

2015

PATENT ATTORNEYS

EXAMINATION

PAPER D

The Preparation of Specifications
for New Zealand Patents

Regulation 158 (1) (d)

Duration: 4 hours (plus 10 minutes for reading)

General instructions for this question:

Only the prior art that is referred to is to be taken into account in your answer. You must not take into account any prior art that you are separately aware of.

This exam has only one question with two parts for a total mark of 100 for the paper.

An additional set of drawings is provided at the end of this question that you may use in your answer.

Duncan Gibson is a keen mountain bike rider and skier. He travels a lot with his mates to various mountain bike parks in New Zealand.

Putting their bikes on top of the car on roof racks has been one way they have transported their bikes.

The bike rack he currently uses is one that slips over the tow ball of his car. It requires two bolts to be tightened to secure the rack. But Duncan is a bit clumsy. The bolts are done up with a hex key (e.g. an Allen key) and this often goes missing. Hand tightening the bolts tends to leave the rack wobbly, which is not safe. Attached are some pictures of this bike rack, referred to as "Rack 1".

Duncan has some money and he decided to start a bike accessory design company to make the world of biking a better place. His first product off the rank is a better bike rack.

He asked his friend Laura Snoep to get involved to design the ultimate bike rack. They travelled to a trade show in the USA in May 2015 where they saw a popular design of a rack from an American company that they quite liked. They picked up a brochure of the rack of the American company at the trade show and have given you some drawings from it, shown as "Rack 2" attached.

The American company's rack also slips over the tow ball and can clamp onto it when its arms 100 are pushed outwards. It still requires fiddling around with the bar 101 that needs to be extended and contracted in length in order to move the arms outwards or closer to each other. This can be time consuming because it requires you to turn the turnbuckle 102. The turnbuckle has an internal thread that receives section 103 of the bar 101. As you turn the turnbuckle the section 103 moves in and out of the other section 104 depending on the direction you turn the turnbuckle. Turning the turnbuckle can also be difficult when you are wearing thick gloves like ski gloves. Rack 2 has telescoping arms 100 and uses a spring clip arrangement to let the bike support bars 105 be adjusted and set in height.

Laura and Duncan have designed a better bike rack and drawings of it are attached as "Rack 3".

This new rack does not need any tools or fiddling around with bolts or winding of turnbuckles. The bar 1 has two sections 2, 3 connected at a pivot pin 111. Rack 3 clamps onto the tow ball when the handle 4 is pushed downwards from its "Stored position" to its "In use position". It gets held in this "In use position" by virtue of the opposed push pins 5. The push pins are on a spring clip retained inside the tube 10 of section 3 and once aligned can pop into the holes 6 on the section 2. To release the pins, you simply need to push the pins out of the holes by hand.

An alternative to this spring clip locking may be achieved by a latch 7 as seen in the drawings called "latch version". The latch 7 is connected to section 2. When the end of section 3 is aligned in the channel of section 2, a person can flip the latch over to prevent the two sections folding up. If the latch is used, in order to prevent the two sections from pushing beyond their alignment as shown in the "In use position", a base 8 is provided to the member 2, making it channel-shaped in cross section. This helps ensure that the two sections don't fold up as the handle is pushed down, which would otherwise push beyond alignment and result in the clamp losing its hold on the tow ball.

The two sections 2,3 may each have holes that can be made to line up when the clamp grips the tow ball. This allows a padlock to be inserted so that the clamp remains in a tight grip with the tow ball and the rack cannot be removed. This helps prevent theft. The padlock arrangement is shown in only one of the drawings.

For extra security against theft, there is a lip 120 that extends from the clamp around the bottom of the tow ball to prevent a person using a spanner to undo the nuts that secure the tow ball to the tow bar of the car.

The bike carrying arms 40 can fold over to sit against the opposite side of the arms 108 to make the entire rack, when not in use, compact for easy storage.

Duncan comes to you to get a New Zealand patent for the new rack.

1. Prepare a complete specification for Duncan. An extra set of drawings is provided at the end of this paper to assist you.

85/100 marks

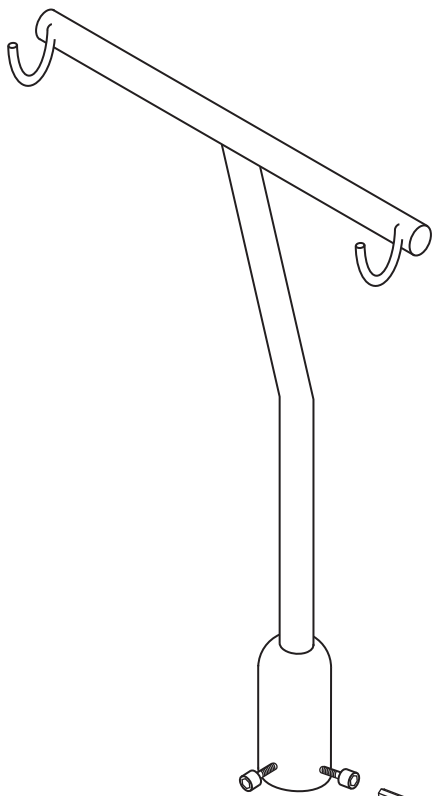
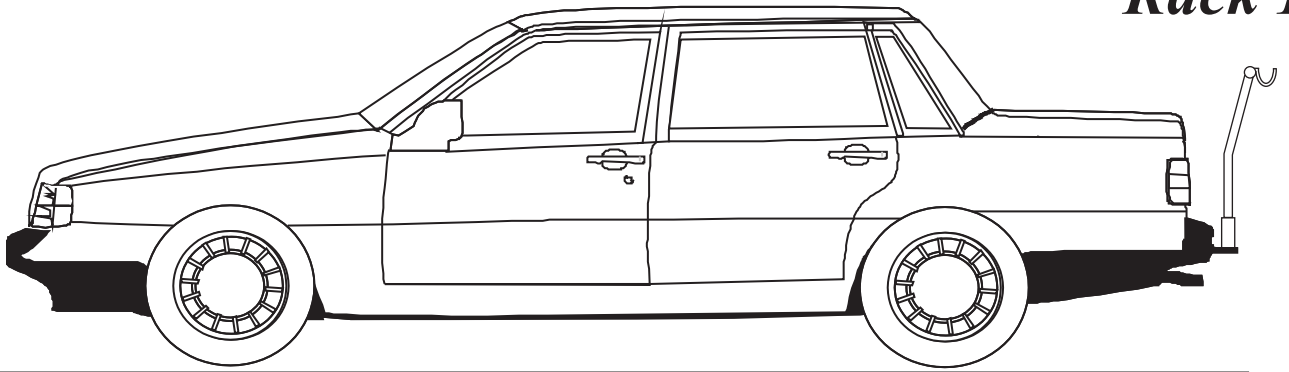
2. Please also prepare a letter explaining to Duncan:

- a. The general layout of a patent specification and reasons why certain sections of a patent specification exist.
- b. Any specifics about your patent specification, e.g. why you have drafted the patent specification as you have.
- c. How Duncan should go about reviewing the patent specification and what input and other information you require from Duncan before filing the New Zealand patent application.

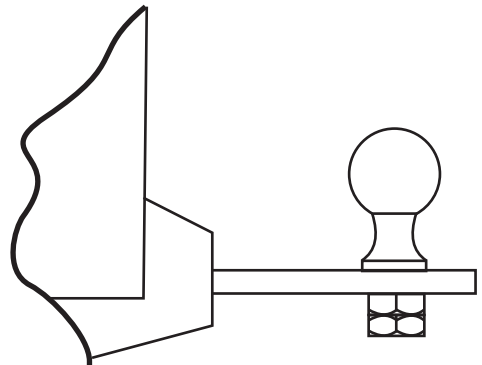
15/100 marks

END OF QUESTION 1/1

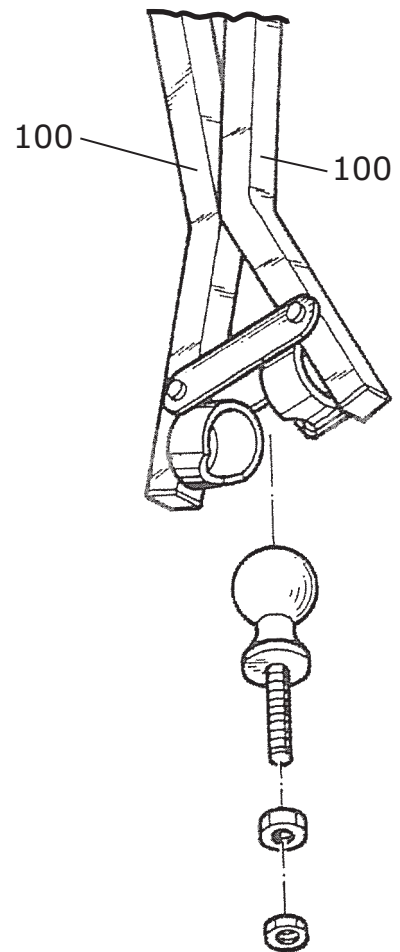
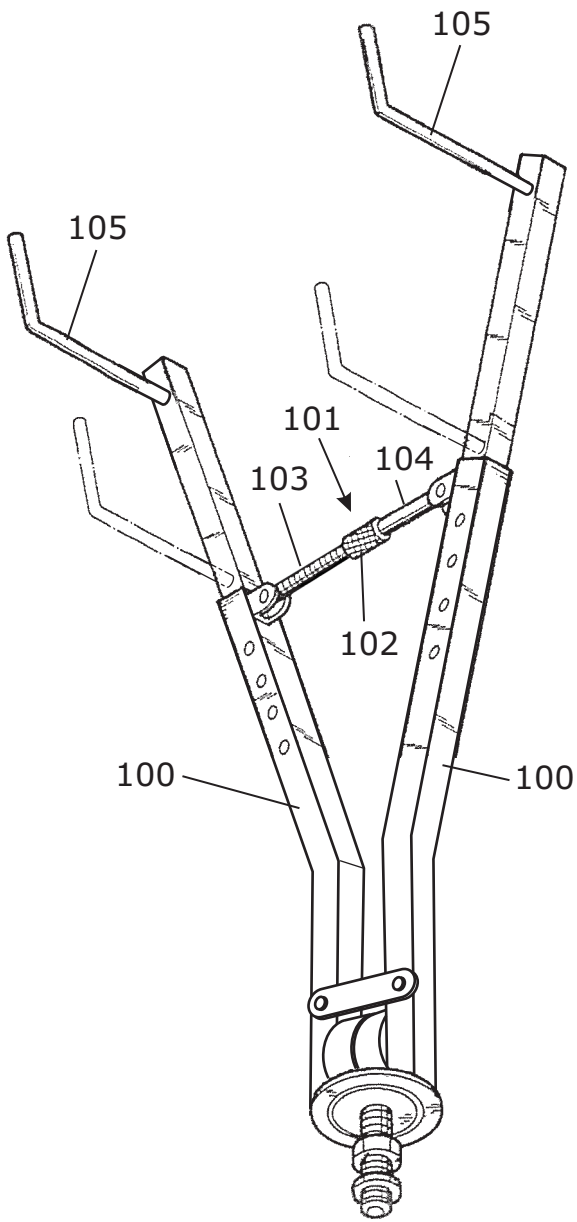
Rack 1



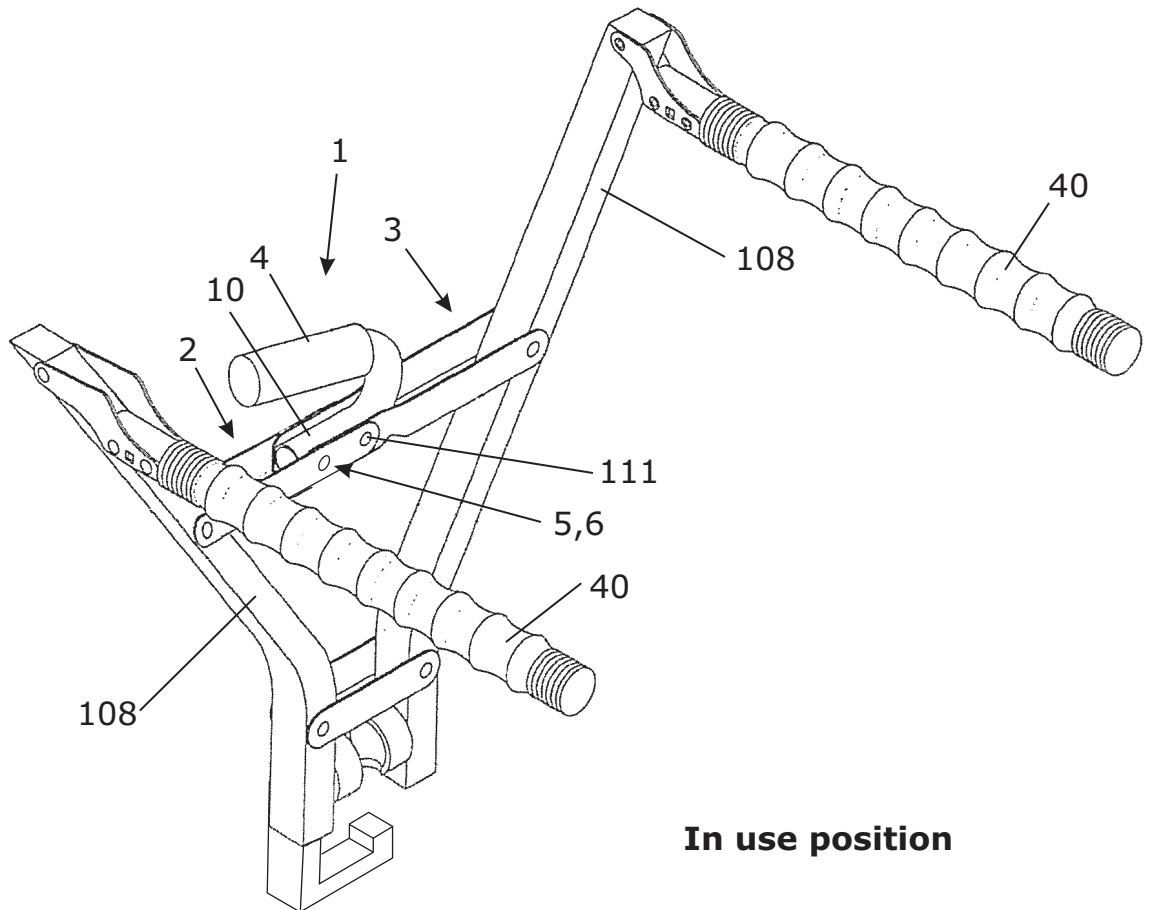
Hex Key



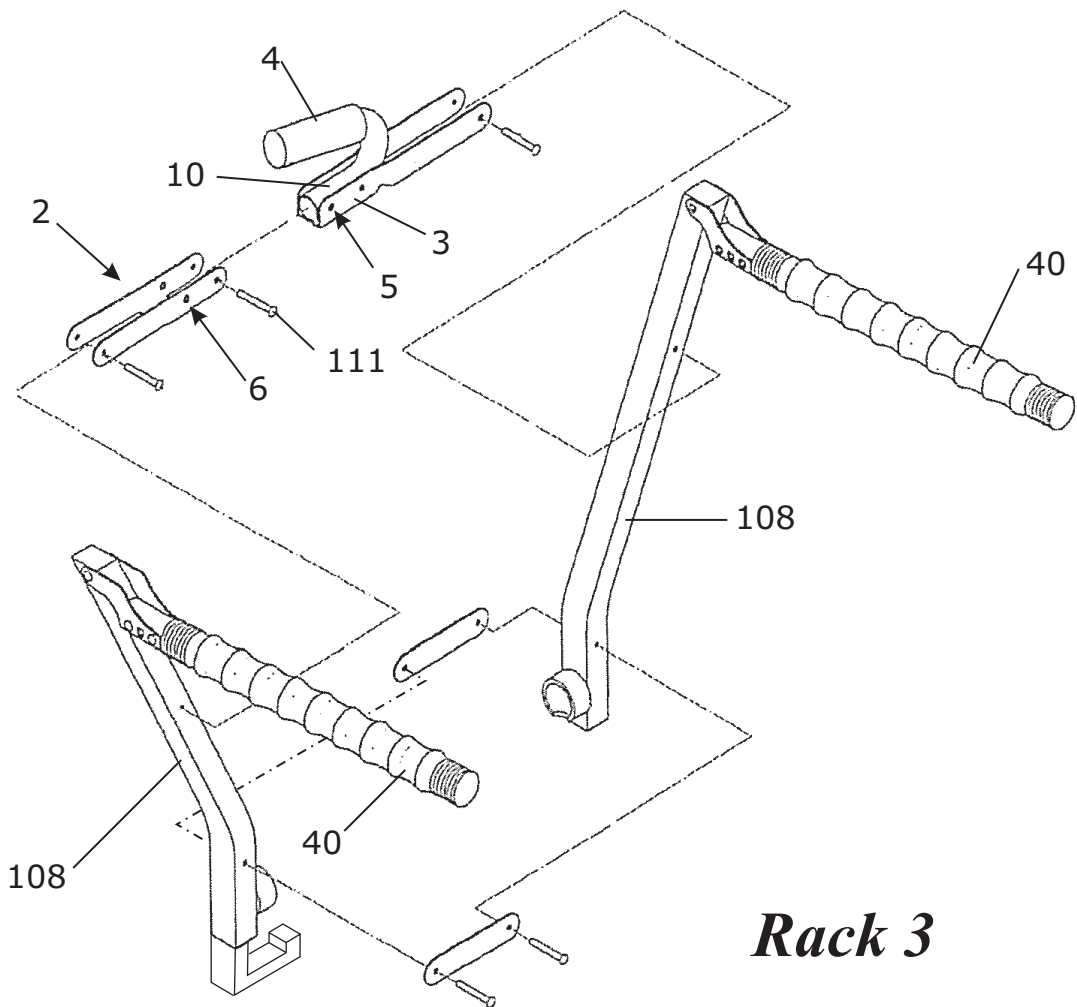
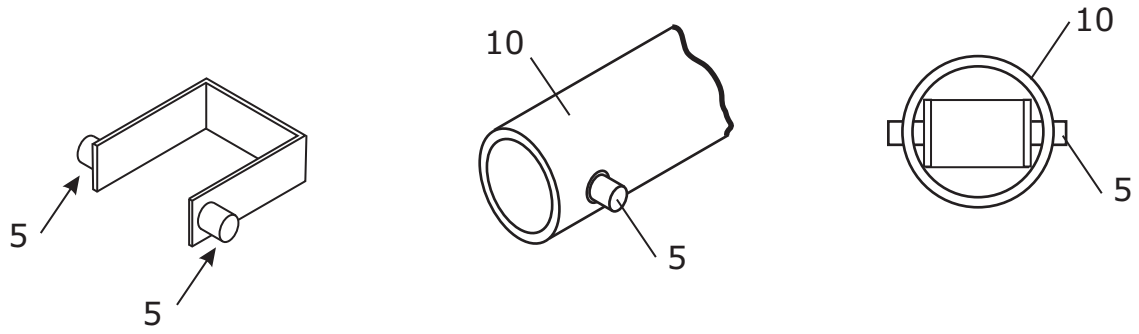
Rack 1



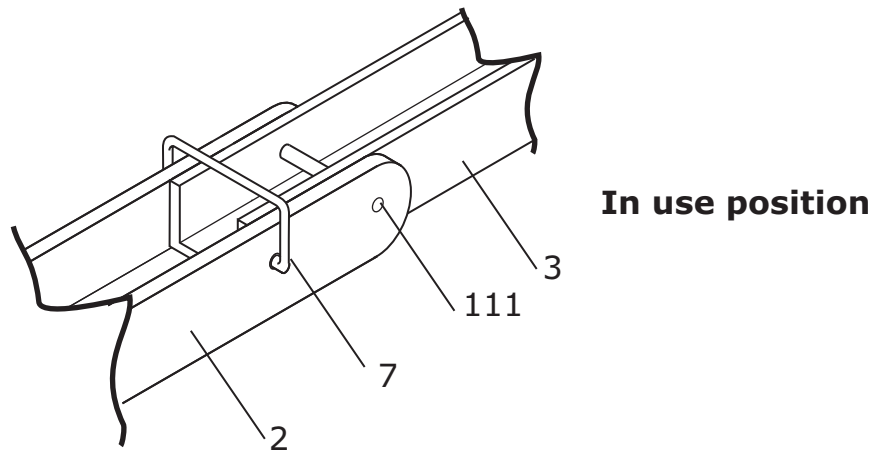
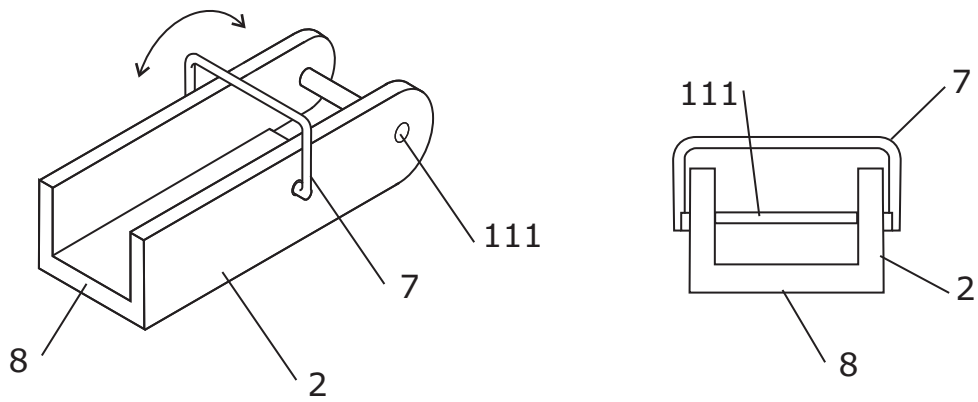
Rack 2



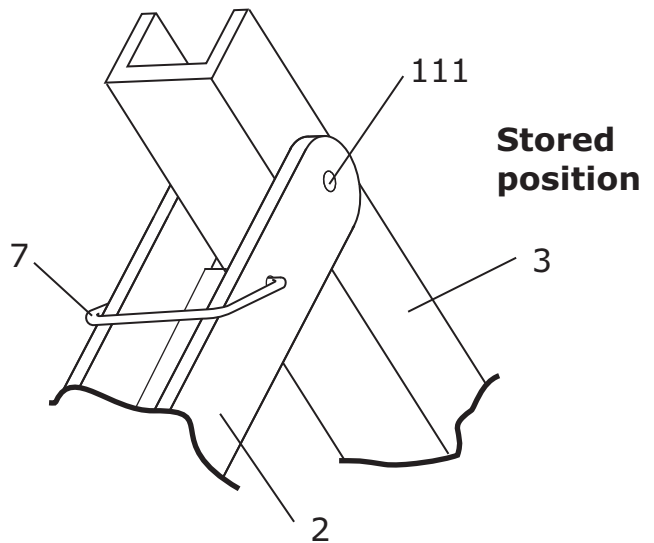
Rack 3

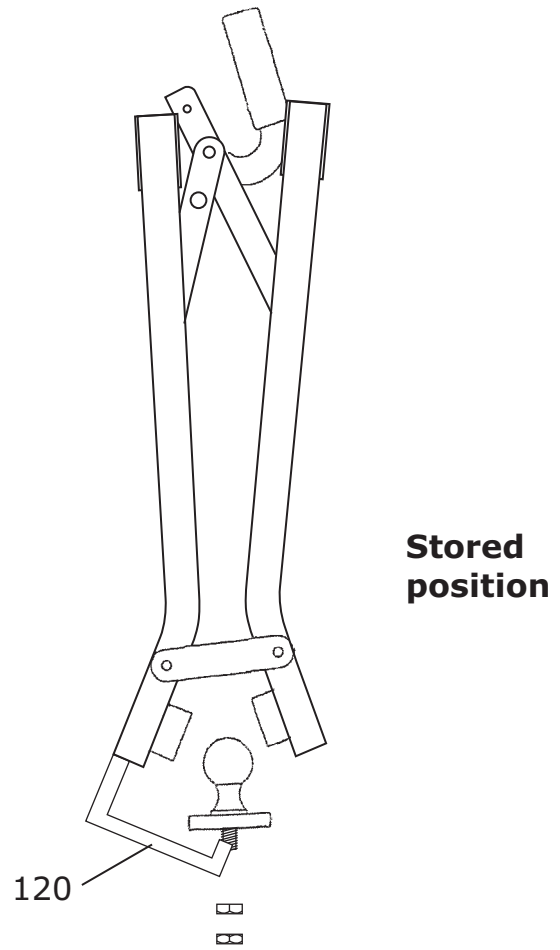


Rack 3

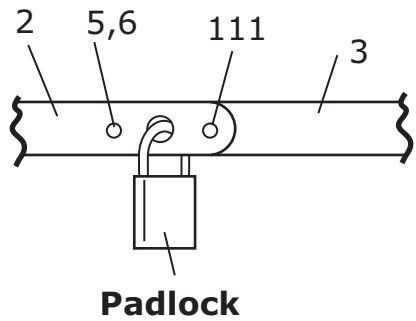
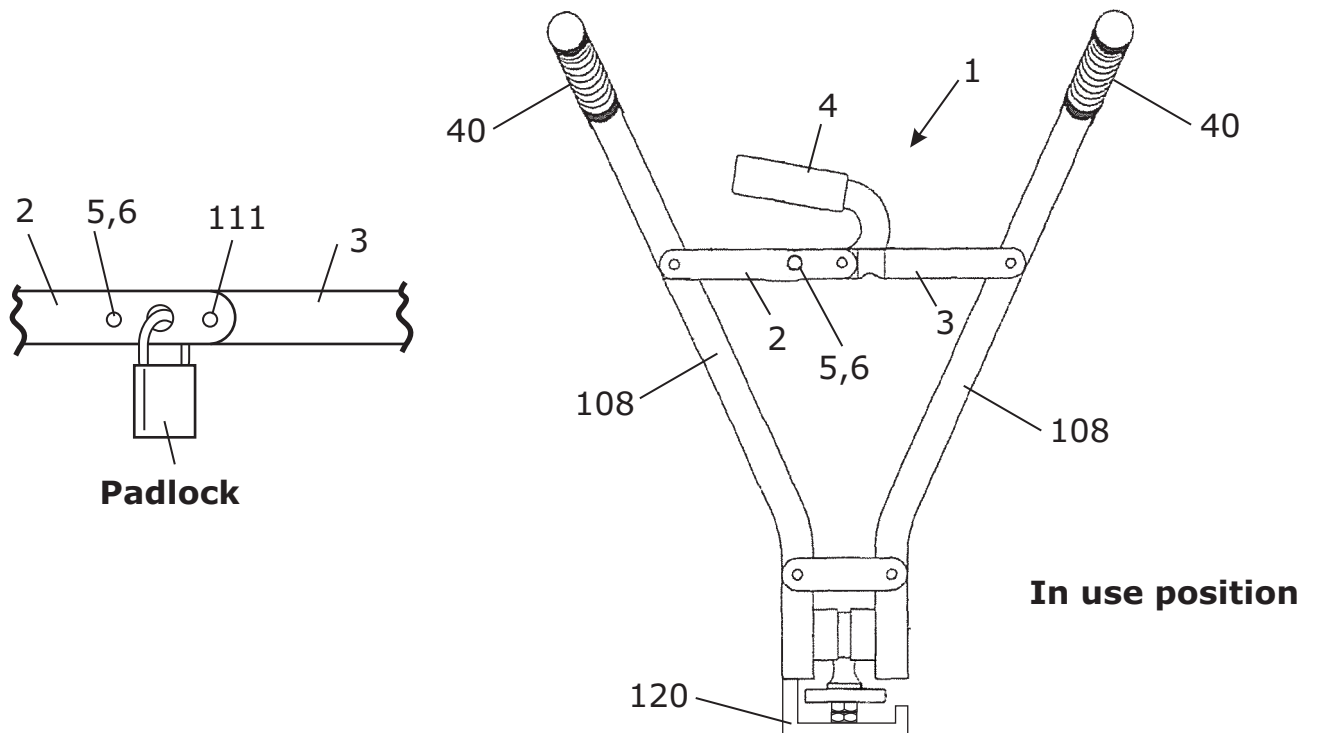


***Rack 3
latch version***





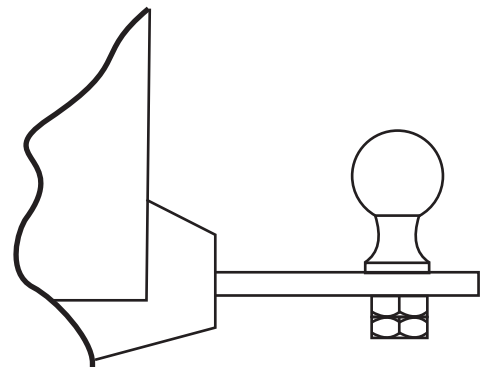
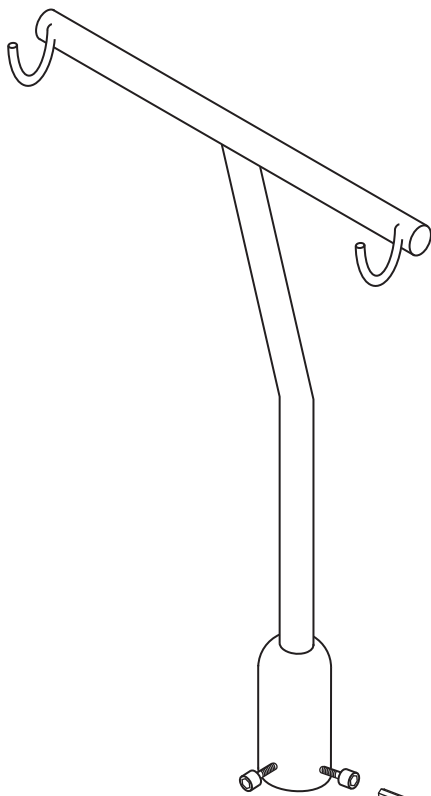
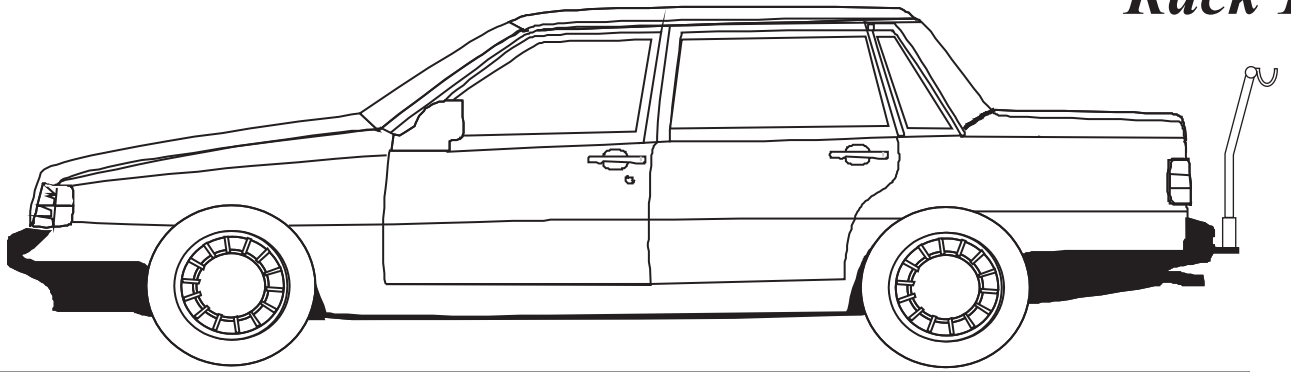
Rack 3



Duplicate of drawings for candidates to use for their answer

Drawings
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Rack 1

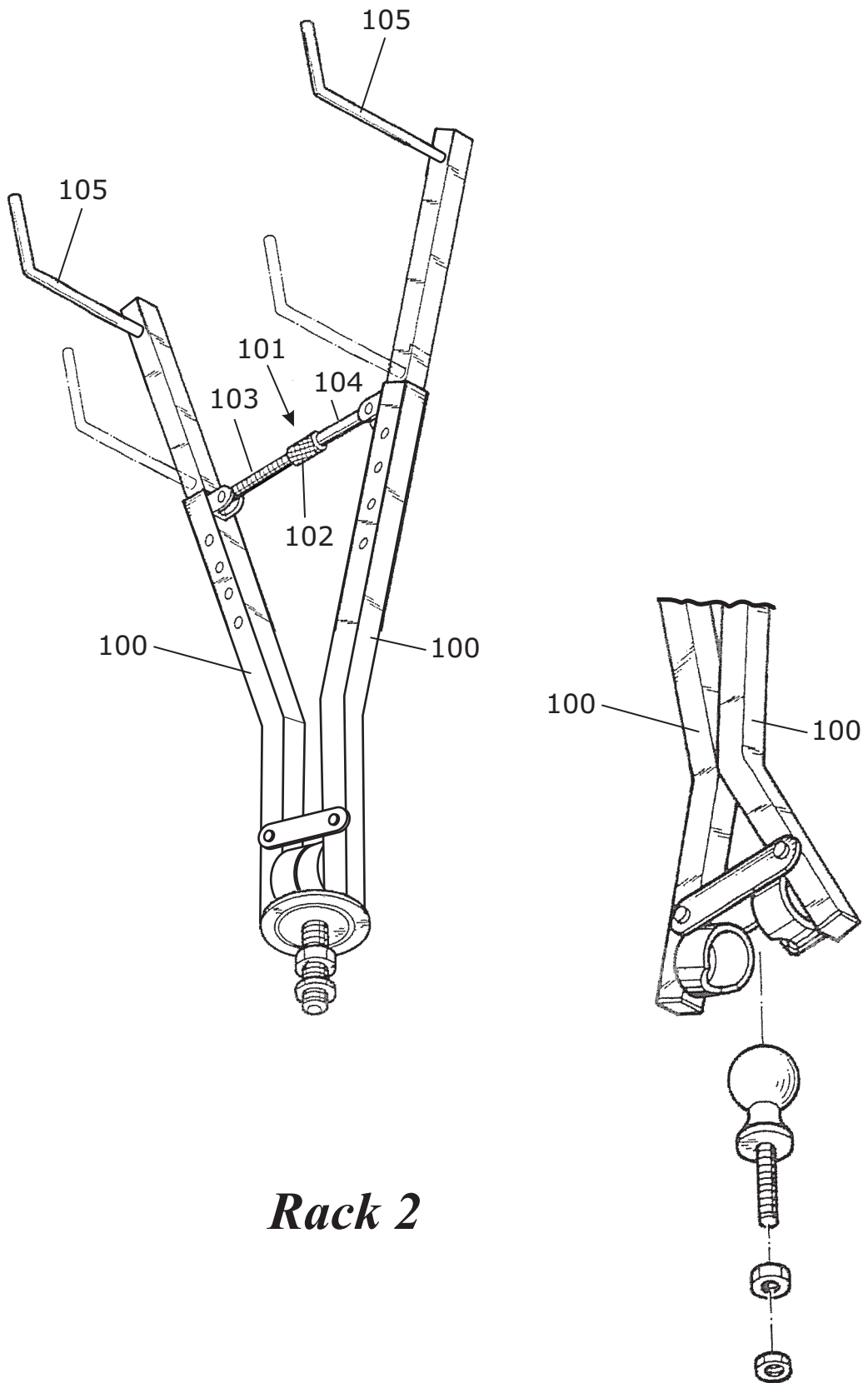


Hex Key

Rack 1

Duplicate of drawings for candidates to use for their answer

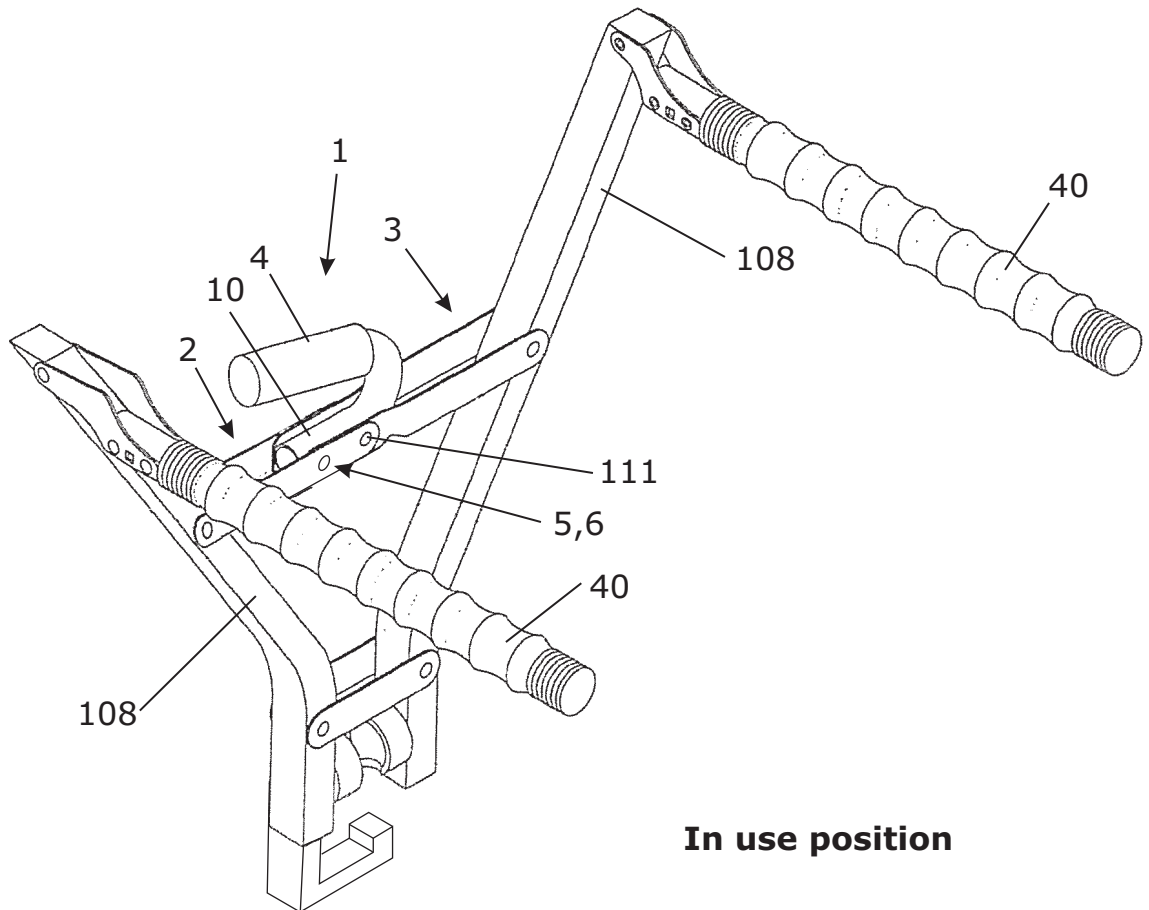
Drawings
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Rack 2

Duplicate of drawings for candidates to use for their answer

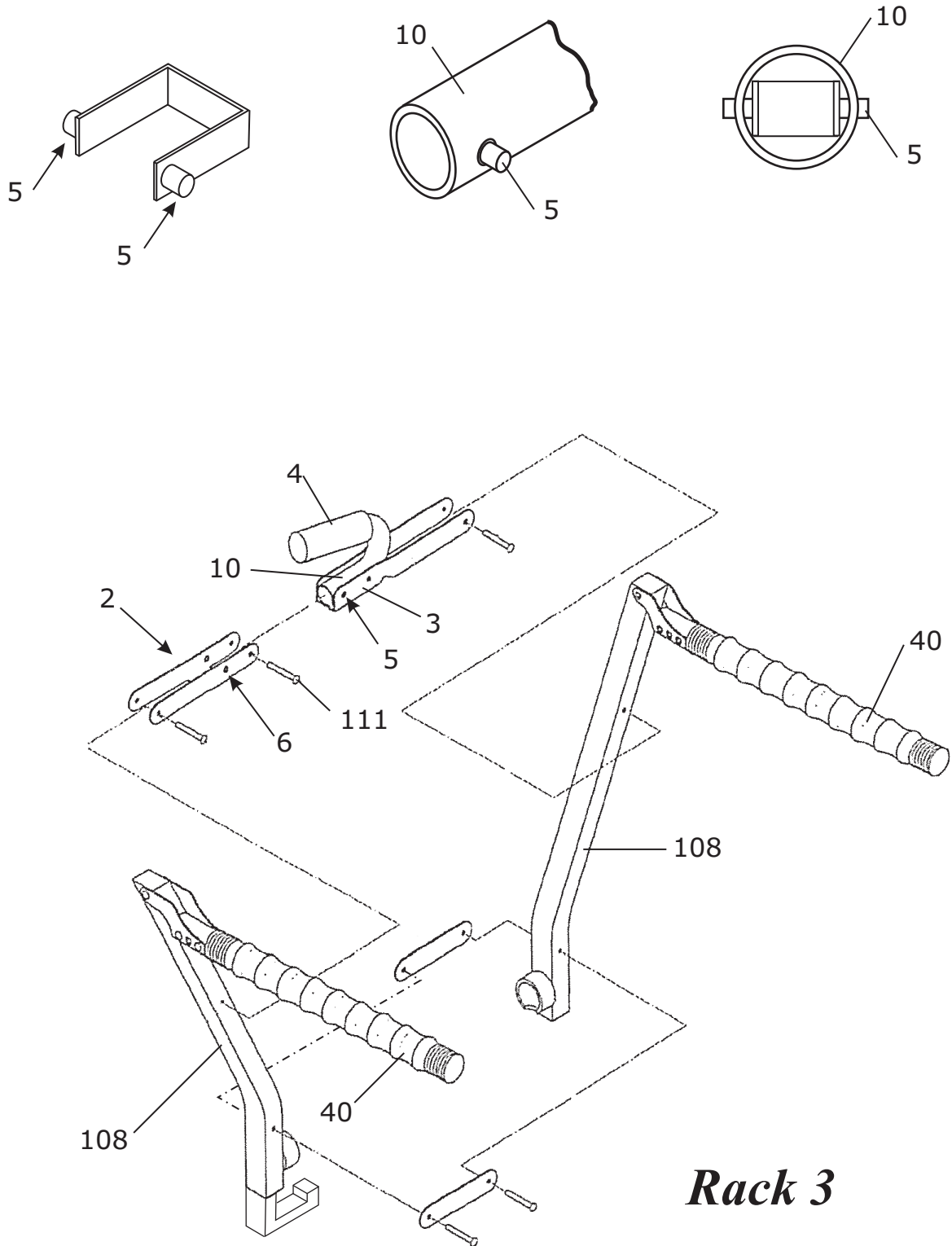
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Rack 3

Duplicate of drawings for candidates to use for their answer

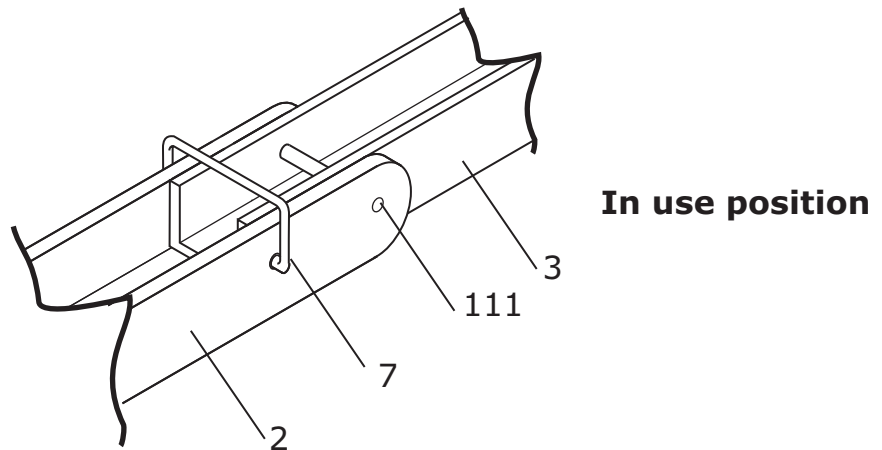
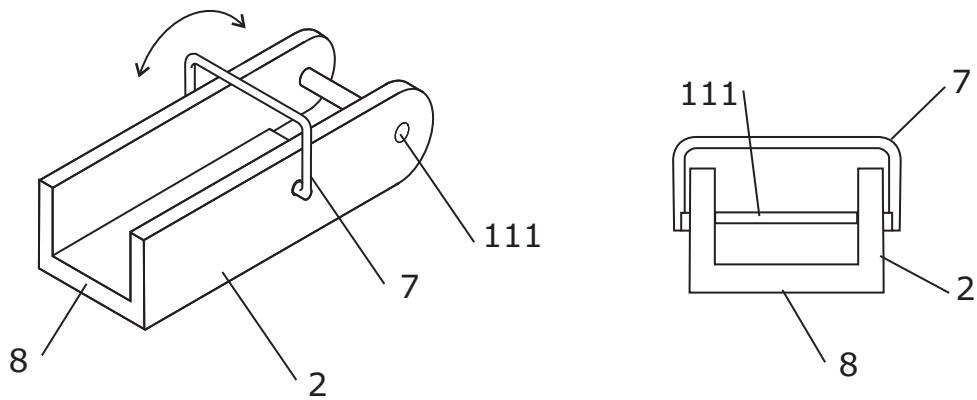
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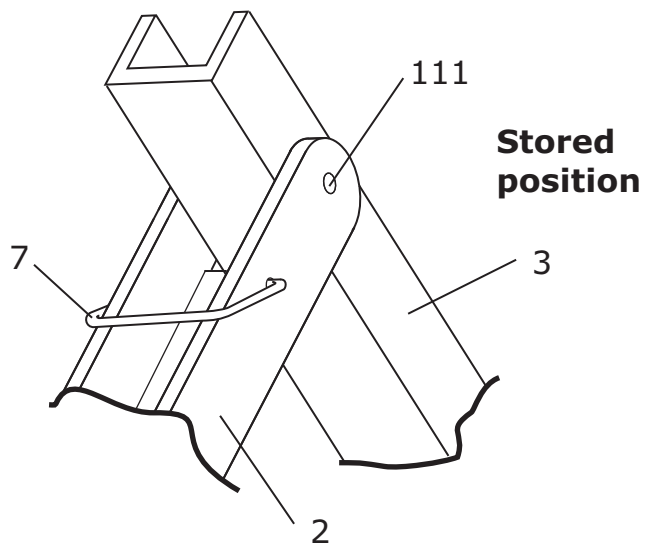
Rack 3

Duplicate of drawings for candidates to use for their answer

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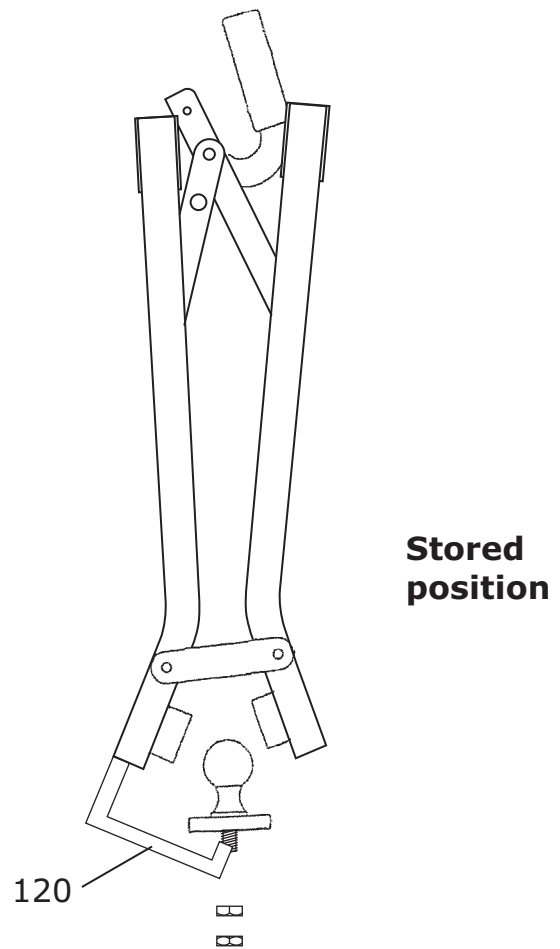


***Rack 3
latch version***



Duplicate of drawings for candidates to use for their answer

Drawings
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Rack 3

