

#14099

RECEIVED
JUL 25 1924
SECRETARY'S OFFICE



Our Coaches

are the result of twenty years of
experience in the designing
manufacturing and operation of
motor coaches

THERE IS NO SUBSTITUTE FOR EXPERIENCE AND FINANCIAL RESPONSIBILITY

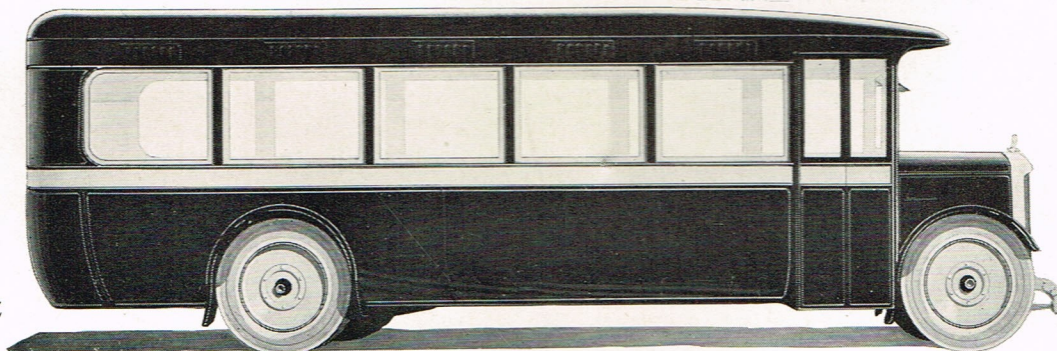
Superior Types of



Type Z

67 Passenger Double Deck Coach

(Designed for heavy traffic; creates riding through appeal of the upper deck)

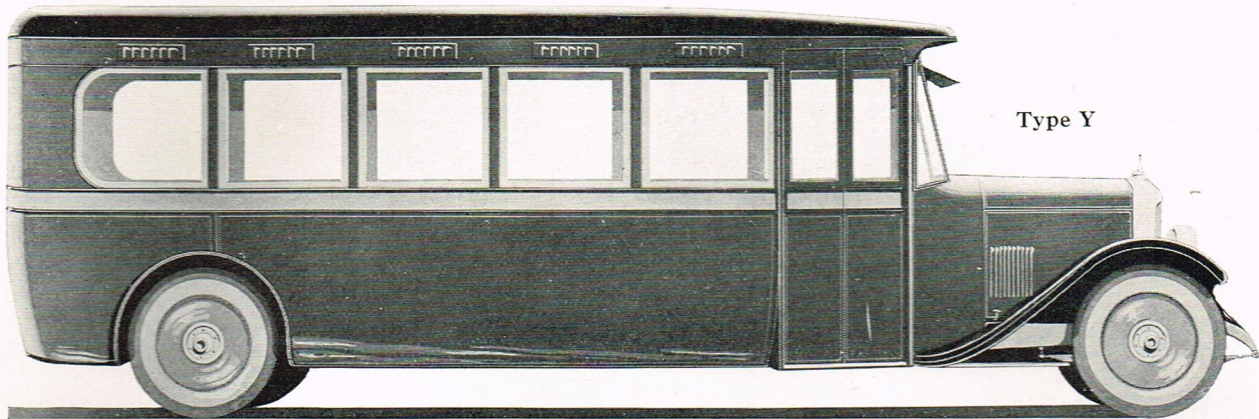


Type Z

29 Passenger Single Deck Coach

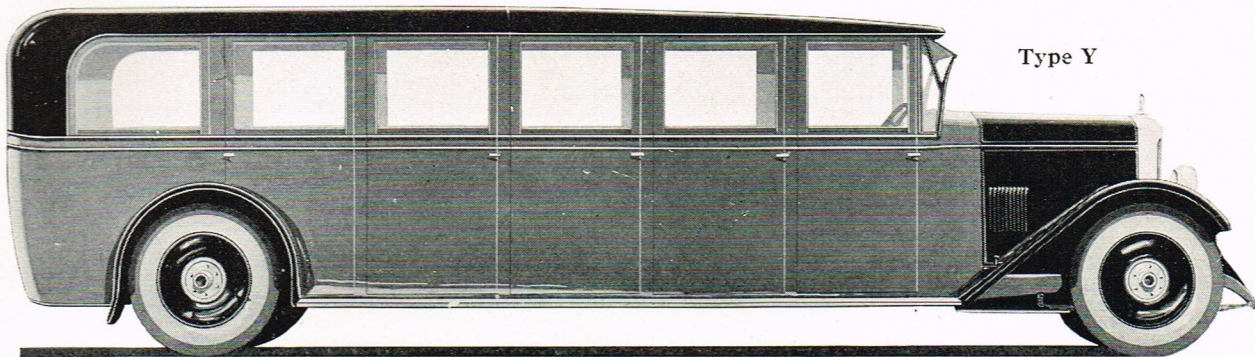
(Specially adapted to accommodate large number of passengers.
Permits a standing load equal to seated load)

Motor Coaches



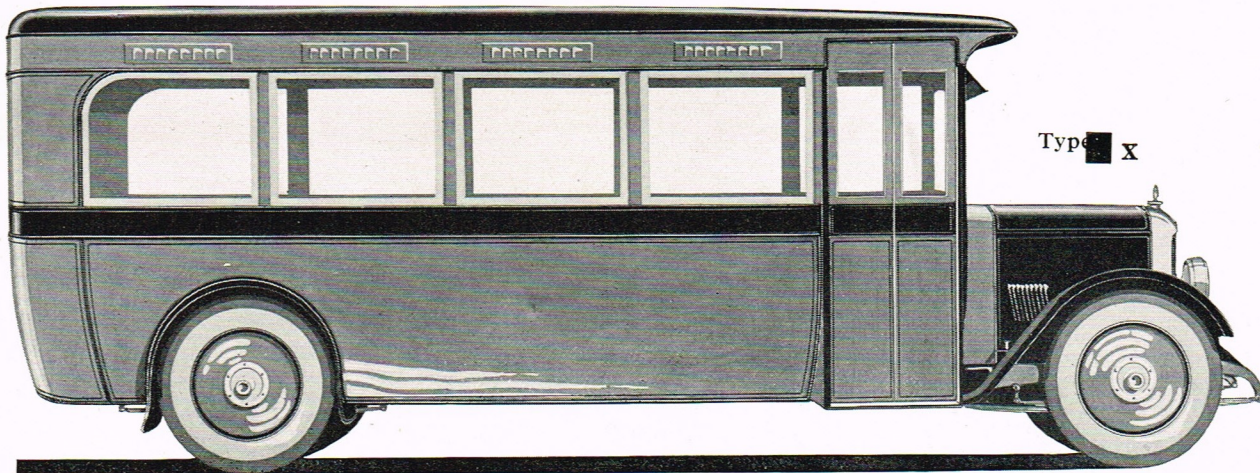
25 Passenger Single Deck Coach

(Specially adapted to provide feeder and supplementary service to existing rail lines. Permits a limited number of standees).



22 Passenger Sedan Coach

(Finds its field chiefly in providing accommodations for interurban traffic where high speed is a factor).

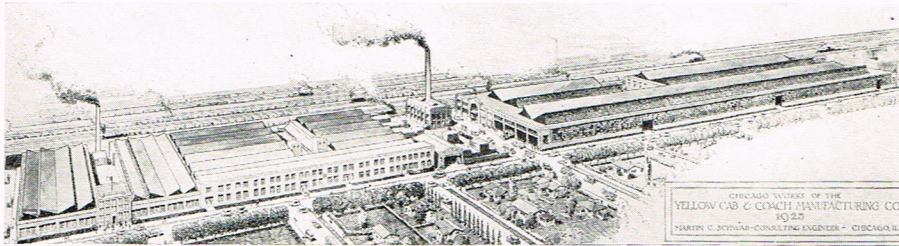


16 Passenger Single Deck Coach

(A small rapid transit coach capable of handling a limited number of standees in addition to seated load.)

We are now designing and constructing other types of Coaches which include a 57 passenger double deck coach, for one-man operation.

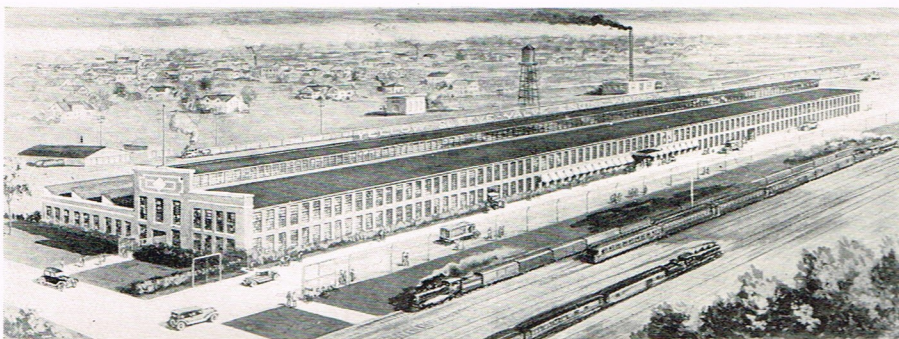
Plant Facilities



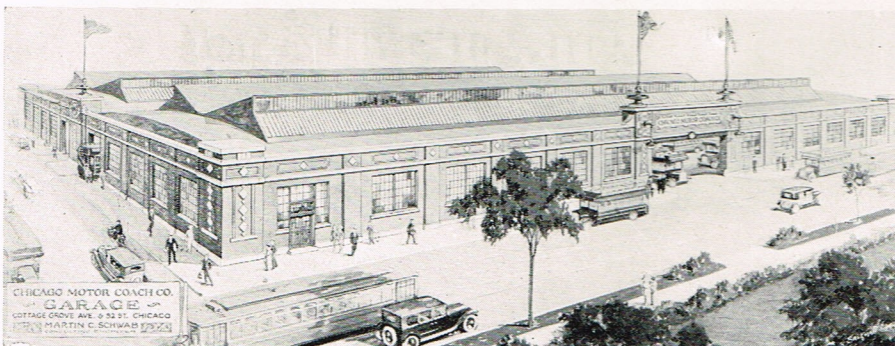
The Yellow Cab and Coach manufacturing plant.



A standard Yellow Cab garage in Chicago.



The Yellow Sleeve Valve Engine Works, East Moline, Illinois.



A standard Chicago Motor Coach Company garage.

The Organization Back of the Product

Operating Companies

CHICAGO MOTOR COACH CO.

OPERATES
MOTOR COACHES
IN CHICAGO

NOW OPERATES 150
WILL OPERATE 700

CAPITAL STOCK (Present Value) \$9,900,000
FUNDED DEBT - - - - NONE

President JOHN A. RITCHIE
Vice-President - - - - - GEO. A. GREEN

YELLOW CAB CO.

OPERATES
2300 YELLOW TAXICABS
IN CHICAGO

CAPITAL STOCK (Present Value) \$20,500,000
FUNDED DEBT - - - - NONE

President - - - - - JOHN HERTZ
Vice-President - - - - - CHAS. W. GRAY

Manufacturing Companies

YELLOW COACH MFG. CO.

(Subsidiary of Yellow Cab Mfg. Co.)

Manufacture Motor Coaches

Plant Capacity When Completed 6,000 Annually

CAPITAL STOCK - - - - \$1,000,000
FUNDED DEBT - - - - NONE

President - - - - - JOHN A. RITCHIE
Vice-Presidents - - - - - GEO. A. GREEN
RALPH M. SPARKS

YELLOW CAB MFG. CO.

Manufacture Yellow Taxicabs

Plant Capacity Annually 15,000

CAPITAL STOCK (Present Value) \$49,000,000
FUNDED DEBT - - - - NONE

President - - - - - JOHN HERTZ
Vice-President - - - - - PAUL H. GEYSER

YELLOW SLEEVE VALVE ENGINE WORKS, Inc.

(Subsidiary Yellow Cab Mfg. Co.)

Manufacture Knight Sleeve Valve Motors

Plant Capacity Annually 15,000

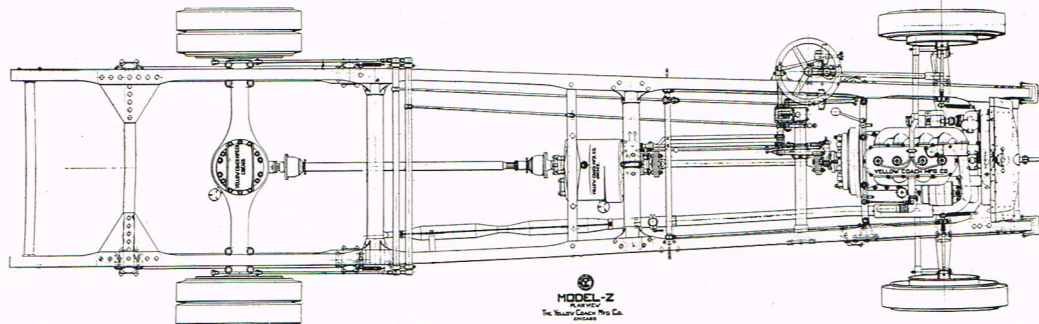
CAPITAL STOCK - - - - \$750,000
FUNDED DEBT - - - - NONE

President - - - - - JOHN A. RITCHIE
Vice-President - - - - - GEO. A. GREEN

Being operators as well as manufacturers, we are conducting what amounts to a laboratory for observing the requirements in motor vehicle transportation. It is evident that the product of our organization will represent the very latest development in Automotive engineering and manufacture.

“Experienced Management—Adequately Financed”

General Specifications of the "Z" Type Chassis



ENGINE—Knight Sleeve Valve type; 4" bore, 6" stroke; 3" crank shaft 40 h. p. at 1400 r. p. m.; maximum power 55 h. p. Performance unique from standpoint of silence, power output, fuel economy and low maintenance.

LUBRICATION—Force feed lubrication to main bearings and connecting rods with oil strainer easily detachable from outside of crank case. Oil pump attached to crank case top half and positively driven from spiral gear on eccentric shaft.

CRANK SHAFT—3" in diameter with balance weights drop forged integrally. Bearing surface hardened to resist wear.

IGNITION—High tension magneto. Provision made to take care of either fixed or automatic advance.

CARBURETOR AND MANIFOLD—Specially designed Zenith carburetor. This unit is provided with $\frac{1}{2}$ " hardened and ground throttle spindle and extraordinarily large bearing areas. A gland is fitted to prevent air leakage. Engine equipped with special hot spot manifold. Design of induction pipe straight and short; provision made for either vacuum or gravity feed.

GENERATOR—Provision made for generator, output sufficiently large to take care of any requirements. Mounting arranged so unit may be removed and replaced in a few moments.

SELF-STARTER—Provision made for self-starter capable of cranking engine under conditions of extremely low temperature.

FAN—Four blades 20" diameter driven from eccentric shaft with 2" belt at 1.50 times engine speed. Fan mounted on cast tubular bracket with an exceedingly simple form of adjustment.

RADIATOR—Core constructed to avoid damage as result of freezing, and readily detachable for repairs. Exterior of radiator polished. No exposed bolts. Radiator presents strikingly distinctive and beautiful appearance.

GASOLINE TANK—Capacity 43 gallons. Equipped with hand hole of large size. Fuel supply can be shut off from driver's position, a quick acting valve being provided for this purpose. A special design of strainer absolutely prevents any possibility of water or dirt entering gas line.

CONTROLS—Mounted direct on 3" tube directly behind engine. Control of selective type with very accessible levers and pedals, all of these details being drop forged. Exposed parts either stove enameled or nickel plated. Entire control readily detachable. To insure maximum comfort for drivers, brake and clutch pedals are provided with an exceedingly simple form of adjustment.

CLUTCH—Single disc type. Revolving member exceedingly light, and is cooled by induced air current. Friction linings directly attached thereto. Pressure is evenly distributed over entire frictional surface. Revolving member cooled by air current. A simple, efficient and easily adjustable clutch brake provided. Entire clutch assembly forms a unit, removal and replacement of which may be effected in a few minutes.

TRANSMISSION—Three speed silent chain or four speed gear with both types transmission; housings are aluminum. Three speed silent chain transmission specially designed for city service where grades are not severe and where total absence of noise is an essential requirement. Both types of transmission mounted amid-

ships, three point suspension employed. Arrangement such that removal and replacement is an exceedingly simple operation. Transmission cover located on under side, thus permitting easy pit inspection. (Chain transmissions have been standard equipment in London coach service for past ten years).

FRONT PROPELLER SHAFT—Fabric disc type with tubular shaft. Three driving discs employed at each end, $\frac{3}{8}$ " thick, 7" in diameter. Shaft arranged so that it may readily be removed or replaced. Length of shaft between disc centers 44".

REAR PROPELLER SHAFT—Metal type. Center to center distance 72". Provision made for positive retention of lubricant.

FRONT AXLE—Reverse Elliott type. Wheel loads taken on specially designed thrust races, each race equipped with 20— $\frac{1}{16}$ " balls—a very important factor from standpoint of easy steering. Wheel bearings of taper roller type, and spaced on wide centers.

REAR AXLE—Underslung worm and wheel type. Housing a one-piece drop forged banjo type heat treated member—a single piece from flange to flange with integral spring pads. Axle of semi-floating type, thus permitting wheels to be readily withdrawn without exposing or interfering in any manner with wearing parts. Drive shaft tubular, all bearings of taper roller type with shim adjustment. Each rear wheel mounted on two opposed bearings held in a container; shaft, bearings and container thus forming a unit.

WHEELS—Cast steel. Spokes and rim of hollow section.

TIRES—34"x5" solid or 34"x6" semi-pneumatic. Single tires on front, dual on rear.

SPRINGS—Both front and rear of progressive type, mounted underneath frame. Rubber shock insulators employed in place of shackles and shackle pins. Require no lubrication, prevent squeaks and rattles, and provide unexcelled riding comfort. Rear springs 62 $\frac{1}{2}$ " long, 4" wide. Front springs 50 $\frac{1}{2}$ " long, 3 $\frac{1}{2}$ " wide.

BRAKES—Total brake surface area 774 sq. in. Three sets of brakes. Two sets operate direct on rear, one set on front wheels. Foot pedal connected to front wheel brakes and one set of rear wheel brakes. Second set of rear wheel brakes coupled to hand lever of push-on type. Brake drums made from heat treated high carbon steel forgings. Both rear and front wheel brakes readily adjusted by driver from seated position.

FRAME—Of rigid construction. Five tubular cross members. Ends brazed into steel castings—riveted to side bars. Maximum side bar depth 10", $\frac{1}{4}$ " thick. Flange width varies from 3" to 4". Frame construction unique, eliminates body distortion, squeaks, rattles and other objectionable noises.

STEERING—Worm type, mounted outside frame. Hand wheel 18" in diameter. Steering exceptionally easy.

GENERAL DIMENSIONS, ETC.

Overall Length (dash to rear end of frame), 19' 6";

Wheelbase, 16';

Front Wheel Track, 5' 11";

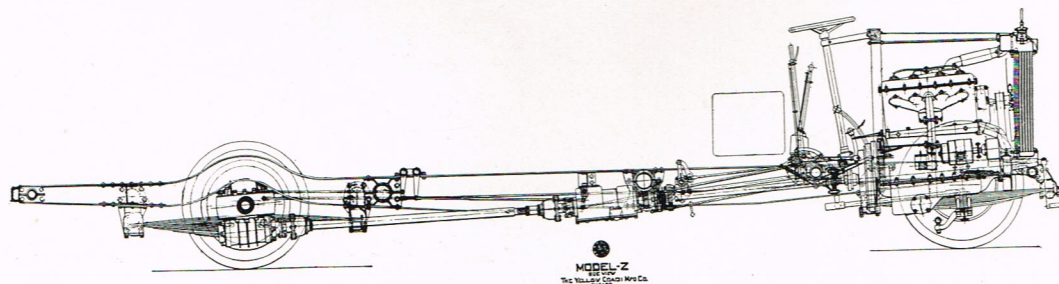
Rear Wheel Track, 6' 1 $\frac{5}{8}$ ";

Height to Top of Frame from Ground, 1' 11 $\frac{1}{2}$ ";

Turning Radius, 34'.

Overall Length (starting handle to rear end of frame), 23' 7".

NOTE—This chassis when used in conjunction with a single deck body is equipped with pressed steel disc wheels and pneumatic tires. Necessary modifications are made to springs and gear ratios.



General Specifications of the Bodies

FRAMEWORK—Framework throughout of second growth, thoroughly seasoned ash securely braced and joined in conformity with best body building practice. All joints treated with white lead and either screwed or bolted. No nails used.

SASH—Instead of conventional broad wood sash usually found in coach bodies, an extremely light drawn brass sash is used; giving maximum window vision and minimum weight. Sash equipped with a patented anti-rattling device. Replacement of glass extremely easy—it being necessary to remove only four special screws to take sash apart.

WINDSHIELDS—There are two closed automobile type windshields at front end of body; upper half ventilating.

HEATING SYSTEM—Provision made for adequate heat, regardless of weather conditions by exhaust gas being carried around both sides of body through thin walled steel tube. All exposed parts guarded to prevent damage to passengers' person or clothing. Control valve located inside body and operated by conductor.

FINISH—Interior of coach above belt rail finished in brightly varnished natural wood. Roof, carlines, and advertising signs enameled white. Sides of body covered with rattan panelling to match seats. Floor and lower side panels finished in dark green. All hardware white metal or aluminum.

VENTILATION—Louvre type ventilator with sliding adjustment, individually operated over each window, capable of changing the air within coach every ten minutes.

Double Deck Features

CAPACITY AND SEATING ARRANGEMENT—Upper deck accommodates thirty-nine passengers, all facing forward with the exception of one individual seat at head of stairway. Seats slat type, natural wood, varnished finish, 35" wide with hand grips at aisle corners, spaced 27" apart. Aisle width 18".

Lower deck accommodates 28 passengers, all facing forward with exception of two seats over wheel pockets. Seats 34½" wide, spaced from 27¾" to 30" apart. Pedestals pressed steel with full sprung cushions and backs. Aisle width 18".

PANELS—Lower deck and stairway panels sheet steel, specially treated to prevent rust, panels firmly screwed and fastened and all edges covered with metal or wood mouldings screwed through panels into framework. Upper deck panels ¼" Haskelite so applied that no edges are exposed to the weather.

ROOF—Constructed of 2" wide tongued and grooved specially selected pine, braced at each body post with ash gun stock carlines, braced to body posts. The roof covered with heavy waterproof canvas, maple slats closely spaced laid diagonally across roof and secured in position by means of brass screws.

DESTINATION SIGNS—Large well-illuminated roller destination signs of "Hunter" type sunk flush in front end of coach and in last right hand side window. Front sign 50"x10", side sign 25"x8".

DRIVER'S COMPARTMENT—Driver enclosed in a separate compartment with entrance through a 27" wide full door on left side of coach. Driver can at no time come in contact with passengers—an excellent safety factor.

BELL SYSTEM—Each seat provided with an accessible buzzer button for signaling operator.

STAIRWAY—Of spiral type 17" wide; eight steps with a 10¾" rise.

REAR PLATFORM—45" long and 62" wide. Surface covered with metal anti-skid tread. Grab handles conveniently located for boarding and alighting. Platform 14½" from ground. Low level chassis eliminates necessity of two-step platform.

ADVERTISING SPACE—Standard size on sides of white enamel finish, and each card space is separated.

LIGHTING—Interior illuminated with eight 21 c.p. nitrogen filled lamps, so arranged that light is thrown directly over seats. Lights are self-contained in upper half of advertising rack and removable as a unit. Rear platform illuminated by a light over entrance step. Front and rear destination signs illuminated. Light and bell system of 12 volts.

PAINTING—Optional.

GENERAL BODY DIMENSIONS

Length of Platform, 45";
Length of Upper Deck, 23' 9";
Overall Length, (complete vehicle), 27' 6";
Overall Width, 7'-10";
Overall Height, (ground to top rail), 10' 5½";
Headroom, (lower deck), 6' 1½".

Single Deck Features

CAPACITY AND SEATING ARRANGEMENT—Coach accommodates 29 passengers, all facing forward. Seats are of rattan with light-weight pressed steel pedestals and full sprung seats and backs.

PANELS—All outside panels are of 14 Ga. aluminum. Inside panels of ¼" veneer covered with rattan to conform with upholstery of seats.

ROOF—Extremely rigid and waterproof construction covered with a layer of canvas, and an outside covering of best grade dark green roof fabric leather.

LIGHTING—Interior is illuminated with ten frosted glass dome lights with silver rims, of 21 c.p. each, so arranged that light is thrown over seats.

Wiring is self-contained in advertising rack and is removable as a unit.

Entrance step is equipped with two step lights operated by the driver. Dash lights of 4 c.p. are mounted alongside of destination sign in front roof panel. Right side light green, left side light red.

Headlights of drum shape, German silver with anti-glare lens. Coach is equipped with a combination stop and tail light.

DESTINATION SIGN—"Hunter" type roller sign, illuminated, is sunk flush in front roof panel; sign space 8"x40".

FARE BOX—Fare-box is mounted in a cast aluminum, polished pedestal, conveniently located for "pay-as-you-enter" fare collection.

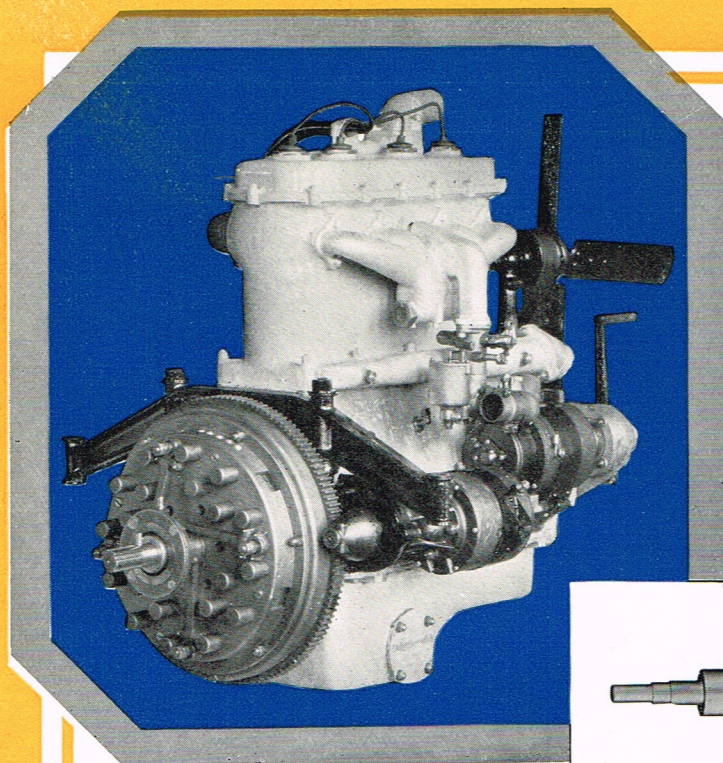
TOOLS, TIRE AND BATTERY—Ample space for tools, jack and battery is provided under rear cross seat, easily accessible. Extra tire is carried at rear underneath body.

GRAB-RAIL—Nickel grab-rail in a vertical position is provided at the left of the entrance step.

ENTRANCE DOOR—Entrance door of jack-knife type swinging inwards, toward front of body, so arranged that no portion of door at any time protrudes outside of body. Operated by efficient, easily adjusted mechanism. Upper door panels of glass.

GENERAL DIMENSIONS

Overall Length	- - - -	24' 11"
Length of body	- - - -	20' 9½"
Overall width	- - - -	7' 10"
Overall height	- - - -	8' 4"
Headroom	- - - -	6' 1½"
Step to ground	- - - -	13"



The Engine with the Three Inch Crankshaft



WE manufacture our own Knight Sleeve Valve engine at our plant in Moline, Ill. This engine has been specifically developed for coach service. A corps of engineers selected from amongst the best talent available in this country and abroad and under the direction of Geo. A. Green, have been working continuously on this development for the past eleven years and the development is backed by more than 100,000,000 service miles.

The crankshaft is the heart of the engine. Few engine manufacturers realize that here is the root of most of their troubles. Nearly all crankshafts are under size. The net result is torsional vibration, undue noise, wear and tear, a short bearing life and finally a broken crankshaft—possibly a wrecked engine.

But we set out from the inception to avoid just this condition. So we employ a 3-inch crankshaft with counter-balance weights drop forged integrally.

Observe the substantial appearance of the engine. Note the extraordinary rigidity gained by the block cylinder construction with the jackets extending clear down to the base. This, in conjunction with the deep crank case, split below the main bearing center line, gives unparalleled solidity.

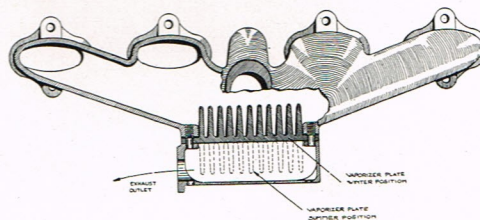
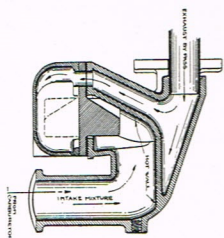
The matter of oil consumption is very important from an operating viewpoint. With the average engine more oil is lost as a result of leakage than actual use. With our design it will be seen that extraordinary precautions have been taken to eliminate oil leakage. Abnormally

wide joint faces are employed throughout and the clamping bolts are spaced on very close centers.

The magneto and generator shafts are provided with specially designed stuffing boxes. At both rear and front end of crankshaft large oil throwers are fitted. The net result is a minimum consumption of oil and a clean engine at all times. Note also the easily removable oil strainer and the complete absence of exterior oil piping.

From the viewpoint of fuel economy wonderful results are shown. In part this is due to the inherent advantages possessed by the Knight engine, but our manifold design also plays an important part. Notice the reversible hot spot grid. The illustration shows the grid in the winter position. There are over 50 square inches of heated surface presented to the incoming mixture. For summer operation the grid is reversed.

The disadvantage of the average hot spot is that no provision is made to vary the amount of heat to suit wide temperature changes. We overcome this difficulty by making the grid reversible.

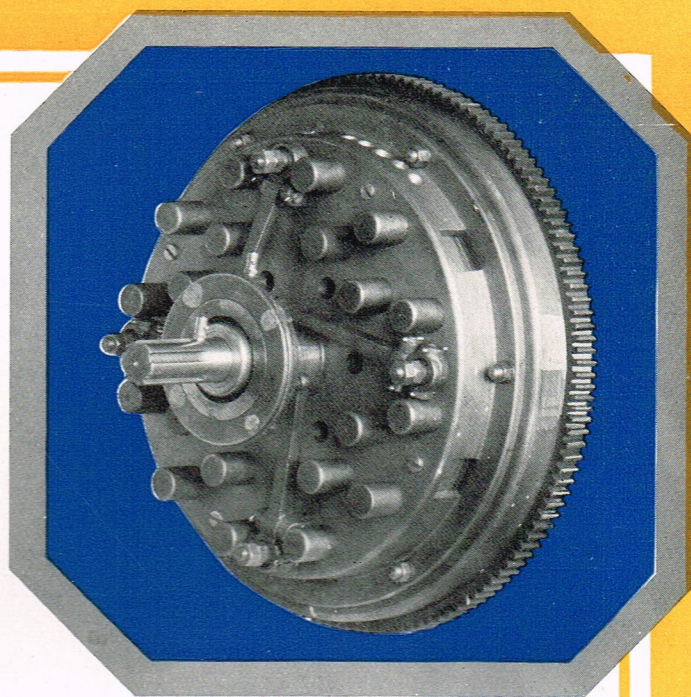


The Clutch

Constant starting and stopping in motor coach service soon tries out the stamina of the clutch, and experience has amply vindicated the unique design used on the Yellow Coach. The exceedingly light weight moving element consists of a single disc faced on both sides with friction fabric.

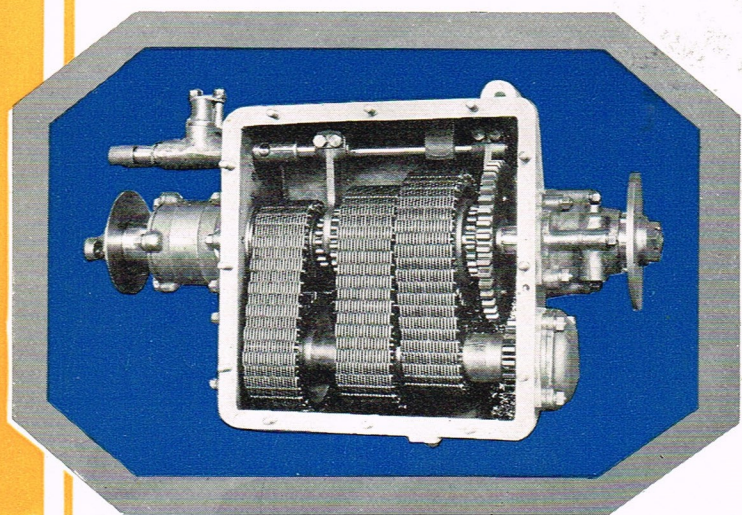
Wear is evenly distributed on all parts of the friction surface by the multiplicity of springs acting on the disc. Twenty in numbers, they are arranged alternately in two rows, insuring firm contact and even pressure on all parts of the surface.

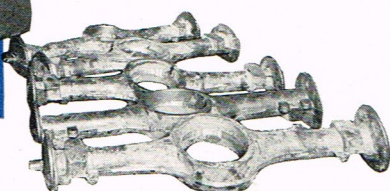
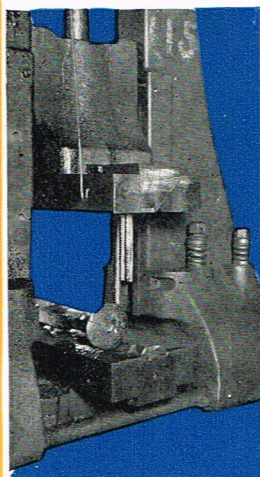
Heat necessarily generated under the severe conditions of this service, is rapidly and effectively dissipated through air ducts, by currents of air automatically created by the motion of the fly wheel. A simple and ingenious clutch brake acts simultaneously with the depression of the pedal.



The Transmission

Quiet, and ease of operation, two very necessary features of city coach work, are found as salient points in the three speed chain drive transmission shown. The chains are always in mesh, and speed changes are effected by sliding clutches, making positive engagements. When grades are steep a four speed gear transmission is equipped.





THE REAR AXLE

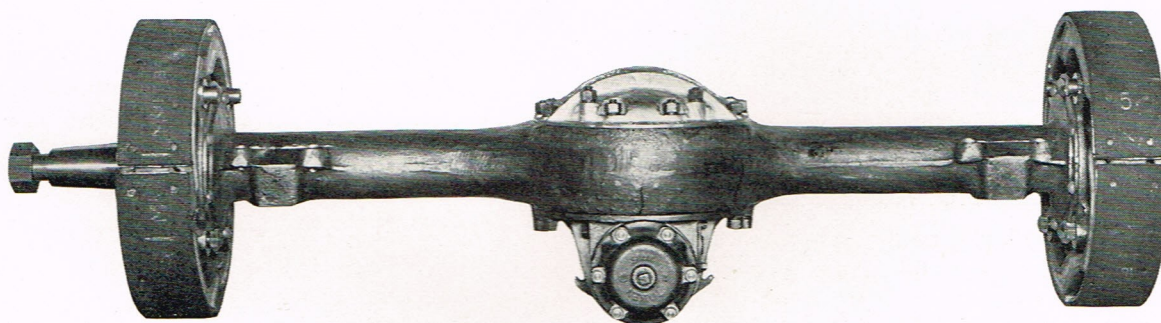
For the one piece housing we employ what we believe to be the largest forging ever used in the history of the automotive industry. It is 61 inches in over all length, requiring enormous dies and hammer equipment.

Exceptional light weight and strength together with many special features calculated to facilitate maintenance work characterize the entire design. The housing is guaranteed against fracture for all times regardless of the duration or severity of service. It is 20 to 30 per cent lighter than the average cast or pressed steel housing, having the same carrying properties. The drive shafts are of ample size. They are tubular in form; this again with a view to weight saving.

We have two sets of tremendously powerful brakes on the rear wheels. They are 21 inches in diameter, 5 inches wide, cam operated.

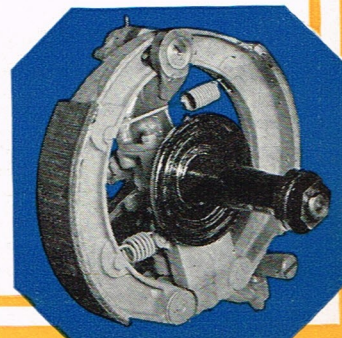
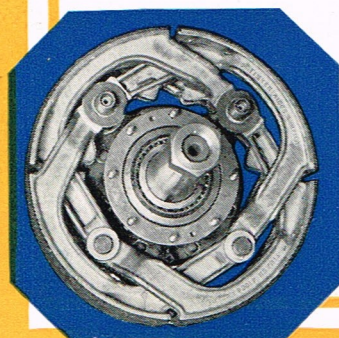
Front wheel brakes are optional. They also are cam operated and the design is such that they can be attached or detached in but a few moments. When front wheel brakes are employed they are coupled up with one set of the rear wheel brakes, both sets being operated by foot pedal.

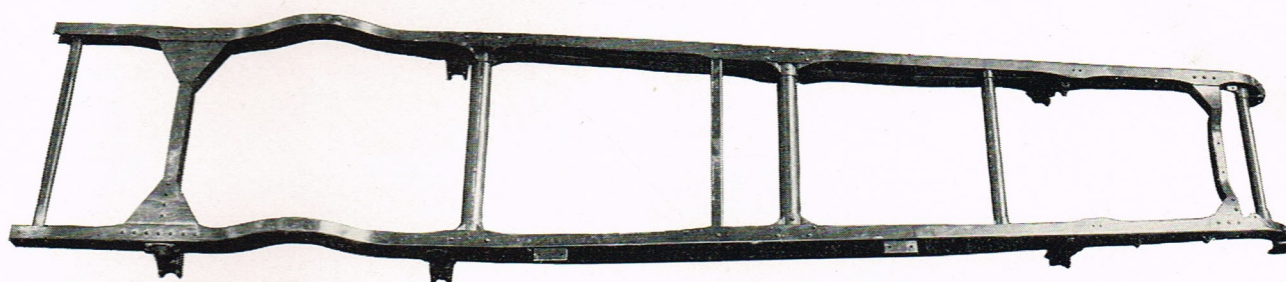
There is a total of 774 square inches brake surface area. This means extraordinarily long lining life and a minimum number of adjustments.



THE BRAKES

We believe with the enormous brake area the ease of operation together with the facilities for keeping the adjustment constantly correct, that our "Z" brake equipment constitutes an unparalleled achievement from the viewpoint of safety and control.





THE FRAME

Generally speaking, a new automobile rides well. Both body and chassis are free from squeaks and rattles, the vehicle responds to brake, clutch and accelerator as an integral unit. But unfortunately this condition does not continue indefinitely.

The reason is, that in nearly all cases automobiles have flexible frames and without the support of the body the frame side members cannot remain parallel with one another even for a fraction of a second, even when operating over a nearly perfect road bed.

When the body is relied on for stiffening it suffers during the process. There is a gradual loosening of the joints. Inevitably fatigue sets in. The result is squeaks and rattles. In time the vehicle loses its rigidity and this affects even the riding properties. For this reason an old automobile can never be rejuvenated.

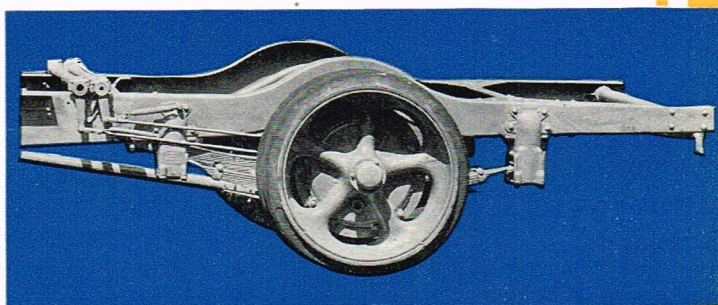
Remember that a vehicle operating over even a smooth pavement seldom has all four wheels exactly in one plane. There is a natural tendency for the frame side members to accommodate themselves to this condition and they will do this unless securely tied together and the tying process is made effective by either the cross members or the body. It is clear that the conventional channel cross member is not equal to the task and certainly the body should be relieved of these stresses.

The answer is found in the proper tying of the side bars together—the tube is the thing.

This fact should not be lost sight of—if one frame side member is flexed so as to be at an angle with the other side member, then every cross member in the frame must of necessity be twisted throughout the entire length to the extent of that angle.

It is our contention that the main purpose of a frame cross member is to resist torsion, and that a conventional channel section cross member is nearly useless from this standpoint. Actually then, frame cross members are torsion members so a comparison can be made with other forms of similar members; for example, propeller shafts, and certainly no sane engineer would specify a channel section for such service.

The "Z" frame is of absolutely rigid construction. Five tubular cross members are used. The ends are brazed into steel castings riveted to the side bars. There are two 2½ inch, one 3 inch, and two 4½ inch diameter tubes. The maximum side bar depth is 10 inches. The side bars are ¼ inch thick for the double deck and 3/16 inch for the single deck chassis. By reason of this construction it is found possible to materially decrease the body weight and at the same time greatly lengthen the useful life of the body. This construction guarantees minimum maintenance charges.



From the Passengers



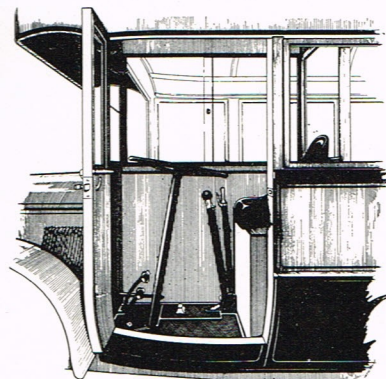
An attractive coach attracts patronage. We believe that we present to you a coach which is beautiful in appearance.

A coach that is easy to get in and out of and that provides a comfortable ride, retains and increases the patronage which it attracts.

The chassis is of the low level type, and there is only one short step from the ground to the platform. The low center of gravity, wide spring and wheel center to center distances are factors which contribute tremendously toward safe and comfortable operation. In short, the stability of the vehicle is guaranteed.

The Driver's Compartment has also received special attention, as we believe that his comfort contributes largely to the safe operation of the coach. We have separated him from the passengers in order that he may give his undivided attention to his work.

Progressive type of springs embedded in rubber shock insulators give exceptional smoothness of riding, even on rough pavements.

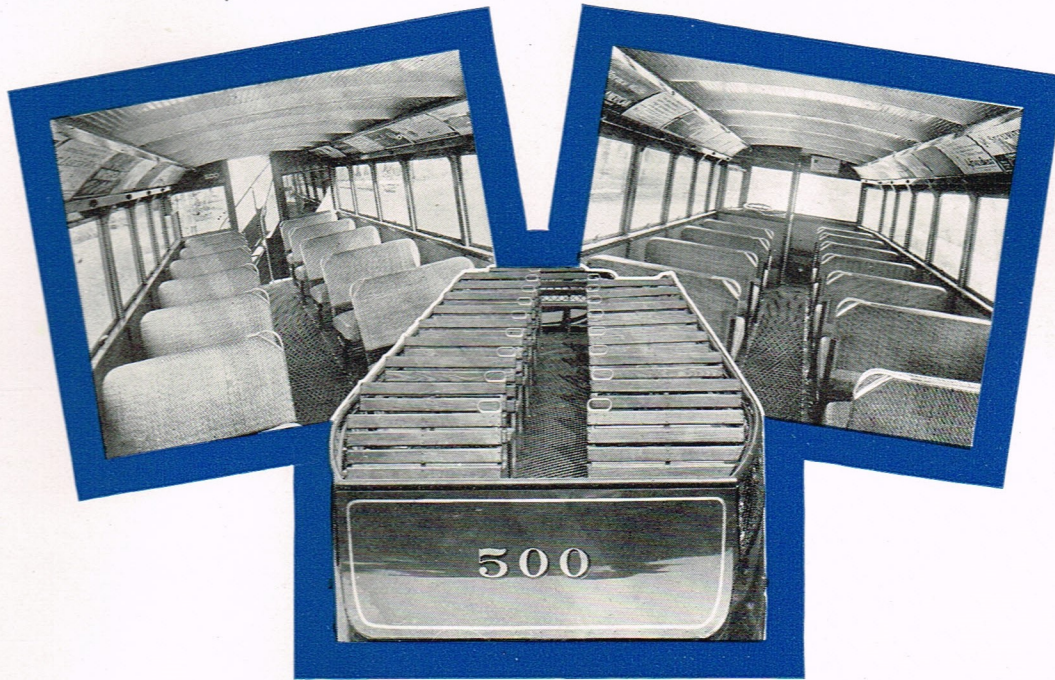


The Driver's Cab



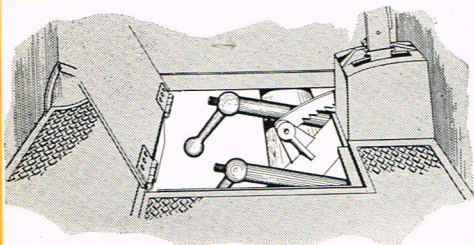
Especially Attractive Radiator

Point of View



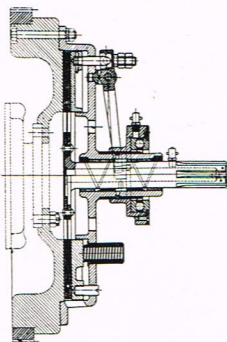
The interior of the coach is most inviting in appearance. Riding in the coach verifies the first impression. The seats are wide and are very comfortably upholstered. Ample knee room is provided through a generous spacing of the seats. There is a head room clearance of 6 ft. 1 in. The narrow drawn brass sash provides maximum glass area, and the white enamelled ceiling, the rattan seats and the safety tread flooring all contribute toward the general impression of cleanliness and comfort. Exhaust gas carried through thin-walled steel tubing heats the body in cold weather and ventilation is generously provided for by fourteen adjustable ventilators.





BRAKE ADJUSTMENT

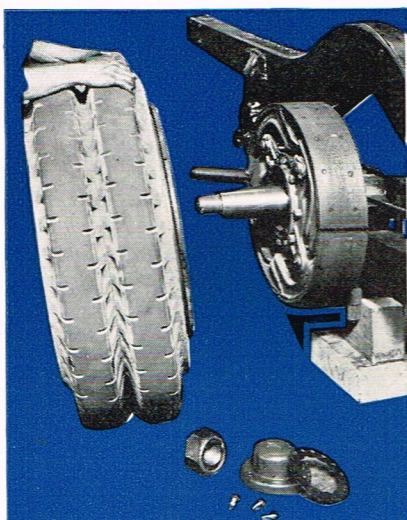
All three sets of Brakes may be adjusted by the driver from his seated position and without the aid of tools. It is only necessary to lift up the trap door under the driver's feet—then twist the levers one or more turns. The left hand lever takes care of the adjustment of the front and one set of rear brakes. Right hand lever adjusts the second set of rear wheel brakes.



CLUTCH

The simplicity and accessibility of the clutch is evident as is also its ready removal as a unit. Even under conditions of very severe service 40,000 or 50,000 miles may be expected from the anti-friction linings.

There is no inaccessible spigot bearing—always a troublesome matter from a lubricating viewpoint. Note the single disc and the ample air space for cooling.



REMOVAL OF WHEELS

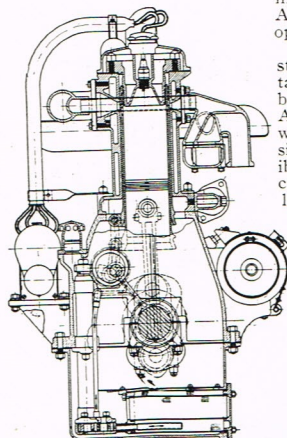
With our construction this is a very simple operation and occupies but a few moments. It is only necessary to remove the hub cap and lock washer, take off the drive shaft nut, apply a puller, and off comes the wheel.

Observe the absence of miscellaneous parts which ordinarily must be dealt with during the process of removing a wheel.

These are but some of the many reasons why we employ our special semi-floating design.

Fourteen

Reducing Maintenance to a Minimum



ENGINE

100,000,000 miles of Knight engined coach operation in Chicago and other cities have confirmed our belief in the unqualified superiority of this type. High gasoline economy is the rule, not the exception, for the valves are positive in their action at all speeds; then there are no valve pockets. The absence of pockets and the spherically shaped combustion chamber permit high compression. The central position of the spark plug is another important advantage.

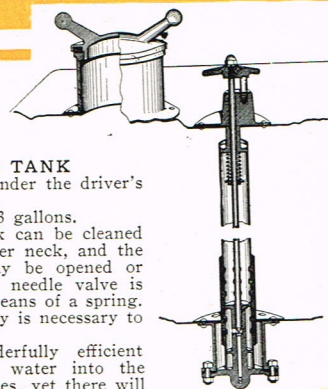
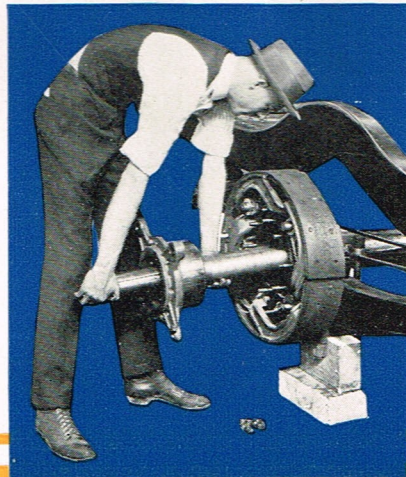
The mechanical efficiency of the Knight engine is extremely high, the friction horsepower lower than that of the average poppet valve.

The cost of repair is small, since there are very few skilled operations. The cylinders never require re boring and carbon formation is an advantage, rather than a detriment.

The performance of the Knight engine remains constant throughout its useful life and practically no adjustments are necessary, since there is nothing to adjust. Throughout the useful life there is little if any increase in noise due to wear and the performance tends to improve.

REMOVING DRIVE SHAFT

This operation can be quickly and simply accomplished. After having taken off the wheel it is only necessary to remove the nuts securing the brake spider, then the drive shaft complete with its cage and bearings may be drawn out. The drive shaft, cage and double opposed taper roller bearings form a unit. The bearings may be set up on the bench. Shim adjustment is used. From a service standpoint the job is simplicity itself. Observe the ample size of the drive shaft and its taper on which the wheel is mounted.



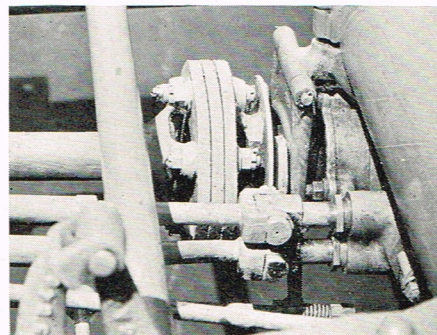
THE GASOLINE TANK

The location is directly under the driver's seat.

The capacity is ample—43 gallons.

Note how easily the tank can be cleaned through the extra large filler neck, and the fact that the fuel line may be opened or closed in a moment. The needle valve is firmly held on its seat by means of a spring. A half turn of the lever only is necessary to open or close it.

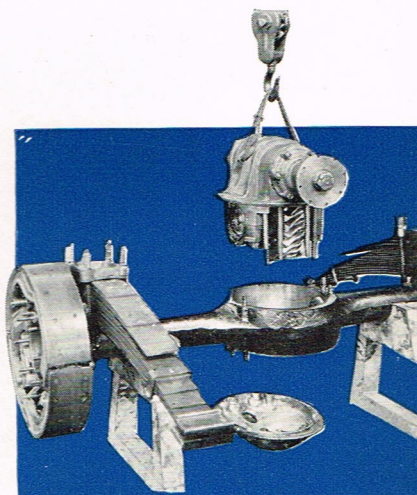
Then there is a wonderfully efficient strainer. You may pour water into the tank, even in large quantities, yet there will be no ill effect from an operative standpoint. A substantial sediment trap is provided and water or dirt may readily be drained out by simply removing the plug. We employ flexible metal gasoline hose. In this way the customary trouble due to broken gasoline lines is completely avoided.



THE CLUTCH BRAKE

The design is noted for its simplicity, its effectiveness, and the ease with which it can be assembled or dismantled as a unit.

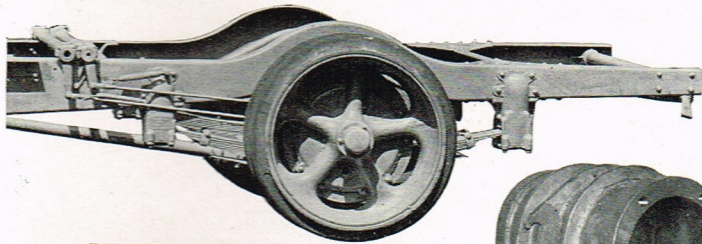
The clutch brake automatically becomes effective when the clutch pedal is depressed, for there is an extension to the clutch withdrawal lever which is coupled to the clutch brake operating rod, which in turn is attached to the shoe. Note the large tube supporting the front end of the transmission. The support has a boss cast on it and from this boss the clutch brake shoe is suspended.



REMOVING CARRIER

The carrier, worm, wheel, bearings and differential gears are a complete unit—a bench assembly job. The entire unit may readily be removed or replaced in the main carrying member. The worm is inverted and operates immersed in oil, so its lubrication is assured.

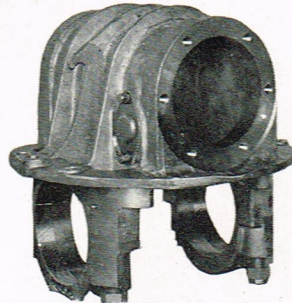
"There is No Substitute for Experience"



RUBBER SHACKLES

The suspension is an achievement of which we are justly proud. The customary jolts, jars and vibrations are eliminated. We use springs of extraordinary length, width, and depth. Then the grading of the leaves has been very carefully carried out, and the springs are progressive in their action.

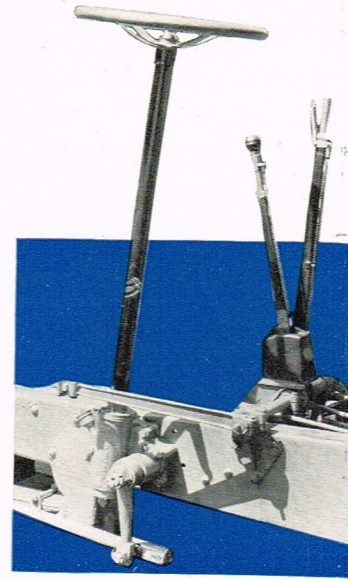
Last, but not least, the ends of the springs are held in rubber shackles. Actually the shackles are universal joints and almost entirely eliminate spring breakage.



WORM CARRIER

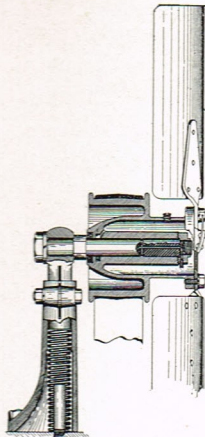
The rigid, yet simple, construction is apparent.

Thrust from the worm wheel cannot spread the carrier sides, since the carrier registers in the banjo. For the same reason it is impossible to suffer misalignment as a result of careless assembly.



STEERING CONTROL

The Coach may be steered as easily as the finest automobile. Note the rigid mounting of the box. Note also the straight drag link, and the simple and clean appearance of the control set.

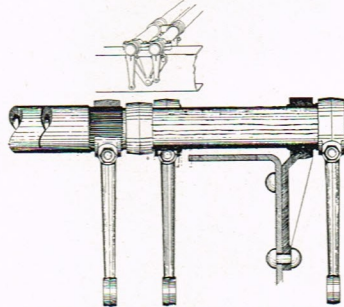


THE FAN

There are many important features in connection with our design. Observe the 2" belt. Then the blades are driven at 1.5 times engine speed. Most fans are driven faster. Naturally the belt slip is greater and more rapid belt wear takes place.

Tubular construction is used for the bracket design. Where strength is wanted the tube is the thing.

As to adjustment, it is only necessary to loosen the clamp nut; then the spring will automatically lift the vertical spindle; tighten up the nut and the operation is complete.

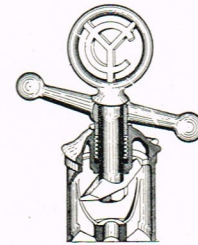


THE BRAKE CROSS SHAFTS

Experience has shown us that the average brake mechanism is subject to considerable spring. We guard against this by the large size of our brake cross shafts and of course our levers have built into them an equal safety factor. The tubular cross shafts are 2" in diameter. The levers are secured by means of serrations.

The cross shafts are mounted in spherical self-aligning bearings. This means that free working is guaranteed.

Note the tie bar connecting the cross shafts. The design is such that when applying either hand or foot brake the bending stresses must pass through both shafts.



RADIATOR FILLER CAP

It is quite impossible for leakage to take place through our filler cap, since, like a poppet valve, it is held firmly on its ground seating by means of a concentric spring. A half turn of the bar relieves the spring loaded cam; the cap is then released from its steam-tight ground seat. A half turn in the reverse direction and it snaps back in place.

The cap is designed so that our regular monogram can be replaced with any standard form of temperature recording device.

The filler cap is constructed from polished nickel bronze and it always retains its luster.

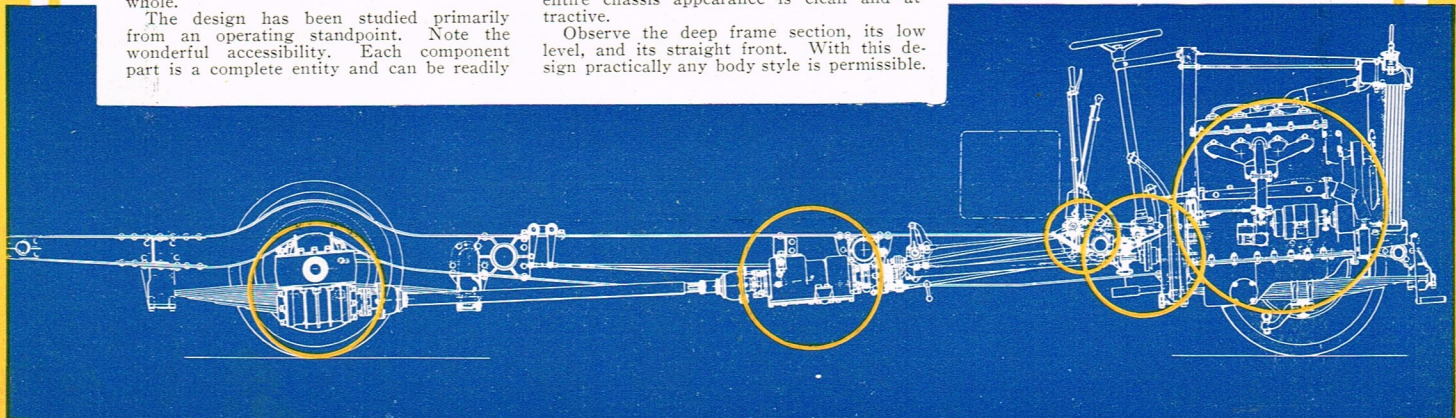
THE "Z" CHASSIS

The keynote is simplicity. There is no excess weight, yet all highly stressed parts are rugged in design. No expense has been spared in producing a finely engineered whole.

The design has been studied primarily from an operating standpoint. Note the wonderful accessibility. Each component part is a complete entity and can be readily

removed or replaced. Then again, each unit is easy to take apart and but little difficulty will be experienced, even where skilled help is the exception rather than the rule. The entire chassis appearance is clean and attractive.

Observe the deep frame section, its low level, and its straight front. With this design practically any body style is permissible.



PERSONNEL OF MANAGEMENT

(Yellow Coach Mfg. Co.)

Chairman of Board, JOHN HERTZ

President, Yellow Cab Company.
President, Yellow Cab Manufacturing Company.

President, JOHN A. RITCHIE

President, Chicago Motor Coach Company.
President, Yellow Sleeve-Valve Engine Works, Inc.
Formerly, President, Fifth Avenue Coach Company, New York City.
Formerly, Personal Assistant to Theodore P. Shonts, President, New York City Subway, Elevated and Surface Lines.
Formerly, Operating Statistician, Illinois Central Railroad.

Vice-President, GEO. A. GREEN

Vice-President, Chicago Motor Coach Company.
Vice-President, Yellow Sleeve Valve Engine Works, Inc.
Formerly, Vice-President and General Manager, Fifth Avenue Coach Company, New York City.
Formerly, Deputy Chief Mechanical Engineer, British Tank Corps.
Formerly, Works Manager and Chief Assistant Engineer of the London General Omnibus Company.

Vice-President, PAUL GEYSER

Vice-President and General Manager, Yellow Cab Mfg. Co.

West'n Sales Mgr., GARRETT T. SEELY

Formerly, President, Penn.-Ohio Electric Company, Youngstown, Ohio.
Formerly, Assistant General Manager, Chicago Elevated Railways.

Chief Engineer, G. J. RACKHAM

Formerly, Assistant Superintendent, British War Office, Department of Tanks, Design and Experiment.
Formerly, Engineer in Charge Experimental Department, London General Omnibus Company.

Research Engineer, W. D. REESE

Formerly, Research Engineer, Fifth Avenue Coach Company, New York City.

Works Manager, CHAS. O. BALL

Formerly, Chief Engineer, American Motorbus Corporation.
Formerly, Engineer, London General Omnibus Company.

Transportation Engr., H. C. MOSER

Assistant General Manager, Chicago Motor Coach Company.
Formerly, Superintendent Transportation, Fifth Avenue Coach Company, New York City.

Equipment Engr., EDWARD WOTTON

Superintendent of Equipment, Chicago Motor Coach Company.
Formerly, Superintendent of Equipment, Fifth Avenue Coach Company, New York City.

Body Engineer, JAMES S. ST. CROIX

Formerly, Assistant Body Engineer, Brewster & Company, New York City.
Formerly, Body Engineer, Fifth Avenue Coach Company, New York City.

The organization above, represents the best engineering and operating experience available, and is engaged in producing completely specialized coaches, specifically intended for passenger transportation.

Believing that transportation is a natural monopoly, subject to regulation, and that the motor coach industry is destined to take a place of great and lasting importance in the economic life of this age, and looking toward the methods that will produce the most sound and permanent success for those engaged therein and the satisfactory and adequate service to the public, the Yellow Coach Manufacturing Company invites the business of those individuals and companies who have a like attitude toward the future of the industry and who will bring to the establishment of motor coach transportation in their various communities the best management and soundest financial resources obtainable. Thus shall we build a unified and co-ordinated system of transportation, which will mutually serve the communities, and ourselves in the fullest measure, and thus ensure permanent success.

YELLOW COACH MANUFACTURING CO.

CHICAGO, ILLINOIS

"THERE IS NO SUBSTITUTE
FOR EXPERIENCE AND FINANCIAL RESPONSIBILITY"