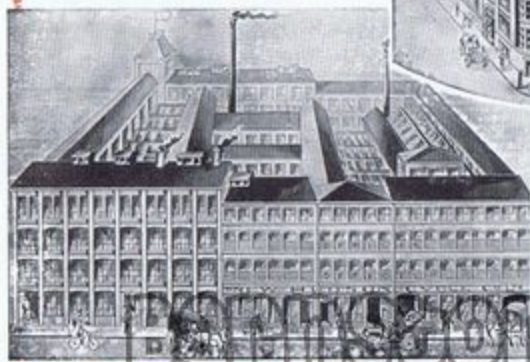
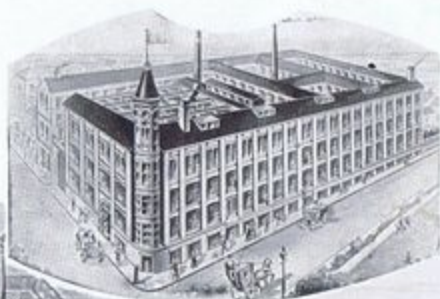
LONDON—
43, Grays Inn Road,

MANCHESTER—
205, Deansgate,
171, Oxford Road.

BELFAST—
108, Ann Street.

CAPE TOWN—
Corner Strand Street
and Long Street.

PARIS—
Rue de Sablonville, Neuilly.



THE NEW HUDSON CYCLE CO. LTD.



FOREWORD.

The New-Hudson 3-speed Motor Cycle is the pioneer of variably-gear motor cycles, and in a single season revolutionised motor cycling as a sport. It made history in the motor cycle industry by demonstrating the great ability of variable gears. It solved the important question of speed control, and thereby vastly extended the usefulness of the motor cycle.

The Variably Geared Machine has taken a powerful hold on the motor cycling community, who were quick to appreciate the splendid qualities of the Armstrong 3-speed gear when the New-Hudson 3-speed, by reason of its many triumphs in reliability tests and hill climbing competitions, indisputably proved its superiority over higher powered single-gear machines again and again.

Variable Gears have become a necessity for all round work, and will be in universal demand; their manifold advantages are acknowledged by experts, their necessity proclaimed by the Auto Cycle Union, their reliability has been proved beyond doubt, for machines fitted with reliable gears (in most cases Armstrong 3-speed) have been victorious in all the great races and tests of the year.

There are no limits to the usefulness of the 3-speed motor cycle, while a single-gear machine holds the rider completely at its mercy. The 3-speeds enable him to travel anywhere without fear of steep or tortuous hills, caring nothing for rough roads, and knowing that when passing through the busy streets of the city he can so control his speed that he can crawl through traffic with perfect ease and safety, while the top gear provides high speed. To the New-Hudson 3-speed no hill is too steep. They will climb any hill, and restart on gradients up to 1 in 5 with the rider in the saddle, no road too rough or difficult. Their splendid services in countries where few roads exist are convincing proof of their power and dependability.



"After 1,000 miles without trouble of any kind."

BarnstorfMilers.co.nz

For rapid and economical travel

Professional men, Inspectors, Supervisors, Agents and many others, who must of necessity cover long distances, find the use of the New-Hudson 3-speeds an economical and pleasant method of saving time, labour and money, while in the Colonies it has proved invaluable as a means of transit over rough roads and mountainous country.

The New Hudson Motor Cycle

has won confidence at home, in the colonies and dependencies, and in foreign countries. At home it has been consistently successful in open competitions for hill climbing and reliability, no other machine has such a record of victories; in the colonies and dependencies, Canada, South Africa, Australia, New Zealand, India, it has proved to be exactly the machine wanted, and is held in high favour; while in foreign countries, France, Italy, Switzerland, Egypt, Holland, America, and others the New-Hudson 3-speed is rapidly making a name under the most exacting conditions. They have achieved that popularity by sheer merit, the merit of efficiency and reliability, and their ability to do all the rider requires.

The New-Hudson 3-speed Motor Cycles

are manufactured by the New-Hudson Cycle Co., Ltd., whose prestige and reputation for the past 30 years is well known wherever bicycles are ridden. The sound design combines correct principles properly applied, perfect materials and construction give them the qualities essential to reliability and efficiency. The splendid finish bears the stamp of superiority while the New-Hudson trade mark on a Motor Cycle is the sign of expert approval after final inspection and running tests.

The 2½ h.p. New-Hudson 3-speed Motor Cycle

is a powerful machine of medium weight, economical in use, easy to handle, light on tyres, and has demonstrated its exceptional capability and absolute reliability under all conditions of service.

The 3½ h.p. New-Hudson 3-speed Motor Cycle

is ideal for side car work and a perfect type of machine for mountainous or rough country. It has more power than any other Motor Cycles of equal engine capacity, while the immense advantages of the **Armstrong 3-speed Gear and Free Engine Clutch** give to this powerful machine that efficiency and reliability in which it excels, and admits of any speed from 5 to 50 miles per hour.



BARNSTORMERS.CO.NZ
G. PATTERSON, Jun., changing gear on the bad bend on Shelsley Walsh.
[By permission of "Motor Cycle"]

SOME NEW-HUDSON SUCCESSES IN 1911.

A.C.U. RELIABILITY TRIALS, JANUARY, FIRST CLASS CERTIFICATE

Kop Hill Climb (Open)
April 8th, 1911

TWO FIRSTS, TWO SECONDS
TWO GOLD MEDALS.

Harrogate Hill Climb,
Halton Moor (Open)
April 15th, 1911

THREE GOLD MEDALS. THREE SILVER MEDALS AND SILVER CUP.

Shap Fell Hill Climb
(Open) April 17th 1911

FIRST, SECOND, THIRD

A.C.U. RELIABILITY TRIALS, APRIL, TWO FIRST CLASS CERTIFICATES

Only Six Awarded.

Bristol Hill Climb
April 29th, 1911.

TWO FIRSTS

Birmingham Hill Climb
April 29th, 1911

TWO FIRSTS

} New-Hudson 3-Speeds.

Streatham Hill Climb
Tilburstow April 29th 1911

TWO FIRSTS

Kop Hill Climb (Open)
250 Entries
May 6th, 1911

SEVEN FIRSTS, SEVEN SECONDS, THREE THIRDS

FOUR GOLD MEDALS AND 3 SILVER CUPS.

New-Hudson 3-Speeds wins 17 places.

Glasgow Hill Climb,
Stoney Moulín Hill
May 6th, 1911

FIRST AND SECOND

London to Land's End &
Back 550 miles. reliability
trial (Double Journey)

SILVER MEDAL

2½ h.p. New-Hudson 3-Speed.

S.E. London Hill Climb,
May 13th, 1911

TWO FIRSTS, FOUR SECONDS, TWO THIRDS

BROOKLANDS TEST HILL, OFFICIAL CERTIFICATE.

May 9th, 1911.

Roy W. Walker ascended from Standing Start.
Weight of machine and rider 327lbs.

Coalport Hill Climb
May 20th, 1911

FIRST, SECOND, THIRD Three New-Hudsons started and finished in first five.

Birmingham Hill Climb
(Open) Shelsley Walsh
June 10th, 1911

§FIRST, §SECOND, THIRD §Two best performances of the day for efficiency.

London to Edinburgh
24 hours' reliability trial

GOLD MEDAL

Lancashire Hill Climb,
Sawley Bank
June 17th, 1911

FIRST (On Time) FIRST (On Formula) GOLD MEDAL.

Harrogate Hill Climb
June 10th, 1911

FIRST 2½ h.p. New-Hudson 3-Speed

M.C.C. Inter-team,
reliability trials

NON-STOP CERTIFICATE H. O. Beard

Shropshire M.C.C
Llandudno and Back

NON-STOP CERTIFICATE S. W. Moss

Birmingham to Land's
End

TWO MEDALS Only 2 New-Hudson 3-Speeds entered

Their performance the most convincing argument so consistently successful.

Barnstormers.co.nz

JUNIOR TOURIST TROPHY RACE, I.O.M. (150 miles including 4 ascents of Snaefell)

H. G. Dixon, 2½ h.p. New-Hudson 3-Speed.	A.C.U. GOLD MEDAL.
Wenlock Edge Climb, A.C.U., Mid. Centre.	TWO FIRSTS, TWO SECONDS Over 100 entries.
Birmingham M.C.C. June 10th, 1911	CHAS. JARROTT SILVER TROPHY & GOLD MEDAL
Harrogate M.C.C. June 10th, 1911	THE PILCHER TROPHY
Lancashire M.C.C. June 17th, 1911	HAROLD ECCLES CUP & GOLD MEDAL

A.C.U. THIRD RELIABILITY TRIALS, JULY, TWO FIRST CLASS CERTIFICATES

Two New-Hudsons only entered.

SCOTTISH SIX DAYS' RELIABILITY TRIALS, JULY, AWARDED MEDAL.

George Bell, 3½ h.p. New-Hudson 3-speeds:

N.E.A.A. & Durham M.C.C. Hill Climb July 29th, 1911.	RECORD	C. W. Smith. 2½ h.p. New-Hudson 3-Speed
A.C.U. Six Days' Trial August, 1911.	GOLD MEDAL SILVER MEDAL	H. G. Dixon. 3½ h.p. New-Hudson 3-Speed T. C. Atkinson. 2½ h.p. New-Hudson 3-Speed
Coventry Open Hill Climb Newnham Sept. 2nd, 1911.	TWO FIRSTS, TWO SECONDS, ONE THIRD	
Roy W. Walker 2½ h.p.	Two New-Hudsons win Six Prizes.	
Tunstall Hope Hill Climb Sept. 9th, 1911.	FIRST	C. W. Smith. 2½ h.p. New-Hudson 3-Speed
M.C.C. Hill Climb, Sundon September 9th, 1911.	SILVER MEDAL	Roy W. Walker. 2½ h.p. New-Hudson 3-Speed
Sutton Coldfield A.C. and Oxford M.C.C. Newnham Sept 23rd, 1911.	FIRST	H. O. Beard. 2½ h.p. New-Hudson 3-Speed
Dundee M.C.C. Hill Climb October 2nd, 1911.	FIRST	2½ h.p. New-Hudson 3-Speed

P. J. EVANS TROPHY, OCTOBER

3½ h.p. New-Hudson 3-Speed created a New Record by ascending Sunrising Hill with Side-Car and Passenger.

Canterbury New Zealand M.C.C. Hill Climbing Competition Nov. 30th, 1911.	FIRST SECOND THIRD	† G. Patterson, Junr. 2½ h.p. New-Hudson 3-Speed L. Edvean. 2½ h.p. New-Hudson 3-Speed A. E. Scott. 2½ h.p. New-Hudson 3-Speed
† Faster time than Winners of Heavy Classes.	Best Performance of the Day.	
Otago, New Zealand M.C.C. Hill Climb, Dunedin Dec. 9th, 1911.	FIRST THIRD	G. Patterson, Junr. 2½ h.p. New-Hudson 3-speed A. E. Scott. 2½ h.p. New-Hudson 3-Speed

FRENCH M.C.C. ROAD RACE, DECEMBER.

3½ h.p. Standard Touring Machine Second. Beaten only by Stripped Racing Machine.
FIRST for Touring Machines under 300 c.c. Average over 30 m.p.h. in pouring rain.

London to Exeter & Back 24 hour Reliability Trial Dec. 25th, 1911.	GOLD MEDAL GOLD MEDAL	H. Graham Dixon. 3½ h.p. New-Hudson 3-Speed Roy W Walker. 3½ h.p. New-Hudson 3-Speed
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Two New-Hudson 3-Speeds entered and gained highest possible Award.

The NEW-HUDSON 3-Speed does all we claim for it.

BANSTOPPERS.CO.NZ



At the foot of the Upper Grindelwald Glacier. The First Motor to climb there.
MOTOR CYCLE MOUNTAINEERING.

Personal Experiences in the Swiss Alps by Dr. W. Stocker, of London, England.

THE wisecracks prophesied disaster when I proposed to attempt the seemingly impossible task of crossing the Alpine Passes into Italy on my $2\frac{1}{2}$ h.p. 3-speeds New-Hudson Motor Cycle, which I had been using daily in my practice in London. It certainly seemed a pretty tough proposition for a middle-aged professional man, weighing 16 stone, to tackle, especially as I am by no means a motor expert, and my preparations for my annual holidays were too hurried for the machine to have any special tuning up or preparation at the works, though they kindly offered to do this for me.

No special difficulties were experienced with getting past the various Customs Officials, as I had "been there before," as the Yankees say, and I soon arrived in Switzerland, at Thun, where the first bit of real climbing began up to Interlaken. As it was a blazing hot day and I had a big bag with 30 pounds of luggage on the back carrier, the 1,800 feet rise took some doing, for it finished up with a long stretch of 1 in 6 gradient, where the road (?) had been re-metalled and left unrolled—consequently it was a mass of loose stones, which were very awkward on the hairpin corners. However, the machine got up quite comfortably on the lowest of the three speeds.

On arriving at Grindelwald I found there was a sort of road which was closed to automobiles, about 5 kilometres long and leading up to the Upper Grindelwald glacier. As I argued that a motor bicycle is not an automobile I put her at the forbidden track, which degenerated into a mere path with two deep ruts carved out by the carts bringing gravel down from the glacier. However, "she" went gaily on, across four water splashes, right up to the foot of the glacier without a stop. This was the first motor of any description to negotiate this climb, which was something of a feat all things considered.

My next move from Interlaken was over the famous Brunig Pass to Lucerne. My New-Hudson behaved beautifully, though the gradients are very steep, and the road covered with loose metal. I stopped once to cool the engine and admire the view, and she re-started on the clutch quite comfortably and came to the top in a way that proved an eye-opener to the chauffeur of a 40-50 six-cylinder Rolls-Royce car. When I got to Brunnen I saw the Grand Hotel, Axenstein, perched on the mountain 1,000 feet above the Lake of Lucerne, with a cogwheel or rack railway running up to it. Although no motor of any sort had been up this before, I had a shot at what seemed a sheer impossibility, and I got up all right by the side of the rails in spite of the gradient being 1 in 4 and 1 in 5 and sharp curves frequent.

Reassured by this I proceeded with my plans of crossing the Alps to the Italian lakes by the Saint Gothard Pass, and returning by the Simplon into Switzerland again.

I successfully negotiated the Saint Gothard Pass, although it was still closed to traffic and would not be open for another two weeks or so. I left my aerial palace—the Hotel Axenstein—and dropped down the 1 in 5 to the Axenstrasse.

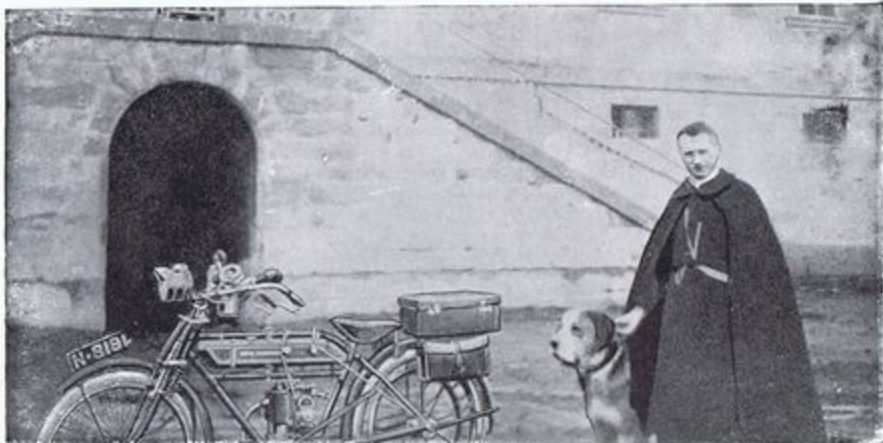
I went straight on to the Saint Gothard—then the real climb began. The road ascends after Amsteg 1,300 feet in 2 kilometres.

I made good progress to Gressabau, when to my dismay I found I could not proceed any further as no motor was permitted to Aidermann until 6 p.m. When I arrived I was then informed that the pass was blocked



At the Italian Frontier.

with snow and was closed to traffic. However, to return was unthinkable, so I got permission to go as far as the snow. I started immediately and soon began mounting. I was not restricted to speed, as the pass being closed I had it to myself. I got to the snow in about 40 minutes. There was, indeed, heaps of it, and men at work cutting a road through. I was just going back when two of the men suggested to me that four of them might drag the bicycle through the snow to the Hospice



At the Hospice of Saint Bernard.

of Saint Bernard, which was quite close. Then they began their labors, and it took two hours hard work for four men to reach the top. They told me there was no snow on the other side. When I reached the top, however, I found the snow steeper, deeper and more dangerous than on the side I had come up. Here I was in a fix. I could not return without the men's help, so I bargained for them to get the bicycle down. It proved most difficult and dangerous—the slope is very steep and the snow entirely covered the zigzag road, making a clear sweep of snow 1,000 ft. down, an angle of 45 degrees. One man cut steps while another man held on to the handles on the upper part of the slope, whilst two men held the machine up beneath. More than once I thought the bicycle was going to glissade right down the slope. However, they were Alpine guides, used to snow, and worked like Trojans, and after two more hours of this work they at last passed the last snow slope. I was thankful, but the bicycle was covered with cakes of snow—the back wheel was a solid mass of frozen snow. They cleared it as best they could and then I was anxious to try how it would run after all this. I was glad to find she fired perfectly. I then ran quickly down to Airolo. Next morning she was going as well as ever, and I did 100 miles over the vilest roads, and through two Alpine thunderstorms; but I think I have said enough to prove that the New-Hudson will go anywhere and do anything. I stayed at the Hotel Belle Vue, at Pallanza, on Lago Maggiore, in Italy, for a few days, and then left for the Simplon Pass. I fought my way up to Simplon Village against the hail, wind and rain. At last I reached the summit (over 7,000 feet up), with the surrounding country still covered with snow.

The descent into Brieg and Berisal was really far worse than the ascent, owing to the skiddy roads and frequent hairpin corners, with unprotected precipices at the sides. In spite of my care I came a cropper on one of these, luckily without damaging the machine much, though I was covered with bruises.

Things were so bad that I put up for the night at Sion; and next morning I had a lovely run of 80 miles into Lausanne, on the Lake of Geneva, where I stopped a day and then went on to Pontarlier, in the Jura Mountains, across the French border. Owing to the calls of business, I had to return by train after riding on to the outskirts of Paris, via Dijon and Troyes, a distance of over 150 miles. Altogether I did over 800 miles in nine days, without any trouble with the machine. This seems to me a far more searching test than any amount of "Tourist Trophy" races and reliability trials where the machines are, in most cases, specially prepared by experts, and ridden by them. Without a really reliable and efficient variable gear and clutch it would be the height of folly to dream of touring in the Alps. Even an 8 h.p. Twin would be quite useless with a fixed gear, owing to the appalling road surfaces and frequent acute corners rendering anything but a slow speed impossible in many places.

It must be remembered that my New-Hudson was only fitted with a 2½ h.p. engine (70×76 m.m. bore and



At Lake Como.

stroke, with automatic inlet valve—the older pattern). I found the big crank case clearance of no less than six inches, and the excellent magneto position (15 inches from the ground and high up behind the cylinder out of the way of wet and mud) simply invaluable on the boulder strewn roads encountered; also they had deep cross ditches in many cases which were raging torrents in wet weather.

The well-designed and sturdy New-Hudson 3-Speed created a vast amount of interest everywhere, and astonishment at its phenomenal mountain-climbing abilities; whilst it was a striking contrast to some of the flimsy foreign machines which seemed more fitted for ambling along boulevards than for serious work.

I have previously taken several holidays in Switzerland with a pedal cycle, but they are very slow after the motor cycle sort. *Motoring, Canada.*



WHAT EXPERTS SAY OF THE MARVELLOUS NEW - HUDSON — 3-SPEED — MOTOR CYCLE.



AUTO CYCLE UNION.

"No Motor Cycle is properly equipped for all-round work unless equipped with variable gear or clutch."

MOTOR CYCLE.

"One thing absolutely certain, change speed gears are now undoubtedly reliable."

EASTERN MORNING NEWS.

"The Trials (A.C.U. Six Days) proved over again that for all-round utility and convenience a variable gear is a 'sine qua non' to the Motor Cycle."

"Of the variably geared machines the Armstrong Triplex Hub never gave a moment's trouble."

MOTOR CYCLING.

"Atkinson's New-Hudson put up one of the best performances in the Trial, he took the machine just as it was out of the shop window and rode it without mechanical trouble of any sort."

GLASGOW CITIZEN.

"The 3-speed New-Hudson did magnificently."

MOTOR CYCLING.

"2½ h.p. New-Hudsons with 3-speed Gears went well, and were certainly two of the best finished and best turned-out machines."

GLASGOW EVENING CITIZEN.

"The variable gear class was interesting, as it showed the difficulty of starting on an up grade on clutch only."

MOTOR CYCLE.

"The variably geared machine is the only mount for the rider who wants to go everywhere without a lot of fiddling by the roadside."

BIRMINGHAM GAZETTE.

"Their achievements form a striking testimony to their reliability."

MOTOR CYCLE.

"We found re-starting on a gradient quite easy."

BIRMINGHAM DAILY POST.

"Thoroughly deserved the applause of enthusiastic onlookers."

MOTOR CYCLING.

"The new 4 h.p. New Hudson 3-speed was one of the best looking and neatest machines in the Quarterly."

MOTOR CYCLE.

"A 2½ h.p. go-anywhere machine—the fascinating New-Hudson. The 3-speed Hub brings hills of the calibre of Sutton Bank easily within its range."

MOTOR CYCLING.

"After a standing start on the 1 in 5 . . . the 2½ h.p. New-Hudson went up in magnificent style, picking up speed like a big car."

The fastest single-geared machine in the Junior Tourist Trophy Race could get no nearer than seventeenth, and of the first sixteen exactly half were fitted with the Armstrong Gear, besides being placed 1st, 2nd, 3rd and 4th.

Every New-Hudson Motor Cycle fitted with the Armstrong 3-speed Gear—the strongest, most efficient, and most reliable clutch applied to Motor Cycles.

These extracts afford gratifying evidence of the enthusiastic approval and satisfaction, and testify to the fact that the New-Hudson will do all we claim for it.

barnstornmenz.co.nz

THREE SPEEDS

In conjunction with 2½ h.p.

OUR further acquaintance with the 2½ h.p. three-speed New-Hudson has even improved the high opinion we formed of it on the occasion of our initial test. Easy to start, a really speedy machine, economical to run, and absolutely reliable and dependable for hill-climbing under all conditions, no wonder it is taking a powerful hold of the motor cycling community.

Why, only a couple of years ago people would have laughed at the idea of such a lilliputian engine climbing Snaefell Mountain unaided, yet the machine recently sailed up with ease with our 11½ stones in the saddle, and never once required the lowest gear. It picked up after the hairpin and the Gooseneck in surprising fashion.

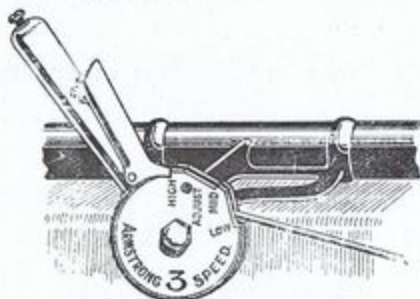
The New-Hudson, with its gracefully swept down top tube, enables the lowest saddle position of any standard mount we have yet ridden, and the increased feeling of comfort and security as a result is most pronounced.

The Well Balanced Engine.

The engine of the machine we tried was the new model mechanically operated side by side valve, and the absence of effort on the part of this engine when running between 20 and 30 miles per hour greatly impressed us. Knocking

and labouring are practically non-existent; it responds to the throttle in a manner suggestive of

applying spurs to a war-horse, and in conjunction with the three-speed gear we found we could do more than we could with the finest of 3½ h.p. single-gear machines, and with a good deal less fuss and less risk to the rider, which is saying a good deal.

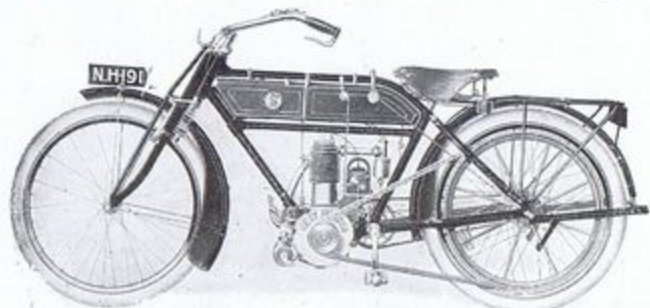
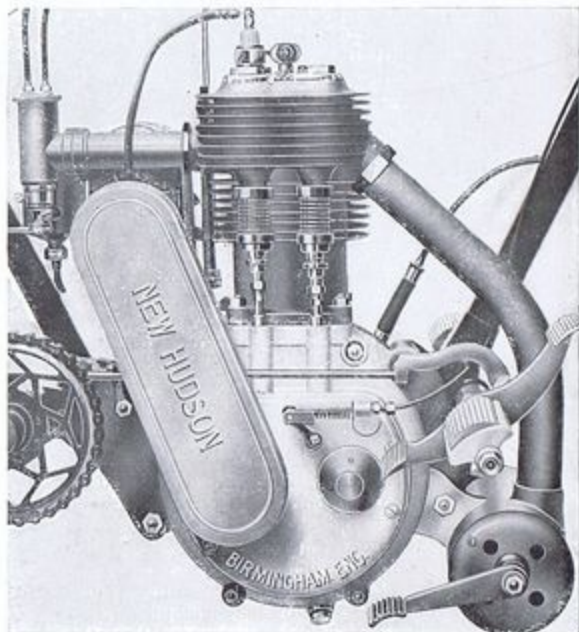


New type of gear changing lever and bracket fitted to the forward part of top tube. The fittings are larger and stronger than hitherto fitted to Armstrong gear.

It seems almost unnecessary for us to refer to the bicycle work of the New-Hudson, for this Company always made a pretty bicycle, and if we say that they commenced designing motor cycles where other people left off we consider we have hit the nail on the head.

To revert to the gear, this is simplicity itself to manipulate. With the lowest ratio in engagement one may crawl at a speed limited only by the capability of remaining upright which discounts fully two-thirds of the fears associated with traffic riding. Once or twice in riding the machine in traffic we have been brought to a standstill but have remained seated in the saddle until an opening occurred, and by digging on the ground with our feet with the lowest gear in engagement, the engine fired immediately on releasing the valve lifter.

During our trials of the machine we have been convinced over and over again that a variably-gear mount is the simplest to manage. On tortuous hills a single-gear mount is most difficult to control and keep going, and many are the risks taken by their riders in approaching blind corners at too fast a speed, whereas the nonchalant owner of a variably-gear mount progresses upward and upward at a comfortable pace, slow but sure, utterly oblivious to the number of twists and hairpins which may abound. And these are in brief the main reasons which have caused us to thoroughly believe in the ultimate future of the variably-gear motor cycle.



2½ h.p. three-speed New-Hudson with which our trial was made.

New Hudsons give satisfaction always, not only today, but for years to come.

BARNSTORMERS.CO.NZ

INTERESTING EXPERIENCES.

From Riders of

NEW-HUDSON 3-SPEED MOTOR CYCLES.

Mr. E. L. BENTLEY, of East India Avenue, London, E.C., writes on September 12th, 1911:—

"I have just returned to London with my 3½ h.p. 3-speed New-Hudson, which I bought just before my trip to Yorkshire, and it may interest you to hear the results, especially as I was wholly unacquainted with the machine when starting. 1.—London to York in 8 hours (net riding time on the first day). 2.—The machine took Sutton Bank at first attempt on the way north. 3.—Lythe and Blue Banks were taken six times and three times respectively, my machine **never failing on any hill**. 4.—I could crawl down the many precipitous hairpin bends as easily as I could mount them. 5.—The engine and 3-speed gear are beyond all praise, and give any speed between **5 and 50 miles an hour**. 6.—After over a thousand miles riding (including some of the worst roads) I have never touched the engine. I have had four of the best known makes of motor cycles, but prefer the New-Hudson to any machine I have yet ridden. I heartily congratulate you upon your well-earned success. I have never given a testimonial before, but you are at liberty to use this, which was quite unsolicited."

"Never failing."

Mr. E. P. HUNT, of Johannesburg, in a letter addressed to the Editor of "Motor Cycling," October 17th, 1911, says:—

"One of the machines, the 2¾ h.p. New-Hudson fitted with Armstrong gear created quite a sensation by its speed, ease of handling and the way it could get over sluits and thick dust where the heavier machines had to stop and push over. My friend, who rather prides himself of the speed of his machine, was a little crestfallen when he discovered that the little 2¾ h.p. was a match for him on good roads, and beat him easily on bad ones. The New-Hudson is the type of machine that is wanted in this country."

"Created a sensation."

Mr. SAKA F. LAWANI, of Lagos, writes on September 6th, 1911:—

"I have given a trial to the machine, and have found it to be a most wonderful one. I have ridden it more than 500 miles since it came to hand, and I have had already several challenges from riders in Lagos with more powerful machines. None of them, however, can beat my New-Hudson."

"A Wonderful Machine."

J. C. MARSH, care of Office of the Administrator of the Transvaal, Pretoria, S.A., writes on July 3rd, 1911:

"I have purchased one of your 3-speed 2½ h.p. machines with automatic inlet valve engine, which is giving entire satisfaction and runs like a top. I am quite a novice, never having ridden a motor until I went for a ten mile spin by myself on this one. I find the low speed extremely useful for picking one's way over our rough roads or through traffic, and a convenient means of starting."

"Runs like a top."

Mr. WM. ASHTON MANDALE, of Workington, writes us:—

"My 2¾ h.p. New-Hudson came to hand last Tuesday. Two days later, on Thursday, September 7th, I gave it a trial run up to Keswick, 22 miles away, and I was simply astonished to find that the second and bottom gears were never required, even though very stiff hills had to be climbed. The time taken was 36 minutes. On the same day I ascended Latrigg Hill, 2,203 feet high, on the approach to Skiddaw, never having ridden a New-Hudson machine before. The road is a bridle path, very rough and steep, about 6ft. wide with four hairpin corners. These four corners are really more than "hairpin" because they come to a sharp angle of 45 degrees, and are mostly covered with short slippery grass. On the last ascent, a gradient of 1 in 3, I came to a standstill, but not before I had disengaged my clutch, thus keeping my engine running. I had to jam my front brake on, also hold myself from slipping back with my left foot, then accelerate the engine to the full. When I engaged my clutch I did not think for one moment she would get away (on such a gradient as 1 in 3), but she did, and the top was reached. May I further say that through the whole of this severe test I never heard the slightest approach of 'knocking' in the engine, and the little machine brought me home to Workington even better than on the outward journey. Also I am ready at any time to repeat the ride."

"Climbs 1 in 3 Gradient."

R. J. MECREDDY, Esq., Editor of the "Irish Cyclist," writes:—

"I was very much struck with the machine generally. I may also say I have the highest possible opinion of the Armstrong Motor Hub, and my views exactly coincide with yours as to the general utility of the 2½ h.p. machine fitted with this change speed gear, and I applaud your perspicacity in having selected this as your standard. The ponderous, heavy, high-powered machine only appeals to a certain section. **What is wanted is a light, easily-managed machine which will run smoothly and quietly in traffic, and which with the aid of the variable speed gear will climb practically any hill.**"

"Will climb any hill."

Mr. J. BURNS, Buchanan Street, Glasgow, says:—

"I am highly delighted with your machine. I gave it a short trial and found the 3-speed Gear and Free Engine Clutch works very sweetly indeed. This is just the machine which a great number of people are waiting for. Easy to start, easy to control in traffic, and with the excellent ratio of the Armstrong 3-speed Gear **no hill too steep to climb**. I have every confidence in saying that when once the public finds that it is such a good thing there will be a regular boom in the Armstrong 3-speed Hub."

"No hill too steep to climb."

ARMSTRONG MOTOR CYCLES

INTERESTING EXPERIENCES.—Continued.

Mr. FRANK DUNDERDALE, Motor Engineer, 61, Lower Mosley Street, Manchester, writes on October 14th, 1911:—

"It may interest you to hear the account of my first trip on the 2½ h.p. New-Hudson 3-speed Motor Cycle. I went out to look for real test hills, so started for Buxton, which was reached on top gear, with the exception of the steep bit out of Horridge End. **The way the gear changes is really splendid.** From Buxton I rode toward the 'Cat and Fiddle,' but the 'old' road attracted me on account of the tales I had heard of its gradients, so I decided to explore it. I suddenly struck a road surface that was truly awful, and dropped the gear lever to the low position. After stopping at the end of this bad bit, I started the engine up on the stand, de-clutched, and got the machine going. The machine soon got under way, and I rode on to the 'Cat and Fiddle,' where I dismounted to inspect things, but everything was right. The tyres and rims were as good as new, and the belt pulley ran quite true. Then followed a splendid trip on top gear into Macclesfield, occasionally de-clutching, stopping the engine, and allowing the machine to free wheel swiftly and in silence down the long grades. I then went to Clinlow Cross and to the top of the fearful gradient known as Wincle Hill. Down this hill with engine in low gear, exhaust valve lifted and both brakes hard on, I cautiously 'subsided.' At the bottom I turned round, and the machine romped to the top again on low gear with plenty of power in reserve. I need not say I am pleased with the machine. Anyone who was not pleased with a motor bike that behaved as this did would be hard to please indeed."

"A real test"

Mr. A. S. BRIGHT, Glazebrook, 52, Elfindale Road, Herne Hill, London, S.E., writes:—

"Of the whole behaviour of the machine I have nothing but the highest praise. It is a wonder, it fairly eats the hills. Not with the dangerous gulp of a powerful twin, which means taking impossible corners at impossible speeds, but it takes them with a comfortable 'chew,' but it eats them all the same; besides, chewing is a much more healthy process than gulping. I smiled on several occasions when I left a big single looking very much overheated near the top of some of the hills. I was faster too than the Douglas or Moto-Reves, and, of course, infinitely better on hills. The machine was much admired for its handsome appearance, and the gear aroused a deal of attention."

"Fairly eats the hills."

N. SLUYTER, Pretoria, writes on May 6th, 1911:—

"I have the pleasure to inform you that I have now used one of your New-Hudson Motor Cycles for the last three weeks, and am glad to say that I am very well satisfied with the running of same. The 3-speed gear is very useful and handy, especially on our bad South African roads."

Mr. C. J. TRACY, 140, Queen's Avenue, Watford, Herts, writes on September 17th, 1911:—

"I use my 2½ h.p. 3-speed New-Hudson for business purposes, and have so far covered about 1,300 miles without any trouble whatever, or even a misfire. I have had a long experience—some 12 years—of all types of motor cycles, cars, etc., and can assure you that my machine for comfort, reliability, hill climbing, etc., quite eclipses anything I have previously ridden. In my opinion it is better than a 3½ h.p. Triumph (fixed gear). It is certainly more comfortable to ride. I have much pleasure in speaking of the 2½ h.p. New Hudson as I find it, and I ought to know something about motor cycles; this is the seventh I have personally owned."

"Eclipses anything I have ridden."

Mr. F. HALL, Cycle Agent, Broughton Astley, near Leicester, says:—

"My customer says he likes the machine very much. He considers it most compact and easily handled. He would not have anything else, as he thinks the New-Hudson far and away the best he has examined."

"Compact, easily handled"

W. & A. SCOTT, Dunedin, writes on the 15 August, 1911:—

"The New-Hudson Motor Cycle has caused quite a sensation out here. Certainly the 3-speed gear is a beautiful combination; it works very well, and makes motoring a pleasure. A great number of our riders require a 3½ h.p. as our country is so hilly, but the little 2½ h.p. seems a little marvel on our hills."

"A Marvel on hills"

Dr. T. FOLEY, Ardmore, Youghal, Co. Cork, writes:—

"Very pleased with my machine (2½ h.p. 3-speed). Could not live without it now. The roads in this district are some of the worst in Ireland."

"Could not live without it"

Mr. T. M. SLEIGH, Managing Director of the Rossleigh Ltd., Edinburgh, says:—

"I have to compliment you on your Motor Cycle. It is without doubt the neatest thing I see anywhere. It has a splendid appearance, and I am confident that the running of the machine is equally good. The instructions to the rider will be appreciated by novices."

"The neatest thing I have seen."

H. CHAMBERS, Hamilton, Ontario, Canada, writes on June 1st, 1911:—

"I may say that I have tested your motor cycle, and find it very satisfactory. I consider it to be the best lightweight that I have ever ridden."

"The best lightweight"

Mr. W. B. ELLIS, Newcastle-on-Tyne, writes:—

"I may say that I am absolutely satisfied, and so is my boy, with the 2½ h.p. New-Hudson. It has been a splendid machine. It has never given the slightest trouble, and is a splendid worker. It is only for one of your 3½ h.p.'s and I declare that I am thinking of exchanging, otherwise I want nothing better for solo work."

"Never given slightest trouble"

Barnstormers.co.uk

THE ARMSTRONG THREE - SPEED GEAR AND CLUTCH (PATENT).

HIGH SPEED
MIDDLE " "
LOW " "
FREE ENGINE

ALL IN THE HUB!

NO COMPLICATIONS!
EVERLASTING WEAR!
ONLY WANTS OILING!

The Gear.

As great an improvement in motor cycles as was the introduction of the magneto, it is the very perfection of gear construction, embodying "simplicity and reliability." It has solved the problem of variable gears for motor cycles, and proved itself equal to the most severe and exacting tests that can be devised. Is the most complete and efficient variable gear which has yet been introduced for the **Motor Cycle**, and at the same time the simplest and most perfect for its work—**lighter, stronger**, and more satisfactory in every respect than anything of the kind yet brought before the public. The many successes of the **New-Hudson** in hill-climbing and reliability contests conclusively prove the immense advantage of the three speeds.

Use of the 3-speeds.

1. **THE LOW GEAR** is sufficiently low to enable machines to climb the steepest of hills, whilst for starting purposes in traffic or town riding it is invaluable.
2. **THE MIDDLE GEAR** is useful for general purposes, and will take ordinary hills without pedal assistance.
3. **THE HIGH GEAR** will enable riders to attain an extra 7 or 8 miles per hour on favourable roads, and prevents racing of the engine and consequent over-heating.

Gear Changing.

either up or down, is perfectly easy at any engine or road wheel speed, without throttling down, lifting the exhaust valve, or de clutching. Absolutely no skill is required, and the **faster the gear changing lever is moved the better.**

There is no possibility of damaging the gears by changing quickly. This may seem too good to be true, but it is a positive fact, and, moreover, the gear changes are effected instantaneously and without the slightest noise or jar.

Gear Ratios.

The **Gear Ratios** are approximately 5 to 1, 7 to 1 and 10 to 1, but these can be varied simultaneously, either **higher or lower**, by altering the size of the engine pulley. For instance, a rider may alter his engine pulley to give gears of 4 to 1, $5\frac{1}{2}$ to 1 and 8 to 1.

Free Engine Clutch.

Is of the **multiple disc type** running in an oil bath, and is self-contained in the back hub where it is out of the way of dust, water, or mud, and free from any risk of accidental damage. **The clutch**

pedal is conveniently situated on the right-hand foot rest, and automatically stays in position whether engaged or disengaged. To engage the clutch it is only necessary to depress the heel or back portion of the double pedal and let the front portion rise slowly with the pressure of the clutch springs, easing it with the ball of the foot.

Ability.

A $2\frac{1}{2}$ h.p. **NEW-HUDSON** with 3-speed gear will easily climb (without assistance) such well-known test hills as;

SUTTON BANK,
KOP HILL,
BROOKLANDS TEST HILL,
WILLERSEY,
BIRDLIP,

ST. GOTHARD & SIMPLON PASSES,
SUNRISING,
ARTHUR STREET, EDINBURGH,
FARLOW BANK,
EDGE HILL,

and restart on them from a standstill, on the clutch, with the rider seated in the saddle. This conclusively proves the advantages that are derived by the use of the 3-speed gear. It is possible to climb any hill where the wheels will hold the road.

A $2\frac{1}{2}$ h.p. **NEW-HUDSON** machine, fitted with the 3-speed Gear, will mount hills that many a higher powered machine fails at, more especially on a hill with an awkward turn or bend in it, the low gear enabling the rider to keep his engine running at a normal number of revolutions, with the machine travelling at a reasonable pace, and enables him to round awkward corners on hills without risk of skidding, etc.

ARMSTRONG

THE NECESSITY FOR SPEED GEARS ON MOTOR CYCLES.

THE AUTO CYCLE UNION the governing body of Motor Cycling in
their published regulations definitely state :

“That no Motor Cycle is properly equipped for all-round work unless fitted with a Variable Gear and Clutch.”

The **NEW-HUDSON THREE-SPEED** does more, it gives you Three Speeds and the best plate clutch in existence.

**THE GEAR THAT
NEVER FAILS.**

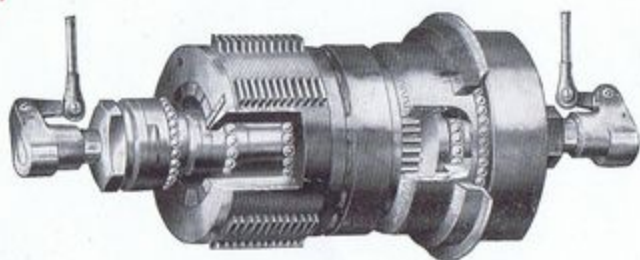
**PROVED
RELIABILITY.**



**NO
COMPLICATIONS.**

**EASY AND
SIMPLE.**

**ONLY WANTS
OILING.**



The Armstrong 3-speed Gear and Clutch, which enables even a novice to negotiate even the worst hills, the roughest roads, and the most crowded traffic, with ease and certainty.

Enables a 3½ h.p. Engine to do the work of a 6 h.p.

The Armstrong 3-Speed Gear possesses great advantages over two-speed machines. The intermediate gives on the low gear greater hill-climbing capacity, slow speed in traffic without declutching, ease of starting with engine running, and a feeling of absolute security on greasy surfaces.

The intermediate allows smaller ratios between high and low, and eliminates the shock of gear changing; it also allows the engine to be run at a more regular speed. Hills can be climbed on middle speed without racing the engine, the high gear enables the rider to run on top speed with less engine revolution, thus saving petrol, engine wear, and preventing overheating.

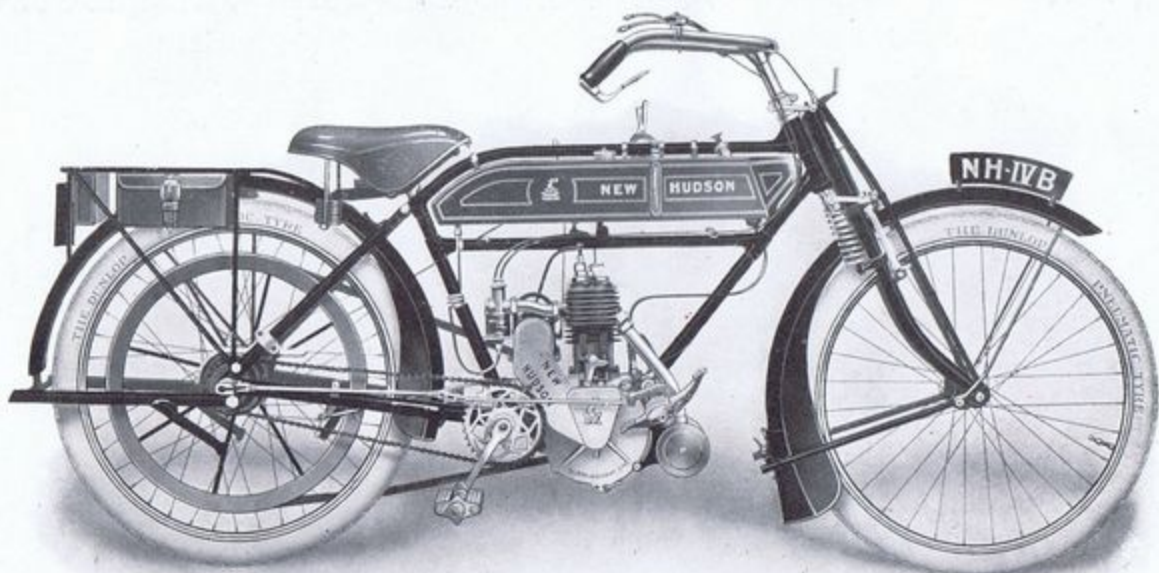
Barnstormers.co.nz
“One thing absolutely certain, change speed gears are now undoubtedly reliable.”
Motor Cycle.

2 $\frac{3}{4}$ H.P. NEW-HUDSON No. IV.B

With 3-speed Gear and Free Engine Clutch.

The great reputation of New-Hudson 3-speed Motor Cycles has been mainly built up on this model. Its success in all the big open competitions of the year, as well as in the hands of private users, has been nothing short of phenomenal.

Among those features which have made it such a prime favorite with doctors and professional men of middle age are its simplicity and absolute reliability under all conditions; its ease of control in heavy traffic, and last, but not least, its almost incredible hill climbing powers. It is the first machine of its power and weight to obtain the official Brooklands test hill certificate and to scale the great Alpine passes. It has justly earned the title of "The Mountaineering Middleweight."



Specification.

ENGINE. 2 $\frac{3}{4}$ H.P. NEW-HUDSON—JAP. Bore and stroke, 70×76 m/m=292 c.c. capacity; interchangeable side-by-side mechanically-operated valves of nickel steel. A marvel of power, flexibility and sweet running. The balance is perfect. The large clearance from the ground, six inches, and high magneto position render the machine specially suitable for use in country districts or the Colonies.

VARIABLE GEAR. ARMSTRONG patent three-speed and free engine clutch, with adjustable engine pulley (see page 12).

MAGNETO. Bosch Z.A.I., ball bearings, entirely dust and water-proof carried on an aluminium bracket, cast integral with the crank case high up behind the cylinder. Driven by gear wheels running in oil-tight aluminium case. The base plate is 15in. from the ground.

CARBURETTOR. New 1912 Brown & Barlow (variable jet and choke tube to order). Instantly accessible; very economical—will cover 120 miles per gallon petrol consumption.

FRAME. Specially designed and built throughout in our works. Of immense strength, giving very low and comfortable riding position, easily adjustable to suit a tall or short man; top tube dropped at the rear. The steering is perfect. A special anti-rust process is applied to the frame before enamelling, the finish throughout being of the highest quality.

2 $\frac{3}{4}$ h.p. NEW-HUDSON No. IV.B.

TANK. Very substantial and of large capacity. Nine pints petrol and one quart lubricating oil. Large filler caps. Petrol injection pipe to compression tap for easy starting. Fitted with petrol gauge, **double safety partition** between oil and petrol compartments, and gauze filters inside the large filler caps.

HANDLEBARS. Wide and brought well back, with dropped ends, giving perfect control and a most comfortable riding position. The wrists are at their natural angle—a great boon on long rides.

FRONT FORKS. NEW-HUDSON-DRUID, made under patent 7379/08, girder pattern. Very strong and comfortable. The springs **never** break. Fitted with special front wheel stand.

BRAKES. Very powerful foot brake, with eccentric adjustment for shoe, operating on separate drum on right side of back wheel. Pedal attached to separate lug on frame—not on footrests. Efficient front rim operated by Bowden inverted lever, from right handlebar.

TRANSMISSION. $\frac{3}{4}$ in. rubber belt, deep V section, Dunlop or Lyso.

WHEELS. 26 × 2in., heavy gauge spokes and specially strong standard size rims. Hubs, cone-adjusting, oil-retaining, and dust-proof.

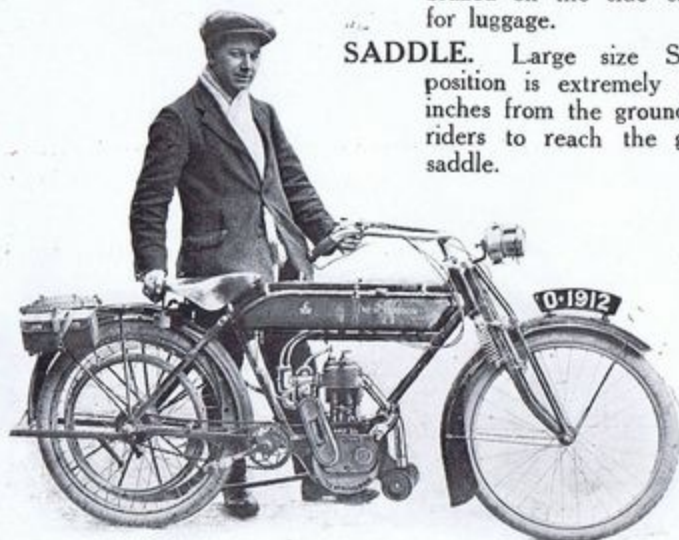
TYRES. 26 × 2in. Dunlop Special Heavy Non-Skid.

MUDGUARDS.—Long and wide; securely stayed and fitted with side wings, both front and back. The front guard is extended well forward and follows the contour of the tyre evenly, an advantage not found with some spring forks.

CARRIER. Light, but very strong tubular pattern, all joints brazed, securely stayed and bolted to lugs on back stays. Carrier, rear half mudguard, number plate and pannier tool bags are removable "en bloc," for tyre repairs on loosening **three** nuts, the whole being assembled as a unit.

TOOL BAGS. Square leather pannier bags, with internal metal strengthening strip by means of which they are bolted to lugs brazed on the side stays, leaving the top of carrier clear for luggage.

SADDLE. Large size SPECIAL LYCETT. The saddle position is extremely low and comfortable, being only 29 inches from the ground, which enables even the shortest of riders to reach the ground with both feet when in the saddle.



PRICE: NET CASH.

£70 : 0 : 0

Including 3-speeds and free engine and full equipment.

NO EXTRAS.

MR. G. PATTERSON, who on a 2 $\frac{3}{4}$ -h.p. Three-Speed New-Hudson broke the 12 and 24-hour Road Records in Australia, the previous best having been done on a 3 $\frac{1}{2}$ -h.p. T.T. machine.

This Model is also made with the 76 × 65 $\frac{1}{2}$ type of engine, and with two pairs of footrests instead of pedalling gear for those who prefer this design.

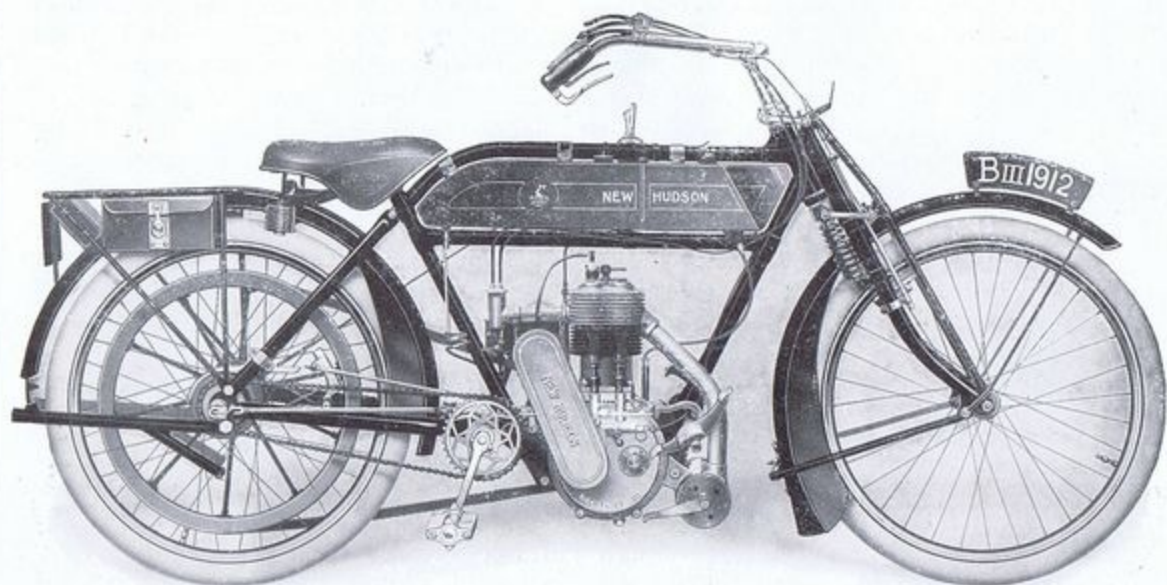
"The 2 $\frac{3}{4}$ h.p. 3-speed New-Hudson filled a long-felt want."

BARNSTORMERS.CO.NZ Price:

3 $\frac{1}{2}$ -4 H.P. NEW-HUDSON No. III.B.

With 3-speed Gear and Free Engine Clutch.

This extremely powerful model contains all the very latest improvements and refinements. We claim that it is the perfect 3 $\frac{1}{2}$ h.p. Single Cylinder for touring purposes designed specially to incorporate the Armstrong 3-speed gear. It is a machine that will "go anywhere" and "do anything." It is the very acme of perfection in design, workmanship, materials and equipment. In short, it is an "engineer's job" right through.



It is exceedingly comfortable to ride and easy to handle and control under all conditions. The reserve of engine power on the low gear is enormous, and enables the steepest hills to be climbed with ease and certainty at slow or fast speeds as desired.

Specification.

ENGINE. 3 $\frac{1}{2}$ h.p. NEW-HUDSON, 85 x 88 m/m=499 c.c. capacity. Every engine thoroughly tested and guaranteed, and made throughout in our own works (see page 22).

MAGNETO. Bosch improved 1912, Z.E.I. high tension type, entirely dust and water-proof, carried high up behind the cylinder and driven by $\frac{1}{2}$ inch pitch Renold chain running in oil-tight aluminium case. The chain is adjustable by slackening two bolts.

ENGINE PULLEY. Deep V groove, correct angle of 28 degrees, easily adjustable to enable the rider to alter all three gear ratios simultaneously, or to tighten his belt.

TRANSMISSION. The drive from the engine pulley is direct to the belt rim is by deep section $\frac{3}{8}$ in. rubber belt (1 in. to order) the most simple, silent and efficient drive ever fitted on motor cycles—and the fastest.

VARIABLE GEAR. ARMSTRONG patent 3-speeds and clutch hub (see page 12). In conjunction with the adjustable pulley sets of gears, 3 ranging from 3 $\frac{1}{2}$, 4 $\frac{1}{2}$ and 6 $\frac{1}{2}$ to 1 down to 4 $\frac{1}{2}$, 6 $\frac{1}{2}$ and 9 to 1 are obtainable.

DAVIS-BROWNE & CO. LTD.

3½-4 h.p. NEW-HUDSON No. III.B.

CLUTCH. Multiple disc type, adjustable and self contained in the back hub, where it runs in an oil bath. Operated by means of long heel-and-toe pedal through the special NEW-HUDSON system of compound levers, making it very easy and smooth in its working.

CARBURETTOR. Brown and Barlow, 1912 type. Instantly accessible and very economical and flexible (with variable jet and choke tube to order).

FRAME. Specially designed to incorporate the 3-speeds and clutch hub, and built throughout in our own works. Of immense strength and equal to sidecar work or the roughest Colonial roads. The top tube is dropped in a graceful curve and enables a very low riding position, which can be adjusted to give perfect comfort for short or tall riders.

No loose clips are employed, both stands, carrier, pannier bags, change speed quadrant, brakes, etc., being securely bolted to special lugs brazed up with the frame when first built.

All frames are treated with our own anti-rust process, which gives the enamel a better finish and greater durability, besides making corrosion, even in hot damp climates, an impossibility.

Lock-nuts, spring-washers and split-pins used throughout where necessary.

WHEELS. 26 × 2½ in., with heavy gauge spokes and specially heavy standard size rims.

TYRES. Dunlop, 26 × 2½ in., special non-skid pattern.

CARRIER. Light tubular pattern, of immense strength brazed up in one piece, and carrying pannier tool bags of improved pattern, with spring locking catches. Readily detachable, together with back half of mudguard, on slackening three nuts only, when the whole of these come away "en bloc," being built up on the "Unit" system.

SPRING FORKS. NEW-HUDSON—DRUID, girder pattern, made by us under patent 7379/08: giving enormous strength and perfect comfort. Some advantages of these forks are that the springs never break, whilst an efficient front brake can be fitted, and the mudguard follows the contour of the tyre evenly.

A front wheel stand is fitted, acting as mudguard stay, and held in position by spring-catch and wing-nut.

SADDLE. LYCETT or BROOKS B.104, size 4, with padded top. Only 29 inches from the ground.



PRICE:

£80 : 0 : 0

The above price includes full equipment
and the 3-speed gear.

NO EXTRAS.

H. Graham Dixon and Roy W. Walker in the London to Exeter and back Reliability Trials, December 20th, 1911, 3½ h.p. New-Hudson Three-Speed. Both gained highest award—Two Gold Medals.

www.camco.com.au

3½-4 H.P. NEW-HUDSON No. II.B.

With Armstrong 3-speed Gear and Free Engine Clutch.

Special Colonial or Sidecar Model.



Built for strenuous work under the most rigorous conditions it has a surplus of power and strength to meet exceptional demands or excessive strain, and has proved itself the most useful machine for all round work.

Designed in response to the increasing demand for a machine specially built throughout for sidecar work and for the roughest Colonial roads. In this model we have adopted a far larger factor of safety than is required for ordinary solo work on average roads in England.

PRICE :

Including 3-speeds and
clutch hub
and full equipment :

£85 : 0 : 0

NO EXTRAS.

Specification.

FRAME. Built throughout in our own works, and treated with our secret **anti-rust process** previous to enamelling. Of enormous strength and rigidity, reinforced throughout with liners where necessary. Back stays of heavy D section tubing, acetylene welded on our special plant. Top tube dropped to give low saddle position.

ENGINE. 3½-4 h.p. NEW-HUDSON, 85 x 88 mm bore and stroke, 499 c.c. capacity, with very heavy flywheels and moderate compression. Crank case clearance over five inches (see page 22).

3½-4 h.p. NEW-HUDSON No. II.B.

MAGNETO. Bosch 1912, Z.E.I., absolutely water-, mud- and dust proof, carried in well protected position behind cylinder. The machine can be wheeled through 18 inches of water without wetting the magneto. Driven by ½ in. pitch Renold chain running in oil-tight aluminium case, readily adjustable on slackening two bolts.

TRANSMISSION. By deep section 1 in. rubber belt, Dunlop or Lyso, or Whittle leather link-grip to order.

ENGINE PULLEY. Deep V groove, readily adjustable to give low gear ratios all round if required, and enabling belt to be tightened easily.

VARIABLE GEAR AND CLUTCH. ARMSTRONG 3-speeds and plate clutch hub. Oil retaining, dust- and water-proof. Ratios of 4¾-6½ and 9½-1 obtainable (see page 12).

This machine is designed and built throughout to incorporate this gear has double leverage clutch control, change speed quadrant on top tube and the back axle fixing with special locking device for nuts. The fork ends are machined from the solid forging and carry supports for stand

WHEELS. Front, 26 × 2¼ in., extra large front hub; Back, 26 × 2½ in. (or 650 × 65m/m to order). Both fitted with extra strong rims and heavy gauge spokes.

TYRES. Dunlop heavy non-skid pattern with security bolts. 2½ in. back, 65 m/m light car pattern to order.

SADDLE. Brooks B104, size 4, or Lycett padded saddle, large size.

CARRIER. Tubular pattern, all joints brazed and strong enough for heavy luggage. Bolted to special lugs and not clipped on frame. Detachable together with toolbags, rear half mudguard, etc., as a "unit" on loosening 3 nuts.

TANK. Very strong, and of large capacity, supported by three broad clips above and one underneath. Double safety partition between oil and petrol compartments, gauze filters to both. Large filler caps. Petrol pipe to compression tap to ensure easy starting.

This tank holds two gallons of petrol, and half a gallon of oil.

H. GRAHAM DIXON on a
3½-h.p. with Side Car,
New-Hudson 3-Speed,

the first machine under
500 c.c. with Side Car and
Passenger to climb Sun-
rising Hill in competition,
a performance repeated by
Mr. W. H. Egginton, a
private owner, in the Open
Reliability Trials, Feb 17th,
1912.

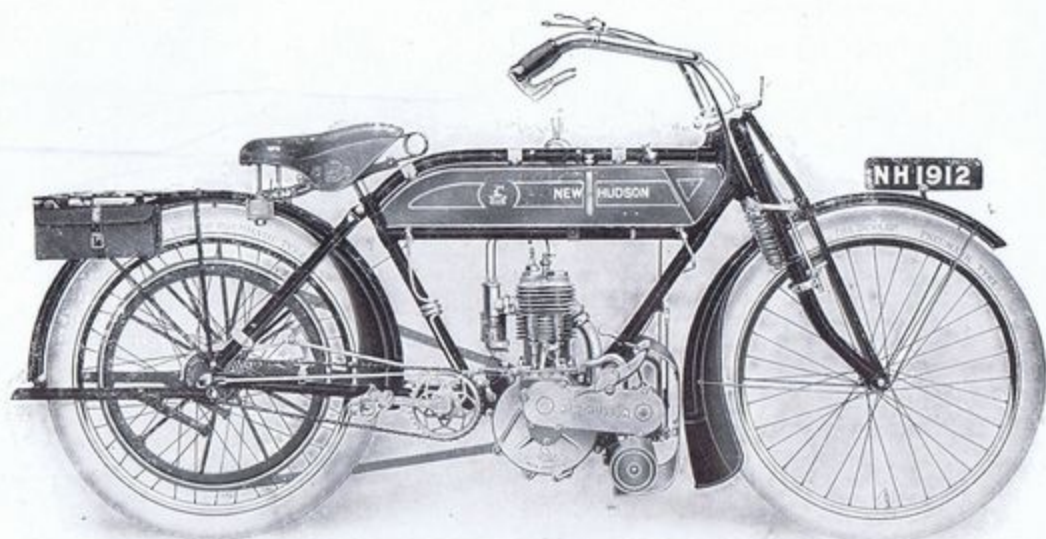
"Sunrising claimed its
usual complement of fail-
ures; but the New Hudson
and Side Car made a fine
climb." — *Motor Cycle*



BARNSTORMERS.CO.NZ

3½ H.P. NEW-HUDSON No. VIII.B.

With 3-speed Gear and Free Engine Clutch.



Specification.

ENGINE. 3½ H.P. NEW-HUDSON—JAP, single cylinder, 85 × 85 m/m.=482 c.c. capacity.

MAGNETO. Bosch 1912, Z.E. 1, ball bearing pattern, entirely dust and water-proof. Driven by enclosed chain.

TRANSMISSION By deep section ¼ in. rubber V belt, with easily adjustable engine pulley.

VARIABLE GEAR AND CLUTCH. NEW-HUDSON—ARMSTRONG 3-speed and clutch hub, made under Armstrong patents (see page 12). Gear ratio of 3½, 5 and 7 to 1 are readily obtainable.

CARBURETTOR. New 1912, Brown & Barlow (with variable jet and choke tube to order). Very accessible and economical.

SPRING FORKS. NEW-HUDSON—DRUID, made in our own works under patent 7379/08. Fitted with front wheel stand.

SADDLE. Lycett or Brooks B104, size 4, padded top.

TYRES. 26 × 2½ in. Dunlop, non-skid pattern on standard size rims.

FRAME. Made throughout in our own works, of great strength and giving very low riding position.

PRICE: £80 : 0 : 0 Including 3-speeds and clutch hub and full equipment.

NO EXTRAS

BARNSCORMERS.co.nz

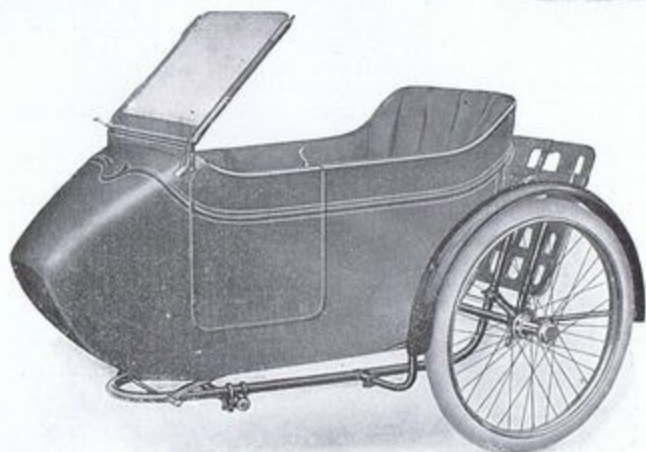
SIDE-CARS.

We strongly urge the necessity of fitting only better qualities to NEW-HUDSON Motor Cycles, on the principle that a really high grade machine is worthy of a high grade Side-car.



Type E.

Torpedo Pattern Art Cane, fully upholstered with Pegamoid, with adjustable Seat for child and apron. 26 x 2½ Dunlop Heavy Studded Tyres.



Type D.

Fitted with Art Cane Pattern Body, fully upholstered Pegamoid 26 x 2½ Midland Studded Tyres.

The Canoelet (Patent).

Original. Dainty. Comfortable.

PATENT CHASSIS and ATTACHMENT. One nut on each Clip releases Side-car.

BODY. (Reg.) Coach built and Richly upholstered.

Price :

WIND SCREEN. Price :

LUGGAGE CARRIER.

Price :

Straps for same

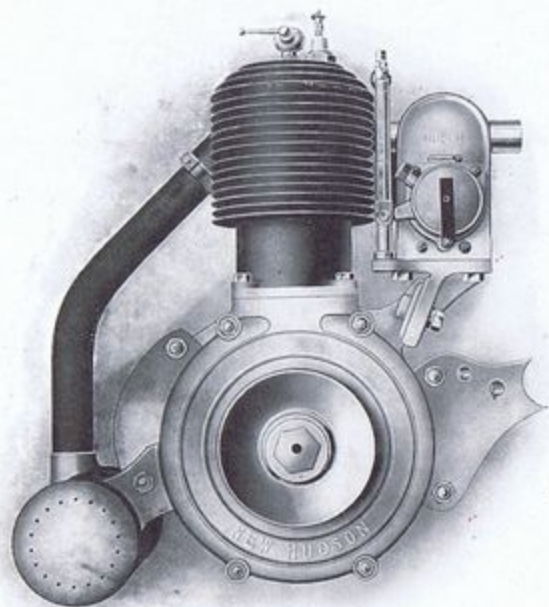
HOODS. Price :



BARNSTORMERS.CO.UK

3½ h.p. NEW-HUDSON ENGINE.

CONSTRUCTIONAL DETAILS.



Engine Pulley Side in Frame.

The Fly Wheels are extra heavy and of large diameter, with most of the weight in the rims; they are very carefully balanced to give perfectly smooth running. The connecting rod, crank pin and the main shafts are of a specially high grade of steel, and the latter run on double row self-aligning ball bearings, which give added life to the engine and last indefinitely.

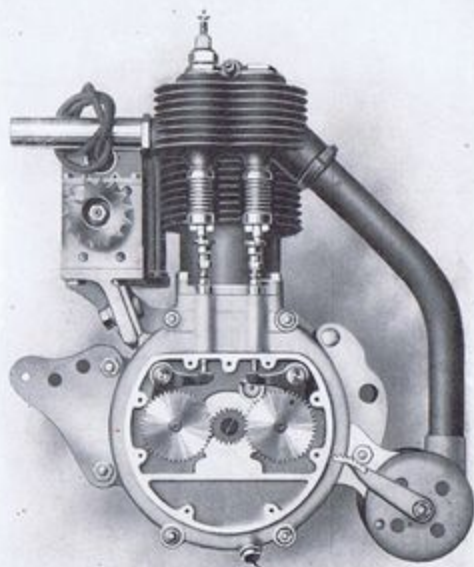
The Timing Gear is of hardened steel throughout, and careful provision is made for adequate lubrication, as any wear at this vital point seriously impairs the efficiency of an engine.

The tappets are easily adjustable, and are operated through bell crank levers by internal cams, machined and ground inside the webs of the large two-to-one wheels from the solid forging. The exhaust valve lifter works through an interposed lever inside the timing case, and as very little strain is imposed on the Bowden wire, breakage or stretching is obviated.

The 3½ h.p. New-Hudson ENGINE embodies the very latest practice and is built throughout in our own works. The bore and stroke are 85 m/m by 88 m/m=499 c.c. capacity every engine is tested before leaving the works, and gives considerably over its rated power. Every part is made dead true to limit gauges, thus ensuring absolute interchangeability.

The Cylinder Casting is a striking example of the founder's art, the radiating ribs being clean, thin and deep, whilst the ports are specially large and are designed to give a very free passage for the incoming mixture and the exhaust gases. These points have helped to produce a highly-efficient engine, which keeps very cool and maintains its power under heavy loads, making it ideal for sidecar work, as the compression is moderate.

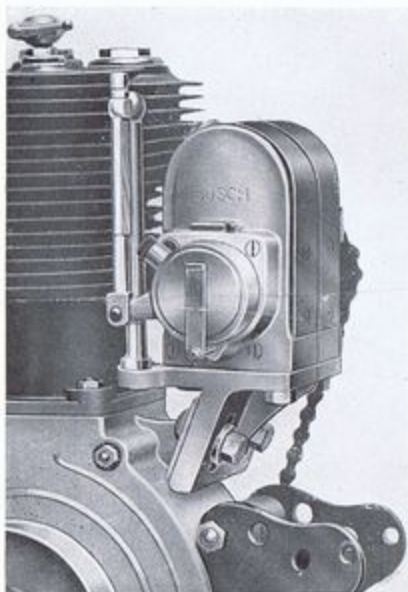
The Piston is very light but strong, and is provided with three broad step-cut rings, at the top and bottom and over the gudgeon pin, thus preventing any chance of this moving laterally and scoring the cylinder walls. The gudgeon pin is hardened and ground true to gauge, whilst it is a dead fit in the lugs cast for it in the piston; thus it cannot move or turn round.



Right-hand side of Engine showing Timing Gear.

CONSTRUCTIONAL DETAILS.

The Magneto is the new and improved 1912 Bosch (Z.E.I.) high tension type carried on a cast aluminium bracket high up behind the cylinder, where it is out of the way of any wet and mud. This magneto in itself is absolutely dust and weather-proof, whilst the single high tension wire to the sparking plug is kept quite short: apart from this, owing to the position, the machine could be wheeled through 18 inches of water without wetting the magneto. This is an immense advantage, which will be appreciated by those riders, colonial or otherwise, who have ever suffered from "drowned-out" magnetos, when crossing fords or water splashes. Bowden control from the handlebars is fitted, with a specially designed anchorage for the wire. The magneto is driven from the inlet two-to-one wheel by an enclosed Renold chain ($\frac{1}{2}$ inch pitch), which is readily adjustable by slacking two bolts and sliding the entire magneto and platform upwards, when the bolts are again tightened, locking up the whole securely.



Magneto Chain Adjustment.

Removing Cylinder. In spite of the large crank case clearance from the ground it is quite an easy matter to remove the cylinder on any New-Hudson Motor Cycle for cleaning out carbon deposit, etc., without disturbing the crank case or any other parts.

Proceed as follows:—

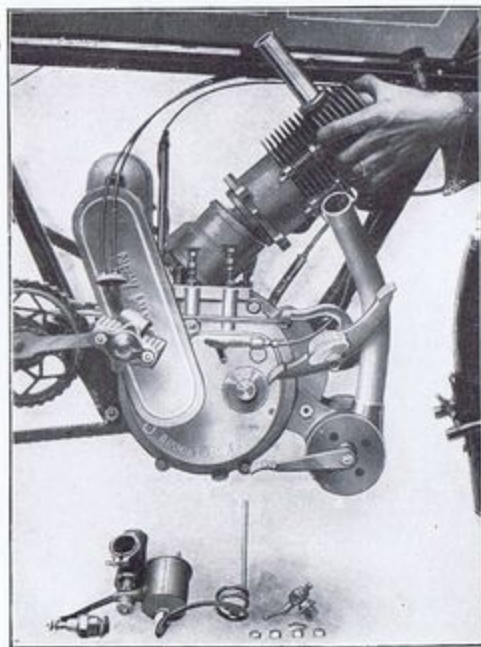
Unscrew union nut on exhaust pipe and remove the latter or swing it round out of the way. Remove the carburettor slides with half a turn of the bayonet jointed top; unscrew union nut of petrol pipe under tank. Disconnect and remove carburettor and petrol pipe complete. Remove sparking plug and compression tap, and unscrew the four nuts at base of cylinder. Remove belt from engine pulley, and turn this round until the connecting rod is pointing forwards; then gently lift up the cylinder and draw it off the piston, getting it in a line with the main down tube as shown.

Remember both piston and cylinder are of cast iron, and, therefore, more or less brittle. Place a clean duster round the connecting rod between this and the piston to avoid any chance of chipping the edges, and over the open top of crank chamber to avoid any dirt getting in.

Chip off all carbon deposit with long blunt screw-driver, and thoroughly clean out both cylinder and piston with petrol.

To reassemble proceed in reverse order, taking care that there is no grit on walls of piston and cylinder, and smear these with engine oil, otherwise they may get scored.

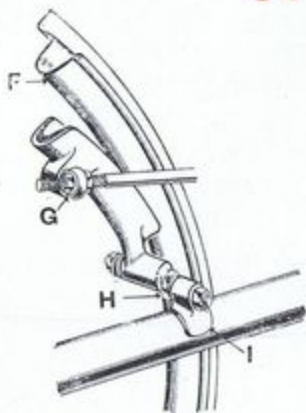
Take care to tighten cylinder base nuts evenly, not first at one corner. Carbon deposit should be scraped out at least every 2,000 miles, and it is as well to thoroughly clean out the dirty oil from the crank case with paraffin somewhat oftener, not forgetting to give two pumps of oil before running again the engine.



Showing how to remove 3½ h.p. New-Hudson Cylinder.

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CONSTRUCTIONAL DETAILS.



Foot Brake. The New-Hudson Foot Brake is operated by means of a large and conveniently placed pedal from the left footrest. This is, however, separately mounted, so that the brake is not put out of action in the event of the footrest being bent.

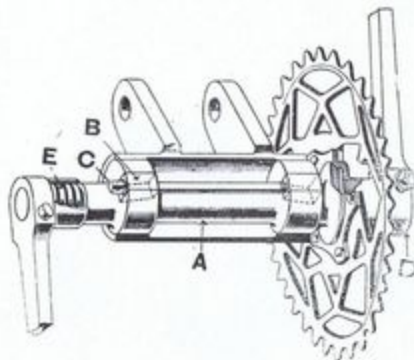
Two adjustments are provided to take up any wear; firstly the eccentric bolt which is secured to a lug brazed on the right hand chain stay, which allows the brake shoe to grip the brake rim snugly; and, secondly, the adjustable nuts on the brake rod itself, which are provided with spring washers. A split pin also passes through the end of this rod as an additional safeguard. A special composition is used for the brake pad, which does not glaze and grips in wet weather. As this brake is made extremely powerful for side-car work, care should be taken not to apply it too suddenly, or it may skid the back wheel when used solo.

The Bottom Bracket is mounted eccentrically to provide an easy means of chain adjustment, and obviate any chance of the back wheel getting out of line, as happens when it is free to slide in the fork ends. To tighten the pedal chain loosen the square-headed bolt, which expands the two wedge pieces against the bottom bracket shell, and revolve the whole eccentric casting as required; then lock up again.

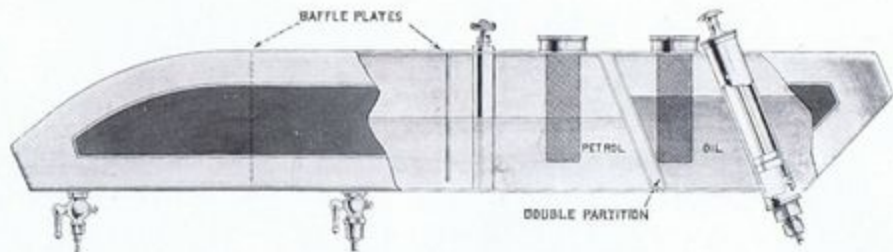
The spindle runs in plain bearings, and a coil spring is provided inside the left hand crank end, which presses together the two clutch-like conical surfaces inside the chain wheel. This effectively prevents any annoyance from the pedals revolving when the machine is running, and the rider has his feet on the footrests.

The pedals are wide and have blocks of compressed leather instead of rubber. This is far more durable than rubber, and does not get slippery in wet weather.

The crank ends are split and contracted by means of small square-headed bolts on to the threaded end of the pedal spindle, when these are screwed home. The pedals are never left on the road through their unscrewing and falling off.



Back Carrier. An example of New-Hudson attention to details is found in the "Unit" system of assembling the carrier, pannier bags, number plate and rear half of split mudguard so that they can be removed *en bloc* in a few seconds simply by loosening three nuts. The leather pannier tool bags are not strapped or hung on the carrier but are bolted to lugs brazed on the side members, through a steel strengthening strip passing round inside them. This leaves the top of the carrier free for luggage, and it is obviously easier to effect tyre repairs with the whole of the carrier, etc., removed than when it is merely swung partly out of the way. There are no loose screws or nuts and the whole is absolutely secure and rigid when bolted to the special lugs on the back stays.



Tank The illustration shows the specially large and strong tank on the Colonial Model H.B. 3 1/2 h.p. New-Hudson. This holds approximately two gallons of petrol and half a gallon of engine oil. It is provided with transverse baffle plates for strength and to stop the petrol washing about inside. The following features are standard on all New-Hudson tanks—a double safety partition between the oil and petrol compartments, giving increased stiffness at this vital point, and preventing any chance of the oil and petrol mixing in case of accidental damage. Large diameter filler caps are provided, with internal gauge filters and a petrol gauge with its glass barrel sunk flush with the tank, besides a needle valve to cut off the flow of petrol to it if required. All our tanks are designed to stand Colonial roads. We need say no more.



Oil Pump.

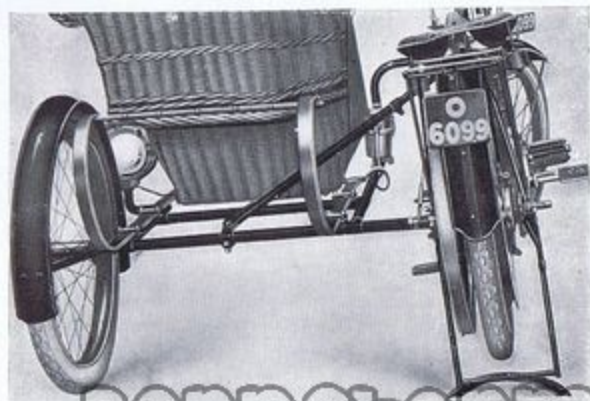
The New-Hudson Oil Pump

is of the tapless variety and is placed inside the tank, avoiding any risk of leakage or accidental damage. The Plunger **A** should be pulled up slowly, which draws the oil in through the passages **F**, past the suction valve **E**; when the plunger is depressed the oil is forced past the spring controlled ball valve **H**, to the engine. Care should be taken to filter the oil as any dirt or grit may interfere with the action of the valve and cause flooding of the crankcase with oil.

Front Wheel Stand. A light but strong tubular front wheel stand is fitted on all New-Hudson 3-speed Motor Cycles, which is bolted to lugs brazed on the ends of the Druid spring forks. This will be found a great help for cleaning purposes, adjusting the front wheel or steering head ball bearings, and for tyre repairs. When out of action it takes the place of the lower mudguard stays, and is held in place by a spring clip, which can be tightened by a wing nut.



Front Wheel Stand.



With Stand Attachment

New-Hudson Self-Aligning Stand Attachments.

Designed for use with a side-car, obviates the difficulty experienced with stands of the usual type when the back wheel of a side-car combination is jacked up. With an ordinary stand all the load is taken on one corner, which alone touches the ground, and this obviously unmechanical arrangement imposes several cross strains on the back stays and side members of the stand. With our new device, however, the weight is evenly distributed, and is supported at two points some distance apart even on a road with a steep camber or ruts. It is only intended for passenger work and may be removed in a few seconds simply by undoing one nut, when the machine is used solo, leaving the stand as usual.

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Important to Riders.

The satisfactory running of the Gear depends upon the following:—

1. Lubricate the gear daily with ordinary cycle lubricating oil. **Do not use thick engine oil.**
2. Keep both the gear and the clutch correctly adjusted, as per instructions.
3. See that the spindle nuts are always secured properly, otherwise the spindle may revolve and cause a breakage.
4. Keep side shake out of the rear wheel by adjusting the **right** cone.
5. **Do not disturb the left cone**, as this gives correct position to the internal parts of the gear.
6. When changing gears it is much better to change sharply than slowly—the faster the better—and there is **no necessity to de-clutch.**
7. Do not dismantle the gear for curiosity sake, as it is inadvisable to re-assemble the gear under unfavourable conditions without proper tools.

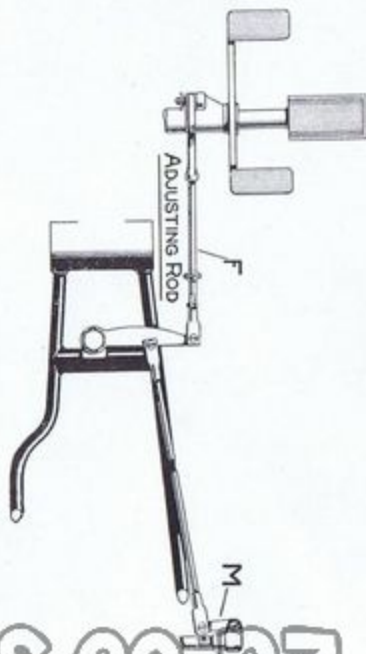
The Free Engine Clutch

is of the multiple disc type running in an oil bath, and is self-contained in the back hub where it is out of the way of dust, water, or mud, and free from any risk of accidental damage. The clutch pedal is conveniently situated on the right hand foot-rest, and automatically stays in position whether engaged or disengaged. To engage the clutch it is only necessary to depress the heel or back portion of the double pedal and let the front portion rise slowly with the pressure of the clutch springs, easing it with the ball of the foot.

To Adjust Free Engine Clutch.

The Free Engine Clutch is adjusted in following manner:—

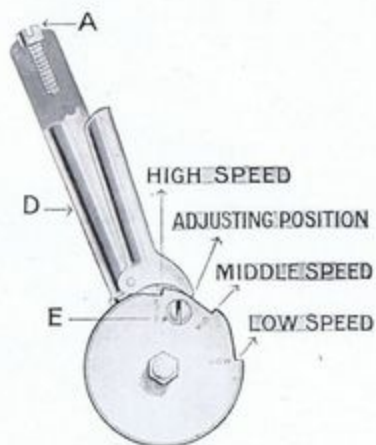
- 1.—Unlock nut **G**, shown in sketch.
- 1.—Revolve pull-rod **F**, until the wheel only just turns freely with the foot pedal in the disengaged position, and re-lock securely by the lock-nut **G**.



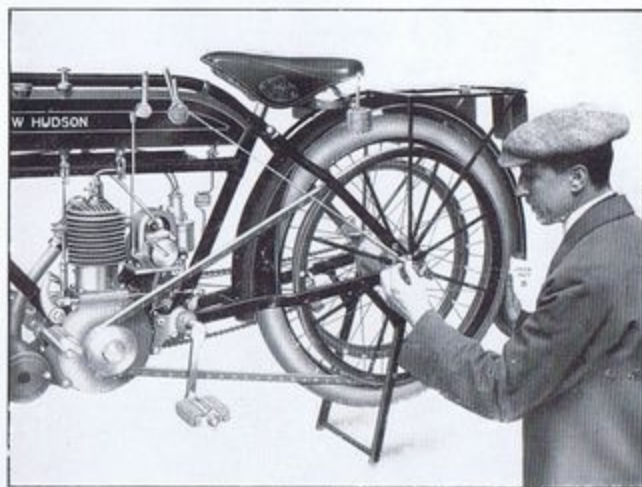
NOTE.—Do not adjust the clutch too tight as this throws unnecessary strain upon the mechanism.

How to Adjust the Gear.

1. Take out screw **A**, pull control lever over to the adjusting position (see illustration) and insert the screw in the hole marked **E**, this will retain the operating lever in a neutral position.
2. Unscrew the lock nut **B** and turn the knurled adjusting sleeve **C** until you find the free or neutral position, by revolving the back wheel by hand; meanwhile the clutch should be in the driving position.
3. When the free position is found, replace the screw **A** in the lever **D**, and re-fasten the lock-nut **B** securely.



Three-speed Control.



The illustration shows a rider actually adjusting his gear by finding the "free" position. While turning the knurled nut **C** with his finger and thumb, he is also trying to revolve the back wheel in either direction to find free position.

When he finds the wheel is free to revolve in **both directions** the gear is correctly adjusted. It is then only necessary to secure the knurled nut **C** in position by screwing up the lock-nut **B**, shown in the sketch.

Gear Changing,

either up or down, is perfectly easy at any engine or road wheel speed, without throttling down, lifting the exhaust valve, or de-clutching. Absolutely no skill is required, and the **faster the gear changing lever is moved the better.**

There is no possibility of damaging the gears by changing quickly. This may seem too good to be true, but it is a positive fact, and, moreover, the gear changes are effected instantaneously and without the slightest noise or jar.

To Dismantle the Gear.

Simply remove the spindle nuts and cone on the right-hand side, then unscrew the left hub end **D** (left-hand thread) on left side, and the whole of the interior can be withdrawn from hub shell. When re-assembling in the reverse order, care should be taken that operating mechanism **A** and **L** are not screwed too far on the spindle.

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Side Cars, Spare Parts, Accessories, &c.

Engine Spares.

	2½ h.p. 70×76 m/m	3½ h.p. 85×85 m/m
Inlet and Exhaust Valves, complete	- - -	- - -
Spring only	- - -	- - -
Automatic Inlet Valve, com- plete with seating, for Model IV.A, 2½h.p.	- - -	- - -
Ditto, less seating	- - -	- - -
Seating only	- - -	- - -
Crank Case Drain Taps	- - -	- - -

- *Sparking Plugs, Bosch - - -
- * " " " Lodge - - -
- *Exhaust Valve, complete, 2½ h.p. - - -
- *Exhaust Valve, complete, 3½ h.p. - - -
- *Repair Outfits, from - - -
- Vulco and Dunlop (large) - - -
- *Belt Punches, from - - -
- *Belt Fasteners, "Forward" - - -
- *Generators, from - - -
- Lamp Sets, from - - -
- Lucas' Acetophote, No. 319, self-
contained - - -
- *Lucas' "King of the Road"
No. 458, with special forked
bracket and generator - - -
- Lucas' "King's Own," No. 452 - - -
- *Motor Horns, various, from - - -

Motor Oils--

- Price's Motorine A, per gallon - - -
- " Huile de Luxe " - - -
- " Luburno," Regd. - - -
(Strongly recommended.)
- Vacuum Mobiloil B, per gallon - - -
- Case of four Spare Jets, for
Brown & Barlow's carburettur - - -
- Bosch Magneto Spares Outfit -
- D.A.1. ball bearing type - - -
- D.A.2 " " " - - -



We can supply Lyso Rubber Belts, Bosch Magneto, Brown & Barlow's spare parts, etc., at makers' list prices.

We recommend the items marked thus * as a suitable and adequate equipment for NEW-HUDSON Machines.

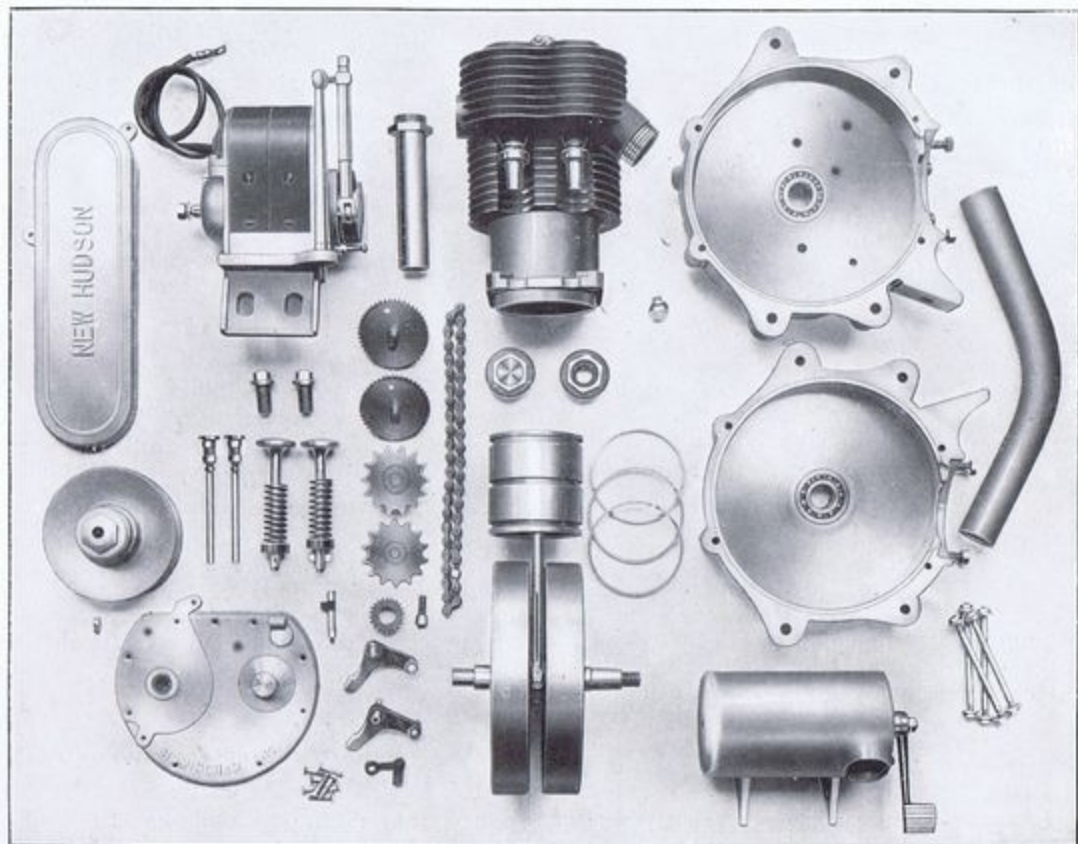
Much unnecessary trouble, expense and inconvenience is caused by the use of unsuitable or inferior Accessories. We can, however, recommend the above articles.

Side-Cars.

The 3½ h.p. New-Hudson 3-speed Model is especially adapted for side-car work, the additional strain being fully provided for both in design and construction. We can supply all the leading patterns, such as Mills and Fulford, Montgomery, etc., etc., specially made to fit the New-Hudson Side-Car Model, and we are prepared to quote inclusive prices (see separate list).

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3½-4 h.p. New-Hudson Engine Parts.



	£	s	d.
Cylinder, complete with valve guides each			
Valve Guides "			
Piston only "			
Piston rings "			
Gudgeon Pin "			
Connecting Rod only "			
Small End Bush "			
Big End Bush "			

	£	s	d.
Valves, complete, inlet or exhaust each			
Adjustable Pulley, complete "			
Outer Lock Nut "			
Outer Pulley Flange "			
Inner Fixed Flange "			
Crank Case Drain Plug "			
Compression Tap "			
Valve Caps, inlet or exhaust "			

For Prices of Bosch Magneto and Brown & Barlow Carburettor spare parts, see makers' separate booklets—free on application.

The above prices are absolutely Nett, and all orders must be accompanied by remittance, including cost of postage.

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Hints and Tips to Riders.

Starting a New Machine. See that the tanks are filled with petrol and **good air-cooled oil**, and see that there is some oil in the crank case of the engine; inject two pumpfuls if empty.

Jack the back wheel up on the stand, set the ignition lever about half way advanced, the lower or throttle lever on the handlebar control of the carburettor about half-open, and the upper or air lever entirely closed—as far to the left as it will go.

Inject a little petrol into the cylinder through the compression tap, by means of the special pipe provided from the tank, to free the piston if required.

Turn the petrol tap to carburettor on (downwards), see that the float chamber is full by depressing the plunger, then lift the exhaust valve by means of the inverted lever on left side of handlebars and pedal briskly, dropping the lever when the engine is under way.—It should fire immediately.

The throttle lever should then be closed slightly by moving it to the left, and enough extra air given to get a good mixture, which will be easily detected by the beat of the engine.

The **absolute novice** should familiarise himself with the functions of the **control levers, with the engine running on the stand**, before venturing on the road—especially in traffic.

Do not, however, run the engine "all out" on full throttle on the stand, or for more than about half a minute at a stretch.

Lubrication. "Little and often" is a golden rule for lubricating the engine; half a pumpful every eight or ten miles is better than a full charge every twenty. The pump is of the tapless variety and fills when plunger is drawn up; upon depressing the plunger the charge of oil is forced into the engine. To fill pump draw up the plunger slowly, then depress gradually—otherwise it will not go down.

Three-Speed Gear To obtain most perfect results with gear, the following instructions should be observed.

1. Lubricate the gear daily with ordinary cycle lubricating oil. **Do not use thick engine oil.**
2. Keep both the gear and the clutch correctly adjusted, as per instructions.
3. See that the spindle nuts are secured properly, otherwise the spindle may revolve and cause a breakage.
4. Keep side shake out of the rear wheel by adjusting the **right cone**.
5. **Do not disturb the left cone**, as this gives correct position to the internal parts of the gear.
6. When changing gears it is much better to change sharply than slowly—the faster the better and there is **no necessity to de-clutch**.

Some "Don'ts." DON'T use cheap oil or be too sparing in lubricating the engine. Remember it is far less trouble and expense to take the cylinder off and scrape off any carbon deposit than to renew bearings, etc.

DON'T run the engine too hard or too long on the stand.

DON'T forget to oil the cycle bearings, hubs, steering head, etc., also the magneto, however, don't over-oil the latter.

DON'T run the belt too tight, it is more likely to pull through or break at the fastener, also this throws an undue strain on the bearings and drives less sweetly.

DON'T flood the engine or three-speed gear with oil or it is likely to get thrown out—a **little and often** is the golden rule.

For full description of the Three-Speed Gear and Instructions, see page 12.

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Some Hints for Side-Car Users

Remember that

1. Both machine and engine are submitted to a double load, so require to be kept well up to the mark.
2. Cheap side cars, tyres, belts or fasteners, accessories or engine oil, etc., are false economy in the long run and generally mean unsatisfactory service—besides leaving the rider stranded at inopportune moments.
3. If a novice, remember that a motor cycle and side-car steers far more like a tricycle than a single track machine. Do not try to steer by balance, but by a steady pressure on the handlebars.
4. Sidecars are tricky to steer **without** a passenger, especially at high speeds. Never lean **away** from the side-car round corners, and do not have the machine and side-car at an obtuse angle.
5. Everything is more prone to shake loose with a side-car, therefore, go over all nuts, etc., and especially the side-car connections frequently, and do not neglect to keep the ball bearings of both the front and side-car wheels well adjusted and oiled. It saves time and trouble to pack these hubs full of Stauffer grease, or a good semi-solid lubricant. See that the handlebars are tightened up, and all brakes and connections in good order.
6. Our $3\frac{1}{2}$ h.p. engines will stand treatment which would have speedily "scrapped" earlier types. However, it is not advisable to run the engine "all out" with no load on, or on the low gear for long at a time.
7. Do not try to run on too high a gear which means overloading (commonly known as "overheating"). The engine will keep cooler and run more sweetly if the revolutions per minute are kept up, with the magneto advanced so as to fire at its point of maximum efficiency, and the minimum of gas and maximum of extra air possible.
8. The engine requires more generous lubrication than when used "solo," and it is advisable to use a fairly heavy **air-cooled** oil, giving half a pumpful every four to six miles, or when climbing steep and long hills. Similarly the multiple disc clutch gets far heavier work; oil it "little and often" through the right-hand lubricator on the hub shell with the clutch pedal depressed, which enables the oil to run down between the steel and phosphor bronze plates.
9. Do not run the belt **too** tight as this throws unnecessary strain on the bearings and is liable to cause the fastener to break or pull through the end of the belt. The back tyre should be very substantial and kept well-inflated to prevent rolling in the rim round corners, and "creeping"; security bolts are a good preventive of the latter. To keep down running costs and increase your average speed—do not overload a $3\frac{1}{2}$ h.p. machine as if it was a 20 h.p. four-cylinder car.



Barnstormers PHOTO CYCLING

A New Hudson 3-speed on the Vellit.

The really remarkable Success of NEW-HUDSON CYCLES during 1911 has been repeated during the present season—their achievements continue to excite admiration in all parts of the Universe.

The following are some of the more notable wins during the early months of the present season:—

AUSTRALIAN 12 and 24 HOUR ROAD RECORDS.

New Figures set up of **312** and **547** miles,

By GEO. PATTERSON, JUNR., on a **2½** H.P. 3-SPEEDS NEW-HUDSON.

The finest Motor Cycling performance ever accomplished South of the Equator. Handsomely beating previous records of 510 miles, made on **3½** h.p. T.T. machine.

Streatham M.C.C. <i>February 23rd</i>	{	T. H. KENNINGTON - - - 2½ h.p. 3-speeds -	FIRST
		SILVER MEDAL.	
South Australia M.C.C. Hill Climb, <i>February 10th</i>	{	G. PATTERSON, JUNR. - 2½ h.p. 3-speeds -	FIRST
		Fig Merit 401, next best 362 by 3½ h.p.	
Cambridge University M.C.C. Hill Climb, <i>February 17th</i>	{	T. P. ELLIS - - - - 2¾ h.p. 3-speeds -	FIRST
Midland Open Reliability Trial, <i>February 17th</i>	{	H. Graham Dixon and A. T. Rigbey, 3½ h.p. 3-speeds, gained maximum marks. W. H. Egginton, a private owner, 3½ h.p. 3-speeds, succeeded in climbing Sunrising Hill and Edge Hill with Sidecar and Passenger.	
Natal M.C.C. <i>February 17th</i>	{	Passenger Class - H. CHRISTIAN - 3½ h.p. 3-speeds -	FIRST
	{	Hill Climb, Formula - R. BURN - 3½ h.p. -	FIRST
	{	Fastest Hill Climb (Open) - R. BURN - 3½ h.p. -	FIRST
		Beating 7 h.p. and 8 h.p. Twins.	
		"The New-Hudson 'lost' the others on the hills."— <i>Vide Press.</i>	
New Zealand M.C.C. Trials <i>March 1st and 2nd</i>	{	Highest Agregate - R. BURN - 3¾ h.p. -	FIRST
	{	Petrol Consumption Test - R. BURN - 3½ h.p. -	SECOND
New-Hudsons sweep the board.	{	Hill Climb	
	{	300 Miles Trial (Open) - L. RHODES - 2¾ h.p. -	SECOND
	{	including Hill Climb and Petrol Consumption Tests (Under 350 c.c.) - L. RHODES - 2¾ h.p. -	SECOND
	{	Fastest Hill Climb - L. RHODES - 2¾ h.p. -	SECOND
Essex M.C.C. Hill Climb, <i>March 16th</i>	{	Class E, under 1,000 c.c. - 3½ h.p. 3-speeds -	FIRST
	{	Class C, under 500 c.c. - 3½ h.p. 3-speeds -	THIRD
Herts County A.C. Open Trial, <i>March 23rd</i>	{	H. BERWICK - - - - 3½ h.p. 3-speeds -	Full Marks
		Being one of six only of 54 entries who made a clean ascent of Kop Hill.	
Oxford M.C.C. Hill Climb, Irondown, <i>March 23rd.</i>	{	Singles - - - - 2¾ h.p. 3-speeds -	FIRST
	{	Sidecars* - - - - 3½ h.p. 3-speeds -	FIRST
	{	Unlimited - - - - 3½ h.p. 3-speeds -	FIRST
	{	Lightweights - - - - 2½ h.p. 3-speeds -	THIRD
*Best performance of the day.	{	Rider 15 stone. Total weight of machine and passengers 750 lbs.	SECOND

1912 Achievements (continued).

<p>Auto Cycle Club de France Argenteuil, March 24th</p>	<p>{ Class II., under 350 c.c. - 2$\frac{3}{4}$ h.p. 3-speeds Sidecars, under 500 c.c. - 3$\frac{1}{2}$ h.p. 3-speeds</p>	<p>- FIRST - FIRST</p>
<p>Derby Oakamoor M.C.C. Open Hill Climb, March 30th</p>	<p>{ Class I. - H. BERWICK - New-Hudson 3 speeds</p>	<p>- FIRST</p>
<p>French A.C.C. Circuit de Paris, April 5th.</p>	<p>{ 2$\frac{3}{4}$ h.p. 3-speeds - - - - -</p>	<p>- SECOND</p>
<p>Harrogate M.C.C. Open Hill Climb, Leathley Bank, April 6th</p>	<p>{ Passenger Class, any Single - 3$\frac{1}{2}$ h.p. 3-speeds T.T. Lightweight Class - 2$\frac{3}{4}$ h.p. 3-speeds Standard Lightweight Class - 2$\frac{3}{4}$ h.p. 3-speeds</p>	<p>- FIRST Formula - SECOND Formula THIRD Time - SECOND Formula SECOND Time</p>
<p>Beating 6 h.p. and 8 h.p. machines.</p>	<p>"By far, the best exhibition was by H. Graham Dixon on a 3$\frac{1}{2}$ h.p. New-Hudson 3-speed, with H. Berwick in the Sidecar. Spectators could hardly believe their eyes as they watched this 3$\frac{1}{2}$ h.p. single cylinder approach at a faster speed than some of the bicycles, once round the bend the machine even gathered speed, yet we witnessed several machines up to 7 h.p. fail." - <i>The Motor Cycle</i>. "Dixon's climb on a 3$\frac{1}{2}$ h.p. New-Hudson 3-speed and Sidecar was nothing short of marvellous." - <i>Motor Cycling</i>.</p>	
<p>Westmorland M.C.C. Open Hill Climb at Brigsteer, April 8th</p>	<p>{ Passenger Class, any capacity machine with Sidecar, 3$\frac{1}{2}$ h.p. 3-speed - - - - -</p>	<p>- FIRST Beating 6 h.p. machines.</p>
<p>Oxford M.C.C. Open Hill Climb, April 13th</p>	<p>{ Passenger Class - - - - - Senior T.T. Class - - - - - Variable Gear Class - - - - -</p>	<p>{ Formula Time FIRST SECOND FIRST SECOND</p>
<p>Bristol Open Hill Climb, April 27th Fastest Single Cylinder.</p>	<p>{ Class I., Lightweights - - 2$\frac{3}{4}$ h.p. 3-speeds Class IV., Touring - - 3$\frac{1}{2}$ h.p. 3-speeds Class VI., Racing, 1,000 c.c. 3$\frac{1}{2}$ h.p. 3-speeds Class VII., Sidecar - - 3$\frac{1}{2}$ h.p. 3-speeds Class VIII., Racing up to 500 c.c. 3$\frac{1}{2}$ h.p. 3-speeds</p>	<p>{ FIRST Time THIRD Formula SECOND FIRST FIRST THIRD</p>
<p>Middlesboro' M.C.C., Castleton, May 1st Three Gold Medals.</p>	<p>{ Standard Touring, any capacity 2$\frac{3}{4}$ h.p. 3-speeds Variably-gearred Class, including restart on hill, 2$\frac{3}{4}$ h.p. 3-speeds - - - - - All Comers, any capacity, 2$\frac{3}{4}$ h.p. - - - - -</p>	<p>FIRST Formula FIRST Time FIRST Formula FIRST Formula</p>
<p>Notts M.C.C. Hill Climb, May 4th</p>	<p>{ T.T. Class - J. R. SYLVESTER 2$\frac{3}{4}$ h.p. 3 speeds Touring Class J. J. KELM 3$\frac{1}{2}$ h.p. 3-speeds J. R. SYLVESTER 2$\frac{3}{4}$ h.p. 3-speeds</p>	<p>FIRST SECOND THIRD</p>

1912 Achievements (continued).

Midland Open Reliability Trial, Coventry and Warwickshire M.C., May 4th

"Climbed all hills."

150 miles under the most adverse road and weather conditions, including Birdlip, Sudeley, Ilmington and Saintbury Hills.

TWO NEW-HUDSON 3½ H.P. 3-SPEEDS

only entered.

BOTH MACHINES CLIMBED ALL THE HILLS.

ROY. W. WALKER (weight 13 stone)

MADE SUCCESSFUL NON-STOP RUN.

Only six out of sixty competitors made non-stop runs.

H. G. DIXON only stopped by puncture near the finish.

**THREE New-Hudson 3-speeds started.
THREE New-Hudson 3-speeds finished.**

Without losing a single point.

Dubost, on his New-Hudson 3-speed, in spite of many punctures, completed the return journey, 250 miles, in the day. The only competitor to accomplish this (average over 40 K.M. per hour).

Paris—Trouville Reliability Trial

Fine Performance.

Great Scottish Trial, Edinburgh, May 11th

3 Firsts
3 Seconds

Class I., under 350 c.c. R. LINDSAY 2¼ h.p. 3-speeds **FIRST**

Formula
FIRST
Time

H. BERWICK 2¼ h.p. 3-speeds **SECOND**

Formula
SECOND
Time

Class II. - - H. BERWICK 2¼ h.p. 3-speeds **SECOND**

Formula
THIRD
Time

Passenger Class - H. BERWICK 3½ h.p. 3-speeds **FIRST**

Formula
SECOND
Time

French A.C.C. Road Race, 150 miles, May 11th

Passenger Class* - H. G. DIXON 3½ h.p. 3 speeds **FIRST**
*Fastest Lap Time, beating Twin Cylinders of 8 and 10 h.p.

Belfast M.C.C., Bangor May 11th

Open Class - - P. H. DODS 2¼ h.p. 3-speeds **FIRST**
Lightweight
FIRST
Touring

Only beaten by 3½ h.p. T.T. Racer.

Harrogate M.C.C. Speed Trial, May 11th

T. C. ATKINSON - - - 2¼ h.p. 3-speeds **SECOND**
Only beaten in Final by 6 h.p. Twin.

Belfast & District M.C.C. May 11th

P. H. DODS - - - 2¼ h.p. 3 speeds **SECOND**
First Lightweight and First Touring on Formula.

Edinburgh & District M.C. May 11th

Class I., up to 400 c.c. - A. J. C. LINDSAY 2¼ h.p. **FIRST**
H. BERWICK - 2¼ h.p. **SECOND**
Class II., up to 600 c.c. H. BERWICK - 3½ h.p. **SECOND**
Class V., Passenger m/c H. BERWICK - 3½ h.p. **FIRST**



1912 Achievements (continued).

Auto Cycle Club de France (150 miles), May 12th	{ Passenger Class - H. G. DIXON 3½ h.p. 3-speeds FIRST Also made Fastest Lap Time for Passenger machines. Beating 8 and 10 h.p. Twins.
Hants Motor Cycling Union Hill-climbing Contest, May 15th	{ Sidecar Class PERCY KILN - 3½ h.p. 3-speeds FIRST H. S ILLINGWORTH 3½ h.p. 3-speeds THIRD Under 500 c.c. PERCY KILN - 3¼ h.p. 3-speeds SECOND All-comers - PERCY KILN - 3½ h.p. 3-speeds SECOND
Ballymena M.C.C. Hill Climb, May 22nd	{ E. MONTGOMERY - - - New-Hudson 3-speed SECOND
Great International Hill Climb, at Mayenne, France, Whitsuntide	{ Sidecar Class - H. G. DIXON 3½ h.p. 3-speeds FIRST Under 500 c.c. - H. G. DIXON 3½ h.p. 3-speeds SECOND Under 350 c.c. - H. G. DIXON 2¾ h.p. 3-speeds FIRST Joint Hill Climb Lightweight & 500 c.c. - - - 2¾ h.p. 3-speeds SECOND Sidecar Class - - - - 3½ h.p. 3-speeds FIRST
Dublin & District M.C.C. May 27th	{ J. BROWNE - - - - 3½ h.p. 3-speeds FIRST GOLD MEDAL. Joint Winner of the "White" Cup. Thirty starters, including nearly all the leading makes, and the first occasion that the full 100 marks have been allotted in this competition.
Scarborough & District M.C.C., May 27th	{ Lightweight Class - H. MOON 2¾ h.p. 3-speeds FIRST
Birmingham to Land's End and Back	{ W. E. BAYLISS - - - - 3½ h.p. 3 speeds } WON TWO B. BOURKE - - - - 3½ h.p. & Sidecar } GOLD MEDALS
London to Edinburgh Reliability Trial	{ ROY W. WALKER - - - - 3½ h.p. & Sidecar WINS M.C.C. MEDAL
Harrogate & District M.C.C. Hill Climb, June 1st Second year in succession.	{ Sidecar Class - C. A. NETTLETON 3½ h.p. 3-speeds FIRST Standard Sin-Cy. C. A. NETTLETON 3½ h.p. 3-speeds FIRST C. A. NETTLETON, again wins THE PILCHER TROPHY.
Dublin & Belfast Inter- City Reliability Trial, June 1st	{ J. BROWNE - - - - 3½ h.p. 3-speeds FIRST The only machine to obtain Full Marks. GOLD MEDAL.
Anglo-Scottish Inter-Team Hill Climb, June 8th	{ Sidecar Class - H. BERWICK - 3½ h.p. 3 speeds FIRST Open Event Class I. A.J.C. LINDSAY 2¾ h.p. 3-speeds FIRST Single Cylinders - H. BERWICK - 3½ h.p. 3 speeds THIRD
Ulster M.C.C. Hill Climb at Roguey	{ P. H. DODS - - - - 2½ h.p. 3 speeds THIRD

Guarantee.

Being the form of Guarantee recommended by the Cycle and Motor Cycle Manufacturers' & Traders' Union.

FOR MOTOR CYCLES.

WE give the following guarantee with our motor cycles instead of the guarantee implied by statute, or otherwise, as to the quality or fitness of such machines for the purpose of motor cycling; any such implied guarantee being in all cases excluded. In the case of machines which have been used for "hiring out" purposes, or in respect of which our Trade Mark or Manufacturing Number has been removed, no guarantee of any kind is given, or is to be implied.

We Guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship; but this guarantee is to extend and be in force for three months only from the date of purchase, and the damages for which we make ourselves responsible under this guarantee are limited to the replacement of any part which may have proved defective.

This Guarantee is given this day of 191 , to

Mr. and relates to a **New Hudson Motor Cycle**

..... No. as stamped on machine.

We undertake, subject to the conditions mentioned below, to make good at any time within three months any defects in these respects. As motor cycles are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse, or neglect. Any motor cycle sent to us to be plated, enamelled or repaired, will be repaired upon the same conditions as if it were a new motor cycle, i.e., we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of material and workmanship, such guarantee to extend and be in force for three months only from the time such work shall have been executed, and this guarantee is in lieu and in exclusion of any common law or statute warranty, and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

Conditions of Guarantee. If a defective part should be found in our motor cycles, it must be sent to us, carriage paid, and accompanied by an intimation from the sender that he desires to have it repaired free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the name of the agent from whom he purchased, and the date of the purchase.

Failing compliance with the above, no notice will be taken of anything which may arrive, but such articles will lie here at the risk of the senders; and this guarantee, or any implied guarantee, shall not be enforceable.

We guarantee only those machines which are bought either direct from us or from one of our duly authorised agents, and under no other conditions.

We do not guarantee the specialities of other firms, such as tyres, saddles, chains, lamps, belts, etc., etc., or of any component part supplied to the order of the purchaser differing from our standard specification, supplied with our motor cycles or otherwise.

No guarantee is given with side cars unless fitted by us and then only on condition that they are not overloaded.

The Term "Agent" is used in a complimentary sense only, and those firms whom we style our agents are not authorised to advertise, incur any debts, or transact any business whatsoever on our account, other than the sale of goods which they may purchase from us; nor are they authorised to give any warranty or make any representation on our behalf other than those contained in the above guarantee.

For and on behalf of

THE NEW-HUDSON CYCLE CO. LTD.

BARNSTORMERS.CO.NZ



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