

#### 英语奇趣文精选

邝日强 编译 常玉田 校订

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## 编译者的话

要掌握好一门外语,语言基础知识和技能的培养训练非 常重要,需要阅读大量的题材广泛的辅助材料,逐步提高阅 读速度和理解能力。

要达到这一目标,必须具备锲而不舍的钻研精神。而阅读材料本身的知识性、趣味性和衔接性将会起到积极的推动作用,使阅读变得饶有兴味,富有情趣,从而激励起更强的求知欲,养成良好的阅读习惯,为专业阅读和迅速获取信息打下厚实的基础。编译此书的目的正是为读者提供一本合适的、趣味盎然的英语科技阅读材料。

本书文章均精选自国外近年新出版的科技杂志,经适当 的剪裁加工,使原文内容更为紧凑完整。为方便读者更好理 解原文,每篇文章后附有注释和译文。

本书原文语言自然流畅,文章内容奇特有趣,引人入胜。题材较广泛,涉及科技各个领域,在同类的科技外语读物中有较强的知识性、趣味性和可读性。适合高中毕业生、大学生及一般科技人员作为英语学习教材或课外阅读材料。

书中多篇文章已在我校的教学实践中得到应用,作为泛读教材受到了同学们的欢迎。在编译此书过程中得到徐钤教授及 John Baker, Muriel Steiger 等外籍教师的指导,在此深表感谢。由于水平所限,孤陋寡闻,不当之处祈望批评教正。

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# 1. Ten Developments That

# **Changed Our Century**

The 20th century has seen more changes than any other century in world history. Today, our everyday life is faster and more colorful. We are more aware of[1] world events than ever before. The developments of science and technology are at the root of these changes.

The staff of Science World[2] thought it would be fun and significant to pick out just ten from the hundreds of developments that changed our century. Our picks aren't necessarily the bigbest, best, or most far—reaching changes in the 20th century. Yet all directly influence our daily lives.

#### **(1) Zippers**[3]

Why bother with shoes laces?[4] Witcomb Judson asked this question in 1883. He ended up inventing the zipper, a very small development that is part of daily life for millions of people around the world.

But this 'Clasp Locker and Unlocker for Shoes' [5] first introduced at the 1883 Chicago World's Fair [6] was an oddity that no one would recognize as zipper. By 1913, after many chances, Judson's zipper caught the eye of the US military. The military ordered thousands of them for troop trousers. Judson's patent on his invention expired in 1931, meaning anyone could now make zippers [7]. Zippers quickly

spread around the world, finding their way onto purses, handbags, blouses, and many more items.

#### (2) Computers

The first American computer used bulky circuits called vacuum tubes. Some 18,000 vacuum tubes were necessary to power the 30 ton ENIAC machine, which filled a room the size of basketball court in 1946.

Vacuum tubes were gradually replaced with smaller, more efficient transistors. With the ability to mass-produce transistors, the price for electrical equipment dropped[8]. Finally transistors could be done away with thanks to silicon chips[9]. Computers continue to be improved each year. Computers are made that have more memory and capability in smaller sizes than the year before[10]. The work of the first digital computer can be matched today by a computer the size of a television set.

There are many johs in the modern world that can be done by computers. They may be used to keep track of information in a library, to store and transmit messages in a communication system, to predict the weather. Another job particularly suited to computers is the extremely complicated problem, such as the guiding of the flight of the rockets and the proper operation of the spaceships as well as the satellites.

Computers have become more and more a part of everyday life. Here are just a few examples: automobile ignition systems[11], game played through TV sets, calculators,

typesetting, cash registers[12] in supermarkets and department stores, airline reservation, theater ticket sales and stoplight control.

#### (3) Airplanes

On December 17, 1903, at Kitty Hawk[13], North Carolina[14], Orville Wright made the first successful powered airplane flight in a biplane[15]. This eventful day marked the beginning of modern aviation.

Airplanes brought a dramatic changes to the 20th century. People could now travel farther, faster, and more conveniently than ever before. In 1880, it would have taken you three months to travel from New York to Los Angeles on the fastest train, and about six months to sail to Los Angeles on the fastest boat. Today a routine nonstop flight from New York to Los Angeles takes about six hours.

#### (4) The Aqualung[16]

Breathing underwater is an ancient dream. For thousands of years, people have hoped to explore the sea. In 1538, two Greek divers went inside a big and heavy bell. When the bell was put into the river, they stayed in it for about ten minutes successfully. In 1745, An Englishman stayed for half an hour underwater in a barrel. Then in 1819, Augustus Siebe made the famous Siebe's helmet and suit. But not until 1942 would a reliable device for breathing underwater be invented [17]. Jacques—Yves Cousteau and engineer Emile Gagan combined and improved existing SCUBA (Self Contained Underwater Breathing Apparatus)

equipment to invent the Aqualung. Of chief importance was the air regulator they developed[18]. As divers go deeper, the air regulator automatically adjusts the amount of oxygen reaching the diver's lungs. Before the invention of the Aqualung, divers had to rely on air pumped from the surface.

The Aqualung was developed to let people explore under water, yet its development led the way for exploring outer space. With air regulators, high—flying jet pilots, like divers, could carry their own air with them. And with self—contained breathing apparatus, space becomes the new frontier [19].

#### (5) The Plaster Cast[20]

Perhaps the most humble of the 20th century development, but by no means[21] the least important, is the plaster cast. The ordinary plaster cast used to set broken bone was developed in 1936. Before then, broken bones were a serious threat to life. About 50 percent of the broken-bone victims would either lose their limbs or their lives. Without casts, how many limbless people would you know?

### (6) Nylon

Just 100 years ago, nearly all clothing was handmade from the fibers of plants or from the hides of animals. Nylon changed all that.

An American developed nylon in 1938 to replace horse-hair-paint-brush bristles. Special types of giant molecules, called polymers[22], were developed by a group of scientists. They finally produced a substance that might be used

as a textile fiber. Yet within two years, nylon began replacing silk in parachutes and ladies' stockings.

The greatest importance of nylon's invetion is that for the first time man had combined simple elements to make a new and useful fiber. Nothing like nylon exists in nature. Today, clothing is a blend of synthetic fabrics and natural fibers[23]. Nylon is recognized as the 'great grandmother' of the hundreds of synthetic materials we enjoying today[24].

#### (7) Rockets

Rockets of the type still used as fireworks were first made by the Chinese. The earliest mention of them is from the year 1232. Shortly thereafter they became known in India and Arab countries. Rockets were used in western Europe in 1241.

Rockets have found wide applications. Nearly everyone has listened to a weather report, has made or received a long distance telephone call. Your telephone call may have bounced off a satellite to reach its destination. Your weatherman may have studied satellite weather pictures from a communication network around the world and rockets put them into orbit.

Among various kinds of rockets, Saturn V [25] was the largest and most powerful rocket used by US during the 1960s and early 1970s. In the Apollo program of lunar exploration, this rocket successfully carried astronauts deep into space, powering them all the way to moon and back.

#### (8) Zeppelins (Airships)

In 1900, no flying machine offered as much promise as the Zeppelin. Unlike the early airplanes, Zeppelins could be steered[26] and could carry dozens of people. The best airship records have been made by the Zeppelins. These ships have flown thousands of miles in peace and in war, have crossed the Atlantic many times, and have flown around the world.

But the early Zeppelin's giant steel frame, covered with silk and linen, was filled with hydrogen, a gas that is quick to explode. On May 6, 1937, the passenger ship Hindenburg blew up while landing, which killed 36 people aboard, all but ending the days of the mighty airships[27].

Zeppelins or blimps of today use helium, a gas that is lighter than air, but won't catch fire. The United States has spent many millions of dollars for rigid airships. Some naval officers still believe that large rigids are useful for long distance patrol and scouting work. Airships can also find their wide applications to cargo transportation, rescue work and other aspects.

#### (9) Televisilon

TV had its origin in the 1880s. Addition and improvements came fast in the 20th century. The first practical transmissions over wires were accomplished in 1923 by Baird in England and Jenkins in the United States. Vladimir Zworykin and Philo Farnswork both made great advance in developing devices to serve as TV cameras. In the late 1920s and the 1930s a few stations in US experimented with televi-

sion. In 1942, ten commercial stations were operating.

Although TV was developed for broadcasting entertainment and education, many important uses have been found. Now it is used in industrial plant management, school education, the exploration of the space as well as the ocean depths and the international communication.

#### (10) Refrigerators[28]

Natural ice was first used for refrigeration. It was cut from frozen bodies of fresh water in the winter and stored in sawdust in ice houses for use in summer. There are several difficulties in refrigeration using natural ice. Winter weather changes from year to year, and the supply of natural ice is not always large enough. Nor is the ice formed in warm climates, where it most needed[29]. Scientists looked for a way of making ice.

In 1761 Joseph Black froze water by evaporating it. In 1823 Michael Faraday discovered a process still used in mechanical refrigeration now. In 1926, Carl Von Platen of Sweden[30] patented a machanical refrigerator that used a supercold gas trapped inside copper tubing to refrigerate food. Today more and more families are using refrigerators. They have become a part of our daily lives.

[Science World] April 12, 1985 [Britannica Junior Encyclopaedia] 1982

#### **Notes**

- 1. to be aware of 知道; 意识到 如:Up to now he is not aware of his mistakes. 直至现在,他仍未意识到自己所犯的错误。
- 2. the staff of *science world* 《科学世界》编辑部 staff [sta:f]n.全体工作人员:全体职员《科学世界》是美国出版的科普杂志。
  - 3. zipper ['zipə]n. 拉链
  - 4. shoe lace [leis]n. 鞋带
- 5. 'Clasp Locker and Unlocker for Shoes' "能扣上和拉 开的活动鞋扣" clasp [kla:sp]n. 扣子 locker ['loka]n. 锁扣装 置
- 6. Chicago World's Fair 芝加哥世界博览会 fair [fæ]n. 交易会; 博览会 如: China's Spring Export Commodities Fair 中国春季出口商品交易会
- 7. Judson's patent on his invention expired in 1931, meaning anyone could now make zippers. 贾德森的发明专利到 1931 年期满。这就是说,从此以后任何人都可以生产这种产品。patent ['peitənt ]n. 专利 expire [iks'paiə]vi. 期满;开始无效 如: The contract will expire in two years. 合同两年后期满无效。meaning anyone could now make zippers 是现在分词短语作状语,表示伴随状态。meaning 后接的是宾语从句。

8. With the ability to mass-produce transistors, the price for electrical equipment dropped. 随着晶体管的大批生产,电子设备价格也下降了。mass-produce vt. 成批生产 如: Now coloured television sets of high quality have been mass-produced in our country. 在我国,高质量的彩色电视机已成批生产。

transistor [træn/sistə]n. 晶体管 to mass-produce transistors 不定式短语,作定语修饰 ability。

- 9. silicon chip ['silikən t[ip]n. 硅片 silicon n. 硅
- 10. Computers are made that have more memory and capability in smaller sizes than the year before. 存储量越来越大,效率越来越高,而体积不断缩小的计算机制造出来了。

that 引出定语从句,修饰 computers。定语从句与被修饰的名词被动词谓语 are made 分隔开是因为主语太长,把定语从句置于句后使整个句子结构平衡些。than the year before 是省略的比较状语从句。

- 11. automobile ignition systems 汽车自动点火装置 ignition [ig/nifən]n. 点火, 发火
  - 12. cash register ['kæʃ'redʒistə]n. 现金出纳机
  - 13. Kitty Hawk ['kiti 'ho: k]n. 基蒂·霍克(美国)
  - 14. North Carolina [kærə/lainə]n. 北卡罗来纳州(美国)
- 15. biplane ['baiplein ]n. 双翼飞机 bi-是前缀,表示"双"、"两"、"复"等意思。如: bicentenary n. 二百年 bilin gual a. 两种语言的
- 16. aqualung ['ækwəlʌŋ]n. 潜水呼吸器,亦译水肺,由 压缩气瓶和气密面罩组成。

17. But not until 1942 would a reliable device for breathing underwater be invented. 直至 1942 年,一种安全可靠的潜水呼吸器才被研制成功。本句是一句倒装句,因为否定副词 not 置于句首,要求句子部分倒装,把谓语部分的助动词、情态动词、系动词放在主语前。类似的副词还有never, seldom, hardly 等。

此句的正常语序是: A reliable device for breathing underwater would not be invented until 1942.

18. Of chief importance was the air regulator they developed.

最关键的是他们研制成功的空气调节器。 本句是倒装句。把表语置于句首起强调作用。to be of importance = to be important 是英语的一种习惯用法。又如:The drug is of great value = The drug is very valuable. 这种药物很有价值。

they developed 定语从句,修饰 air regulator 关系代词 that 被省略。

- 19. 'the new frontier' "新边疆" 60 年代肯尼迪任美国总统时美国制定了开发太空的庞大计划,并耗资巨款发展空间探索技术。他们把宇宙空间拟为待开发的"新领域","新边疆"。
- 20. the plaster cast 石膏绷带 plaster[/pla.sto]n. 熟石膏 cast [ka.st]n.模子; 铸型 如: The soldier's leg was in a plaster cast. 这个战士的腿上了石膏。
- 21. by no means 决不;并没有 如: Alan Adler is by no means an ordinary man. 艾伦·阿德勒决非是平凡之 辈。

- 22. polymer ['polimə]n. 聚合物
- 23. a blend of synthetic fabrics and natural fibers 人造纤维和天然纤维的混合织物(通常称为混纺织物) blend [blend]n. 混合物 synthetic[sin'etik]a. 合成的; 人造的
- 24. "We enjoying today 现在分词短语作定语,修饰 the hundreds of synthetic materials. we 是 enjoying 的逻辑 主语。
- 25. Saturn V 土星—5 型火箭 Saturn ['sætə:n]n. 上星 (罗马神话中的农神), V 是罗马数字 5。
- 26. Zeppelin could be steered. 齐伯林式飞艇前进方向可以控制。zeppelin ['zepəlin]n. 齐伯林式飞艇(德国人齐伯林研制成功的,并以其名字命名的一类飞艇。) steer [stiə]vt. 驾驶; 操纵 如: Satellites are steered by computers. 人造卫星由电脑操纵。
- 27. On May 6, 1937, the passenger ship Hindenburg blew up while landing, which killed 36 people aboard, all but ending the days of the mighty airships. 1937年5月6日载人的兴登堡号飞艇着陆时不幸爆炸,飞艇上36名乘搭人员丧生。这样一来盛行一时的飞艇时代几乎结束了。while landing 现在分词短语作状语,表示伴随动作。分词前加when 或 while 表示句子的动作在分词的动作进行过程中发生。which killed 36 people aboard 是非限制性定语从句,修饰前面整个句子。all but 几乎;差一点如:The girl was all but drowned. 女孩差点被淹死。
- 28. refrigerator [ri'fridʒəreitə]n. 电冰箱 refrigerate [ri'fridʒəreit]vt. 使冷冻 refrigeration n. 制冷
  - 29. Nor is ice formed in warm climates, where it most

needed. 在气候温暖地区,水不能结冰,此时正需要冰块。nor 是否定连词,常与 neither, not, no, never 等词连用。当 nor 放在句首时,句子要部分倒装。如: He can't speak French, nor can I. 他不会讲法语,我也不会。Where it most needed 是非限制性定语从句,修饰 warm climates。where=in warm climates 在定语从句中作状语。climates 在句中表示"地区",不作"气候"解。

30. Sweden ['swi;dn]n. 瑞典

# 译文: 本世纪十大科技成果

人类历史上,20世纪的变化最多。今天人们的日常生活节奏加快,生活更加丰富多采,对世界上发生的大事也比过去了解得更多。科学技术的发展是这些变化的基本保证。

《科学世界》编辑部认为,从数以百计改变了本世纪面貌的科技成果中挑选出 10 项来加以介绍也许很有意思、很有意义。这里介绍的 10 项科技成果不一定是最重大、最出色或影响最深远的,然而对我们的日常生活产生了直接的影响。

#### 一、拉链

为什么系鞋带呢? 威特康·贾德森在 1883 年便思考过 这个问题。后来他发明了拉链。虽然只是个小发明,但却成 了世界千百万人日常生活的一部分。

这种能"扣上和拉开的活动鞋扣"于 1883 年首先出现在 -12-