PATENTS EXAMINATION BOARD

Subject: The Drafting of Patent Specifications - Paper 1

Date: July 2016

Time: 09h00 -13h00 (although candidates requiring extra time are entitled to an additional two hours)

Examiners: J Fiandeiro
V Williams

Moderator: J D Whittaker

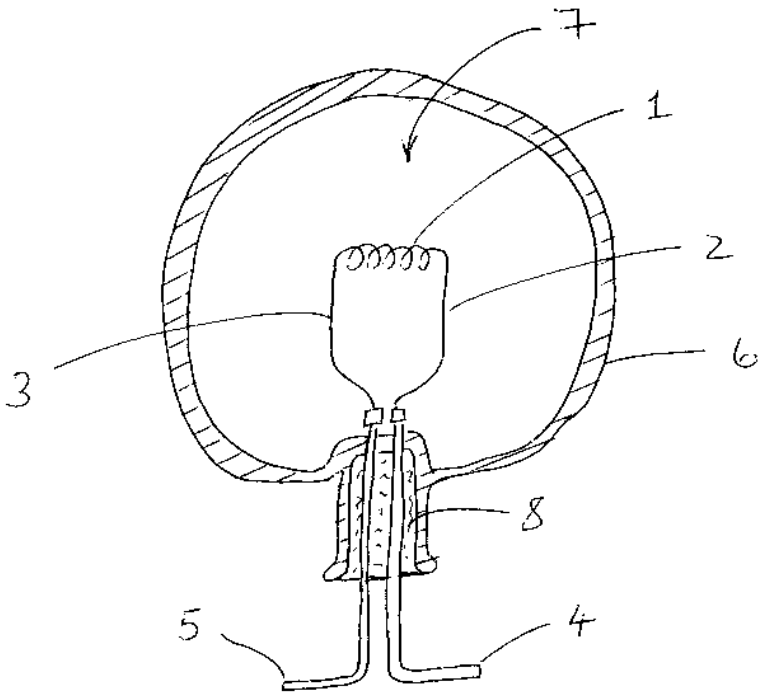
Question 1

The year is 1879 and finding new applications for "electricity" is all the rage. One of your prolific inventors, a certain Mr Thomas Edison, comes running into your office brandishing his latest invention which he calls "an electric illuminator". He tells you, somewhat out of breath, that he has in effect discovered fire for the second time, and that mankind has been delivered again from the curse of night. He states that his electric illuminator is even better than fire because it is brighter, more consistent, and safer than the flames of candles or lamps, which he considers to be the only relevant prior art. He then proceeds to describe his illuminator by making reference to his prototype as shown in figure 1. He explains that the really clever part of the invention is the use of a high resistance, carbonised bamboo filament 1 which becomes incandescent when an electric current is passed through it via conductive platinum support wires 2 and 3 which are connected at their respective free ends 4 and 5 to a source of electricity (not shown). He has also

found that the lifetime of the filament 1 is increased greatly by housing the filament in a glass bulb 6 which defines a vacuum 7 when all of the air is sucked out of it. Once formed, the vacuum 7 is maintained via a sealing plug 8.

You are required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the invention.

Figure 1



Question 2

Fast-forward a couple of years. Mr Edison has improved upon his original illuminator to the extent that his so-called "Edison screw cap bulb", as shown in figure 2, has become the industry standard or norm. The screw cap bulb fits into a complementary screw threaded coupling base, which is shown in figure 3, and the coupling base is connectable to a source of electricity.

Figure 2

Figure 3

Your client, Mr Bright Spark, tells you that he has invented a new quick-release "bayonet" light bulb as shown in figure 4. This light bulb employs a bayonet-type interlocking mechanism for allowing quick mounting in and removal from a complementary, cylindrical bush 2 which is shown in Figure 5. With reference also to Figures 6 and 7, which show the bayonet light bulb and the cylindrical bush 2 in a disconnected, inoperative condition (figure 6) and a connected, operative condition (figure 7), a pair of diametrically opposing bayonet pins which protrude from a cylindrical cap of the bayonet light bulb (the "bayonet cap"), are sized to fit into and be held in place in hook-shaped recesses 3 in the cylindrical bush 2. A helical spring 4, which is mounted co-axially in the bush 2, serves to aid in holding the light bulb in the bush 2 in the operative condition (see figure 7). It is to be appreciated that the spring 4 is easily compressible to

facilitate insertion and removal of the bayonet cap into and out of the complementary bush 2, whilst the bayonet pins follow the path defined by the hook-shaped recesses 3. Although not shown, the bush 2 has electrical contacts which are configured to electrically engage corresponding contacts on the bayonet light bulb, thereby to allow current to flow through the filament and illuminate the light bulb. The bush 2 also has terminals (not shown) which permit connection of the bush to a source of electricity.

Figure 4

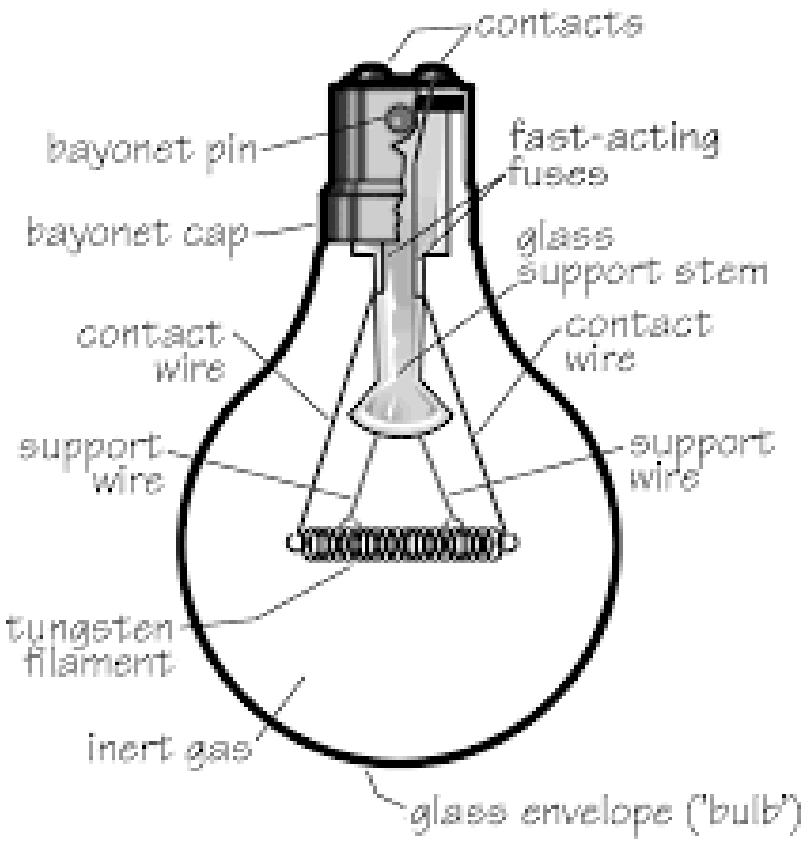
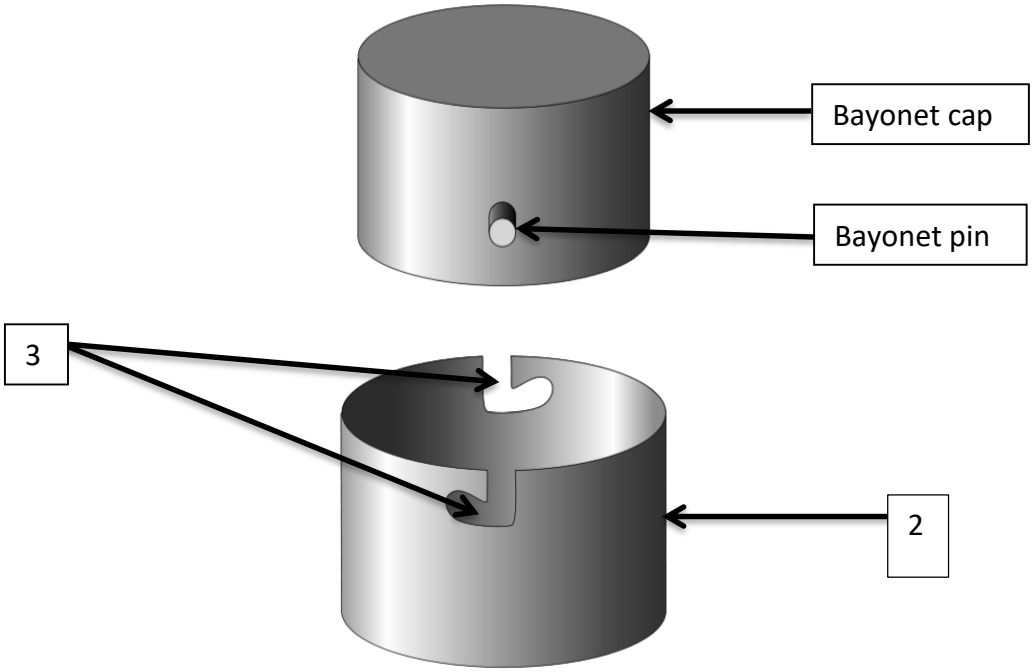


Figure 5



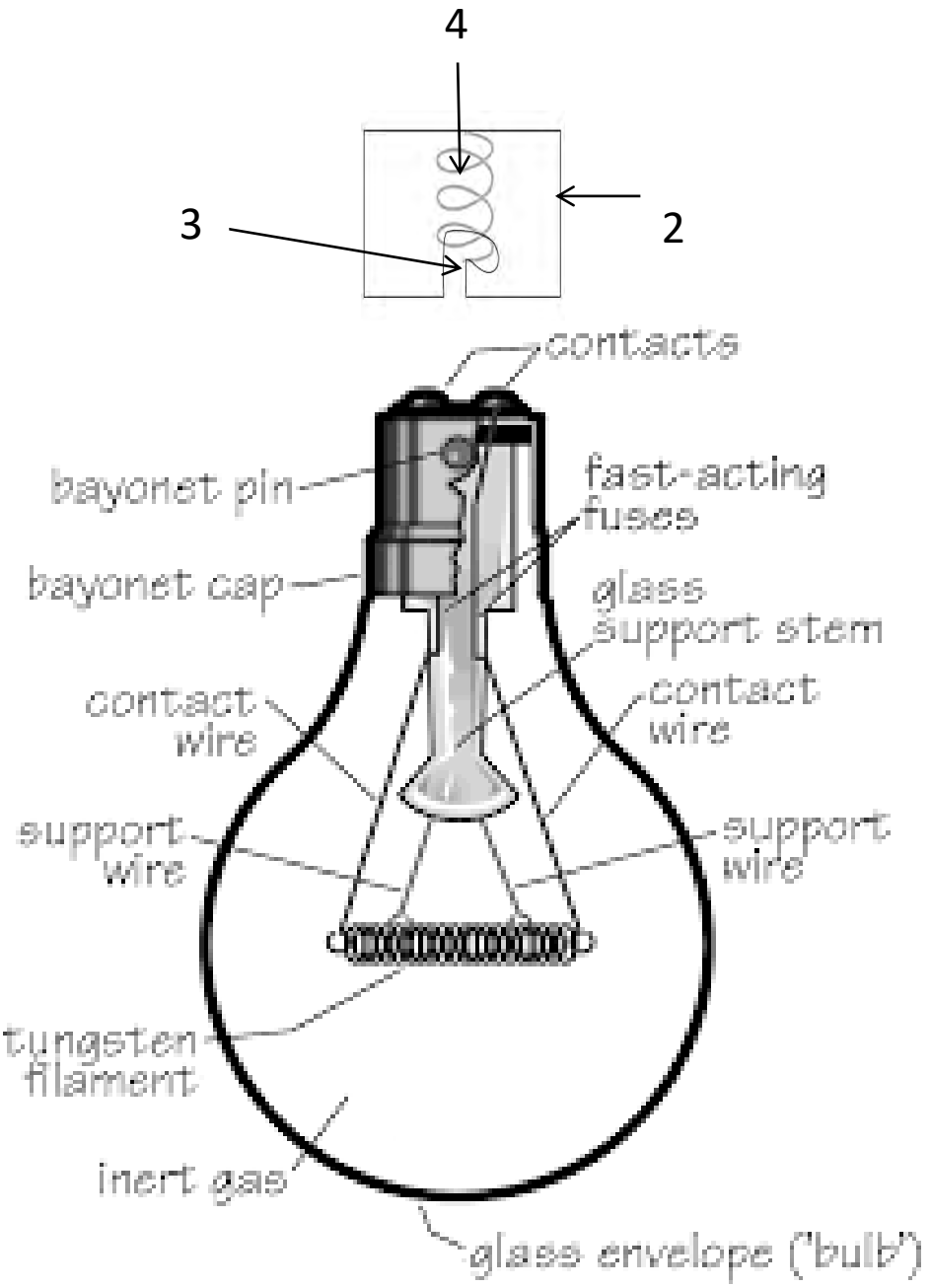

4
3
2
contacts
bayonet pin
fast-acting fuses
bayonet cap
glass support stem
contact wire
contact wire
support wire
support wire
tungsten filament
inert gas
glass envelope ('bulb')

Figure 6

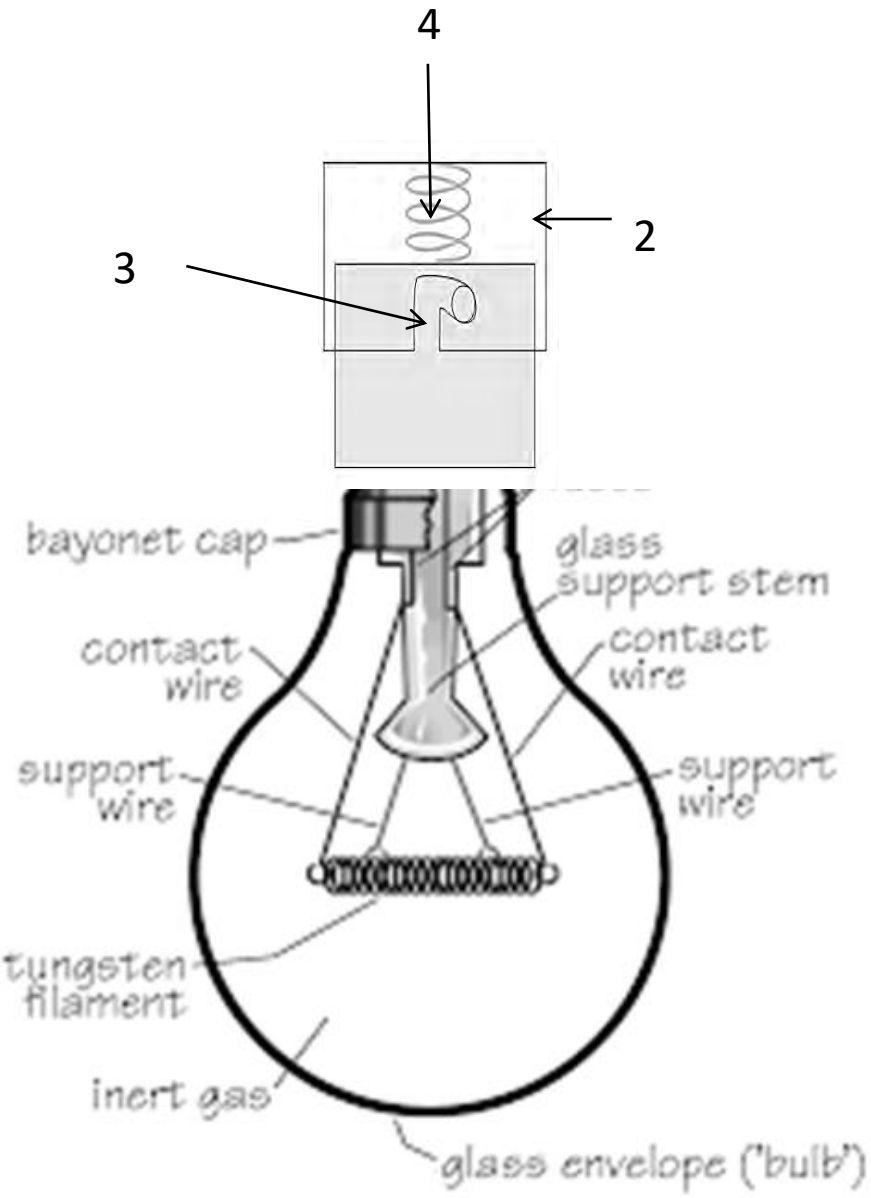


Figure 7

You are required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the invention.