2011 PAPER P6

SAMPLE SCRIPT A

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

CONSTRUCTION

The invention described in B relates to apparatus for measuring distances accurately, in particular small distances when applied to measurement of mechanical parts (page 6, lines 2-3 of B).
The field of invention is therefore the field of small distance measuring devices, over ranges of microns (micrometres) to centimetres.
The skilled person would be the individual, or group of individuals, tasked with designing devices for measuring distances over this range.
Such a skilled person would have the common general knowledge of such devices' use and operation, together with their limitations.
There is no reason why the skilled person for the purpose of determining validity would be any different from the skilled person for the purpose of determining infringement.
In my opinion, the skilled person would understand the following features of the claims to mean:

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

Because a distance measuring gauge would be viewed as a piece of equipment, rather than a method of gauging

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

Because the skilled person would view the apparatus as being in the field of small distance measuring devices, over ranges of microns (micrometres) to centimetres, due to the application of measurement of mechanical parts (page 6, lines 2-3 of B).

1.2 comprising a moving scale slidable adjacent a fixed scale

Comprising => including, but not being limited to having only
In view of page 6, lines 28-29 'moving' and 'fixed' would be seen as simply referring to relative movement, rather than actually requiring a specific one to move.

As discussed with respect to claim 4, the relative movement in claim 1 need not be limited to translational movement (this limitation is added in claim 4), hence rotational movement is also included, for example.
'Sliding' refers to the movement, and that the movement requires contact to be maintained between the first scale and the second scale. However, the contact need not be direct contact; rather, the contact could be via intermediate members.
'adjacent' i.e. normal meaning of 'next to'. In my opinion, the skilled person would not go as far as to read into 'adjacent' that the scales need be parallel, but he would be conscious of the purpose of 'next to' as in for a viewer/observer.
'scale' the normal meaning of a series of marks for reading off a measurement. Ie. More than one mark is necessary to have a scale. This is backed up by the use of 'graduations' used late in the claims. (i.e. repercussive effect, implies existence of more than one 'graduation' in a scale)
Hence,

(a)including a first series of marks
(b) including a second series of marks
(c) observed next to one another
(d) configured to move relative to one another
(e) whilst maintaining direct/indirect contact

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale
'so that'=> the previous features lead to
'aligned' => normal meaning of matched up with one another
Hence,

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale
'so as to'=> the previous features lead to
'indicate'=>the matching up is in the perspective of the viewer (to whom a measurement is 'indicated')
'coarse' and 'fine' (like 'moving' and 'fixed' in 1.2) would be seen as relative terms, in which a coarse measurement on the moving (first) scale is merely a measurement that is more coarse than the 'fine' measurement on the fixed (second) scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second measurement read by the viewer off the second series of marks at the location of the second mark

(b) the first reading being more coarse than the second reading

1.5 the fine measurement corresponding to less than the increments on the moving scale
From page 6, lines 27-28 of B, 'the increments' (which has no antecedent in the claim) would be viewed as 'the distance between adjacent graduations'; that is:

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

Taken on face value, this would be interpreted as:

The first series of marks having one more mark per unit distance than the second series of marks.

However, the skilled person would understand that the effect of the claim discussed in 1.5 (a) could not be achieved in this manner.

In addition, the summary, page 6, lines 31-34 mirrors claim 2, but having 'fixed' and 'moving' swapped.

The skilled person would therefore interpret the claim to make sense, as follows:

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

'made to'=> rather than being interpreted as 'forced to', the skilled person would view this as being configured to , in line with standard interpretation of apparatus claims to define physical features.

As in 1.3, 'align' viewed with normal meaning of 'match up with'.

Although the skilled person might be tempted to read in the portion of line 36 in which the 0^{th} graduation is defined as being at the extreme end of its respective scale, this is not present in the claim.

Rather, the skilled person is likely to look at the effect of the jaws touching (also from line 36, 'being close together').

The jaws themselves are not have no antecedent in the claim; however, the skilled person would understand their function to be to provide a basis for the measurement to be taken. That is, if the jaws are touching (or close together) the distance measurement is going to be zero.

Regarding the term 'jaws' itself, a jaw would be understood as one of a pair of jaws, capable of relative movement toward and away from each other. In this context, they would be seen to be the mechanism for measuring a component; i.e. spacing the jaws apart by the size of a component for measurement allows the size of the component to be measured, by measuring the spacing of the jaws.

Hence,

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.

4.2 in which the moving scale is attached to a moving jaw

As in 3.2, 'jaw' would be understood as one of a pair of jaws, capable of relative movement toward and away from each other. In this context, they would be seen to be the mechanism for measuring a component; i.e. spacing the jaws apart by the size of a component for measurement allows the size of the component to be measured, by measuring the spacing of the jaws.

'attached'=> normal meaning of 'coupled', the skilled person would not read into this term that the jaw would have to go through the process of being attached (i.e two separate components attached together); rather, he would understand that they could be integrally formed.

A first jaw is coupled to the first series of marks.

In order to achieve the measurement, the skilled person would understand that the necessary second jaw of the pair of jaws would have to be coupled to the second series of marks.

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

'slides in a slot' limits the type of relative movement (see 1.2 (d)) to translational movement, rather than, say, rotational.

'slot' itself is a recess that in some sense at least partially contains the first jaw.

'along' also suggests translational motion to the skilled person.

'main body on which the fixed scale is provided' => the second series of marks being located on a body.

Hence,

(a) the second series of marks being located on a body

(b) the first jaw at least partially contained within a recess in the body

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.

INFRINGEMENT

By arrangement of document A.

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

PRESENT because an instrument p3, l3 is an apparatus

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

PRESENT because shown to measure tenths of a millimetre (p5, line 13)

THEREFORE FEATURE 1.1 PRESENT

1.2 comprising a moving scale slidable adjacent a fixed scale

(a)including a first series of marks

PRESENT because markings 14 are a first series of marks

(b) including a second series of marks

PRESENT because markings 30 are a second series of marks

(c) observed next to one another

PRESENT because shown next to one another in in Figs 2 and 3 (observers views)

(d) configured to move relative to one another

PRESENT because secondary scale moveable in front of a a main scale (p3, line 32) is configured to move relative to one another

(e) whilst maintaining direct/indirect contact

PRESENT because lower face of block *slides against* the main scale (page 3, line 34-35)

THEREFORE FEATURE 1.2 PRESENT

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

PRESENT because fig 3 shows marks for 42mm and 0.3mm being matched up.

THEREFORE FEATURE 1.3 PRESENT

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second measurement read by the viewer off the second series of marks at the location of the second mark

PRESENT because fig 3 shows marks for 42mm on first series of marks and 0.3mm on second series of marks matched up.

(b) the first reading being more coarse than the second reading

PRESENT because 42mm is more coarse than 0.3mm.

THEREFORE FEATURE 1.4 PRESENT

1.5 the fine measurement corresponding to less than the increments on the moving scale

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.

PRESENT because distance between marks in the first series of marks is 1mm and the second reading is 0.3mm, which is less.

THEREFORE FEATURE 1.5 PRESENT

HENCE ALL FEATURES OF CLAIM 1 ARE PRESENT AND ARRANGEMENT OF DOCUMENT A INFRINGES CLAIM 1.

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1

PRESENT, SEE ABOVE

THEREFORE FEATURE 2.1 PRESENT

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

NOT PRESENT, there is no clear indication of the relationship between the number of marks per unit distance in the second series of marks. Nevertheless, there appear to be more marks per unit distance in the first series of marks than in the second series of marks.

THEREFORE FEATURE 2.2 NOT PRESENT

HENCE CLAIM 2 NOT INFRINGED

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.

PRESENT because it has all the features defined in claim 1, even though not claim 2.

THEREFRE FEATURE 3.1 PRESENT

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

PRESENT because jaw 18 is a first jaw and jaw 22 is a second jaw, coupled to the respective series of marks, seen in fig 1, and are moveable.

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing

PRESENT because that would be apparent to the skilled person on reviewing the description and figures (esp fig 1)
THEREFRE FEATURE 3.2 PRESENT

HENCE ALL FEATURES OF CLAIM 3 PRESENT AND CLAIM 3 INFRINGED.

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.
PRESENT because it has all the features defined in claim 1, even though not claim 2.
THEREFRE FEATURE 4.1 PRESENT

4.2 in which the moving scale is attached to a moving jaw

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith
PRESENT because jaw 18 is a first jaw and jaw 22 is a second jaw, coupled to the respective series of marks, seen in fig 1, and are moveable.
THEREFORE FEATURE 4.2 PRESENT

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

(a) the second series of marks being located on a body
PRESENT because the second series of marks is located on plastic block 24 which is a body.

(b) the first jaw at least partially contained within a recess in the body
PRESENT because the first jaw 18 of fig 1 can be seen to extend along and through the plastic block 24, i.e. is partially contained within the body.

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.
PRESENT as the skilled person would understand this from the figures and descriptioin.
THEREFORE FEATURE 4.3 PRESENT

HENCE ALL FEATURES OF CLAIM 4 PRESENT AND CLAIM 3 INFRINGED.

NOVELTY

Over internal prior art discussed in first paragraph of B.

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

PRESENT because it refers to a known guage of this type.

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

PRESENT because again, ‘of this ‘type’ means suitable for same use.

THEREFORE FEATURE 1.1 PRESENT

1.2 comprising a moving scale slidable adjacent a fixed scale

(a)including a first series of marks

PRESENT because it has a scale which would comprise a first series of marks

(b) including a second series of marks

NOT PRESENT because only one scale

(c) observed next to one another

NOT PRESENT

(d) configured to move relative to one another

NOT PRESENT

(e) whilst maintaining direct/indirect contact

NOT PRESENT

THEREFORE FEATURE 1.2 NOT PRESENT

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

NOT PRESENT becausenonly one series of marks

THEREFORE FEATURE 1.3 NOT PRESENT

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second measurement read by the viewer off the second series of marks at the location of the second mark

NOT PRESENT

(b) the first reading being more coarse than the second reading

NOT PRESENT

THEREFORE FEATURE 1.4 NOT PRESENT

1.5 the fine measurement corresponding to less than the increments on the moving scale

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.
NOT PRESENT
THEREFORE FEATURE 1.5 NOT PRESENT

HENCE CLAIM 1 NOVEL OVER THIS DISCLOSURE

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1
NOT PRESENT, SEE ABOVE
THEREFORE FEATURE 2.1 NOT PRESENT

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

NOT PRESENT,
THEREFORE FEATURE 2.2 NOT PRESENT

HENCE CLAIM 2 NOVEL

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.
NOT PRESENT
THEREFORE FEATURE 3.1 NOT PRESENT

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith
NOT PRESENT because even though it has the jaws, they are no coupled to *respective* series of marks, as only one series of marks.

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing
NOT PRESENT
THEREFRE FEATURE 3.2 NOT PRESENT

HENCE CLAIM 3 NOVEL.

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.
NOT PRESENT
THEREFRE FEATURE 4.1 NOT PRESENT

4.2 in which the moving scale is attached to a moving jaw

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith
NOT PRESENT because even though it has the jaws, they are no coupled to *respective* series of marks, as only one series of marks.
THEREFORE FEATURE 4.2 NOT PRESENT

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

(a) the second series of marks being located on a body
NOT PRESENT because no second series of marks

(b) the first jaw at least partially contained within a recess in the body
NOT PRESENT

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.
NOT PRESENT
THERFORE FEATURE 4.3 NOT PRESENT

HENCE NOVEL OVER THIS

NOVELTY

Over internal prior art discussed in second paragraph of B.

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

PRESENT because a display scale for instruments is an appparatus.

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

PRESENT because although not explicitly disclosed, it has been included in the spec as relevant prior art, so presume it is suitable for the same use.

THEREFORE FEATURE 1.1 PRESENT

1.2 comprising a moving scale slidable adjacent a fixed scale

(a)including a first series of marks

PRESENT because marks 4 shown.

(b) including a second series of marks

PRESENT because secondary scale 7 shown

(c) observed next to one another

PRESENT because can be seen from figure

(d) configured to move relative to one another

PRESENT because 'slider 2 moves along main scale 3' (slider 2 has secondary scale 7 and marks 4 are on main scale 3) hence they move relative to each other.

(e) whilst maintaining direct/indirect contact

PRESENT 'slider' implies 'sliding' which in turn implies contact

THEREFORE FEATURE 1.2 PRESENT

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

PRESENT because fig 1 shows alignment with diagonal line 6a of main scale 3 (ie links marks 4)

THEREFORE FEATURE 1.3 PRESENT

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second measurement read by the viewer off the second series of marks at the location of the second mark

PRESENT because 6a indicates mark 17 on main scale, and point where 6a intercepts scale 7 indicates a second reading

(b) the first reading being more coarse than the second reading

PRESENT becase mark 17 is further from mark 16 than the distance that scale 7 is designed to measure (ie. Portions of the separation, or fraction of the distance between the two closes marks (line 15-16))
THEREFORE FEATURE 1.4 PRESENT

1.5 the fine measurement corresponding to less than the increments on the moving scale

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.
PRESENT because, as with 1.4(b) above, this is apparent what is being measured.
THEREFORE FEATURE 1.5 PRESENT

HENCE CLAIM 1 LACKS NOVELTY OVER THIS DISCLOSURE

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1
PRESENT, SEE ABOVE
THEREFORE FEATURE 2.1 PRESENT

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

NOT PRESENT, it is not apparent what the spaceing is
THEREFORE FEATURE 2.2 NOT PRESENT

HENCE CLAIM 2 NOVEL

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.
PRESENT because has all the features of claim 1, even though not claim 2
THEREFORE FEATURE 3.1 PRESENT

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith
NOT PRESENT because no jaws are shown for the display scale to be attached to.

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing
NOT PRESENT because no indication of jaws.
THEREFRE FEATURE 3.2 NOT PRESENT

HENCE CLAIM 3 NOVEL.

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.

PRESENT because all features of claim 1

THEREFRE FEATURE 4.1 PRESENT

4.2 in which the moving scale is attached to a moving jaw

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

NOT PRESENT because no jaws are shown for the display scale to be attached to.

THEREFORE FEATURE 4.2 NOT PRESENT

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

(a) the second series of marks being located on a body

PRESENT because scale 7, being the second series of marks, on slider 2, being a body.

(b) the first jaw at least partially contained within a recess in the body

NOT PRESENT because no jaw.

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.

PRESENT as the sliding movement of slider 2 is translational along main scale 3.

THERFORE FEATURE 4.3 NOT PRESENT

HENCE CLAIM 4 IS NOVEL OVER THIS

NOVELTY

Over the well known nonius on the astrolabe at start of wiki article.

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

PRESENT because an astrolabe is an instrument, which is an appparatus.

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

NOT PRESENT because it measures angles, although basic trigonometry could be used so that it could determine large distances, it would not be suitable for measuring distance in the range of between microns (micrometres) to centimetres

THEREFORE FEATURE 1.1 NOT PRESENT

1.2 comprising a moving scale slidable adjacent a fixed scale

(a)including a first series of marks

PRESENT because 0-89 marks on scale.

(b) including a second series of marks

PRESENT because 0-90 marks on another scale

(c) observed next to one another

PRESENT because seen next to one another in fig

(d) configured to move relative to one another

NOT PRESENT because they are engraved on same disC

(e) whilst maintaining direct/indirect contact

NOT PRESENT because not applicable if no relevant movement

THEREFORE FEATURE 1.2 NOT PRESENT

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

NOT PRESENT because no relative movement

THEREFORE FEATURE 1.3 NOT PRESENT

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second measurement read by the viewer off the second series of marks at the location of the second mark

NOT PRESENT because no relative movement, and only one measurement taken

(b) the first reading being more coarse than the second reading

NOT PRESENT because no relative movement, and only one measurement taken

THEREFORE FEATURE 1.4 NOT PRESENT

1.5 the fine measurement corresponding to less than the increments on the moving scale

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.

NOT PRESENT because no relative movement, and only one measurement taken

THEREFORE FEATURE 1.5 NOT PRESENT

HENCE CLAIM 1 IS NOVEL OVER THIS DISCLOSURE

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1

NOT PRESENT, SEE ABOVE

THEREFORE FEATURE 2.1 NOT PRESENT

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

PRESENT, 89 in 90 dgrees for first series of marks is fewer marks per unit distance than 90 in 90 degrees for second series of marks.

THEREFORE FEATURE 2.2 PRESENT

HENCE CLAIM 2 NOVEL, BUT ONLY BY VIRTUE OF ITS DEPENDENCY ON CLAIM 1

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.

NOT PRESENT because has lacks all the features of claim 1, even though possessing those of claim 2

THEREFORE FEATURE 3.1 NOT PRESENT

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

NOT PRESENT because no jaws are disclosed, only a single moving arm, which would not constitute a jaw unless there was another one of a pair for it to move toward/away from .

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing

NOT PRESENT because no indication of jaws.

THEREFRE FEATURE 3.2 NOT PRESENT

HENCE CLAIM 3 NOVEL.

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.

NOT PRESENT because lacks all features of claim 1

THEREFRE FEATURE 4.1 NOT PRESENT

4.2 in which the moving scale is attached to a moving jaw

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

NOT PRESENT because no jaws are disclosed, only a single moving arm, which would not constitute a jaw unless there was another one of a pair for it to move toward/away from .

THEREFORE FEATURE 4.2 NOT PRESENT

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

(a) the second series of marks being located on a body

PRESENT because 0-90 scale, being the second series of marks, on **body** of astrolabe (fig).

(b) the first jaw at least partially contained within a recess in the body

NOT PRESENT because no jaw and no recess.

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.

NOT PRESENT as no relative movement of marks, although the relative movement that is present is rotational in any case (i..e movement of alidade).

THERFORE FEATURE 4.3 NOT PRESENT

HENCE CLAIM 4 IS NOVEL OVER THIS

NOVELTY

Over the disclosure of the modified nonius on the astrolabe at end of wiki article. There is a question over whether this additional disclosure is enabling. It was not constructed. Nevertheless, in my opinion, it would be within the understanding of the skilled person to interpret how it construct and operate it. Accordingly, I consider it valid prior art.

CLAIM 1

1.1 a distance measuring gauge

(a) an apparatus

PRESENT because an astrolabe is an instrument, which is an appparatus.

(b) suitable for measuring a distance in the range of between microns (micrometres) to centimetres

NOT PRESENT because it measures angles, although basic trigonometry could be used so that it could determine large distances, it would not be suitable for measuring distance in the range of between microns (micrometres) to centimetres

THEREFORE FEATURE 1.1 NOT PRESENT

1.2 comprising a moving scale slidable adjacent a fixed scale

(a)including a first series of marks

PRESENT because 'conventional scale' will be first series of marks.

(b) including a second series of marks

PRESENT because extended nonius scale is disclosed on the alidade

(c) observed next to one another

PRESENT because would be next to one another as they are described as being able to 'line up'

(d) configured to move relative to one another

PRESENT because the alidade moves relative to the face of instrument

(e) whilst maintaining direct/indirect contact

PRESENT because held together at pivot point (shown in figure of conventional astrolabe)

THEREFORE FEATURE 1.2 PRESENT

1.3 so that graduations on the moving scale are alignable with graduations on the fixed scale

(a) the relative movement in 1.2 (d) allows at least some of the marks in the first series of marks to be matched up with at least some of the marks in the second series of marks.

PRESENT because 'line up' is equivalent to 'match up'

THEREFORE FEATURE 1.3 PRESENT

1.4 so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale

(a) matching up of a first mark from the first series of marks with a second mark from the second series of marks indicates to a viewer a first reading corresponding to a first measurement read by the viewer off the first series of marks at the location of the first mark and a second reading corresponding to a second

measurement read by the viewer off the second series of marks at the location of the second mark
NOT PRESENT because there is no suggestion of taking two measurements, but rather a single measurement that is then looked up in a table to find a relevant piece of information.

(b) the first reading being more coarse than the second reading
NOT PRESENT because no only one measurement taken
THEREFORE FEATURE 1.4 NOT PRESENT

1.5 the fine measurement corresponding to less than the increments on the moving scale

(a) the second reading being a measurement of a distance less than the distance between successive marks in the first series of marks.
NOT PRESENT because only one measurement taken
THEREFORE FEATURE 1.5 NOT PRESENT

HENCE CLAIM 1 IS NOVEL OVER THIS DISCLOSURE

CLAIM 2

2.1 a distance measuring gauge as defined in claim 1

(a) an apparatus having all the features defined in claim 1
NOT PRESENT, SEE ABOVE
THEREFORE FEATURE 2.1 NOT PRESENT

2.2 in which the moving scale consists of n+1 graduations and covers a distance denoted by n graduations on the fixed scale

(a) The first series of marks having one **fewer** mark per unit distance than the second series of marks.

NOT PRESENT, because there is not suggestion of how the different series are spaced
THEREFORE FEATURE 2.2 NOT PRESENT

HENCE CLAIM 2 NOVEL

CLAIM 3

3.1 a distance measuring gauge as defined in claim 1 or 2

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2.
NOT PRESENT because has lacks all the features of claim 1
THEREFORE FEATURE 3.1 NOT PRESENT

3.2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

NOT PRESENT because no jaws are disclosed, only a single moving arm, which would not constitute a jaw unless there was another one of a pair for it to move toward/away from .

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing

NOT PRESENT because no indication of jaws.

THEREFRE FEATURE 3.2 NOT PRESENT

HENCE CLAIM 3 NOVEL.

CLAIM 4

4.1 a distance measuring gauge as defined in any preceding claim

(a) an apparatus having all the features defined in claim 1, or having all the features defined in claims 1 and 2, or having all the features defined in claims 1 and 3, or having all the features defined in claims 1, 2 and 3.

NOT PRESENT because lacks all features of claim 1

THEREFRE FEATURE 4.1 NOT PRESENT

4.2 in which the moving scale is attached to a moving jaw

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

NOT PRESENT because no jaws are disclosed, only a single moving arm, which would not constitute a jaw unless there was another one of a pair for it to move toward/away from .

THEREFORE FEATURE 4.2 NOT PRESENT

4.3 and slides in a slot formed along a main body on which the fixed scale is provided

(a) the second series of marks being located on a body

PRESENT because second series of marks is located on the alidade.

(b) the first jaw at least partially contained within a recess in the body

NOT PRESENT because no jaw and no recess.

(c) the relative movement of the first series of marks with respect to the second series of marks is translational movement.

NOT PRESENT as the relative movement of the marks that is present is rotational (i..e movement of alidade).

THERFORE FEATURE 4.3 NOT PRESENT

HENCE CLAIM 4 IS NOVEL OVER THIS

SUFFICIENCY

The claims would appear to be sufficient

INDUSTRIAL APPLICABIILITY

The claims appear to be industrially applicable.

ADDED MATTER

There is no indication of any added matter, but we could investigate the file history to find out.

INVENTIVE STEP

In my opinion, Claim 1 lacks novelty over the internal prior art of paragraph 2 of B
The remaining claims appear to be novel.

The closes prior art appears to be the internal prior art of paragraph 2 of B because:

- It shares the most technical features with the remaining claims
- It relates to measurement of small distances, as opposed to angles or large distances (i.e. instead of the wiki article)
- It relates to measurements of distances at a scale more in line with the invention than does the internal prior art of paragraph 1.

Hence, starting from this prior (termed B2, herein) art,

CLAIM 1
claim 1 not only lacks novelty, but is also obvious.
HENCE, CLAIM 1 IS OBVIOUS OVER B2

CLAIM 2
Claim 2 differs in that :
The first series of marks having one **fewer** mark per unit distance than the second series of marks.

The designer of B2 would be free to choose the number of marks per unit distance. Unless the number of marks per unit distance were the same in the first and second series of marks, then (upon careful selection of the correct unit distance) any difference in which the spacing of marks in the first series was more than the spacing of marks in the second series would lead to The first series of marks having one **fewer** mark per unit distance than the second series of marks.

There is nothing special about the selection of The first series of marks having one **fewer** mark per unit distance than the second series of marks, and no particular advantage over The first series of marks having one **more** mark per unit distance than the second series of marks, or The first series of marks having the same number of marsk per unit distance than the second series of marks.

Accordingly, it would be well within the remit of the skilled person to modigy B2 to arrive at the present invention by mere inclusion of a simple workshop variant – that is, the spacing of marks.
HENCE CLAIM 2 IS OBVIOUS OVER B2 AND CGK

CLAIM 3
Claim 3 differs in that :
(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

(b) The first and second readings (see 1.4 (a)) are both zero when the jaws have zero spacing

(a)

Again, the skilled person would be well within his ability to modify B2 to arrive at the arrangement of claim 3.

B2 is described merely as a scale for a scientific instrument. The skilled person's common general knowledge (see page 1 of construction) includes operation and use of devices for measuring. It would therefore be standard practice for such a skilled person to apply the scale *to* an instrument for measuring.

The standard way of measureing is to use jaws (see for instance the internal prior art in the preceding paragraph of B , referred here as B1). Applying a jaw to each of the moveable series is not in my opinion inventive.

(b)

It would also be a mere workshop variant to make sure the readings are zero when the jaws have zero spacing

For instance, in construction section 3.2:

"the skilled person would understand their[jaws] function to be to provide a basis for the measurement to be taken. That is, if the jaws are touching (or close together) the distance measurement is going to be zero."

HENCE, CLAIM 3 IS OBVIOUS OVER B2 AND CGK

CLAIM 4

Claim 4 differs from B2 in that:

(a) the distance measuring device further including a first jaw and a second jaw, coupled to the respective first and second series of marks, and moveable therewith

(b) the first jaw at least partially contained within a recess in the body

(a)

As above for claim 3, the skilled person would be well within his ability to modify B2 to arrive at the arrangement of claim 4.

B2 is described merely as a scale for a scientific instrument. The skilled person's common general knowledge (see page 1 of construction) includes operation and use of devices for measuring. It would therefore be standard practice for such a skilled person to apply the scale *to* an instrument for measuring.

The standard way of measureing is to use jaws (see for instance the internal prior art in the preceding paragraph of B , referred here as B1). Applying a jaw to each of the moveable series is not in my opinion inventive.

(b)

Once a jaw has been applied to each of the movable series, it is apparent that the jaw of the main scale 3 could be viewed as extending as part of the main scale 3. In which case, a the jaw (including the main scale 3) is clearly shown to be partially contained within slider 2 – the skilled person would undoubtedly view the dotted lines shown withini slider 2 as showing this.

HENCE, CLAIM 4 IS OBVIOUS OVER B2 AND CGK

AMENDMENT

Good news for the client. I can see no amendment of B that would be certain of rescuing the patent.

ADVICE

In my opinion claim 1 lacks novelty over B2.
The remaining claims clack inventive step over a combination of B2 and common general knowledge.

Although Claims 1, 3 and 4 appear to be infringed (and claim 2 appears not to be), B would appear to be invalid.

As money may be a significant issue for you, any action you take should keep costs down.

Potential licencee may be put off by a granted patent that appears to cover the product, so you may wish to eliminate B before negotiating with licensee.

As a first alternative, we could contact B and notify them of our belief.
They may agree to surrender their patent. But more likely, we could arrange for them to provide us with a declarataion that they will not prosecute you.
This is beneficial for all parties, as you and your licensee get piece of mind, and at the same time other competitors are put off entering the market. B is also able to be kept by

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SAMPLE SCRIPT B

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

Document B

– Patent specification GB2123123B filed 25th January 2005 in the name of MegaLabs, Inc., without claim to priority. Patent granted 1st June 2007, on the moving scale ... and so on ... fixed scale 22 and the 5mm graduation on the moving scale ... the total separation between the jaws is therefore ...

The same principle will apply at any jaw spacing, so in general for the illustrated gauge, where it is the x^{th} graduation on the fixed scale 22 which aligns most closely with a graduation on the moving scale 12, a distance of x/10 mm has to be added to the jaw separation distance denoted by the graduation on the moving scale lying immediately to the left of the 0^{th} graduation on the fixed scale. Still more generally, where the fixed scale
consists of n + 1 graduations corresponding to a total distance of n – 1 increments on the moving scale, when the x^{th} fixed scale graduation is aligned, the distance to be added is x/n of a moving scale increment.

CLAIMS

1. A distance measuring gauge 1.1 comprising 1.2 a moving scale 1.3 slideable 1.4 adjacent a fixed scale so that graduations on the 1.5 moving scale are alignable with graduations on the fixed scale so as to indicate a 1.6 coarse measurement on the moving scale and a 1.7 fine measurement on the fixed scale, the fine measurement 1.8 corresponding to less than the increments on the moving scale.

2. A distance measuring 2.1 gauge as defined in claim 1, in which the 2.2 fixed scale consists of n + 1 graduations and covers a distance 2.3 denoted by n graduations on the moving scale.

3. A distance measuring 3.1 gauge as defined in claim 1 or 2, in which the 0^{th} graduation 3.2 on the fixed scale is made to align with 3.3 the 0^{th} graduation on the moving scale when 3.4 jaws of the gauge are touching.

4. A distance measuring 4.1 gauge as defined in any preceding claim, in
which the 4.2 moving scale is attached to a moving jaw and 4.3 slides in a slot formed 4.4 along a main body on 4.5 which the fixed scale is provided.

The numbering used above will be used throughout my exam paper.

CONSTRUCTION

1.1 A distance measure gauge
= a gauge or scientific instrument for measuring distances e.g. size of ports
pg. 6 l.32 and p.6 l.10
i.e.

1.2 Comprising = having but not limited to the following features

1.3 A moving scale
= a measuring device or length which can be moved
pg. 6, l.28-29: "moving used here simply in a relative sense"
i.e. scale is moved relative to the distance/object being measured
Scale = term of art e.g. a ruler (see fig. 2, moving)

1.4 Slideable adjacent a fixed scale

1.4.1 Slideable – must logically refer to the moving scale
= able to be moved when gauge is in use.
Pg. 7, l.22: "scale 12 slides in a slot 18"
Repercussive effect of claim 4 means that "slideable" in claim 1 not limited to 2 slides in a slot."

1.4.2 Adjacent = along side / next to
→ not limited to a particular relationship between the fixed and moving scales
Pg. 7 l. 24-25: "two scales are linear and parallel"
But "adjacent" is broader than "linear & parallel"
Pg. 7 l. 23-24: "fixed scale ... lies juxtaposed to the moving scale"
Therefore will construe adjacent relationship of scales as allowing scales to be

1.4.3 A fixed scale
= a moving length which does not move relative to the object / distance being measured (pg. 6, l. 28-29)

1.5 So that graduations on the moving scale are alignable with graduations on the fixed scale
= consequence of relationship between moving scale & fixed scale, not an essential technical feature of invention, although without the graduations the distance measurement cannot be taken.
Therefore will construe the graduations of the two scales as being an essential feature of the invention.

1.5.1 So that graduations on the moving scale
= so that lines on the measuring length which moves relative to the object / Distance being measured
"Graduations" – the equally spaces lines on the scale
i.e. ... | IIII / IIII | graduation

Not limited to a particular length or measurement distance. The "graduations" could indicate any particular value, depending on the scale used.
e.g. pg. 6, l. 32-34: fixed scale has n + 1 graduations ... and covers a distance denoted by n graduations on the moving scale.

i.e. some term "graduations" used for both fixed & moving scale but used to indicate different distances.
Pg. 7 l. 25: "moving scale 12 is graduated in 1 mm increments"

1.5.2 Are alignable with
= can be placed along same line of sight as (when gauge is in use)
Pg. 6, l. 34-35: "0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale"
i.e. Fig. 2 shows how 0^{th} graduations are along the same line as one another, i.e. in the same plane.

Alignment depends on line of sight by a user i.e. when gauge is in use.

1.5.3 Graduation on the fixed scale
= equally spaced lines on the measuring length which is fixed relative to object / distance being measured.
→ see 1.5.1 for construction of "graduations".
Pg. 7 l. 25-26 "The fixed scale 22 consists of 11 graduations."

1.6 So as to indicate a coarse measurement on the moving scale
= consequence of either the "slideable" moving scale or the alignment of the graduations.
Support for both: pg. 6 & 7, bridging sentence:
"When the jaws are at any given separation, the previous graduation on the moving scale with respect to the 0^{th} graduation on the fixed scale will indicate ..."

"A coarse measurement"
→ No support in the description for "coarse". However, a skilled person would understand that it refers to the "whole number of increments"
(pg. 7, 1-2) indicated by graduations on the moving scale

Therefore no effect on scope of claim.
e.g. pg. 7 l. 7-9: "the 0^{th} graduation on the fixed scale lies between the 5^{th} and 6^{th} graduations on moving scale"
- 5 mm ("coarse measurement")

N.B. "on the moving scale" – measurement of the whole number of increments is <u>on</u> the moving scale.
i.e. measurement is made via the moving scale in some way, the measurement is not necessarily defined by the moving scale because the claim is not limited in this way.
(supported by fact that whole no. measure is actually determined by the fixed scale (see below).

1.7 and a fine measurement on the fixed scale
and = conjunctive, refers to a further consequence following the phrase “so as to indicate ...”
“a fine measurement” – again no support in description for this term.
However, a skilled person would understand that it would refer to a smaller measurement (i.e. fractional) than the “coarse measurement” (i.e. coarse vs. fine). Pg.7, 1.4: “additional fraction of a moving scale increment x/n.”

e.g. pg. 7 l. 9-11: “8^{th} graduation on the fixed scale is more closely aligned with a moving scale graduation then ... = 5+ 8/10 mm i.e. 8 x 0.1 mm.”

“on the fixed scale”
- as exemplified by pg. 7, l. 9-11, the fine measurement is not taken by the fixed scale per se, rather by align use of both scales.

Therefore all construe claim not as strictly requiring the whole number measurement on the moving scale & the fraction. On the fixed scale but as using both scales to produce two different types of measurement.

1.8 the fine measurement corresponding to less than the increments on the moving scale.

1.8.1 the five measurement corresponding to
= the measurement of the additional fraction (e.g. $1/10^{th}$ mm)
being.

1.8.2 less than = lower than.

1.8.3 the increment on the moving scale. No antecedent basis for “the increments” but skilled person would construe as = spacing of the graduations.

pg. 7, l.5: “moving scale is graduated in 1 mm increments.”

pg. 7, l.3: “the increment between graduations on the moving scale”.

Repercussive effect of claim 2 means that the graduations on the fixed scale are not necessarily spaced at a smaller distance than the graduations on the moving scale, but that the fractional measurement is simply a fraction of the spacing between moving scale increments.

e.g. if moving scale has 1 mm increments then the fine measurement will be less than 1 mm i.e. a fraction thereof.

“less than” is a relative term but due to measuring involved, = fraction of the moving scale increment.

pg. 6, l.31-32: “distance to the nearest 1/n part of the increment between adjacent

2.1 = 2 + 1

In which = wherein

2.2 the moving scale consists of n + 1 graduations

2.2.1 the moving scale consists of = the moving scale has

2.2.2 n + 1 graduations = n + 1 equally spaced lines

n = an integer, = 1 or more

Repercussive effect of claim 3 means that must at least be two graduations i.e. 0^{th} graduation and one other.

pg. 6, l. 32-34: "n + 1 graduations (and therefore n increments) and covers a distance denoted by n graduations (and therefore n – 1 increments) ...
i.e. n ≥ 1.

N.B. Claim requires <u>moving scale</u> to have n + 1 graduations whereas pg. 6, l. 32-34 teaches that the fixed scale has n + 1 graduations.

Therefore no support for moving scale to have n + 1 graduations and cover a distance denoted by n graduations on the fixed scale.

ONLY for use of scales in the opposite manner.

↓

Skilled person would therefore construe that there was a typographical error in this claim (otherwise couldn't easily work invention by following description).

→

Patentee must have intended to cover embodiment strain

2.3 And covers a distance denoted by n graduations on the moving scale

'And' – conjunctive, refers to a further feature of the moving scale

'Covers a distance' = has a length

Pg. 7, l. 6-7: "covering a total distance of 9 mm"
l. 26: "dividing up a total distance of 9 mm"

N.B. again only support for this feature is in relation to the fixed scale, not the moving scale.

"Denoted by n graduation on the (moving) scale" – length of the fixed scale corresponds to n graduations (equally spaced lines) on the moving scale.

In other words the spacing between graduations is smaller on fixed scale than the spacing between graduations on the moving scale.
pg. 7, l. 33-35: "Increment between graduations on the fixed scale 22 is 0.1mm less than the increment between graduations on the moving scale 12 (0.9mm vs 1mm respectively)".

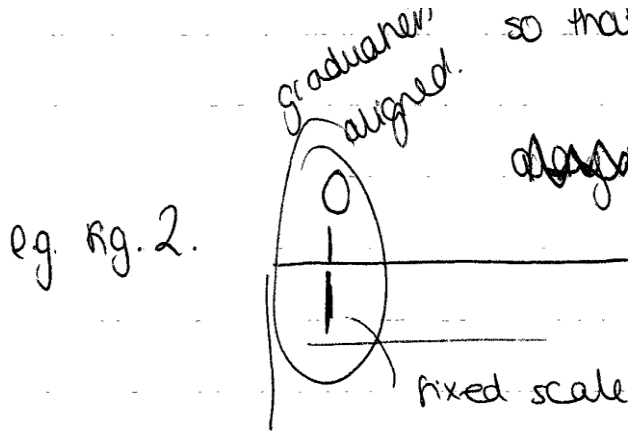
3.1 = 3 + 2 + 1
3 + 1

3.2 The 0th graduation on the fixed scale = the line at the extreme end of the fixed scale (pg. 6, l.36).

3.3 Is made to align with the 0th graduation on the moving scale.
(method step in a product claim)

3.3.1 Is made to align = is designed so that it will be along the same line as moving scale.

e.g. Fig. 2 graduations aligned



Includes alignment by lines on top of one another & above/below.
Align = along the same line, when .....

3.3.2 The 0th graduation on the moving scale = the line at the extreme end of the moving scale (pg. 6, l. 36).

3.4 When jaws of the gauge are touching. No antecedent bonus for "jaws of the gauge" but description only supports the gauge with jaws. Therefore this claim lacks SUFFICIENCY. Description does not enable skilled person to work invention without the presence of jaws to define the distance to be measured.
"jaws of the gauge" = two opposing members designed to grip an object (feature of the gauge).
Fig. 2 =jaws 16 and 14

4.1 = 4 + 3 + 2 + 1
4 + 3 + 1
4 + 2 + 1

4 + 1

4.2 The moving scale is attached to a moving jaw
= the moving scale is connected in some way to one member which acts with another member to define distance to be measured (see claim 3 discussion – jaw should be essential feature of claim 1).

Pg. 7, l. 21-22: "moving scale 12 attached to a moving jaw 16."
i.e. both scale & jaw must be capable of moving when gauge is in use, the nature of their attachment is not specified, but must enable both parts to be moved.

4.3 and slides in a slot
"and" – could refer to the moving scale of the moving jaw

Pg. 7, l.22: "scale 12 slides in a slot 18"
Therefore only support for form."

= moving scale moves from one position to another by moving <u>within</u> an aperture.

4.4 formed along a main body
= refers to the slot (pg. 7 l.22)
= slot is positioned along the length of a central component
Fig. 2 shows body 10 with slot 18 along its length.

4.5 on which the fixed scale is provided
"on which" – must refer to the body
(pg. 7, l. 23-24)
"A fixed scale 22 marked out along the body 10"
"the fixed scale is provided" =
Fixed scale is located <u>on</u> the body of the gauge.

<u>INFRINGEMENT</u>

From client's letter I understand that <u>someone</u> is interested in making and selling client's device in the UK as illustrated in Doc. A.
→ Who is this interested party?
Unlikely to fall within private & non-commercial defence because they are interested in selling the device.
→ Where have discussions got to?
→ Has anything been agreed?
→ Who will supply this interested party with the materials to make the gauge?

<u>Third party</u>

If client's device falls within the scope of claim 1 (and any of the dependent claims 2-4) then the third party's proposed making & sale (& offer to sell & keep) of the device will directly infringe Doc. B.

Customers of the 3rd party will also directly infringe by using the device, unless they are using the device for private and non-commercial purposes or for experimental & research purposes, in which case they will have a defence against infringement.

Client

If client or another party is supplying the third party with the materials required for them to make the device then this supply or offer to supply (if in the UK) will mean that client or supplier will be liable as contributory infringers since they are supplying the third party with the means essential to putting invention into effect when means are suitable for & intended for working invention in UK (obvious to reasonable person in the circumstances that this is the case). The device is not a staple commercial product because only available after client obtained patent.

Client will also arguably be a contributing infringer by supplying the 3rd party with instructions for making .....

1.1 ✔ Present

1.2 because pg. 3 l. 3-4 teaches that invention disclosed is "an instrument for measuring size dimensions such as the external diameter of a part" e.g. measuring calliper.

1.3 ✔ Present

because measuring calliper includes "a secondary scale" which is "moveable" (pg. 3, l. 21-32) relative to distance/object being measured = "moveable le in front of a main scale."

1.4 ✔ Present

because in use the secondary scale is able to be moved along side the main scale which is fixed.
Pg. 3, l. 31-32: "secondary scale is movable in front of a main scale."
Secondary scale is on block (pg. 3, 1.35) & the block "slides against the main scale" (pg. 3, l. 34-35)
Relationship of two scales allows the scales to be compared
(pg. 4, l. 1-4).

1.5 ✔ Present

because relationship between moving scale (2^o) and fixed scale (main) is such that the "subdivision markings" on the 2^o scale are able to be aligned with the subdivision markings on the fixed scale.
Pg. 4, l. 14: "linear main scale with subdivisions"
Pg. 4, l. 19-20: the secondary scale is formed by evenly spaced subdivision markings" = graduations.

Fig. 4 and pg. 5, l. 6-7: "line of sight 32 ... pass(es) through the aligned main scale marking 14b, the index mark 26 and the secondary scale 28".
i.e. graduations are aligned when viewed along line of sight 32.

1.6 ✔ Present

because the alignment of the markings shown in figure 4 (described at pg. 5, l. 6-8) indicates a whole number increment, i.e. nearest the 42mm marking on the main scale 12 (pg. 5, l. 11-12)
= a coarse measurement.
Plus the secondary scale (moving) although not used to define the measurement, the user views the pointer & main scale through the secondary scale (pg. 4, l. 1-2)
Therefore measurement is made by user via the secondary scale.

1.7 ✔ Present
because a smaller measurement is also then made. Pg. 4, l. 3-5: "marking indicates the fractional distance that the pointer lies between the nearest markings on the mark scale." Plus this fractional measurement is made by aligning user's line of sight of markings on both main & 2^{o} scale (pg. 5, l. 6-7) therefore both scales are used to produce two different types of measurement.

1.8 ✔ Present
because the fractional measurement is a fraction of the spacing on the secondary scale pg. 5, l. 2-4: main scale 12 can be marked out in mm, and secondary scale 28 intervals can indicate tenths of a millimetre.

Within scope of claim 1.

2.1 ✔ because within scope of claim 1.

2.2 ✔ Present
Because main scale has more than one equally spaced markings. (Fig. 4, 30-50 mm with 10 markings in between each multiple of 10)

2.3 X Not present
Clear from figure 3 that the n + 1 graduations of the fixed, main scale do not have a length equal to n graduations on the moving secondary scale. Rather there are substantially fewer graduations on the 2^{o} scale.

Not within scope of
Claim 2's subject matter.

3.1 ✔ - when dependent on claim 1 as within scope of claim 1.

3.2 ✔ Present
-3.4 because the line at extreme end of the fixed scale = 0 line & when the jaws 18 & 22 are in contact with another, one can see from Figure 1 that the line at the extreme end of the secondary scale (-4.5) will be along same line as 0 line of fixed scale.

Within scope of
Claim 3's subject matter.

4.1 ✔ - because within scope of claim 1 (and subject matter of claim 3)

4.2 ✔ Present
because pg. 4 l. 16-17: "The carriage has a jaw 22 mounted on it for adjustable cooperation with the fixed jaw" and this carriage includes block 24 when has the secondary scale on its upper face. (pg. 4, l. 18-21)
Therefore the moving scale & moving jaw are attached in such a way that allows both ports to be moved.

4.3 X Not present
because the carriage on which the 2^{o} scale is located has "a through-going slot" in which the main body 16 is slidingly received". Therefore the moving scale does not slide within a slot. Rather it has a slot located therein in which the body slides.

4.4 ✔ Present
The slot of the carriage is positioned along the length of a central component i.e. body 16.
(Fig. 1)

4.5 ✔ Present
because the fixed main scale is located on body 16 of the gauge.

Not within subject matter
of claim 4.

VALIDITY
PRIOR ART for Patent B

1, Known gauge acknowledged in pg. 6 paragraph 1 of Doc. B.
Claim 1 is novel over this known gauge because the gauge only has one scale (a fixed scale) which provides one type of measurement.

Claims 2-4 will also therefore be novel by dependency. Additionally the subject matter of these claims appears to be novel over this known gauge because no moving scale is present in the gauge.

2. Display scale shown in fig. 2 of Doc. B. } Discussed
} in detail
3. Astrolabe disclosed in Doc. C. } below.

4. Known measuring calliper discussed in Doc. A. → appears to be same type as gauge discussed in (1) above, i.e. no moving scale to provide a second, fine measurement.
Therefore claim 1 also novel over this acknowledged prior art – (claims 2-4 novel by dependency.)

	B's display scale	C's astrolabe – Niki + Notebook
-1.2	X NOT Present because pg. 6, l. 10 describes a display scale for a scientific instrument i.e. NOT a scientific instrument per se.	X NOT Present Because astrolabe is described as "a medieval instrument used ... to measure the angle" (pg. 7 l. 4-5) Therefore is a measuring instrument but designed to measure angles, not distances.
1.3	✔ Present because scale includes slider 2 which moves along a main scale 5 & has edge 5 on which there is provided a "secondary scale 7" (pg. 6, l. 18 and pg. 6, l. 10-11) Therefore slider 7 = a measuring device which can be moved on which there is more than one marking.	✔ Present because the notebook discovered in March 2004 speculated about including a scale which moved "with the alidade" (l. 17-18)
1.4	✔ Present because slider 2, "moves along a main scale" Therefore highly like that the main scale is fixed relative to the object/ distance being measured & the relationship of the two scales allows them to be compared (pg. 6, l. 15-17): fraction of distance between ... estimated by the point at which the edges intersect the diagonal 6a (on the main scale)	✔ Present because alidade is said to be a pivoting arm = able to be moved when instrument is in line (l. 11-12) and it is on surface of the moving scales (i.e. fixed relative to the alidade) (see fig) Therefore is such that relationship of scales allows scales to be compared (l. 18-20)
1.5	✔ Present because the slider 2 has a secondary scale 7 shown in Fig. 1 as having equally spaced lines and main scale 3 also has dotted graduation marks 4 & diagonal line 6 which form a "regular zig zag pattern" (pg. 6, l. 14) and graduation marks 4 are shown in fig. 1 as being equally spaced. These graduations 7 on slider 2 can also be placed along some line of sight as the graduations 4 (pg. 6, l. 15-18) – on	✔ Present because describes at l. 18-19 that "by noting where marks on this scale moving line up with the marks of a conventional scale on the face of the instrument" (fixed scale). "graduation" = equally spaced l. 8: "90 equal divisions or ports"

	the fixed scale. "The fraction of the distance between ..."	
1.6	✔ Present because a whole number measurement can be made by the position of the slider relative to the previous whole number i.e. fig. 1 = 17. Therefore the coarse measurement is made via the moving scale.	✔ Present because a measurement is taken using the alignment of moving scale and fixed scale (comparative) upon l. 18-19.
1.7	✔ Present because a "The fraction of the distance between the two closest marks 4 at which edge 5 of the slider lies can be estimated ... (pg. 6, l. 15-17) Therefore a fraction measurement is also made. Two types of measurement are made using both types of scale.	X Not present because a fractional measurement is only provided after consulting a table, not by using the scales to produce two different types of measurement. Rather scales are used to produce two coarse measurements which are used to produce the final measurement including the additional fraction (l. 19-20).
	✔ Present Although not clear from information provided whether the additional fractional measurement is lower than the spacing on the moving scale. (Need to check whether client can confirm this.) Seems that spacing on secondary scale 7 is larger than the distance between two marks of 4. Therefore feature present.	X Not present because no fine measurement taken. Although resulting fraction is less than spacing on the nonius scale.
	NOVEL	NOVEL
1	X because Cl. 1 is novel.	X – Cl. 1 is novel.
2	✔ Present because fixed scale has more than one marks 4 (see fig. 1) (11 shown in figure)	✔ Present because fixed scale on the surface of the astrolabe includes more than one graduation.
3	X Not present because the secondary scale also has 11 graduations (although the poor quality of figure 1 means that this needs to be checked).	X NOT Present → then one graduation because although fixed scale on the astrolabe's surface includes number of concentric arcs with decreasing no. of divisions. Not clear how scales will be arranged on the alidade to provide the second

		reading & whether they will have n graduations.
	Subject matter NOVEL.	Subject matter NOVEL.
1	X – Cl. 1 is novel.	X – Cl. 1 – NOVEL.
2	X NOT Present because although either end line on the marks 4 will be along same line as end lines scale 7 → they are aligned parallel to each other (pg. 6, l. 15).	X NOT Present because the instrument does not include two opposing members designed to grip an object.
	Subject matter NOVEL.	Subject matter NOVEL.
	X – Cl. 1 is novel.	X – Cl. 1 is novel.
2 -2 + 5	X Not present because the scale does not include jaws, rather it is simply a scale with slider 2 & main scale 3.	X NOT Present If alidade = jaw, as it is a member acting with loop to define distance to be measured then alidade will carry the moving scale (l. 16-17). BUT does not slide in a slot formed along a main body.
	Subject matter NOVEL.	Subject matter NOVEL.

INVENTIVE STEP

Taking the skilled person to be a designed of scientific instruments for measuring dimensions, the common general knowledge will include the known gauge described in both Docs. A & B i.e. the provision of one scale & two jaws located therein with a pointer. This appears to be the well known method of measuring dimensions.

Claim 1

The inventive concept of Claim 1 is the provision of two scales to provide two different types of measurement i.e. fixed & moving scales providing a coarse measurement & a fine measurement.

The closest prior art is the scale defined in Doc. B. This is because this scale contains the larger number of overlapping technical features with claimed invention & is also concerned with similar type of dimensional measurement.

The difference between Claim 1 & B is that B is not a ‘distance-measuring gauge’, rather it is simply a scale for a scientific instrument. Pg. 6, l. 10 of B does, however, teach that this scale is for a scientific instrument. I therefore believe it would be obvious for a skilled person to combine this scale with the gauge taught in paragraph

1 of Doc. B & arrive at Claim 1. To do so would simply require replacement of the scale in the known gauge would not affect the way in which the device functioned. Therefore Claim 1 lacks inventive step over B.

The difference between Claim 1 & C is that C is concerned with measuring angles. However, the measurement being taken on the nonius scale before consultation of the tables to generate the angle is arguably a distance so an alternative construction would be that that C does disclose a distance-measuring gauge.

The difference between C & Claim 1 is therefore that 'a fine measurement' is not provided on a fixed scale. Rather the fractional addition is determined by the subsequent consultation of the table.

Absent any teaching or suggestion to make a fractional .....

Both B & C are concerned with measuring dimensions using two sets of scales, therefore arguably the skilled person could combine these documents. This is important for Claim 2.

Claim 2

Inventive concept of Claim 2 is that there are n + 1 graduations on the fixed scale compared to n graduations on the moving scale over the same distance. This decreasing number of graduations is not taught in B.

However the quadrants of C do have a decreasing number of divisions over the same distance. Thus whilst there is not a clear disclosure of this fear in C, it could be inferred from this document that this relationship between the scales could be advantageous. B teaches at pg. 6, l. 24-25 that its device is "more accurate" than prior art (specifically the scale).

However, to incorporate this relationship into the two scales of B would involve a complete re-design of the way in which the scales work. Additionally the astrolabe with one set of concentric arcs has been known since 1500s. I do not therefore believe such a modification to B's scales would be obvious to try.

Therefore subject matter of Claim 2 is inventive.
↓
Advise seeking expert evidence to confirm this point.

Claim 3

No jaws present in either B or C but this is an obvious workshop variant in view of the gauge which forms part of the skilled person's cgk.
Therefore subject matter of Claim 3 lacks inventive step.

Claim 4

Difference between B & subject matter of Claim 4 is that there is no slot as not part of an instrument with a body. Also not taught in C. However, this seems to be an

obvious workshop variant the skilled person would make since jaw of known gauge also slides.

SUFFICIENCY

No support for Claim 1. Not clear how the invention can work without jaws.
This can, however, be easily amended as description provides basis for adding the jaws to Claim 1.

AMENDMENT

Claim 1 is novel but lacks inventive step. This can be easily addressed by amending to include features of Claim 2 which is novel & arguably inventive. You do not however fall within scope of this claim & I would therefore advise that I analyse description in more .....
patentee could move to have a valid & improved claim.

Advice

- Need to collate further information about discussions with third party so far.
- Assume that nothing (no activities) has yet taken place.
- Are there any other parties involved?
- Client = contributory infringer of Claims 1 & 3.
- Third party = direct infringer of Claims 1 & 3.

In view of infringement & questionable validity (I.S.) of Claim 1 I would advise trying to reach an amicable agreement with Mega Labs.

→ Also advise filing a caveat to see if they request post-grant amendment of patent, can then consider opposing this.

- As you only infringe Claims 1 & 3 & Claim 7 lacks inventive step & subject matter & Claim 3 lacks novelty & inventive step I would advise either seeking a royalty free licence from them, or seeking a declaration of infringement & validity.
- Note however that if declaration is negative this could have significant consequences for you.
- Safest option & to maintain your proposed manufacture & sale will be to cross-license. Amicable solution such as this will avoid the expense of litigation which from your lack of funds on filing will undoubtedly be a good thing.

If they refuse, they will likely be able to obtain an interim injunction to stop your activities since they are established on the market & this is one of the best-selling products. Although injunction unlikely to be granted if validity is in issue.

Therefore approach them to sort out situation BEFORE going any further with your negotiations to make & .....

Once they are aware of prior art, likely to be more amenable to negotiations. If you go ahead without doing this then you & your manufacturer & seller may run into problems.

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SAMPLE SCRIPT C

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

Construction

Interpretation of GB2123123B ("B")
N.B. the numbering used in this section is consistent throughout my analysis.

Claim 1

1.1 : "A distance ... comprising"

1.1.1 : "A distance measuring gauge"
= A device for measuring distances, includes measuring size of parts.
Because usual meaning and clear from pg. 6, l. 2-3.

1.1.2 : "comprising"
= includes but not limited to the following integers.
Because usual meaning.

1.2 : "a moving scale ... fixed scale"

1.2.1 : "a moving scale"
= one or more measurement indicators moveable relative to another part of the device
Because usual meaning of "a"
Because "Moving and fixed are used ... in a relative sense"(pg. 6, l. 28-29), therefore moving & fixed arbitrary and can be considered as "first" and "second" instead
Because "indicate a coarse measurement as the moving scale" (pg. 6, l. 26)
Although "moving" indicates actual motion required for infringement, person skilled in the art (PSA) would appreciate that claim not intended to be limited to moving but to moveable, particularly since it would be practically impossible to take a reading from a moving scale.

1.2.2 : "Slideable ... fixed scale"
= the device has one or more measurement indicators which are fixed in relation to the moveable indicator(s) and which lie juxtaposed to the moveable indicator(s), the moveable indicator(s) being connected to the device such that sliding motion relative to the fixed scale is possible.

Because “indicate ... a fine measurement on the fixed scale” (pg. 6, l. 26-27)
Because “juxtaposed” (pg. 7, l. 24)
Because usual meaning of adjacent
Because usual meaning of slideable and clear for Fig. 2 & 3
includes sliding in a slot (pg. 7, l. 22)

1.3 : “So that ... fixed scale”
= the moving and fixed (i.e. first and second) scales both divided into increments and are arranged in such a manner that their respective increments can be lined up together.
Because “fixed scale consists of n increments” (pg. 6, l. 32-33)
Because “moving scale is graduated in 1 mm increments”
(pg. 7, l. 5)
Because usual meaning of “aligned” and clear from Figs. 2-4
includes two scales being linear and parallel (pg. 7, l. 24-25) but PSA would see absence of limitation for claim as intentional, so no limited to it.

1.4 : “so as ... fixed scale”
= can be lined up in such a manner that the first scale can be read to indicate a first distance measurement and the second scale can be read to indicate a second distance measurement that is more accurate than the first measurement.

Because description silent on meaning of “coarse” and “fine”. But clear that a “fine” measurement must be more accurate.

1.5 : “the fine ... moving scale”
= the measurement indicated by the second scale is less than the distance of one increment on the first scale.
Because clear from pg. 6, l. 27-28 and supported by example on pg. 6, l. 31-34.

No antecedent for “the increment”, Therefore moving scale must have increments – this is implicit by use of term “graduations”. Statement of invention uses alternate wording.

Claim 2

Dependent on claim 1 (= 2 + 1)
2.1 : “in which ... fixed scale”

2.1.1 : “in which”
= wherein
Because usual meaning

2.1.2 : “the moving scale ... fixed scale”
= the second measurement indicator has a “n” number of increments covering a total distance of n – 1 increments of the first measurement indicator.

Because clear from text of description that claim wording wrong since fixed and moving reserved – claim must cover the embodiment described e.g. on pg. 6, l. 32-34; pg. 7, l. 4-7
Because “total distance” (pg. 7, l. 6)
Because “n increments” (pg. 6, l. 33)

Because “n-1 increments” (pg. 6, l. 34)
Because pg. 8, l. 9-12

Claim 3

= 3 + 2 + 1; or
3 + 1

3.1 : “in which ... touching”

3.1.1 : “in which”
= wherein
Because usual meaning

3.1.2 “the 0^{th} graduation ... are touching”

= the increment denoting lines at the extreme end of both the fixed and moveable scales towards the mandible-type features are marked such that they line up when the mandible-type features of the device are closed together.

Because usual meaning of jaws
Because pg. 6, l. 34-37

- No antecedent for “jaws”, Therefore device must have jaws.
- No antecedent for “0^{th} graduation”, Therefore each scale must have a 0^{th} graduation – already implicit.

Claim 4

= 4 + 3 + 2 + 1;
4 + 3 + 1;
4 + 2 + 1; or
4 + 1.

4.1 : “in which ... jaw”

4.1.1 : “in which”
= wherein
Because usual meaning

4.1.2 : “the moving ... moving jaw”
= the first scale is connected to a moveable mandible-type feature, this includes a jaw moveable with the moveable seal, i.e. fixed to it.

Because clear from pg. 7, l. 21-22
Because must cover embodiments of Fig. 2-3
Because does not specify “fixedly attached”, Therefore not limited to it.

4.2 : “and slides ... is provided”
= the second scale is marked out along a major portion of the device, a major portion having a channel in which the first scale can be slideably moved.

Because “marked out ...” (pg. 7, l. 23-24)

Because usual meaning of “slot”
Includes moveable scale being fully within slot, as shown in Fig. 3.

Infringement

Devices considered: Calliper as illustrated in GB0912345.6 (“A”)

Claim 1

1.1 = ✔

Because calliper can be used for measuring distances, including measuring size of parts (pg. 3, l. 3; pg. 3, l. 10-11)

1.2 = ✔
Because “secondary scale ... moveable in front of a main scale” (pg. 3, l. 32)

Because “lower face of the block slides against the main scale” (pg. 3, l. 34-35)

1.3 = ✔

Because “subdivision marking on the main scale” (pg. 4, l. 2-3)

Because “sub divisional marking on the secondary scale” (pg. 4, l. 3-4)

Because “line of sight ... pass through the aligned main scale marking 146 ... and the secondary scale 28” (pg. 5, l. 6-8)

Because Fig. 3 – linear and parallel scales (within construction of 1.3).

1.4 = ✔

Because Subdivision markings 30 on the secondary scale 28 ...indicate equal fractions of the internal between markings on the main scale” (pg. 4, l. 35 – pg. 5, l. 2)

Because “main scale can be marked out in mm and the secondary scale ... tenths of a millimetre.” (pg. 5, l. 2-4), Therefore more accurate.

1.5 = ✔

Because pg. 4, l. 35- pg. 5, l. 2

Because “main scale ... in mm ... secondary scale ... tenths of a millimetre” (pg. 5, l. 2-4)

N.B. although use of “moving” and “fixed” is relative and Therefore arbitrary, going forward, the more accurate scale (“secondary scale”) will be considered consistently as the second scale, and the coarser scale as the first scale (see construction 1.5).

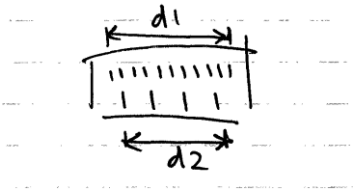
Therefore “A” within scope of claim 1

Claim 2

2.1 = X

Because the second indicator (scale 28) has 10 increments which “indicate equal fractions of the interval between two adjacent markings on the main scale 12” (pg. 5, l. 1-2), i.e. 10 increments on second indicator = 1 increment on main scale.

Even if “covering distance” taken to mean physical distance on device:



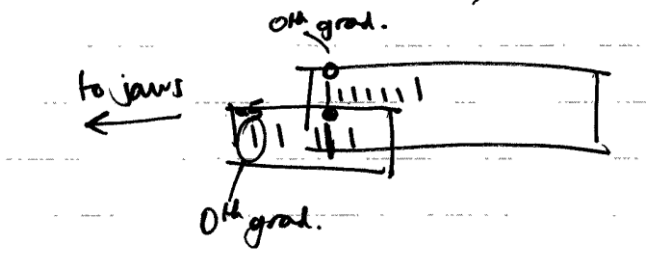
Clear from Fig. 3 that 10 increments of scale 28 “cover” 19 increments of main scale 12, not 9.

Therefore “A” not within scope of claim 2

Claim 3

3.1 = X

Because device does have “mandible-type features” (jaws 18, 22), when these are together, the reading will be 0.0 mm, i.e.:



The extreme end of the second scale towards the jaws denotes -0.5 so will not be lined up with the 0th grad of the main scale 12.

Therefore A not within scope of claim 3

Claim 4

4.1 = ✔

Because "main scale 12 ... marked out along a main body 16 ... also provided with a fixed measuring jaw 18" (pg. 4, l. 14-15), i.e. first scale connected to mandible feature fixed to it.

4.2 = ✔

Because "secondary scale is marked out on an upper face of the block" (pg. 3, l. 35)

Because "carriage 20 has a slot in which the main body 16 is slidingly received ... carriage comprises the .. block" (pg. 3, l. 16-18)

Therefore "A" within scope of claim 4 when dependent on 1

N.B. although "a main body" could mean "the main part of the device", i.e. main body 16 has the slot, best to err on the side of caution.

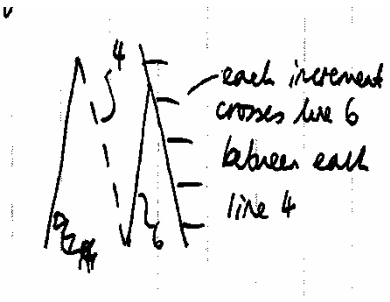
NOVELTY

Documents/Devices considered:

- Known gauge of pg. 6, l. 2-8 ("E")
- Display scale of pg. 6, l. 10-21 & Fig. 1 of B ("D")
- Passage of journal in June 2004 ("C")

All fully citable against B as available before 25.1.05.

Claim	C	D	E
1.1	✔ Because "measure the angle at which a star lies relative to .. vertical" (pg. 110, L. 5), i.e. measures angular distance	✔ Because "the fraction of the distance ... can be estimated" (pg. 6, l. 15-17)	✔ Because "enabling size of a part places between jaws to be loosened" (pg. 6, l. 5-6)
1.2	X Because alidade moveable relative to concentric arcs (pg. 110, l. 11-14) Because extended	✔ Because slider and its scale 7 moveable relative to main scale 3	X Because jaw slides relative to a scale attached to a second jaw (pg. 6, l. 4) but sliding jaw

	nonius scale on alidade moveable relative to astrolabe (pg. 10, l. 17-18) Because arm <u>pivots</u> not sliding motion (pg. 10, l. 11)		does not have measurement indicating scale
1.3	✔ Because marks on extended nonius scale line up with marks of conventional scale on face (pg. 10, l. 18-19)	✔ Because dotted graduation marks 4 linking lines 6 and secondary scale 7 can be lined up – see Fig. 1 (pg. 6, l. 15-18)	X Because no second scale
1.4	✔ Because conventional scale on face indicates angle, scale on arm "accurate to fractions of a scale division" (pg. 10, l. 18-19)	✔ Because distance between two closest marks 4 at which slider intersects diagonal 6a estimated – for this purpose edge 5 provided with secondary scale (pg. 6, l. 15-18)	X Because no second scale
1.5	✔ Because the measurement indicated by the second scale (nonius on arm) is less than the distance of one measurement on the first scale (conventional angle scale) <u>Therefore Claim 1 novel over C</u>	✔ Because Clear from Fig. 1 that the secondary scale 7 is marginally narrower than each zig zag of 4 and 6, Because the scale 7 will intersect the line 6 at each of scale 7's increments between each grad mark 4:  Each increment crosses line 6 between each line 4 <u>Therefore Claim 1 **not** novel over D</u>	X Because no second scale <u>Therefore Claim 1 novel over E</u>
2.1	X Because nonius on arm	X Because scale 7 has 10	

	(second scale) will have 89 divisions compared to 90 divisions no conventional scale (first scale) Therefore Claim 2 novel over C N.B. My understanding of this arrangement should be checked by a skilled person. If nonius has 90 div. and scale has 89, then claim 2 novel by dependency only.	increments covering distance of 1 increment of the grad marks 4, not 9 increments Therefore Claim 2 novel over D	
3.1	X Because has no jaws Therefore claim 3 novel over C	X Because has no jaws Therefore claim 3 novel over D	X Because no second scale Therefore claim 3 novel over E
4.1	X Because no mandible-type feature attached to scale	X Because no mandible-type feature	X Because no second scale
4.2	X Because first scale does not slide in a slot Therefore Claim 4 novel over C	✔ Because main scale 3 appears to lie in channel in which it can be slideably moved. "Guided very accurately" (pg. 6, l. 20) Therefore Claim 4 novel over D	X Because no second scale Therefore Claim 4 novel over E

Inventive Step

The PSA is skilled in the art of metrology i.e. design and manufacture of measuring gauges.

Their common general knowledge (CGK) includes known gauges, such as E, and known display scale E, along with the contents of leading metrology journals and historical measurement gauges such as the astrolabe and astrolabe with nonius.

Claim 1

As stated above, claim 1 not novel using my construction. But, a court may disagree and consider that D does not disclose a distance measuring gauge, since it does not disclose measurement of a part.

Inventive concept = provision of a gauge mechanism with which indicator of D can be used.

Obvious?

Starting from D, PSA would see that the display scale of D could be used to accurately measure the size of a part and would turn to the known gauge (E).

Combining D and E would present no technical difficulties since jaws could easily be placed on slider 2 and on the main part.

Thus, the skilled person would arrive at the teaching of claim 1 without exercising inventive skill.

Therefore Claim 1 lacks inventive step over D + E / CGK

This should be checked with a PSA to confirm.

Claim 2

The inventive concept of claim 2 is the provision of a fine scale which has increments which cover distance of n-1 increments of the coarse scale.

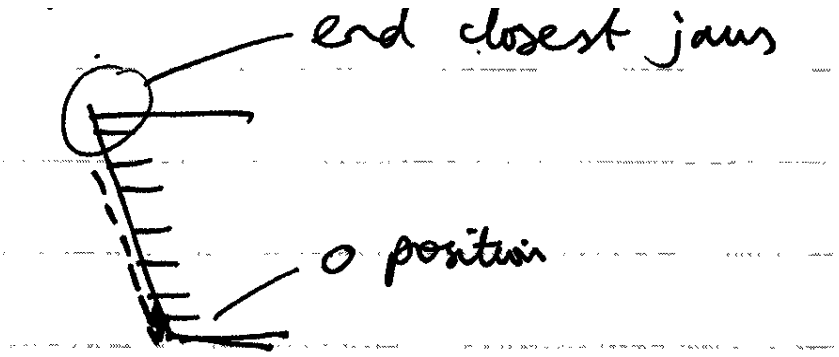
None of C, D or E suggest such an arrangement of scales. Thus, PSA would not be motivated to arrive at claim 2.

Therefore Claim 2 inventive over C, D and E alone and in combination

N.B. If PSA considers that claim 2 novel by dependency only (see novelty 2.1), claim 2 may lack inventive step over D + C.

Claim 3

Starting from D, PSA would consider combining with E to add jaws for measuring (see claim 1), with such an arrangement it would appear obvious to have 0 position corresponding to that of calliper when jaws touching. On the other hand, the “extreme end closest to the jaws” of the secondary scale is not the “0” position.



Thus, not straight forward modification to make.

Therefore Claim 3 inventive

Claim 4

Inventive concept is provision of a jaw and a slot in the main body in which ..

Therefore Claim 4 not inventive over D + E

Sufficiency

No immediate issues. Although claim 2 appears to be incorrect, since the fixed scale should consist of n + 1 graduations covering distance of n graduations of moving scale.

Amendments

Patentee could amend claim 1 to incorporate claim 2 in order to have a valid claim 1. However, such a claim would not cover your device. Patentee should amend claim 1 to replace “moving” with “fixed” and vice versa.

Notes for Meeting with client

Analysis is attached.

By my construction, validity and infringement of B is summarised as follows:

Infringement

Claim	A within scope of claim?
1	✔
2	X
3	X
4	✔

Therefore, the person interested in making devices according to A will infringe claims 1 and 4 of B by making, offering to dispose of, disposing of, importing or keeping such devices in the UK.

B is granted and in force in the UK so is enforceable immediately against the interested person.

End users of the instrument will also infringe B by using the devices according to A, although a defence of private, non-commercial use may be available to them.

Additionally, if you license the invention to an infringer, you could be a joint tortfeaser in an infringement action since you will be acting in a common design with the infringer.

Since the calliper illustrated in B is one of Megalab's (M's) best selling products, it seems unlikely that they will allow infringement without taking some form of action.

If M were to bring infringement proceedings against you or your licensee/assignee, it seems likely that an interim injunction would be available to keep your product off the market since it has not yet been launched.

Validity

Claim	Novel?	Inventive?	Valid?
1	X	X	X
2	✔	✔	✔
3	✔	✔	✔
4	✔	X	X

Claims 1 and 4 appear to be invalid.

Actions

Do not simply ignore the patent (B).

Consider approaching M – perhaps they will acquiesce given that your product appears significantly different.

Consider negotiating a licence with M to use a device within the scope of B's claims.

- use doubtful validity to strengthen negotiating position

- could use our application A as negotiating tool, e.g. by cross-licensing. This means payment of royalties by you or your licensees can be avoided, while having certainty for commercialisation.

- Could consider performing a prior art search to establish if any further relevant documents exist to prejudice validity of B

- Could consider freedom to operate search to establish other third party rights which may block commercialisation of this product

- Note, both FTO and prior art searches likely to be costly

- As lack of funds appears to be an issue, filing a revocation action against B on grounds of invalidity should be a last resort (unless interested person happy to fund it?) since such court proceedings will be costly and lengthy.

Other

- Yes, category A citations do mean indicative of background only, so this is good news.
- I will file a PF5I to become agent for this application.

CLAIMS

1. A distance measuring gauge, comprising a moving scale slideable adjacent a fixed scale so that graduations on the moving scale are alignable with graduations on the fixed scale so as to indicate a coarse measurement on the moving scale and a fine measurement on the fixed scale, the fine measurement corresponding to less than the increments on the moving scale.

2. A distance measuring gauge as defined in claim 1, in which the moving scale consists of n + 1 graduations and covers a distance denoted by n graduations on the fixed scale.

3. A distance measuring gauge as defined in claim 1 or 2 in which the 0^{th} graduation on the fixed scale is made to align with the 0^{th} graduation on the moving scale when jaws of the gauge are touching.

4. A distance measure gauge as defined in any preceding claim, in which the moving scale is attached to a moving jaw and slides in a slot formed along a main body on which the fixed scale is provided.