# THE SPEEDWELL "TITALITE" CYCLE FRAME



Every specialist who has handled this wonderful new advancement has described it as "the most revolutionary development in 20 years."

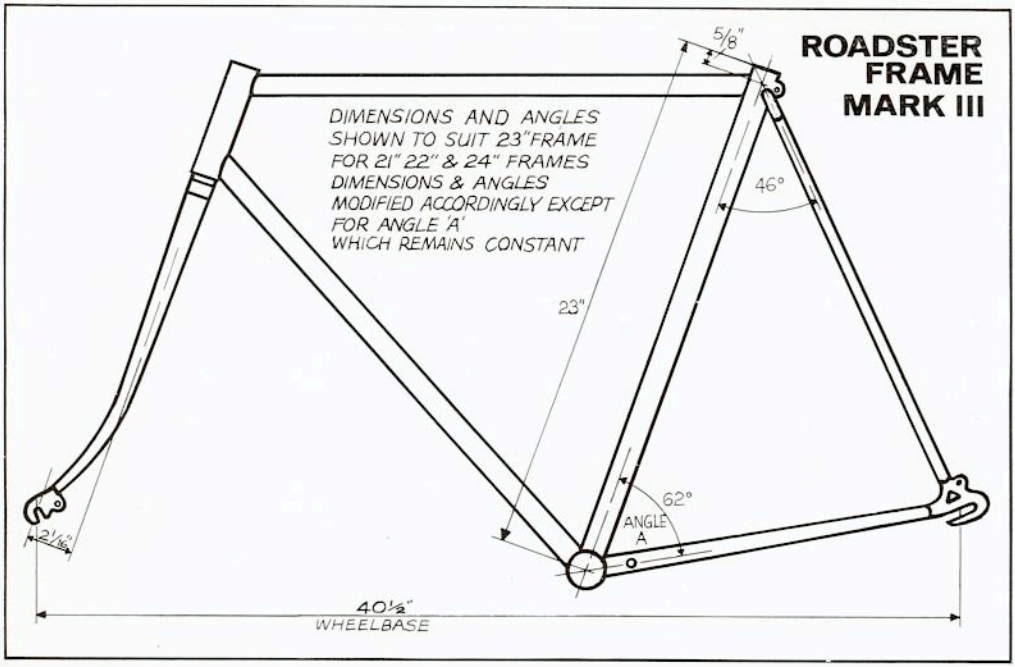
Here are some of the technical facts behind this modern marvel.

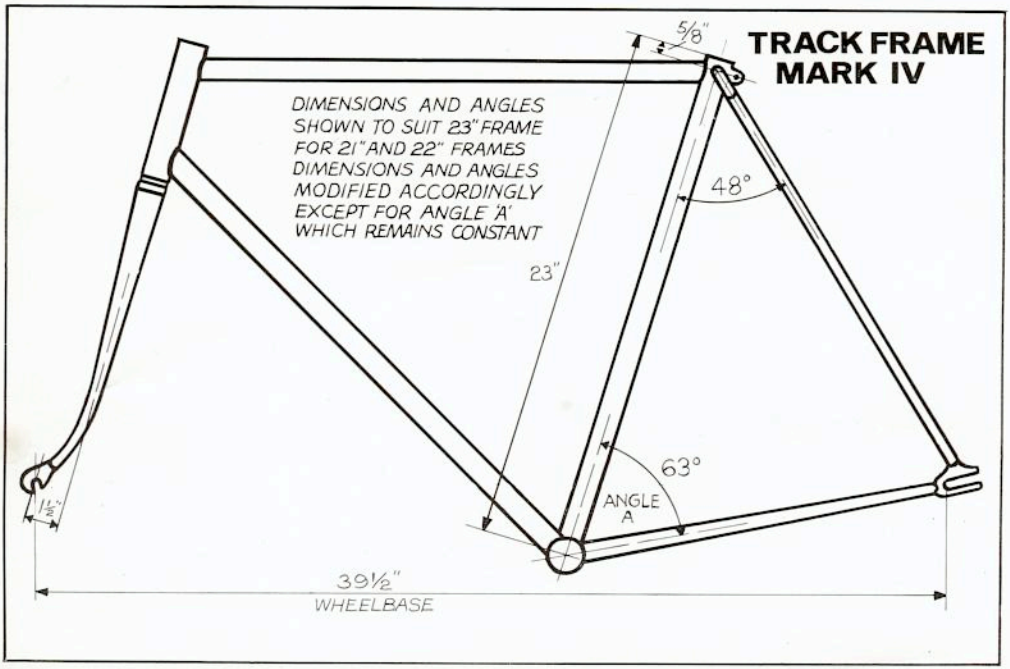
Speedwell

THE SPEEDWELL GEAR CASE Co. LTD.

BIRMINGHAM AND COVENTRY

# Technical Data



## DESIGN & CONSTRUCTION

Angles and detailing are generally to 1973 standards. Lengths are based on 21", 22", 23" and 24" for the road frame, and on 21", 22" and 23" for the track with the appropriate forks.

Bottom bracket to suit English or metric threads. Italian type seat pillars and fork ends are provided, and sizes are generally to suit continental standards.

## CUSTOMS/PURPOSE BUILT FRAMES

A limited supply of frames are built to individual specifications for top class riders.

Measurement charts are available for these personal orders.

## WEIGHTS & STRENGTH

Generally the frame complete with forks and head races will weigh about 3 lbs. 5 ozs. but this can vary slightly with frame size, bosses, guides, etc., which go to make up the individual specification. Material is commercially pure titanium grade 125 or equivalent having a tensile strength in the range 60 KSI — 79 KSI. Welding is carried out under the strictest control and typical tensile strengths will be 50 — 60 KSI. Young's modulus is in the order 15-17 $10^6$lbf/in$^2$ with fatigue limits 55 — 60% of TS.

These details compare most favourably with conventional "racing irons" and allow a weight saving of about 30% with much improved strength characteristics.

Selection of tube diameter, material grades, wall thicknesses and tapers permit a frame of most adequate rigidity without conventional lugging, bearing in mind the peculiar attributes of vacuum welding and the enhanced strength of joint.

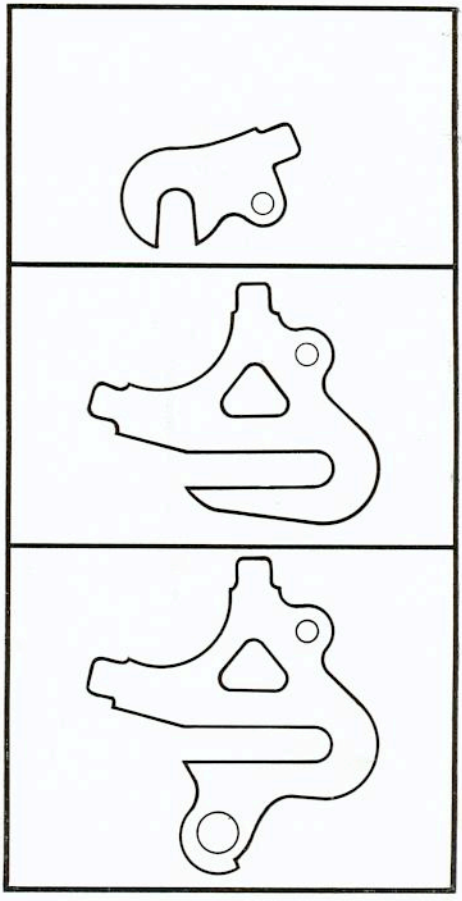
## FINISH

Weld standards: Our operators consider this class of work to be as jewellery standards, and weld cleaning shows this to perfection. Colour: Titanium is one of the best materials for corrosion resistance having common usage in the nuclear space chemical and medical fields. Consequently a finish of high polish like the best stainless steel can be offered and this finish can last a life time. On a commercial scale many attractive colours can be applied by anodising techniques. Aero-drying paint can be applied and also transfers (demalows) with careful preparation including a pickling bath.

## TESTING

Mechanical and service testing has shown this frame to be of outstanding quality but the final judgement lies with the specialist rider. The individuals report is invariably "Even better than its looks." All frames are guaranteed for twelve months for any defects in workmanship and materials subject only to normal wearing and usage.

ALTERNATIVE FRONT AND REAR FORK LUGS



## TECHNICAL DATA — AMENDMENT

The following information is added for use in conjunction with the road and track frame drawing:-

### ROAD FRAME

22", 23", 24" Top Tube is 22½" (centres) with 73° head and 73° seat angles.

21" frame has top tube 21½" (centres) with 73° head and 75° seat angles.

Wheelbase is 39¾" with 10½" bracket.

Fork rake is 42 mm (1.65") wheel size 27" only.

### TRACK FRAME

Built with minimum clearances.




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