t’s true! Canada has made several important contributions over the past few 100 years, ultimately changing the way we live our lives today. From life-saving discoveries to ginger ale, we take a look at Canadian innovations (in no particular order) that helped shape daily life as we know it today.

50 Zipper: Where would we be without the zipper? Thanks to Gideon Sundback, we don’t have to worry. The Swedish-Canadian developed the zipper in 1925, revolutionizing the way people put pants on around the world. Not to mention coats and gym bags.

49 Closed Chest Surgery: In 1999 Dr. Douglas Boyd performed the first robot assisted heart surgery while the heart was still beating! This eliminates the need to cut the chest open, reducing patient recovery time.

48 Stem Cells: Okay, so we didn’t invent them, but we did prove their existence. Thanks to James Till, a biophysicist and Dr. Ernest McCulloch, stem cell research has been very popular in the science community. Today, scientists are finding new applications to stem cell research including nerve regeneration.

47 Java: James Gosling, a computer engineer from Calgary developed the programming language known as Java. Java is now a prominent language used by web site developers and has been adopted by Microsoft, IBM and Macromedia.

46 Curved Hockey Stick: In 1903, Canadian hockey players Stan Mikita and Bobby Hull bent their stick blades to generate harder shots. (At 118.3 mph it’s not like Hull needed it) They played for the Chicago Blackhawks at the time.

45 Frozen Dinners: Archibald Huntsman, an Ontario marine biologist created the worlds first packaged frozen food, Ice Fillets. His product was introduced in Toronto in 1929 and the business failed in 1931. Clarence Birdseye, a New York taxidermist would later claim to have started the frozen food industry, but his products didn’t enter the market until 1931.

44 Wonderbra: A world without wonder? Not anymore thanks to this Canadian designer. Louis Poirier created the first padded bra with an underwire while working under Montreal-based lingerie company Canadelle. Thanks to Mr. Poirier, women (and men) are enjoying the benefits of the Wonderbra worldwide. A British undergarments executive once commented that “the Wonderbra has become an icon which is just as powerful as Levi’s jeans.

43 Canola: By redesigning barely edible rapeseed strains, scientists at the National Research Council in Saskatoon produced canola oil in the 1970s. The oil is a high-quality, relatively healthy cooking oil which is now among three of the largest sources of edible oil. Today, the production of canola contributes nearly $3 billion a year to the economy.

42 Canada Dry: After years of experimenting, pharmacist John McLaughlin perfected his formula for Canada Dry in 1904. The “champagne of ginger ales” is now the most popular ginger ale in the United States, although no longer Canadian-owned.

41 Blue Box: The first Blue Box pilot program began in Kitchener, Ontario in 1981. The program kick-started the idea of community-wide recycling. Today, many communities participate in recycling programs.

40 Snowblower: Quebec native Arthur Sicard became so angry at snow blocking his path to market that he built the first snowblower in 1925. He then refined his design and sold it to the nearby town of Oremont in 1927. Today, thousands world-wide are avoiding back pain from shoveling.

39 Pealess Whistle: In 1997, Ron Foxcroft of Hamilton, Ontario invented the Fox 40 pealess whistle. The Fox 40 is used in practically every sporting event around the world because it doesn’t jam up like its predecessors.

38 Fingerprint Readers: In the late 1990s, Biocrypt Inc. released a new fingerprint reader to replace PINs, keys, and cards. The Mississauga-based company includes clients such as American Express, Intel, and NASA.

37 Lightbulb: Yes, the lightbulb! Contrary to popular belief, Thomas Edison did NOT invent the lightbulb. He only improved on its design after buying the patent rights from
36. **Instant Replay:** In 1955 CBC-TV made use of the first instant replay on Hockey Night in Canada. Instant replays are used in virtually every televised sport today.

35. **Violent Crime Linkage Analysis System:** In 1991, the RCMP, with the help of several provincial police forces, created the first national database that shows potential links between known criminals and unsolved crimes. The database currently houses over 200,000 cases. It has been adopted in many other countries including Australia, Belgium, and the United States.

34. **Canadarm:** The Canadarm, Canada’s hand in the sky, is one of the most significant advances in space engineering. Its ability to capture a free-flying payload in a zero gravity environment makes it one of our most impressive technological developments. The slightest contact with an object in space, regardless of size, will send it spinning away. During more than 50 missions and after 7,000 orbits around the earth, the Canadarm has never malfunctioned!

33. **Insulin:** At the University of Toronto, Dr. Frederick Banting convinced his department head to provide him with lab space and dogs to extract pancreatic secrections. He then injected the insulin in the dogs to lower their blood sugar. It worked! Today, thousands of diabetics are living healthy lives thanks to purified insulin injections.

32. **Heart Pacemaker:** Jack Hoppes, an engineer at the National Research Council needed a way to keep a patient’s heart beating during experiments to see if some surgeries could work better at colder temperatures. Although his 1949 design was too big to fit inside a patient, it worked very well. The 1960s eventually brought transistors which allowed for a smaller design. Today, the pacemaker is installed in many patients routinely, never missing a beat.

31. **BlackBerry:** The BlackBerry is a pocket-sized digital organizer invented by Mike Lazaridis at Research in Motion. Since its original design, the BlackBerry has evolved with several new features including wireless technology, enabling you to browse the Internet and send e-mails from anywhere. BlackBerries are now available worldwide and are a popular choice for businesses and students.

30. **The Confederation Bridge:** A truly spectacular human creation, the Confederation Bridge spans 12.9 km linking Prince Edward Island to New Brunswick. It’s the longest bridge in the world to span water that freezes over. Its special design protects it from high pressures caused by ice packs. Canadian company Straight Crossing Development Inc. took 3 1/2 years to put the 175 piece monster together.

29. **Radio Sonar:** After the Titanic disaster in 1912, Reginald Fessenden invented radio sonar. His invention allows vessels to “see” hazards in darkness and fog. For his efforts, Fessenden was dubbed “the father of radio broadcasting.”

28. **Telephone:** The telephone has had perhaps the greatest impact on our society of any other invention except the lightbulb (which we Canadians also invented, see #37). Alexander Graham Bell made the first long-distance call from Brantford to Paris, Ontario in 1876.

27. **Alternating Current Radio Tube:** Edward Rogers Senior, entrepreneur, inventor, and visionary made many contributions to radio technology. Rogers invented a tube which eliminated the need for batteries in radios. Big deal right? Wrong! In those days, radio batteries were three or four times larger than today’s car batteries. Thanks to his invention, we merely have to plug into the wall outlet rather than lug around heavy over-sized batteries.

26. **Marquis Wheat Strain:** In the early 1900s, Charles E. Saunders developed a new strain of wheat that ripens 10 days earlier than other varieties. This allowed for harvesting before the harsh winters set in. His creation became instrumental in placing Canada on the forefront of global wheat production.

25. **AIDS Drug 3TC:** In 1986, Francesco Bellini, Gervais Dionne, and Bernard Belleau founded BioChem Pharma. Three years later, they found a compound that would prove effective in combatting HIV/AIDS. This was a significant step in making AIDS a manageable chronic disease rather than an automatic death sentence. Former president of the International AIDS Society Dr. Mark Wainberg said that “history will likely regard 3TC, next to insulin, as Canada’s greatest contribution to medical therapies in the 20th century.”

24. **Pablum:** In 1930, doctors at Toronto’s Hospital for Sick Children invented pablum, a cereal paste rich in nutrients to deliver the minerals and vitamins needed for a baby’s growth. Pablum is still used today to feed babies.

23. **Anti-Gravity Suit:** Wilbur Rounding Franks invented the first G-suit in 1941. His invention prevents jet pilots from blacking out at high altitude and enables them to endure G-forces.

22. **Electron Microscope:** Eli Franklin Burton, Cecil Hall, James Hillier, and Albert Presbus co-invented the electron microscope in 1937. Remarkably, the electron microscope can view objects having the same diameter as an atom.

21. **Film Colourization:** Invented by Canadians Wilson Merkle, and Brian Hunt in 1983, film colourization allows us to add colour to black and white photos from the past. This highly technical process is now made available by Canadian company Colorization Inc.

20. **Garbage Bag:** The common green plastic garbage bag was invented by Winnipeg’s Harry Wasylyk and his partner Larry Hansen, of Lindsay, Ontario. The two inventors developed the polyethylene bags in 1950, spawning an industry that gave us, among other things, The Man from Glad.

19. **Electric Wheelchair:** Canadian George J. Klein invented the first motorized wheelchair after WWII. He wanted to help paraplegic war veterans. Today, electric wheelchairs are the “legs” of many around the world.

18. **Paint Roller:** The paint roller was invented by Norman Breakeley from Toronto in 1940. May not seem like a big deal, but it beats painting with your hands.

17. **Quartz Clock:** The world’s first quartz clock was invented by Warren Marrison. Working for Bell Laboratories at the time, Marrison discovered that time can be kept consistently with the vibrational frequency of a quartz crystal in an electrical circuit. Even today, many wrist watches are quartz.

16. **Kerosene:** In 1840 Abraham Gesner of Nova Scotia invented and patented a process for making kerosene. Kerosene is a...
1. **Snowmobile**: Joseph Armand Bombardier not only invented the snowmobile in 1922, but he also managed to build a multi-million dollar company with his ideas. Bombardier Inc. now specializes in transportation vehicles including airplanes, monorails, and various watercrafts.

2. **Robertson Screw**: Peter L. Robertson was a travelling salesman working for a Philadelphia-based tool company when he patented his screw head. The idea came to him when he injured his hand during a demonstration in Montreal. The square/pyramid design of the screw chamber prevented stripping more effectively than other conventional screws. Meanwhile, Henry F. Phillips, who was also a travelling salesman from Portland, Oregon, patented his Phillips screws. Today, Robertson is the most widely used in the US despite its superiority to the Phillips screw which is notorious for stripping. Robertson didn’t want to give up control to US manufacturers.

3. **Universal Standard Time**: Thanks to Sir Sandford Fleming, the whole world can agree what time it is. In 1879, Fleming recommended the standard to the Royal Canadian Institute. By 1884 it became the world standard.

4. **The Montreal Procedure**: Dr. Wilder Penfield developed a method for operating on epileptics in 1934. He cut the top of the skull off and probed the brain while asking patients what they felt. Once he found the part that was causing the violent seizures, he removed the offending tissue or destroyed it.

5. **Electric Cooking**: On August 29, 1892, the first meal cooked with electricity was prepared by Thomas Ahearn. Ahearn was sometimes referred to as “the Canadian Edison.”

6. **Fuel Cells**: Niagara Falls born Geoffrey Ballard dedicated much of his life to finding alternate power sources to oil. His company, Ballard Research Inc. developed a fuel cell - an electrochemical device that combines oxygen with hydrogen to generate electricity. At the launch of his first fuel cell bus, Ballard drank the waste left from the fuel cells - pure water!

7. **Artificial Hand**: In 1964, Dr. Gustave Gingras perfected the workings of the artificial hand activated by the body’s own electrical impulses.

8. **Electronic Organ**: The world saw its first electronic organ in 1927 when Morse Robb of Belleville, Ontario invented it.

9. **Electric Railway**: J.J. Wright of Toronto built the first electric railway with overhead wires. He used an electric pole connected to the car to avoid the rain and snow which frequently short-circuited streetcar rails.

10. **Cobalt Bomb**: The cobalt “bomb” for cancer treatment was developed by scientists from Eldorado Nuclear in London, Ontario, and by Dr. Harold E. Johns of the University of Saskatchewan in 1951.

11. **Explosives Vapour Detector**: Dr. Lorne Elias of the National Research Council invented the explosives vapour detector, capable of sniffing out hidden bombs, in 1990.

12. **Knitted Garments**: Paula Lishman of Blackstock, Ontario was the first to create “knitted” garments using “fur yarn” developed from pelts. Her method is now imitated by designers around the world.

13. **Self-regulating Lubricator**: Elijah McCoy, son of former U.S. slaves living in Colchester, Ontario, gave the rail system a boost with his new invention, the self-regulating lubricator. His invention applied oil to the train wheels while the train was moving. This eliminated the need for frequent stops.

14. **Baseball**: Baseball? Isn’t that American? Much controversy surrounds the creation of baseball. The first recorded game of baseball took place in Canada, a year before Abner Double-day supposedly “invented” the game in Cooperstown, New York. This is a fact that most American baseball fans wish never existed.

15. **Self-regulating Lubricator**: Elijah McCoy, son of former U.S. slaves living in Colchester, Ontario, gave the rail system a boost with his new invention, the self-regulating lubricator. His invention applied oil to the train wheels while the train was moving. This eliminated the need for frequent stops.

References