

The Expert Columbia.

PRICE, \$110.

For a 50-inch, D finish, with Ball-Bearings all around, Columbia "Double-Grip" Ball-Pedals, Spade Handles, Kirkpatrick Saddle, and One-Piece Hollow Cow-Horn Handle-Bar.

Or, with Columbia "Double-Grip" Parallel Pedals, \$105.

Additional for finish A or C, \$10.

Difference of \$2.50 for each two inches in size, up or down.

(For full Schedule of Prices, etc., see page 43.)

BRIEF OF 50-INCH.—Metal parts all steel, and no castings. Endless moulded rubber tires, 1-inch front and $\frac{3}{4}$ -inch rear. Crescent felloes. 56 and 18 direct spokes, No. 11 $\frac{1}{2}$ gauge, with both ends enlarged. $4\frac{1}{2}$ -inch recessed steel hubs, on $8\frac{3}{4}$ -inch axle, with $5\frac{3}{4}$ -inch spread of spokes. Detachable Knous cranks, 5, $5\frac{1}{2}$, and 6-inch (or $5\frac{3}{4}$ to $6\frac{3}{4}$ -inch) throw. Columbia "double-grip" rubber ball-pedals. 18-inch rear wheel. Columbia adjustable ball-bearings to front and rear wheels. $1\frac{1}{2}$ -inch cylindrical perch, made of imported patent cold-drawn, seamless-steel tube. 5-inch cylindrical head, with dust-shield. 4-inch hemispherical and conical centres, with Copeland duplex adjustment. Columbia elliptical, cold-drawn, seamless steel, tubular front and rear forks. 28-inch hollow continuous-steel, detachable cow-horn handle-bar, $2\frac{1}{2}$ -inch drop. Spade handles. One-piece leg-guard. Grip-lever-spoon brake. Adjustable step. Kirkpatrick saddle. Tool-bag, with Columbia B. & S. monkey-wrench, screw-driver, and oil-can. Weight, with saddle and pedals on, 44 lbs.

WE put out the Expert for its tenth year with its reputation for stanchness, durability, ease of running and beauty of lines and finish fully established.

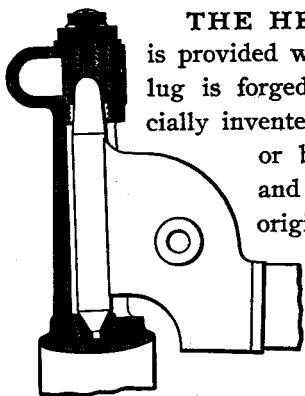
IN GENERAL.—As it was the first *scientifically constructed* high-grade roadster placed on the market, it met with an immediate and unqualified success, and it stands to-day as the most reliable—and relied on—regular roadster in the world.

While we class it as a medium-weight machine, it weighs but a few pounds more than our Columbia Light Roadster, and NO MORE than some other "light roadsters" on the market.

CONSTRUCTION.—In its manufacture strength has in no case been sacrificed for lightness, nor durability for cheapness, nor simplicity and practicality of construction for unnecessary novelty. All metal parts are of steel, and shaped in dies.

THE RAKE of the Expert, that is, the inclination of the centre line of the forks, backward from a perpendicular through the axle of the front wheel, measuring at the bottom of the head, is 2 inches for a 54-inch wheel, and the same angle on other sizes.

THE FRONT AND REAR FORKS are of the best seamless-steel tube, of elliptical cross-section, made with a regard to the best resistance of lateral and torsional strains.



THE HEAD is cylindrical, five inches high, and is provided with a neat dust-shield. The handle-bar lug is forged solid with it. An improvement especially invented for this machine is the hemispherical or ball-steering upper centre, the simplest and most practical of "ball-heads," and our original device.

OUR DUPLEX ADJUSTING DEVICE consists of a cylinder-screw setting well down and around the tapered spindle and admitting of an adjustment for lateral strain, and an internal bolt-screw adjusting down upon the upper spindle-end. Each part has its own set-nut, affording great strength, perfect adjustment, and less liability than other head devices to work loose in riding. All bearing parts are case-hardened to prevent wear.

HANDLE-BAR.—The cow-horn handle-bar is hollow, of one piece of $\frac{1}{8}$ -inch seamless-steel tubing, strengthened by a solid core driven into the middle portion, and gracefully curved and tapered. It is readily removable by taking off the left handle and drawing the key from the lug. A choice of length and drop may be had, as in the Light Roadster.

HANDLES.—The Expert is regularly fitted with Spade handles, though either pear-shaped vulcanite, or "double-grip" handles will be substituted for these on a new machine when desired.

WHEELS.—The flanges of the forward wheel are $4\frac{1}{2}$ inches in diameter, with from $5\frac{1}{2}$ to $6\frac{1}{2}$ inches breadth between them. This breadth of hub, the number and size of the spokes, and the construction of the felloe, make the Expert wheel exceedingly rigid.

THE SPOKES are of the best drawn steel, No. 11 $\frac{1}{2}$ wire, enlarged at *both* ends; and they are "direct," a principle of construction recognized as the most satisfactory for all-round use in a medium-weight roadster. They are headed and nicely fitted in the

Felloe, which is of crescent form, of wide section, and deeply rolled and welded by our patent machinery.

OUR TIRES are of the best Para rubber, made in an endless mould, and put on by a special cement process with the greatest care. They are in to stay, though readily removed and replaced when necessary, without having to be shipped to our factory.

THE CRANKS are detachable, closely fitted, and keyed. They are our regular Knous pattern, affording an absolutely secure socket for the pedal pins, with an adjustable throw of 5, $5\frac{1}{2}$, or 6 inches. We also furnish, when desired, extra long cranks, allowing $5\frac{3}{4}$ to $6\frac{3}{4}$ inches throw.

THE PEDALS are the improved Columbia "double-grip" ball-pedals, shown on page 39, though parallel pedals may be substituted on new machines, at a reduction of \$5 in price.

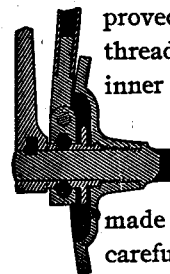
BEARINGS.—Every bearing part is accurately formed and fitted by machinery, hardened with particular care, and polished, so that a new machine may run as freely as if it had been used a week. The front wheel bearings of the Expert are of our well-known and proved Columbia ball pattern. The recess in the hub is threaded, and the adjusting part of the sleeve put on the inner side. On this is formed a large serrated annulus, easily turned by the thumb and finger, and held in position by a neat block screwed to the hub.

BALLS.—The balls used in our bearings are made by special machinery of great accuracy, and are very carefully case-hardened and polished.

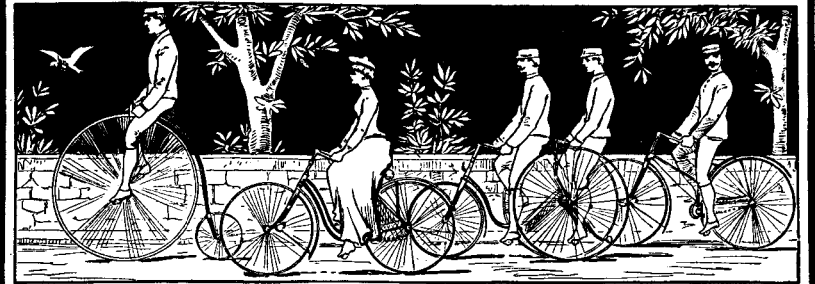
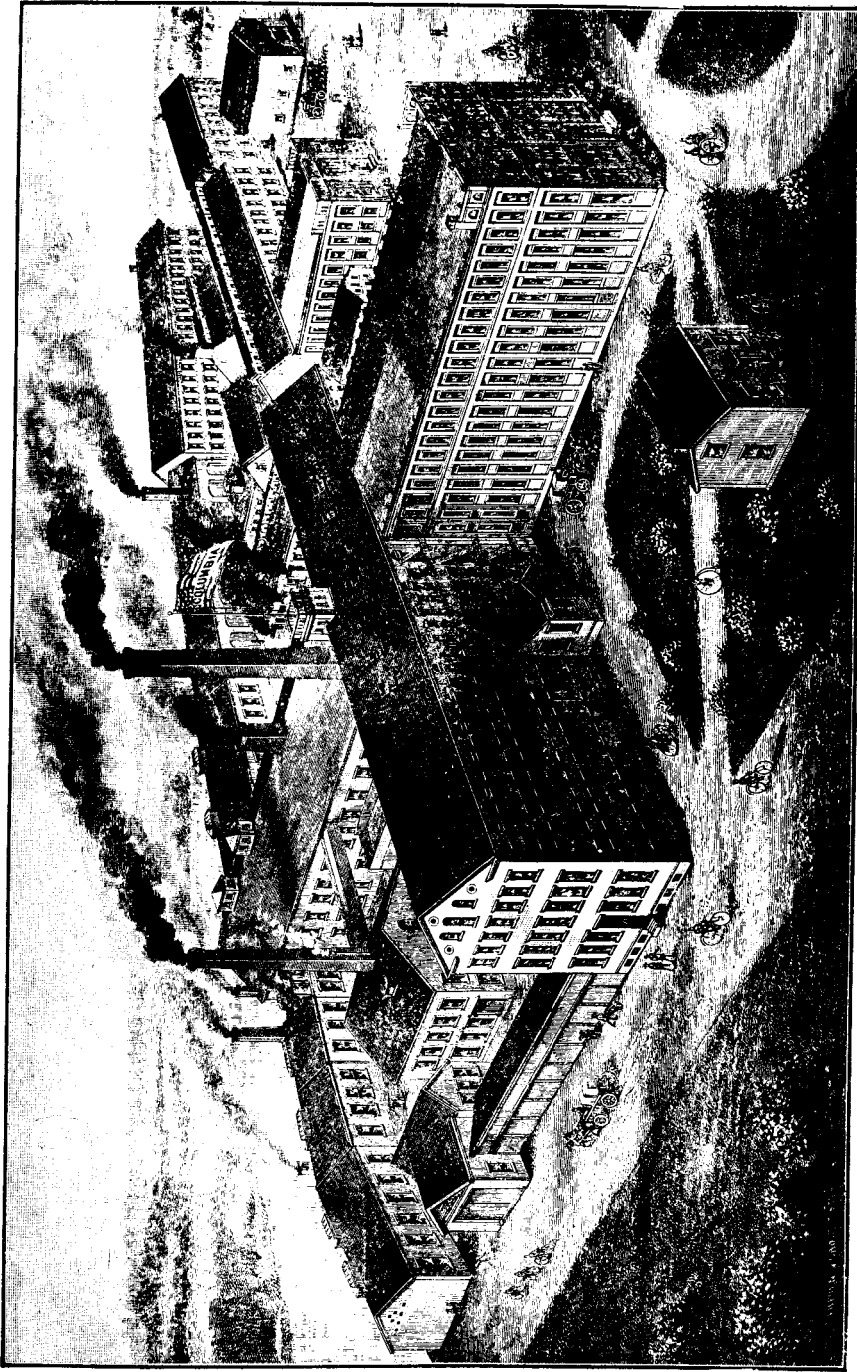
The rear wheel also is provided with our Columbia ball-bearings. The hub is of steel, drop-forged, and the single row of balls on each side is in a hardened box, set in, and the adjustment is effected by turning one cone by its annulus.

THE SADDLE with which the Expert is regularly fitted is our improved Kirkpatrick, described in full on page 33.

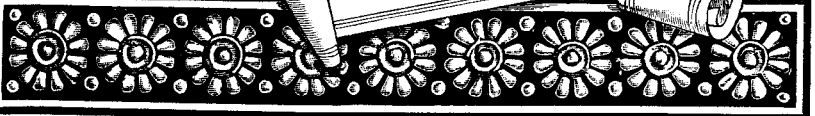
STEP.—The adjustable step is already shown in the Light Roadster description, and may readily be placed at any desired height, or altogether removed



ONLY EDITION FOR 1891.



COLUMBIA
BICYCLES
POPE MANUFACTURING CO.
77 FRANKLIN ST. BOSTON MASS.
BRANCH HOUSES:
12 WARREN ST. NEW YORK:
291 WABASH AVE. CHICAGO:
FACTORY HARTFORD CONN.



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Directions.

Terms, net cash with order.

With EVERY ORDER give full shipping instructions.

Freight or express charges always to be paid by the purchaser.

Correspondence and applications for agency *must* be sent to our Boston office, and plainly addressed to the Company, not to individuals.

Our stock carried in stores at Boston, New York, and Chicago is for local trade only. Orders from agents will be shipped direct from factory.

We cannot guarantee the safe delivery of goods. Our responsibility ceases when goods are delivered at post-office, express offices, or freight depots.

C. O. D. orders from outside of New England must be accompanied by money enough to pay charges both ways in case the goods are not accepted.

Our prices are invariable, and no discounts are allowed except to regular agents.

In ordering, always send weight of rider; and, if selection of size is to be made with us, send also height of rider, and length of leg inside to bottom of sole ball of foot, and length of inside seam of trousers.

We warrant all our COLUMBIA BICYCLES and TRICYCLES to be free from imperfections in material or manufacture, and agree to make good, at store or factory, at any time within a year, any defects in them not caused by use, abuse, or neglect, provided their factory or serial numbers are intact. If such defects are found, all defective parts must be sent to us for examination before any claim is allowed. This warrant does not apply to nickel-plating, though no care or expense is spared to make it the best.



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