Description

Ackerman Steering Gear Science Labs

Features:-

Low cost, effective teaching Self contained Easily seen from a distance Mechanism clearly understandable Loci drawn for further study Standard mechanism for operating the wheels of a vehicle.

Range of Experiments

To determine the loci of the moving parts of the standard mechanism To establish the characteristics of that mechanism: for example to see which links move faster than others or whether a particular motion (such as a straight line) is developed

Description;-

One of sixteen mechanisms built on an A3 board equally suitable for the classroom, drawing office or laboratory.

The principal components are made from amber coloured Perspex, pivoted with hollow rivets, and mounted on a white melamine board for contrast and visibility.

To see the mechanisms move is far more instructive and convincing than listening to a static lecture.

The hollow rivets accept a pencil for transferring the loci of the joints to a sheet of paper, clipped to the board.

The links of this mechanism simulate the steering gear of the wheels of a road vehicle.

The stub axles of the wheels are connected by three links forming a trapezium in the straight ahead position.

As the wheels turn the inner wheel turns more than the outer one thus having a common centre nearly in line with the vehicle rear axle.

This equipment is part of a range designed to both demonstrate and experimentally confirm basic engineering principles.

Great care has been given to each item so as to provide wide experimental scope without unduly complicating or compromising the design.

Each piece of apparatus is self-contained and compact. Setting up time is minimal, and all

measurements are made with the simplest possible instrumentation.

So that the student involvement is purely with the engineering principles being taught.

Each mechanism is supplied with a manual which gives full instructions for producing the loci and applications of the assembly.

The typical graphical result is appended.