GRASSHOPPER

aquarius

first patented by William Freemantle in 1803 and independently by Oliver Evans in the USA the following year the 'Half-beam' or 'Grasshopper' engine may be regarded as evolutionary in terms of design from the orthodox beam to later directly acting engines.

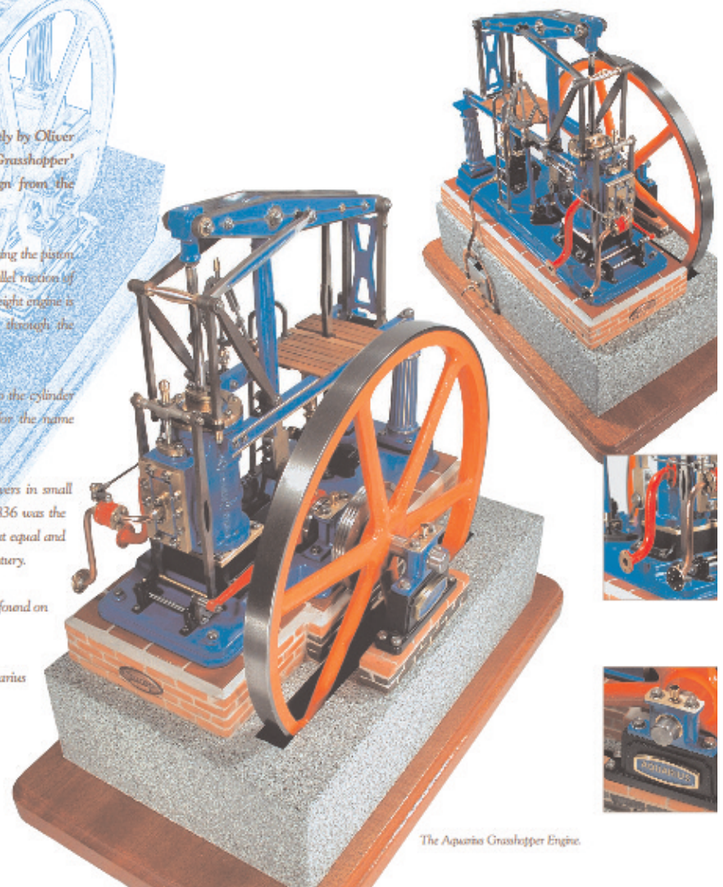
The significant advantage of the Grasshopper concept is that in connecting the piston rod directly to the beam - or more correctly termed, the lever, the parallel motion of the conventional beam engine is eliminated and a more compact light weight engine is possible. Controlled movements of the mechanics is then achieved through the adoption of a simple swinging link.

Grasshoppers are characterised by their cranks being sited very close to the cylinder and the resultant action when in motion demonstrates the reason for the name Grasshopper being applied.

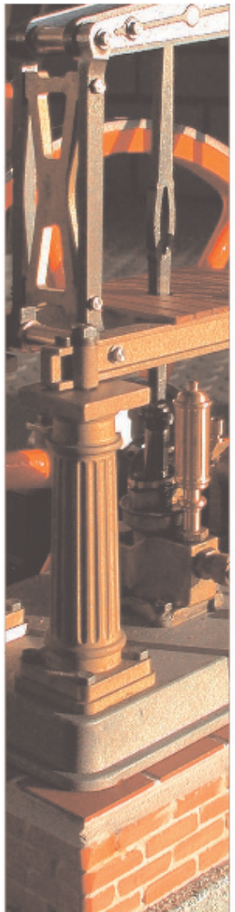
Very often used as pumping engines and to a lesser extent drive mowers in small factories the most prevalent Grasshopper manufacturer, founded in 1836 was the firm of Easton and Amos. Their specialisation in the design was without equal and many of their engines remained in service through out the following century.

Aquarius is representative of the type and includes many of the features found on engines produced in the mid 1800's including a working water pump.

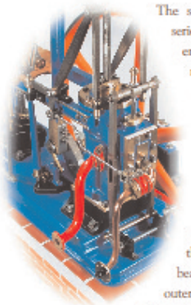
Available fully finished in Caladonian blue with contrasting detail Aquarius is part of our 'Premier Collection'.



The Aquarius Grasshopper Engine.



mechanical evolution



The second in our 'Premier Collection' series Aquarius is the result of many enjoyable hours spent researching the alternatives to the more commonly found beam engine. The resultant model offers a wealth of detail features and is we feel worthy of the connoisseurs consideration.

Set upon a genuine brick foundation faced with quarry tiles the main engine bedplate boasts two substantial main bearings carrying a crankshaft further supported by an outer pedestal bearing. Situated between these bearings the cast iron flywheel runs into a submerged race.

Structural requirements dictate fluted columns supporting two girders tied into the cylinder sides. The girder arrangement providing anchorage for the links controlling the fluted radius arms and the pivot point for the evolutionary swinging link.

Mounted across the girders and accessed by a period style ladder the wooden planking provides an inspection floor. Passing through the floor is an ornate vertical link actuating the bedplate mounted water pump. This working pump drawing and returning water to and from the under floor storage tank.

Further detail includes the geared governor taking its drive directly from the crank, fluted connecting rod, accessory drive pulley and cast brass name plate.

Individually numbered and certified - for your consideration.

aquarius specification

type	Grasshopper
bore	⅞" (22mm)
stroke	2¼" (57mm)
f/wheel dia.	9" (228mm)
valve type	Slide
height	13" (330mm)
length	14" (356mm)
width	7½" (190mm)
connections	Oval Flange (8B.A.)

recommended option

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