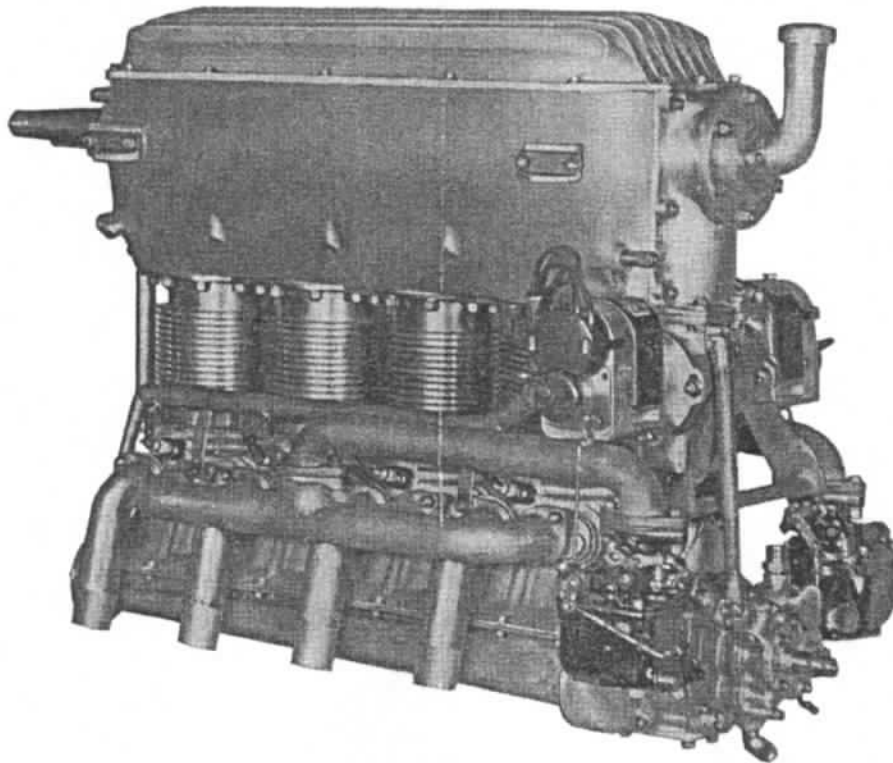


# THE CHEVOLAIR

SUPER SAFETY AIRCRAFT MOTOR



*Patent No. 1362006    Other Patents Pending*

MODEL D-4, 4 CYL.    100 H. P.

MODEL D-6, 6 CYL.    150 H. P.

*Manufactured By*

## CHEVOLAIR MOTORS, INC.

ARTHUR CHEVROLET, *President*

INDIANAPOLIS, IND.

U. S. A.

## *WHY THE CHEVOLAIR?*

The CHEVOLAIR motors have been designed by Arthur Chevrolet with the fixed idea of developing power plants so sturdy and reliable that the pilot of a plane powered with a CHEVOLAIR motor would have absolute confidence in his motor, and this, not only for a few hours, but for hundreds of hours.

No one who drives an automobile, worthy of the name, expects to stop every few hours to make adjustments. When starting for a given destination, one wants to get there as soon as possible, making only such stops as are necessary to take on fuel. Nor does one expect to have the motor of his car overhauled every hundred hours of service or thereabout. He expects that motor to give unfailing service for at least a year and to meet every demand to which it might be put.

The above has been achieved by the automobile engineers and the public has accepted it as a matter of course.

## *UNFAILING SERVICE*

We have set as our goal in the aircraft motor industry the same unfailing performance for the CHEVOLAIR motors as that furnished by the automobile motor. In this we believe we have succeeded.

Everything that goes to make up this remarkable motor is first weighed by the scale, "Will it stand up to our standard of service and performance?" The price and other details are of secondary importance.

## *ASSURANCE*

This fixed idea has been carried out in every detail of the CHEVOLAIR motor, such as the crankshaft, large enough for a motor of double the power; the strong connecting rods, made of the best alloy steel obtainable; and the strong and well-ribbed aluminum alloy castings for the crankcase, gear case and cam housings. The best of materials have been used in the valves and their operating parts. The utmost in simplicity of valve action has been brought about by the two overhead camshafts operating directly over the valves through steel plungers, thereby doing away with all push rods, rocker arms, and all adjustments. The valve stems are ground to proper clearance when assembled and need no attention until reground. The entire valve action, camshafts and springs, are fully enclosed and run in a bath of oil.

All oil lines and passages are either drilled in, or cored in the castings eliminating any possible trouble from broken oil lines.

The motor also has a supplementary oil control whereby the oil can be held in the motor in case of trouble with the lines to and from the oil tank, or the tank itself, changing the system from dry sump to wet sump by merely turning a handle.

## *RELIABILITY*

The disposition of the exhaust valves, two per cylinder, on opposite sides, distributes the heat uniformly over the entire cylinder head, thereby insuring better cooling than is possible where only one exhaust valve of large diameter is used. This feature alone is worthy of more than passing notice as it allows the use of smaller valves which can be adequately cooled without warping and still retain full operating efficiency. This also entails the use of two inlet valves per cylinder, also on opposite sides, which brings about the very desirable condition of cooling that portion of the exhaust valve not cooled from outside by the cold incoming mixture.

It also gives better combustion, due to the mixture entering the cylinder from opposite sides and allows the use of two carburetors which can be used together, or separately in case of trouble with either carburetor or gas line.

The above features, combined in the CHEVOLAIR with the dual magnetos and spark plugs really go further in making this motor safe and reliable under any conditions than any motor that has been brought out so far.

It has been our aim, and we believe we have reached it in the CHEVOLAIR, to make a motor so reliable that it would, as far as is humanly possible, remove all fear of the prospective purchaser of a plane, of a motor failure in the air thereby removing the main obstacle in the way of making aviation really popular.

## *OTHER ADVANTAGES*

Being mounted in an inverted position it gives the pilot better visibility, gives better performance due to higher point of thrust, diverts all exhaust noise and smoke or hot fumes under the plane instead of into the pilot's or passengers' faces, and makes flying a real pleasure instead of an ordeal.

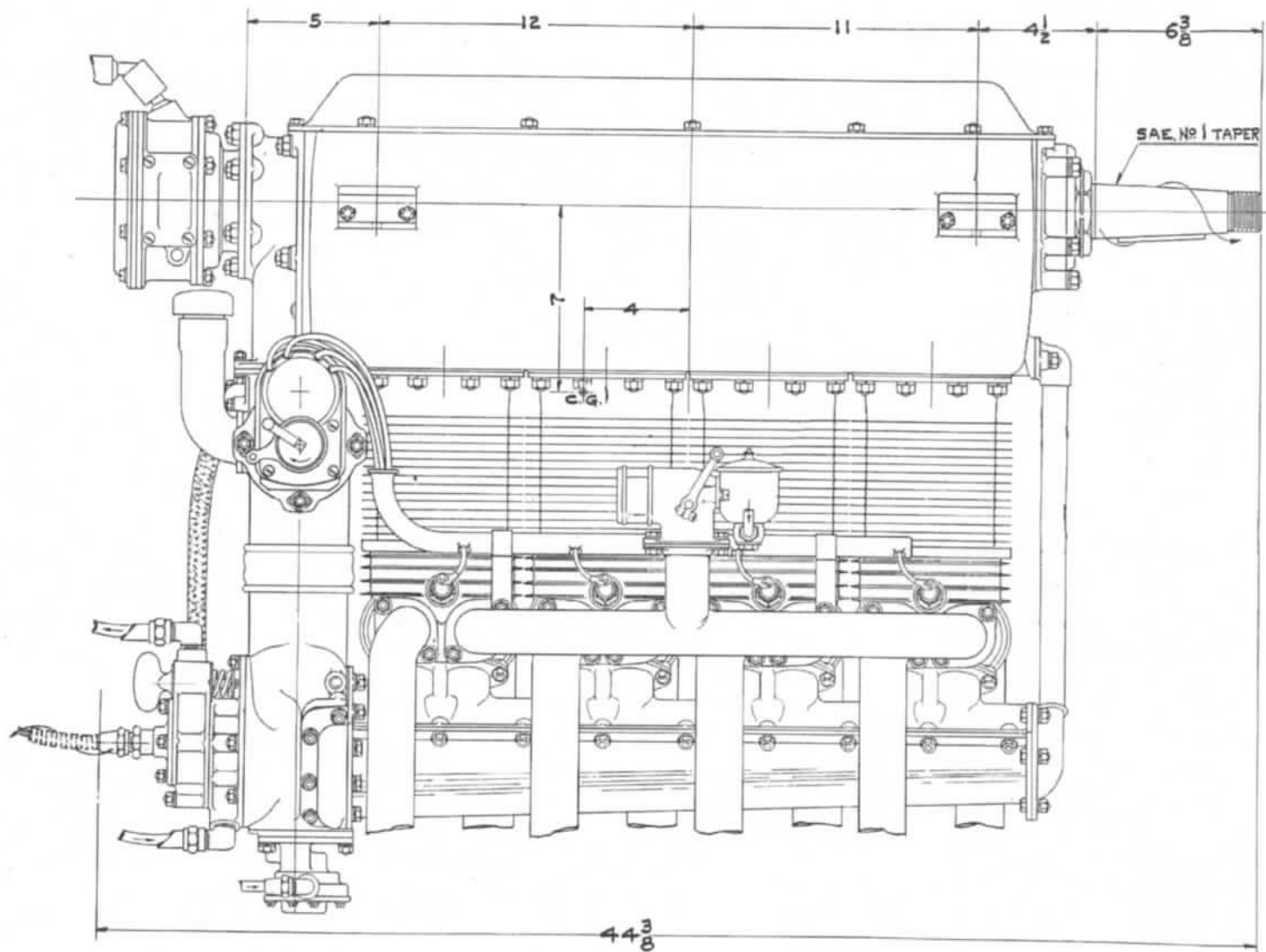
The inverted position also assures much greater accessibility to all vital parts or service parts, such as spark plugs, carburetors, oil pump, etc.

The in-line construction allows of a much better streamlining and reduces the parasitic head resistance to a minimum, thereby giving more speed for a given horse power output, making a more efficient operation on a cost-per-mile basis.

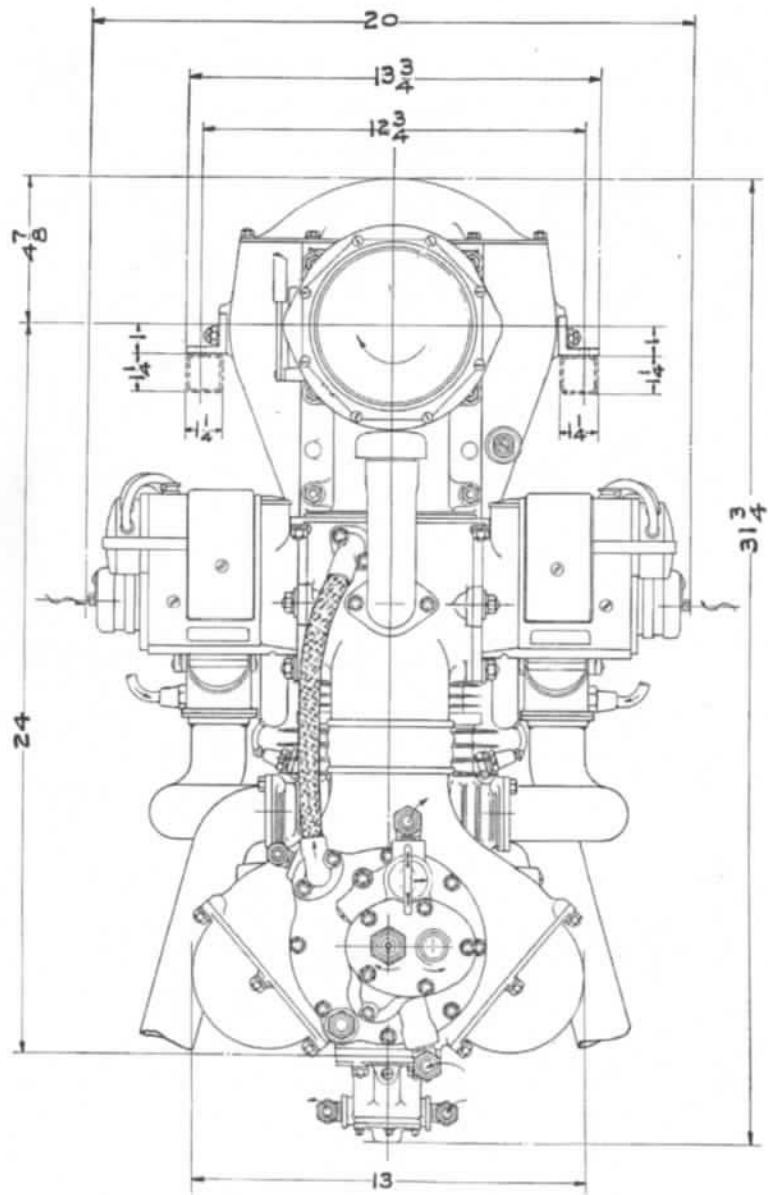
## *PERFORMANCE*

A certain plane of well known standard make, powered by a well known motor of 90 horse power rating, showed a speed of 100 miles per hour over a 2-mile measured course and after installing one of our CHEVOLAIR D-4 motors rated at 90 horse power at 2000 R. P. M., this same plane showed a top speed of 116 M. P. H. over the same course. Tests in both instances were taken in both directions so that the velocity of the wind did not alter the final results.

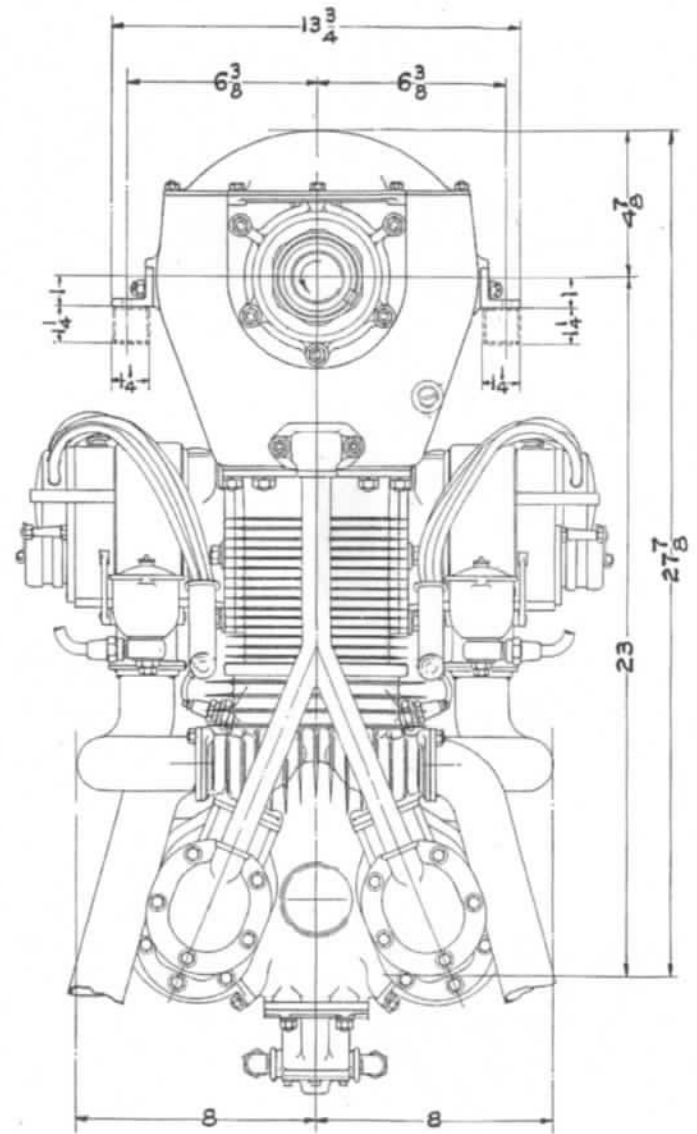
We again say: We believe the CHEVOLAIR motors which we are offering to the aviation industry are nearer to what the ultimate aviation motor will be than anything that has been attempted to date and we offer them with the pledge that no effort or sacrifice of any nature will be spared to make them the best and safest motors that can be built.



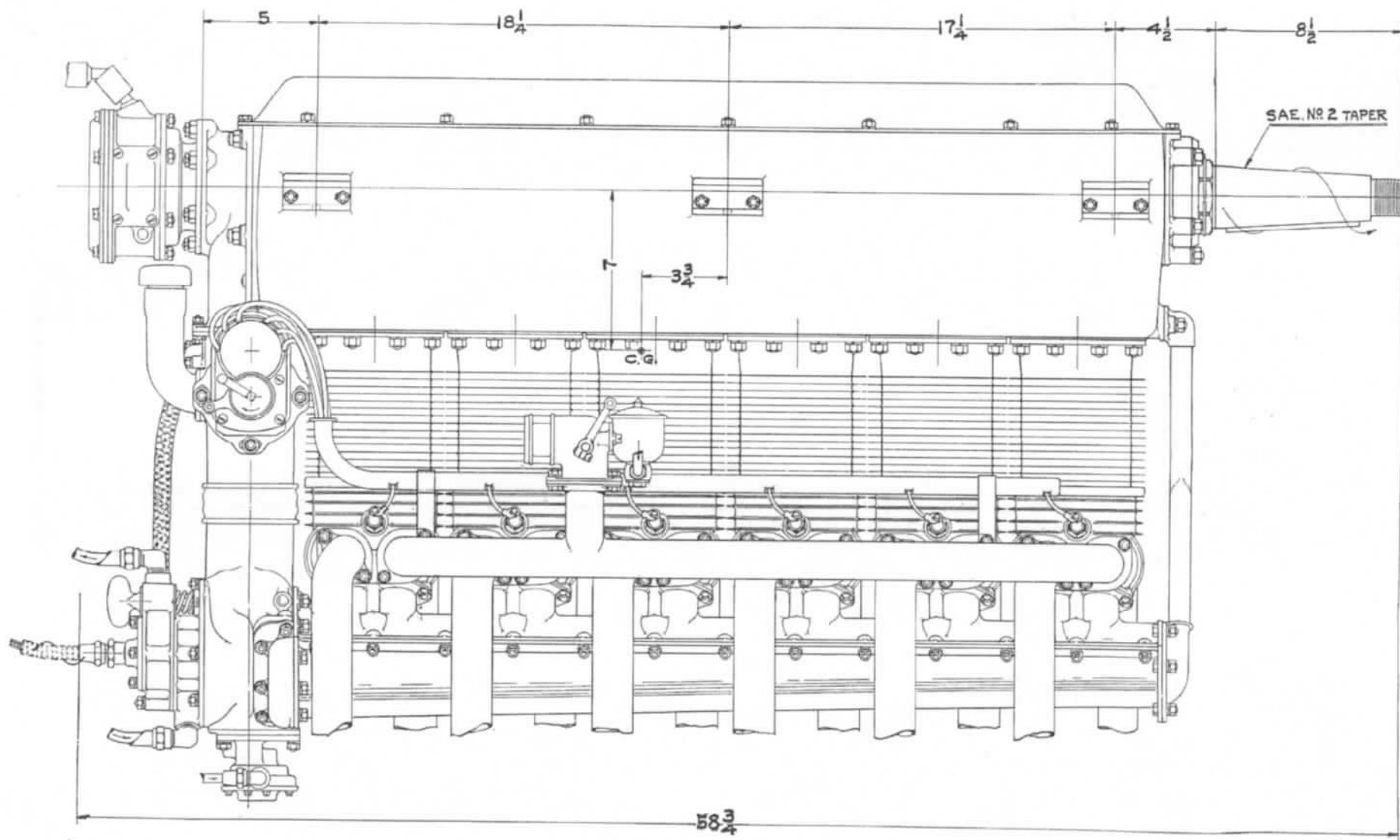
SIDE ELEVATION AND INSTALLATION DIMENSIONS OF MODEL D-4, 4 CYL.



PILOT END PLAN OF MODELS D-6, D-4



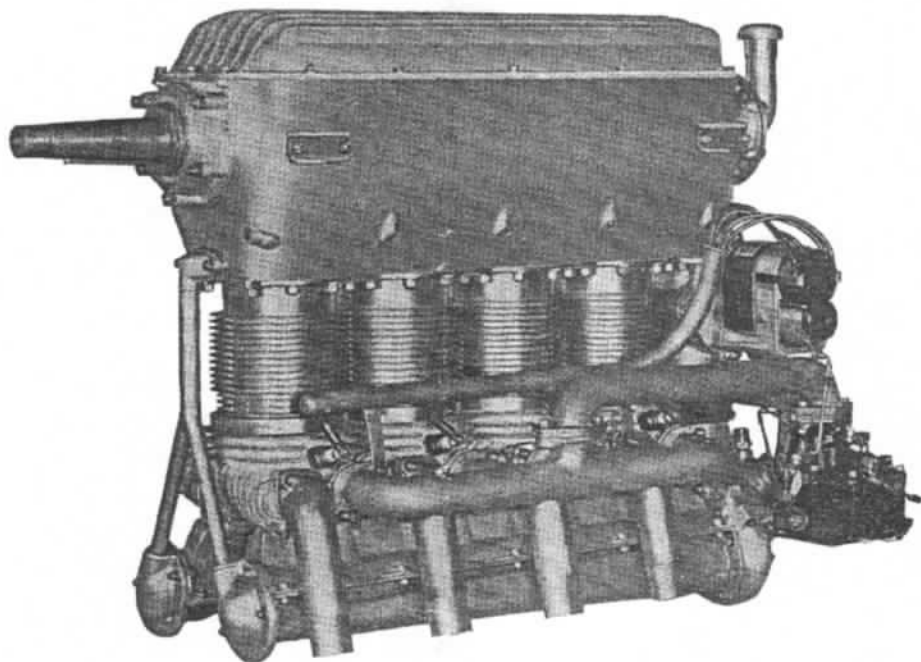
PROPELLER END PLAN OF MODELS D-6, D-4



SIDE ELEVATION AND INSTALLATION DIMENSIONS OF MODEL D-6, 6 CYL.

# THE CHEVOLAIR AIRCRAFT MOTOR

MODEL D-4, 4 CYL.  
90 H. P. AT 2000 R. P. M.



THE 4 CYLINDER MODEL D-4 HAS  
BEEN APPROVED BY THE DEPART-  
MENT OF COMMERCE AND GRANTED  
APPROVED TYPE CERTIFICATE NO. 35

*UNFAILING SERVICE*  
*ASSURANCE*  
*RELIABILITY*  
*PERFORMANCE*

## CHEVOLAIR MOTORS, INC.

INDIANAPOLIS, IND.

U. S. A.