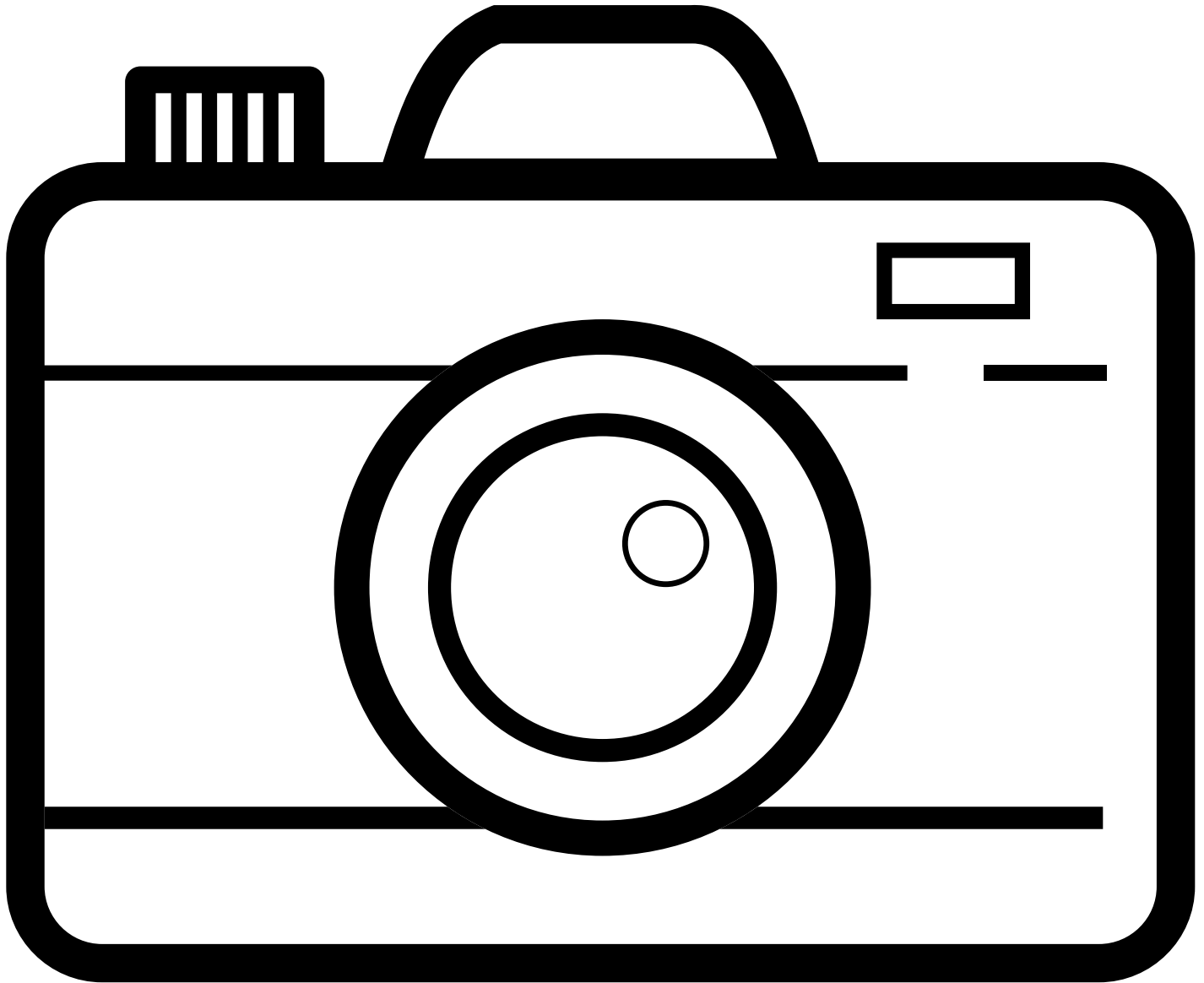
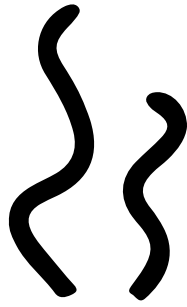


THE CAMERA



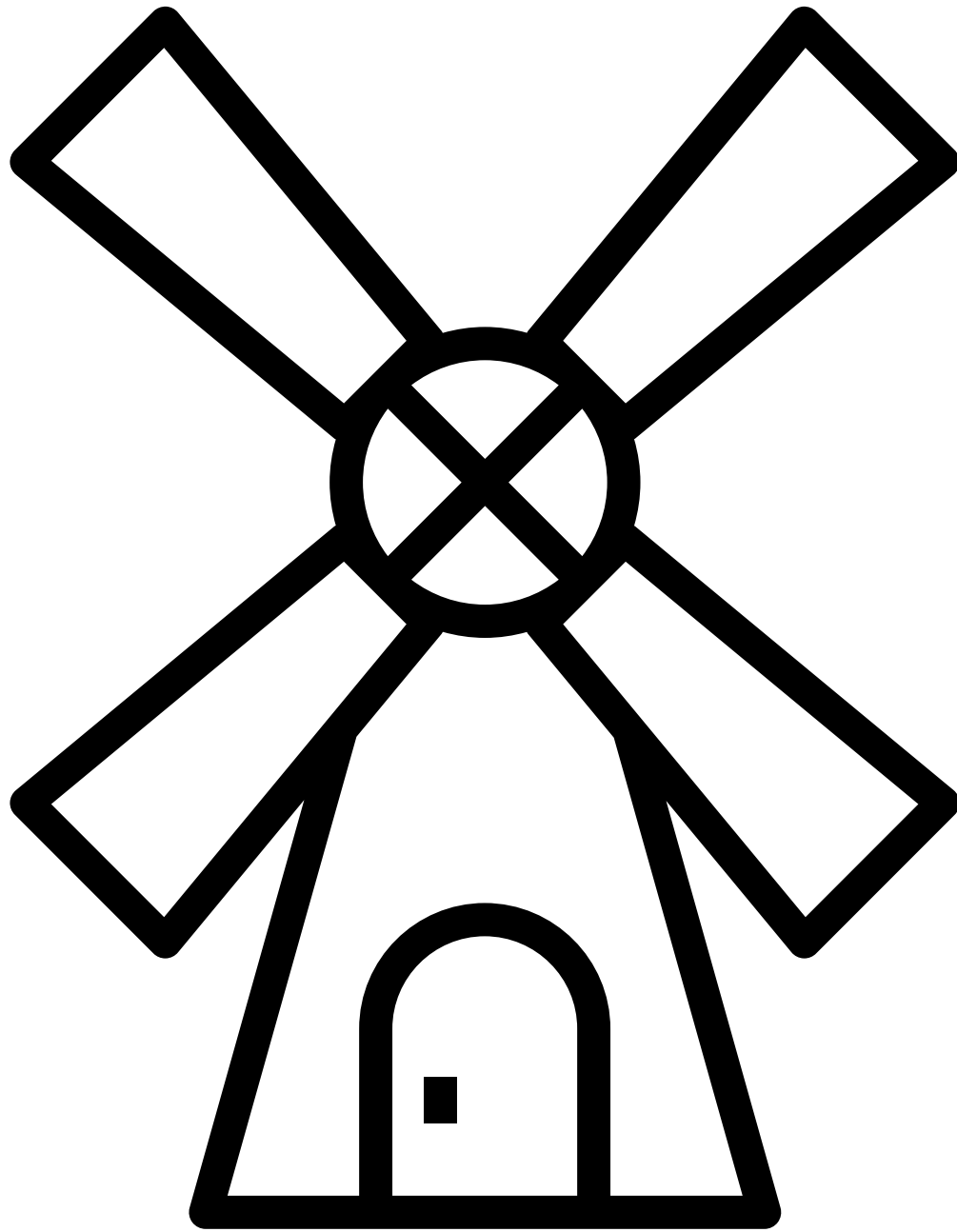
The first camera was invented by Ibn Al-Haitham in the 10th century. He was a mathematician, a physicist and an astronomer. He understood that light enters the eye - whereas previously people believed, as the ancient Greeks did, that our eyes emit rays which allow us to see. By observing how light came in through a hole in window shutters, Ibn Al-Haitham realised that a smaller hole yielded a better picture. He created the first "Camera" Obscura, named so from the Arabic word "qamara" meaning a 'dark room.'

COFFEE



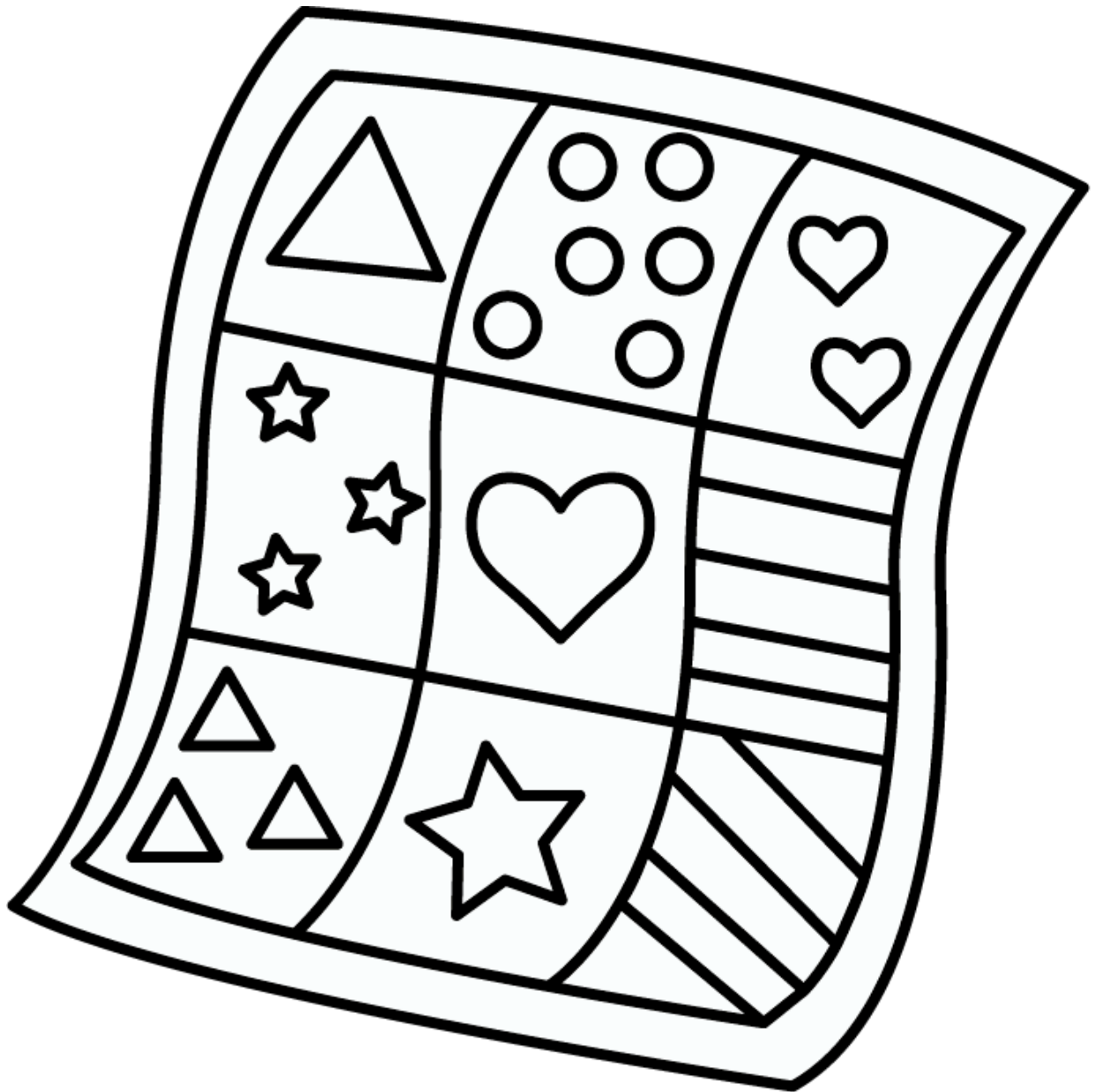
The history of coffee is quite interesting. A sheperd named Khalid from Ethiopia noticed that his goats had more energy after eating a special berry. Khalid boiled these berries - and the result was coffee! From Ethiopia coffee spread to Yemen. Here it was used for religious purposes; the Sufis would drink coffee to stay awake all night and pray on special occassions. Coffee arrived in Turkey and Makkah in the late 15th century. Italy in 1645, and England in 1650. The Arabic name 'qahwa' became 'kahve' in Turkish, then 'caffé' in Italian - and of course "coffee" in English.

WINDMILLS



Windmills were devised and constructed to draw up water from streams to irrigate vegetation and also to grind corn. The first windmill was created in 634 for a Persian Caliph - 500 years before the first ones were introduced in Europe.

QUILTING



Quilting - sewing two pieces of clothing together with a layer in-between, was brought back to Europe by the Crusaders when they noticed the Muslim armies did not wear armour but instead wore canvas quilted shirts filled with straw. This was quite an improvement over the chafing that resulted from metal armour the Crusaders were wearing. Quilted shirts also provided a good deal of insulation and warmth - and hence quilting became very popular in colder regions of Europe like Britain.

SOAP



Muslims perfected a recipe for soap, which is still in use today. Washing and bathing are important religious obligations before prayer, hence the need to formulate something to aid this. The Ancient Egyptians and the Romans had a form of soap but used it more as pomade. Arab experimenters created a vegetable oil and sodium hydroxide base to which they added fragrant oils like thyme oil. In 1759, shampoo was introduced to England by a Muslim entrepreneur who opened Mahomed's Indian Vapour Baths at the beach in Brighton.

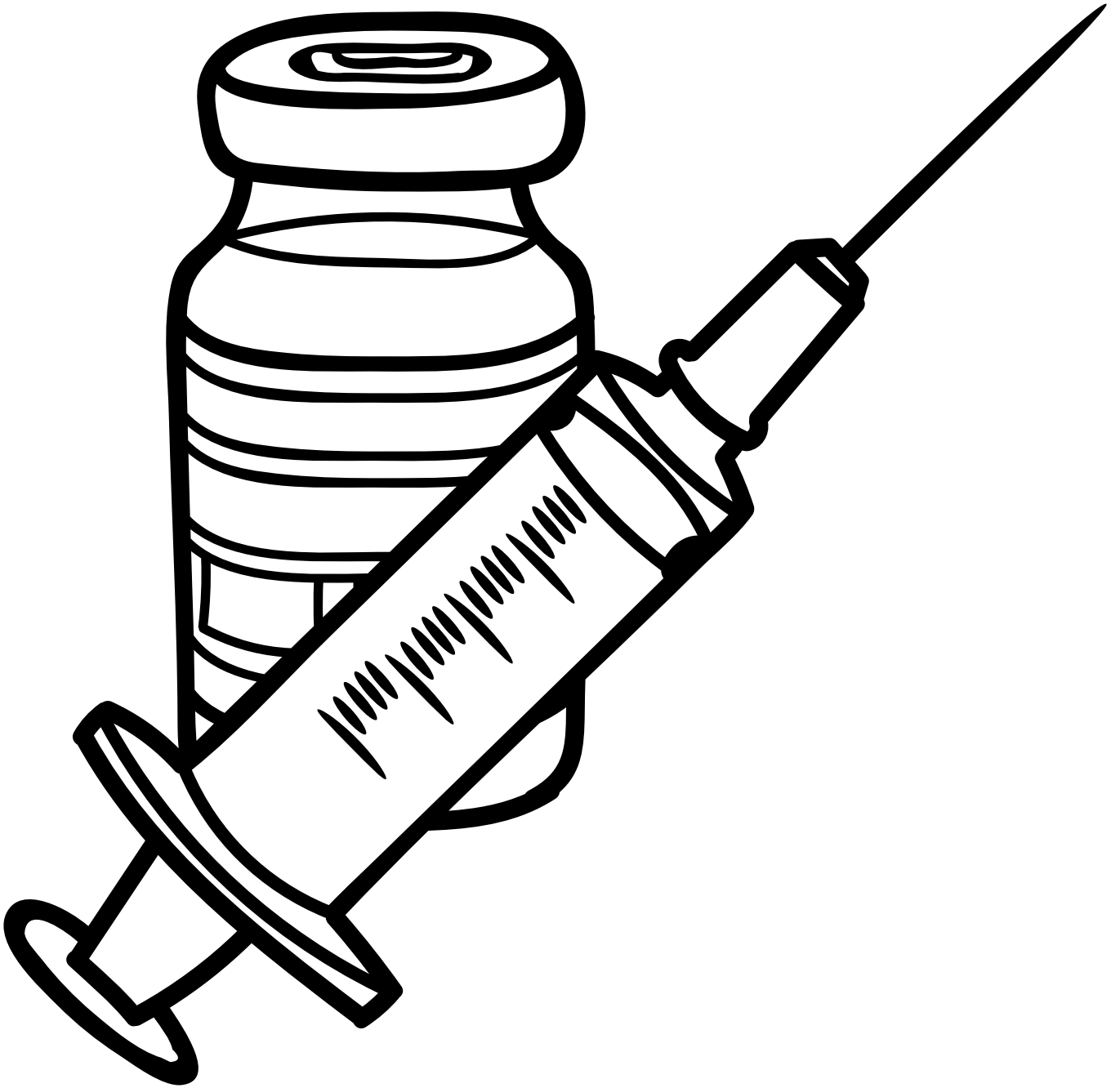
FLIGHT



The first person to 'fly' was Abbas ibn Firnas in 852AD. He was a poet, astronomer and an engineer. His first attempt consisted of a cloak covering a wooden frame.

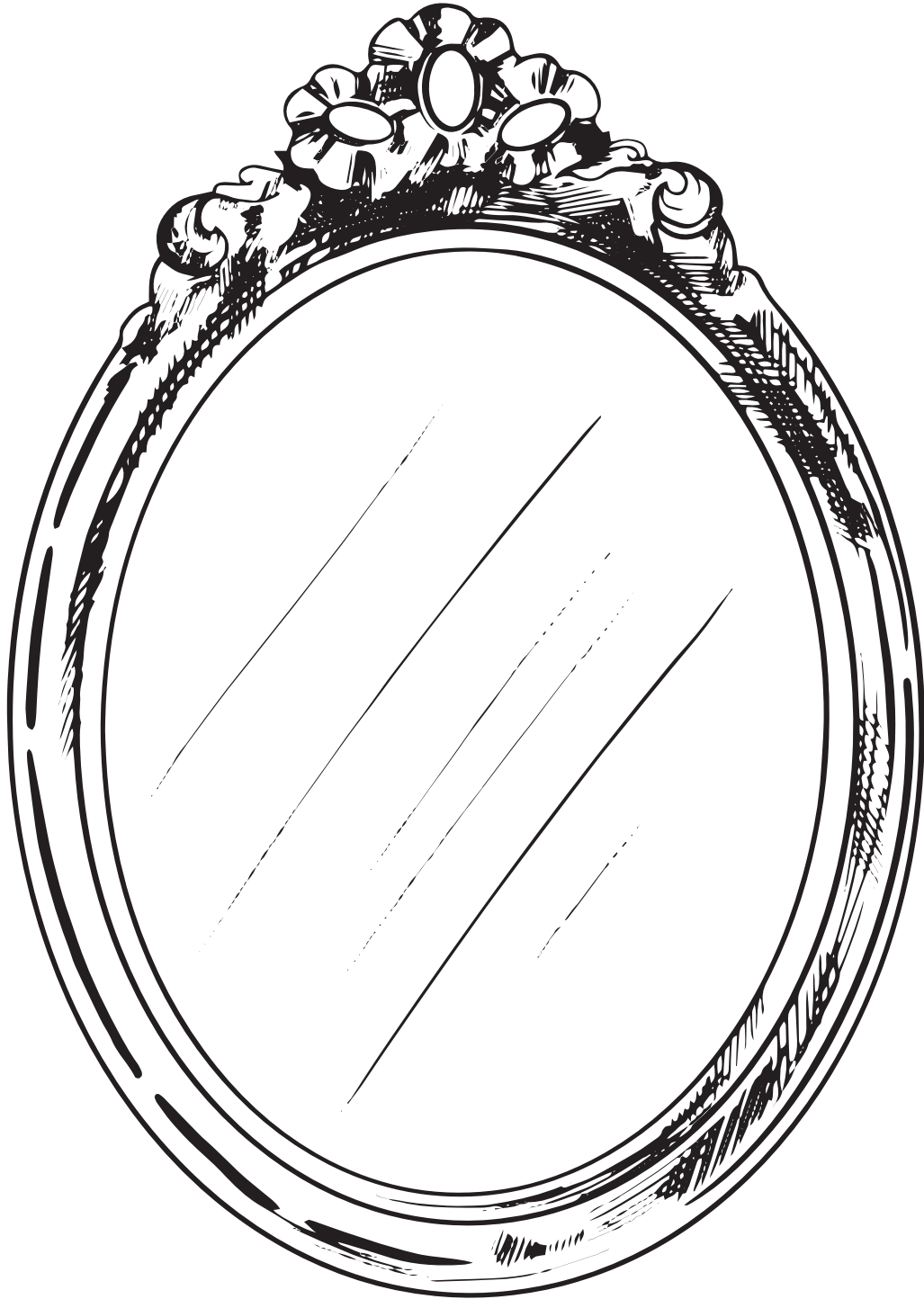
He jumped from a minaret of the Grand Mosque in Cordoba. His contraption worked like a parachute instead, creating what is thought to be the first parachute. In 875, at age 70, he tried again after perfecting a machine made of silk and eagles feathers and managed to stay in the air for around 10 minutes - however, the landing did not go well. He surmised that the problem was the lack of tail to help soften the landing. He now has a statue in his honour at he Baghdad International airport.

VACCINATION



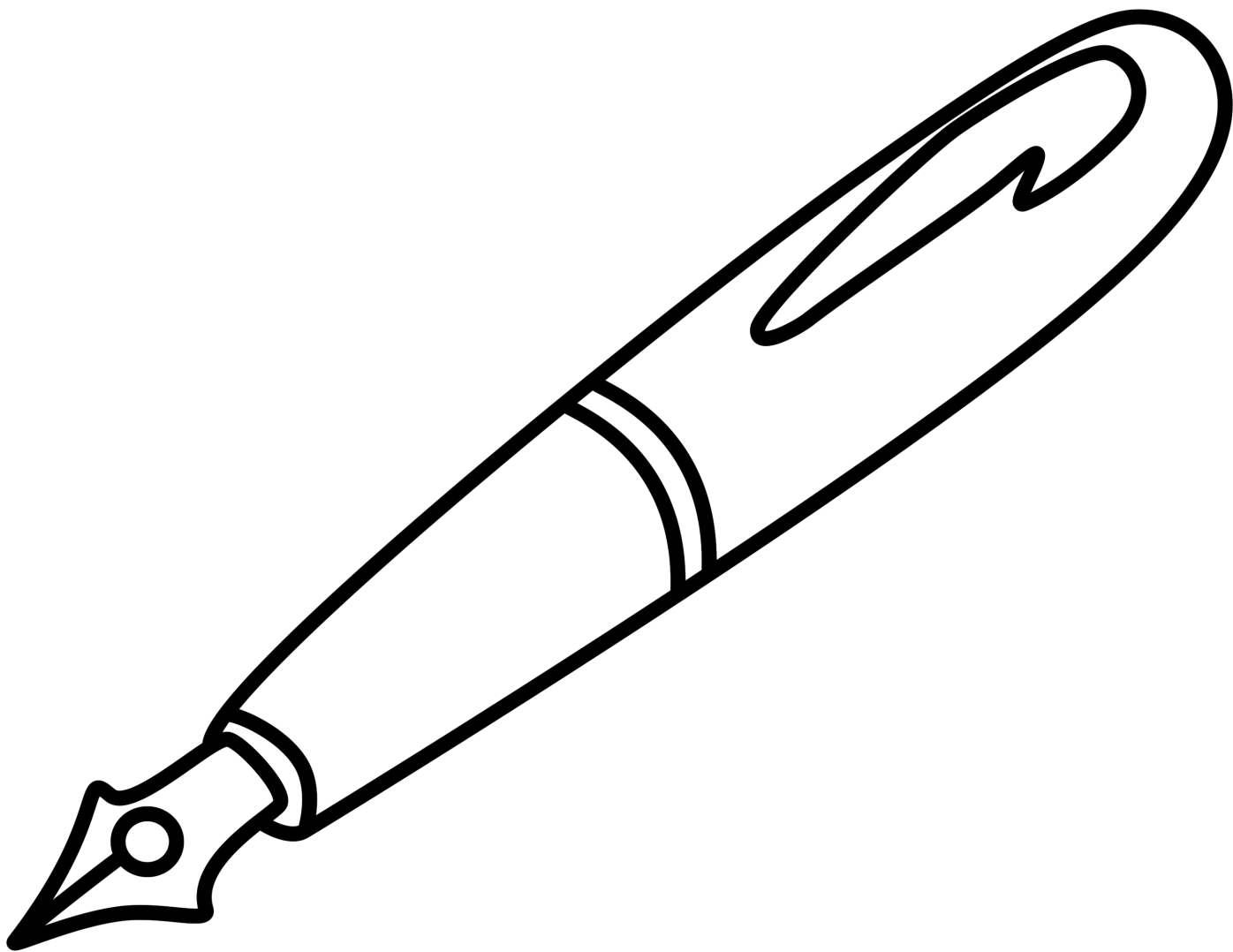
Children in Turkey were vaccinated with cowpox to prevent smallpox, establishing the technique of inoculation which is now essential in many aspects and occasions in life. Around 50 years later, in 1724, the wife of the English ambassador to Turkey introduced this practice into Europe.

GLASS MIRRORS



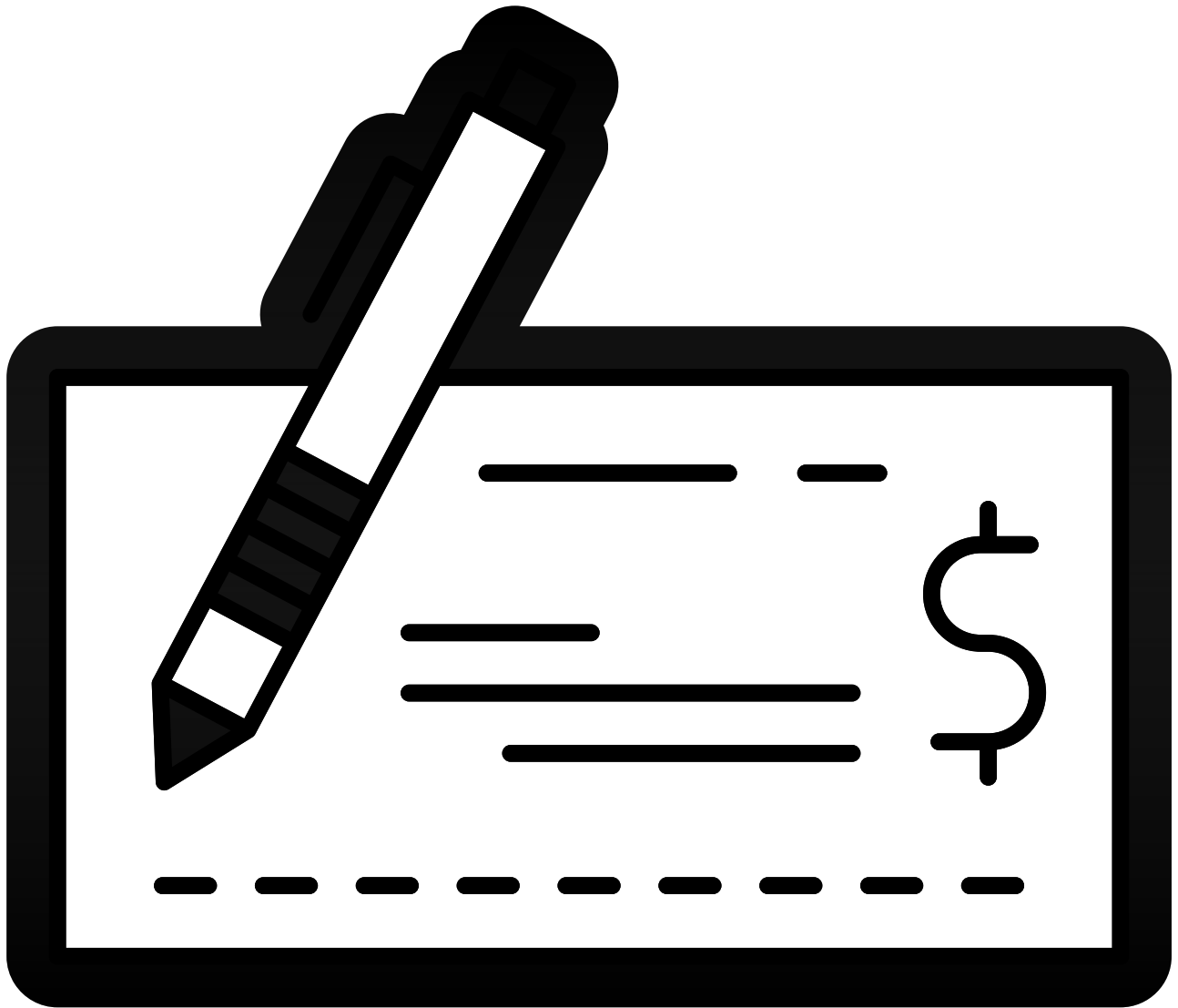
Glass mirrors were in use in Islamic Spain as early as the 11th century. The Venetians learned of the art of fine glass production from Syrian artisans during the 9th and 10th centuries.

FOUNTAIN PEN



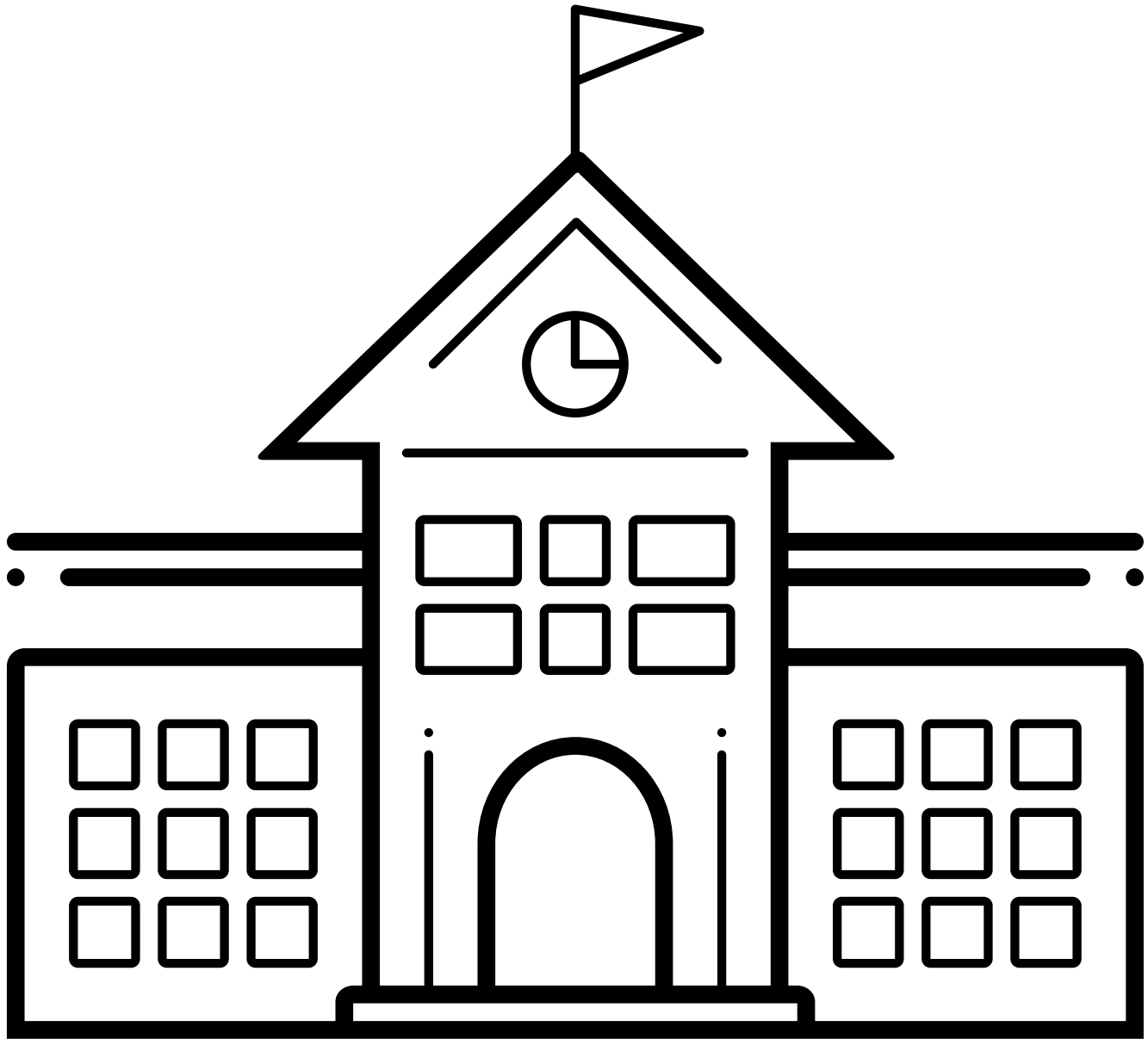
In 953, the Sultan of Egypt demanded a writing tool which would not leak ink or stain his clothes. The 'fountain pen' was devised. Just like modern pens, this pen had a reservoir which held the ink gravity, and capillary action moved the ink to the writing tip of the pen, enabling it to write.

CHEQUES



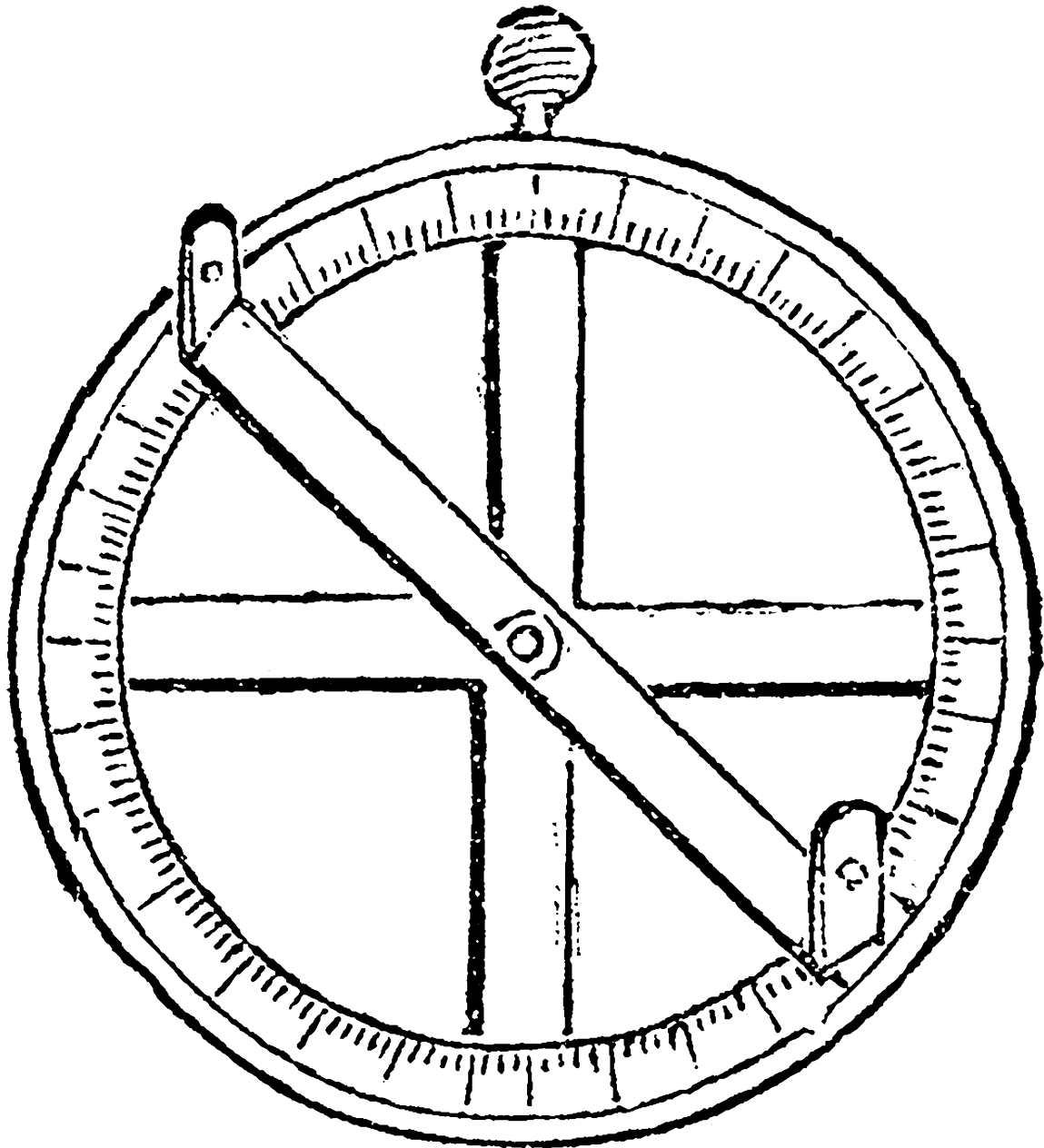
The modern cheque comes from the Arabic 'saqq,' a written vow to pay for goods when they were delivered, to avoid money having to be transported across dangerous terrain. In the 9th century, a Muslim businessman could cash a cheque in China drawn on his bank in Baghdad.

UNIVERSITY



Fatima Al Fihri founded the University of Al Qarawiyyin in Fes, Morocco, in 859. The school is the oldest existing, continually operating university, and the first degree-awarding educational institution in the world, according to UNESCO and Guinness World Records. Al Qarawiyyin became the leading spiritual and educational center of the historic Muslim world, and was incorporated into Morocco's modern state university system in 1963.

ASTROLABES



Mariam Al-Ijliya is famous for constructing Astrolabes, which were used to determine the position of the sun and the planets and were in turn used in the fields of astronomy, astrology, and horoscopes, according to the website Wise Muslim Women. During the 10th century in Aleppo, Syria, Al-Ijliya's handcrafted designs were so intricate and innovative that from 944-967 A.D., she was employed by the ruler of the city, Sayf Al Dawla.