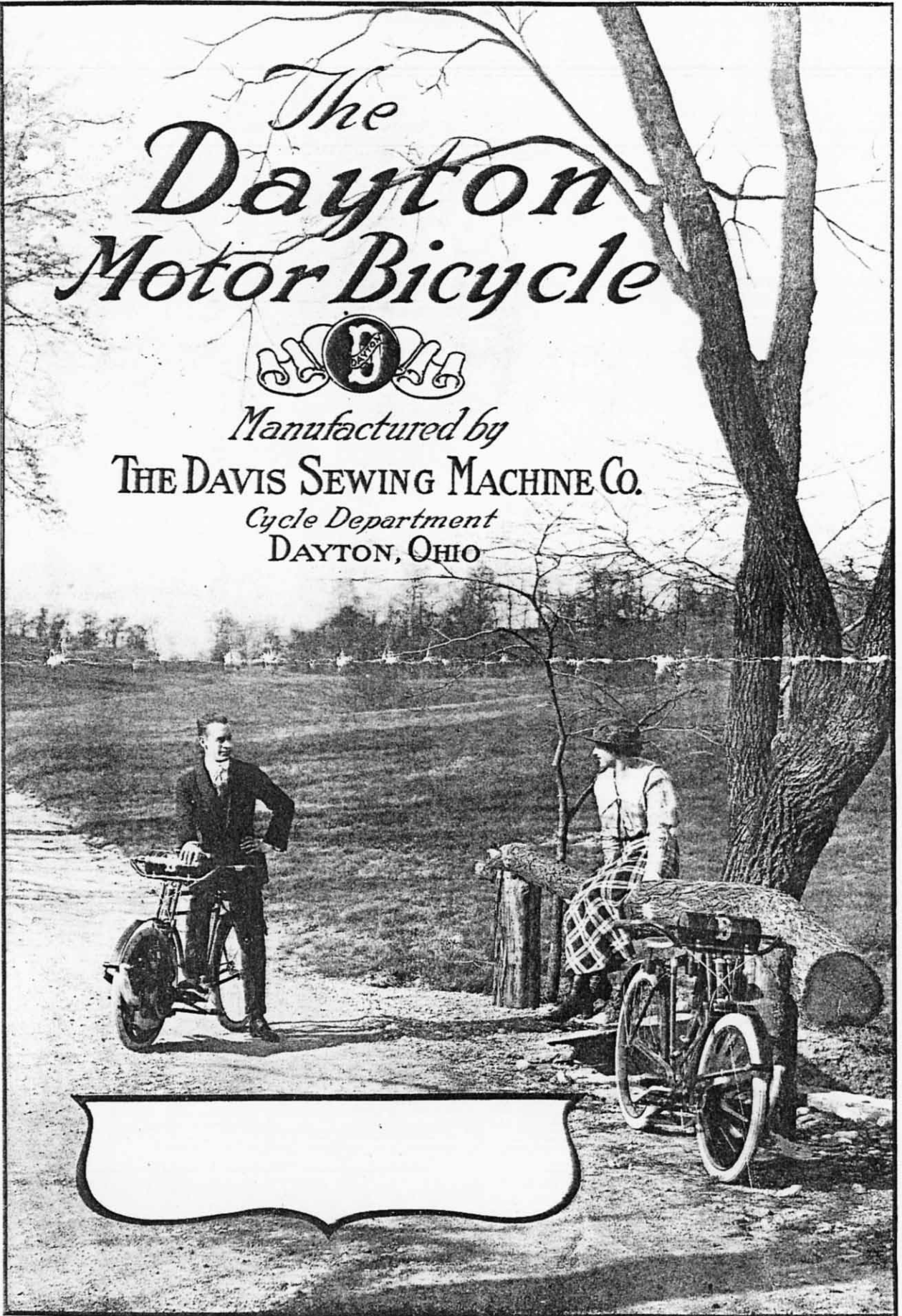


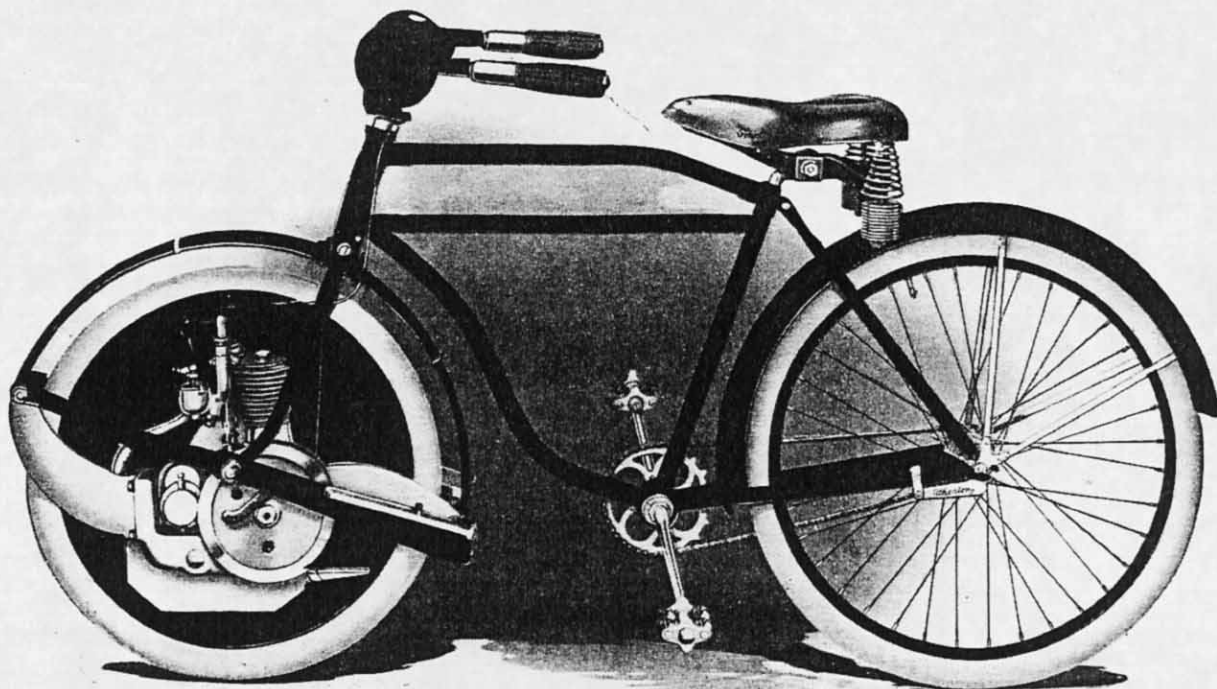
Regular Edition

# The Dayton Motor Bicycle



*Manufactured by*  
**THE DAVIS SEWING MACHINE CO.**  
*Cycle Department*  
**DAYTON, OHIO**





Model M-18 Men's model, compensator equipped.....\$110.00  
 Model F-18 Men's model, clutch equipped.....\$120.00  
 Three per cent. U. S. War Tax and freight from factory additional.

## Now Everyone May Ride

**T**HIS is the Age of the Gasoline Motor. All forms of industry have been revolutionized by it. The best thought of America has been put into the development of the internal combustion engine and its application to modern necessities.

Only a few years ago any sort of self-propelled road vehicle was looked at with curiosity—but with doubt as to its practicability. Now millions of automobiles, motorcycles and motor bicycles are in constant use, day in and day out. The development of the gasoline engine has reached a point almost beyond belief.

The Dayton Motor Bicycle, with its simple, compact, front-wheel drive, is the greatest recent achievement in the motorcycle world. In it are found ideals long sought for—simplicity, light weight, cleanliness, reliability, low first price and economy of upkeep.

With the Dayton Motor Bicycle has developed the sport of Motor Bicycling. Thousands, who for one good reason or another would never consider the heavy twin-cylinder motorcycles, have had opened to them for the first time the pleasure and profit to be derived from the ownership of a Motor Bicycle.

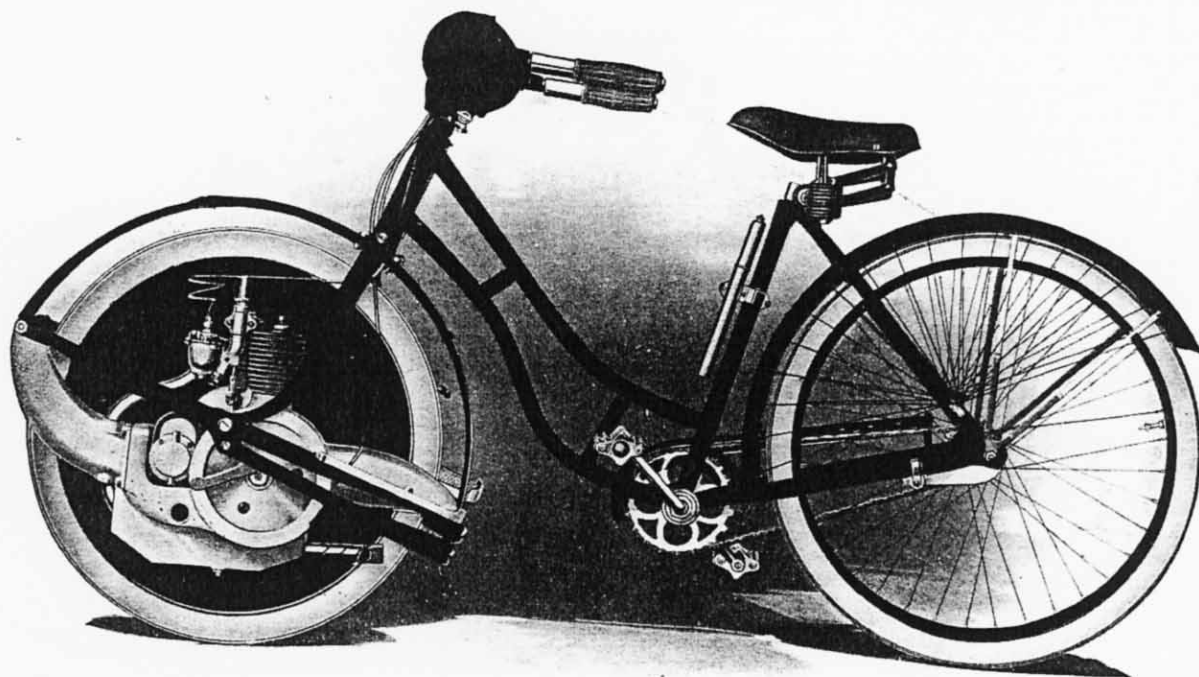
Men in all walks of life have found it a convenient and economical means to get where they want to when they want to. As a source of recreation in odd hours it has brought joy to thousands. Commercial houses have been quick to realize the possibilities it presents in performing rapid light-delivery service. The Dayton Motor Bicycle fills a real demand. And it has met this demand with full satisfaction. We are proud of the Dayton Motor Bicycle.



*H. N. Baker, of Boston, Mass., the first to cross the continent—San Diego to Boston—with a Dayton Motor Bicycle.*



Dayton



Model L-18 Ladies' model, compensator equipped.....\$110.00  
Model G-18 Ladies' model, clutch equipped.....\$120.00  
Three per cent. U. S. War Tax and freight from factory additional.

## Very Simple to Operate

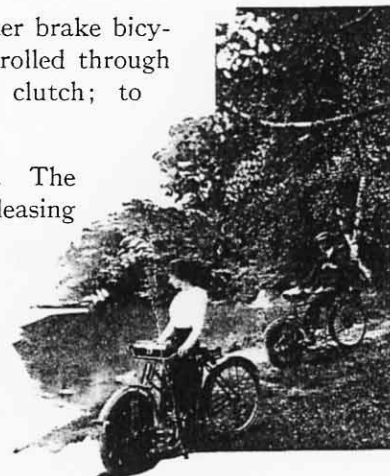
**I**T requires no special mechanical ability to operate the Dayton Motor Bicycle. If you can ride an ordinary bicycle, you can ride a Dayton Motor Bicycle. It is controlled entirely by turning the right handle-bar grip.

One has simply to remember that "in is on and out is off" to master complete control of the Dayton Motor Bicycle. With the grip turned all the way to the right the motor is completely shut off; all the way to the left, the motor is operating at highest speed. In between these limits any rate of speed from five to twenty-five miles per hour may be obtained.

The brake is applied by back-pedaling, just as with an ordinary coaster brake bicycle. On two of the models there is a free-engine clutch and this is controlled through the left handle-bar grip. Turning this grip to the right releases the clutch; to the left throws it into normal position.

To start, the rider mounts the Dayton Motor Bicycle in the usual way. The clutch is engaged and the right grip turned out as far as possible, releasing compression. A few revolutions of the pedals will give sufficient momentum so that the control grip may be turned in and the motor forced over against compression. Ignition is automatic and the Motor Bicycle picks up speed smoothly and quickly.

Simple as this description is, an actual demonstration is even more convincing that the Dayton Motor Bicycle is the ideal universal machine. Why not enjoy life now? Any Dayton dealer will be glad to give you a ride and to let you prove to your own satisfaction the pleasure and profit of Motor Bicycling.



*Anyone who can ride a bicycle can ride a Dayton Motor Bicycle.*



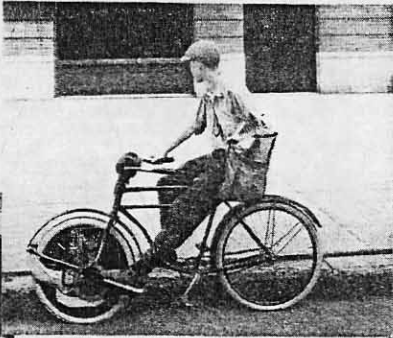
# Five Forms of Service Provided By the *Dayton* Motor Bicycle



PLEASURE



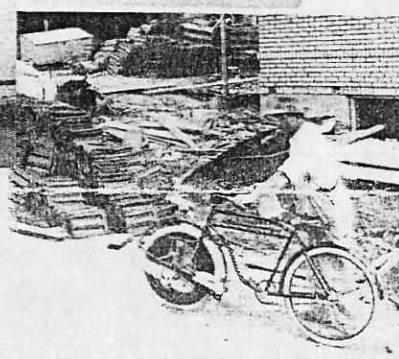
DELIVERY



COLLECTION



MESSENGER



TO AND FROM WORK

## The Factory That Guarantees the Dayton Motor Bicycle

The Davis Sewing Machine Company is an old, reliable organization with more than fifty years successful manufacturing experience. Its huge workshops cover fifteen acres and 1800 men find constant employment therein. For over twenty

years it has maintained a Cycle Department and at the present time leads the world in the manufacture of Bicycles. It is this concern that guarantees the Dayton Motor Bicycle under the standard warranty of the Motorcycle and Allied Trades Association.



## The Advantage of the Front Wheel Drive

YOU may ask "Why is the motor placed in the front wheel instead of in the rear wheel or the frame?"

There are seven big, outstanding advantages of the Dayton front-wheel drive construction, any one of which would ordinarily be considered an achievement in itself.

Cleanliness and comfort mean a great deal in the satisfaction and pleasure that one gets from his machine. With the Dayton Motor Bicycle, one does not have to sit astraddle a hot, oily motor. As no portion of the rider's clothing comes in contact with the engine in the front wheel, no special riding costume of any kind is necessary.

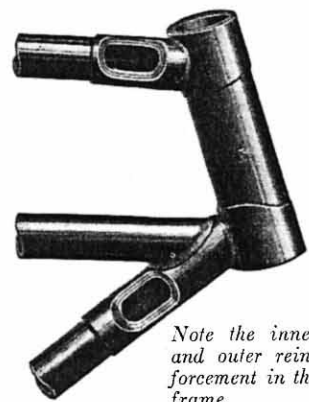
With a 135 lb. rider in the saddle, the front wheel carries a load of 130 lbs. and the rear wheel 140 lbs., including the weight of the Motor Bicycle. This is an ideal distribution of weight. It assures great stability and makes riding easy. The load on the rims and tires is uniform, which means longer life for them. It reduces stresses in the frame and the wheel parts to a minimum.

The front wheel and the motor are supported at the tips of the strong longitudinal steel springs. These springs are in turn connected with the frame head by the patented Dayton rocker spring fork crown. This forms a knuckle joint at the fork crown permitting a slight movement forward and backward, while the vanadium steel springs flex upward and downward.

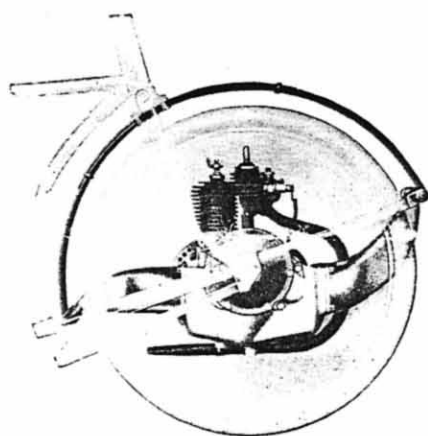
In this way a wonderfully strong front fork is constructed that absorbs shocks and eliminates entirely the motor vibration that is ordinarily felt in the frame.

### Many Parts Eliminated

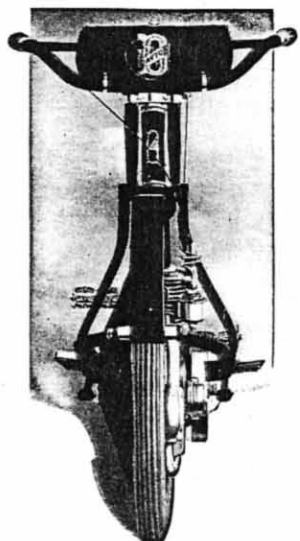
With the pulling force in the front wheel and the braking force in the rear wheel, the details of construction are greatly simplified. This means that the highest quality of material may be used with the maintenance of light weight and low cost—all of vital importance to the rider. The elimination of complicated transmissions leaves few parts to get out of order and greatly reduces possible up-keep expense. With the front wheel pulling and the rear wheel trailing, there is



Note the inner and outer reinforcement in the frame.



Phantom view of the front wheel showing how motor is suspended.



Front view compensator equipped model.

## Seven Great Achievements of the Dayton Front-Wheel Drive

- Perfect Cleanliness
- Low Center of Gravity
- Elimination of Vibration
- Simplicity of Construction
- Direct Application of Power
- Scientific Distribution of Weight
- Pulling, Instead of Pushing, the Load

no tendency for the frame to buckle as would be the case if the power were applied to the rear wheel.

More power in proportion to the size of the motor and more mileage per gallon of gasoline is made possible by doing away with the usual chain or belt drive and connecting the motor direct to the drive wheel.

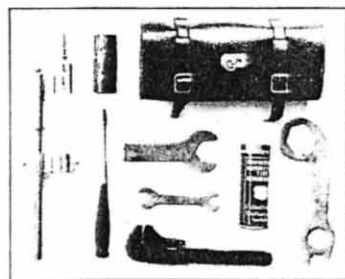
There are no power losses through friction—every particle of power developed by the motor is delivered to the front drive wheel. There is just enough slippage in the compensator or the clutch to allow the machine to get under way without any unpleasant jerkiness.

### Easy to Guide

Draw a line from the rear hub to the center of the front wheel and note that the bulk of the weight of the motor is below the line. This means a low center of gravity, great stability, and consequent ease and safety in riding. In fact, the ease with which the Dayton Motor Bicycle may be guided is a surprise to everyone who rides it for the first time. It responds quickly to a shift of the rider's weight.

Pulling the load is universally admitted better practice than pushing it. In muddy or sandy roads there is a continual tendency for the front wheel drive to pull itself up and out—if the power were applied to the rear wheel the tendency would be to drive the front wheel through or under. This climbing ability of the front-wheel drive makes the Dayton a "mud lark." Then, too, there is no skidding, a most important feature of safety. The rear wheel never tries to "run around" the front wheel.

These are seven plain, common-sense reasons why the Dayton front-wheel drive is superior to any other form of construction. Any one of these reasons might well be considered



Complete outfit of tools with every machine.



This shows the simplicity of the grip control.

sufficient for adopting this modern departure from old methods.

Dayton Motor Bicycles are offered with either the Davis free engine clutch or the special Dayton compensator. The latter performs, to a certain extent, the functions of a clutch, but it cannot be released while the rider is in the saddle. The proper adjustment of the compensator allows just enough slippage to ease off the motor when starting and distribute uniformly the wear on the front tire. Otherwise, the sudden tractive effort following each explosion of the motor would cause an unpleasant jerking and produce wear on the tire in spots.



A section of the heavy 2 in. tire.

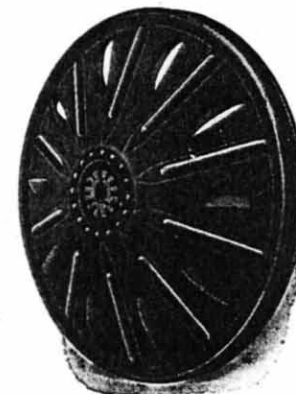
### New Clutch Models

The Davis clutch offers all the advantages of the compensator and in addition permits the motor to run free when the machine is standing still. It is of especial advantage in cities where traffic is dense or on long hills where one enjoys cutting off the motor and coasting.

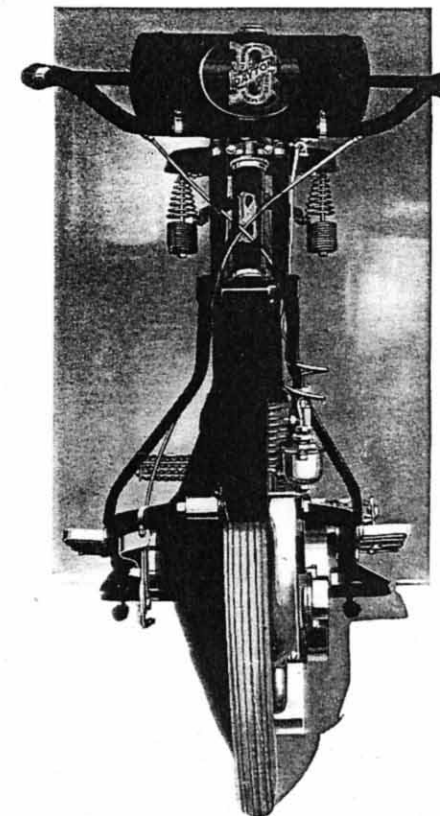
The clutch is exceedingly simple in construction. It is of the multiple steel disc type and self-adjusting. Ten steel

discs well packed in grease give a contact area greatly in excess of actual needs. The large amount of friction surface and the thorough lubrication allow the maximum of slippage with a minimum of wear. Six strong steel springs hold the discs in normal gripping contact and automatically compensate for wear. The vertical load is carried on the drive shaft entirely and there is no side strain on the clutch discs.

The power available is ample for all ordinary purposes. It will carry a 225 lb. rider as well as a 125 lb. man. The Motor Bicycle will throttle down to a walk or will speed along at 25 miles or more an hour. While it is not claimed to be a "mountain climber," the Dayton Motor Bicycle will take long hills of seven percent grade under its own power. Its promptness of response and simplicity of control make it ideally safe in all hands.



Front wheel with compensator in place.



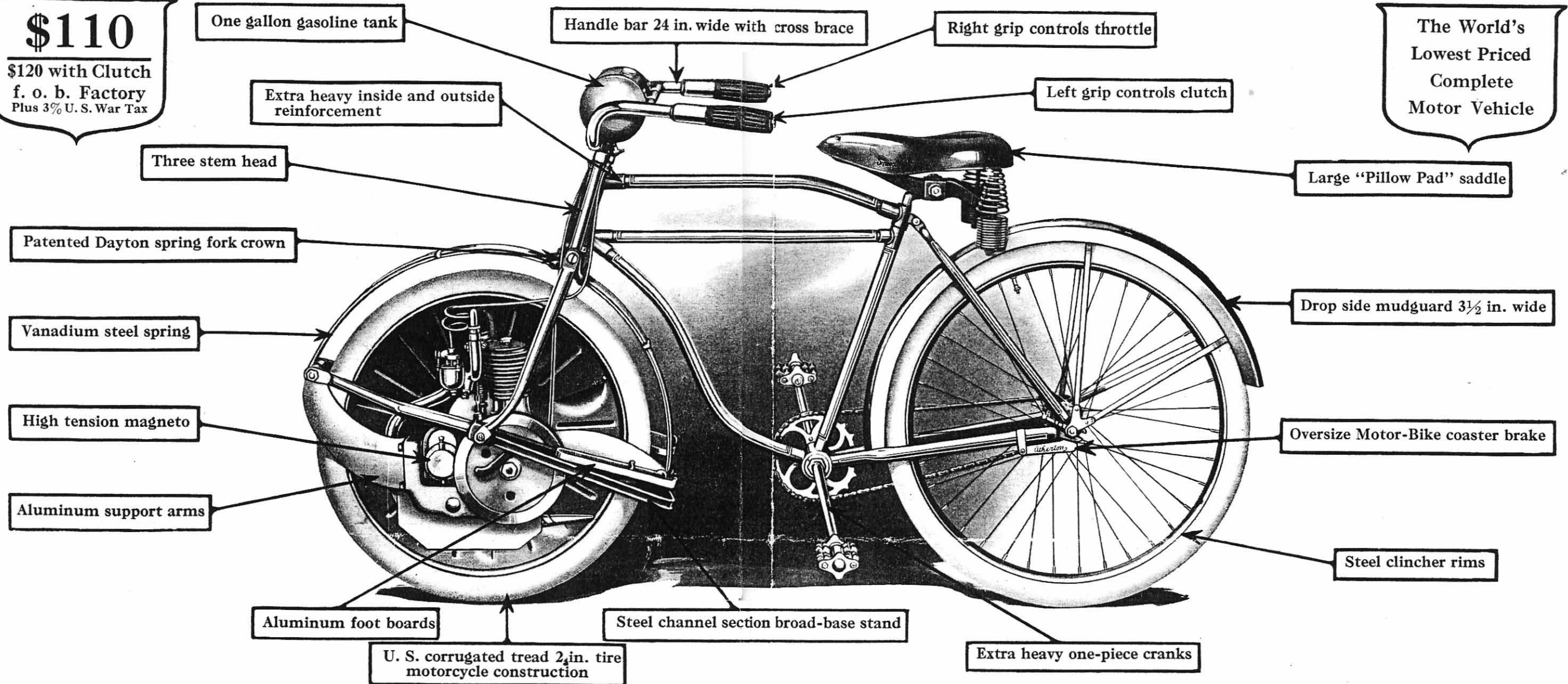
Front view of clutch model. Note compactness of construction.



**\$110**

\$120 with Clutch  
f. o. b. Factory  
Plus 3% U. S. War Tax

The World's  
Lowest Priced  
Complete  
Motor Vehicle



## The *Dayton* Motor Bicycle is of Special Construction Throughout

Do not confuse the Dayton Motor Bicycle with the so-called "light-weight motorcycle" or the ordinary bicycle with motor attachment. The Dayton is of special construction throughout.

**Motor**—Single cylinder, four-cycle, air-cooled, 1½ h. p. high speed type, 2¾ in. (60.32 millimeters) bore and 2¼ in. (57.14 millimeters) stroke. Piston displacement 9.97 cu. in. (163.37 cubic centimeters). Cylinder and piston are made of close-grained gray-iron. Two piston rings cut 45°. Connecting rod and all motor bearings are made of Non Gran bronze, the same as used in finest automobile bearings. Motor support arms and crank case are cast of aluminum.

**Lubrication**—Mechanical oil pump operated from drive shaft maintaining constant supply at proper level about crank shaft. Oil distributed to all working parts of the motor by the splash system. Oil sufficient for 100 miles is contained within crank case and reservoir fitted with sight gauge to indicate oil level. If reservoir is kept filled to proper level, no further attention to oiling system is required.

**Drive**—Direct through the Dayton compensator or the Davis clutch applied between motor and front wheel. The compensator obviates any jerking due to a sudden increase in power and

distributes uniformly the wear on the tire. Gear reduction 8 to 1.

**Carburetor**—Automatic float feed type, easily adjustable.

**Ignition**—High tension magneto securely mounted on crank case and gear driven direct from drive shaft. This ignition system requires absolutely no attention and there are no batteries to recharge or replace. Champion spark plug.

**Cylinder Primer**—Motor primed from intake dome, simple and accessible.

**Frame**—1 in., 18-gauge best steel tubing, triple reinforced at head. Dropped 2 in. at cluster, giving low and easy riding position.

**Front Fork**—Three stem. Wheel attachment patented. Famous Dayton Rocker Spring Fork crown connection. Dust-proof head fittings. Double leaf Perfection Springs of chrome vanadium steel.

**Front Wheel**—24 in. diameter spot-welded pressed steel disc, strong and light, clincher rim. Automatic motor-cooling fans.

**Rear Wheel**—26 in. diameter. Steel clincher rim. Motorcycle type.

**Gasoline Tank**—Capacity 1 gallon, sufficient for 100 miles. Tank securely clamped on handle bars and fitted with extra size filler cap. Flexible feed line of copper tubing nickel-plated, with Dayton combination gasoline and drain cock providing reserve gasoline supply.

**Handle Bars**—Motor Bicycle with cross-brace, 24 in. spread, rubber grips, nickel tipped.

**Mud Guards**—Fork spring constitutes front mud guard, 3 in. steel drop-side guard over rear wheel. On Ladies' Model there is also chain guard and lacing.

**Control**—Single grip with flexible cable designed especially for long wear and strength.

**Footboards**—Aluminum, pyramid faced, with heel form, folding on two hinges, 9 inches long, 3½ in. wide.

**Brake**—Atherton special Motor Bicycle brake fitted to rear wheel. Brake applied by back-pedaling.

**Sprocket**—Four-oval pattern, 20-tooth front, 9-tooth rear, 58 gear.

**Crank Hanger**—Dayton one-piece, 5½ in. crank.

**Pedals**—Davis Ideal. Full ball bearing.

**Stand**—Motorcycle type, steel channel section attached to front fork.

**Chain**—Diamond 1⅝x1 in. pitch block chain.

**Tires**—United States clincher, best motorcycle construction and extra heavy corrugated tread in addition. Size, front 24x2 in., rear 26x2 in.

**Saddle**—Troxel "Pillow Pad" on Men's models. Persons' Cantilever on Ladies' models.

**Tools**—Four wrenches, repair kit, oiler and tire pump in Troxel "Jumbo" leather tool bag.

**Models**—Men's and Ladies', 22 in. frames dropped two inches at seat cluster giving low and easy riding position.

**Finish**—Dayton Carmine with double panel gold striping. Four coats of enamel baked and polished.

**Weight**—130 pounds. Length of wheel base, 43 inches.

**Speed**—Minimum 5; maximum 25 miles per hour guaranteed.

# IceniCAM Information Service



[www.icenicam.org.uk](http://www.icenicam.org.uk)