中等职业教育规划教材
根据教育部中等职业学校新教学指导要求编写

ENGLISH

# 汽车英语

## Automobile English

中等职业教育规划教材编写组
宋建桐 王晓平 主编

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# 前　言

**编写背景**

随着中国入世及全球经济一体化的加快，社会对人才的需求正由单一型的专门人才向复合型人才转变。这就要求各行业从业人员不但要精通本行业的业务技能，还须掌握相关的行业英语知识，以便于查阅和研究与专业知识相关的英文资料，从而更好地处理涉外事务。专业英语教学对学生掌握职业技能，形成综合职业能力和创造能力，以及后续学习和发展都具有重要作用。

《中等职业教育规划教材——汽车英语》正是为适应时代的发展和中等职业院校学生就业的需要而编写的。本教材既可以作为中等职业学校汽车类专业的专业英语教材，也可以作为汽车从业人员和汽车爱好者的自学参考书。

**编写纲领**

本书根据教育部职业教育与成人教育司和教育部职业技术教育中心研究所制定的《中等职业学校汽车运用与维修专业教学指导方案》和《中等职业学校英语教学大纲》编写而成。

**教材特点**

本书在编写过程中参阅了大量外文原版书籍和外文网站，力图为学生呈现出原汁原味的英语语言表达，同时本书根据中职学生的实际水平进行了调整，以更利于学生学习。本教材体例设计丰富多彩，注重对学生思维的诱导和启发，能更好地引导学生积极参与到课堂中来。

**体例安排**

本书共分为六章，第一章介绍汽车概论，概述汽车的发展历史、汽车的构造概况和发动机工作原理；第二至四章讲述汽车的基本构造，涵盖了发动机、底盘、车身和电器设备等方面的知识；第五章介绍新技术；第六章讲述汽车维修和保养。全书共分为 21 课，每课均由以下部分组成：

**Lead In**

用图片、对话、小案例等导入本章内容。内容新颖、活泼，能激发学生对该课内容的深层次思考。

**Text**

课文语言表述地道，专业术语表述规范，有利于培养学生对实用文体的阅读能力。

**Words & Phrases**

列出了本文涉及到的生词及汽车专门术语。

**Notes**

对文中的重点、难点句子进行讲解，给出中文释义，并对该句中出现的重点词句、语法现象进行了剖析。

**Test Yourself**

这一部分是根据课文相关知识精心设计的测试题，既可作为课堂讲解内容的补充，也可作为课后自我测试之用，能使学生通过实际练习，巩固和检验所学知识。

此外，每章的章前设置有 Learning Objectives，即该章学生应达到的学习目标，可用于衡量学生的学习效果。章后设置有 Supplementary Reading，主要用来补充一些与汽车专业相关的常识性知识。这些小短文兼有知识性和趣味性，并给出了中文译文，可供学生课外阅读，能拓宽学生的知识面并激发学生学习该课程的兴趣。

建议学时为 40 学时。

**编写队伍**

本书由宋建桐主编，何继华主审。同时陈卫坚等也参与了本书的编写及审校工作，并提出了宝贵意见，在此一并致谢。

因时间仓促，编者水平有限，本书疏漏之处在所难免，恳请各位专家及读者不吝指正，以使教材不断完善。

编者

# Contents

# Chapter 1 Automobile Overview

## Learning Objectives

1. Read the English material about automobile history.
2. Master the special terms of automobile engine structure.
3. Know well the functions of the automobile structure.
4. Understand the four strokes of the gasoline engine.

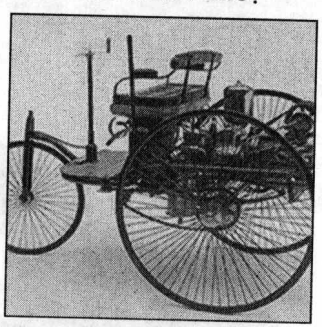
# Lesson 1

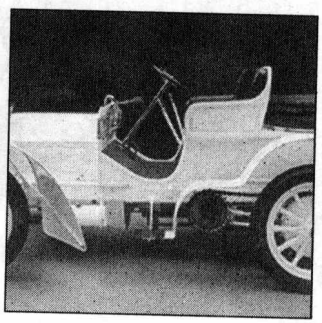
# *History of Automobile*

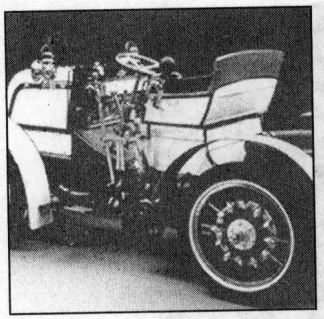
## Lead In

For the average people, there is little doubt that the automobile is the most revolutionary invention in the history of traffic tools since the wheel. The basic premise of the automobile is simple: choose a wheeled vehicle from the many types typically pulled by horses or ox; add a motor to it. Then a self-propelled, personal transportation vehicle is created. The history of the automobile reflects an evolution all over the world. It is estimated that over 100,000 patents have been created resulted from the modern automobile. However, we can figure out the many firsts that occurred related to the automobile...

**Car-links: Do you know which is the latest one?**








# Text

The origin of the automobile can be traced back to the 3-wheel carriage (Fig. 1-1) developed by Nicolas Cugnot in France in 1769. The carriage is powered by a steam engine. This is the first self-propelled highway vehicle in the history. But because it has no improvement on the horse, the cars in the modern sense have replaced it.

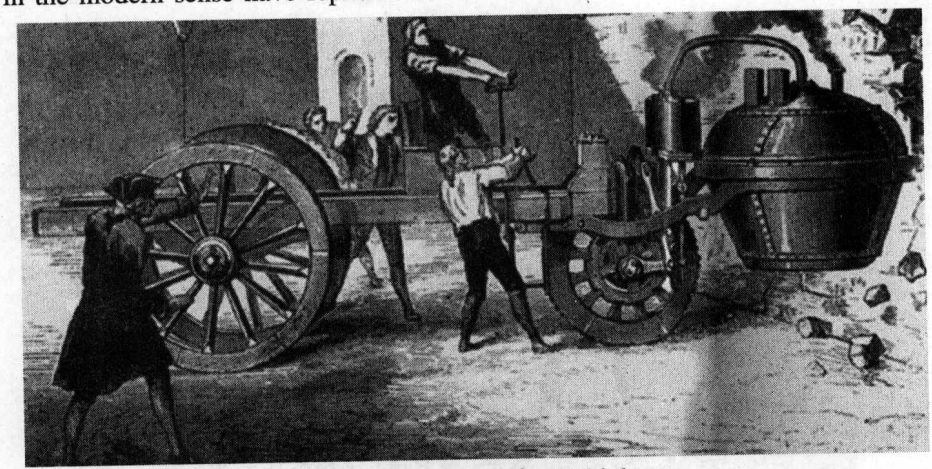


Fig. 1-1 Cugnot's Vehicle

The cars in the modern sense are powered by light-weight, fast-running internal combustion engines. The first designers of cars of this kind are Daimler and Maybach in Canstatt and Benz in Pforzheim, Germany. All the three used the principle that was pioneered by N. A. Otto and patented in 1877. Daimler and Maybach's first motorized vehicle was a kind of motorcycle. And they created the ancestor of the modern motor car in 1886 (Fig. 1-2). On January 29, 1886, Karl Benz applied for a patent for his tricycle (Fig. 1-3). This is officially considered the birth of the first car invented.

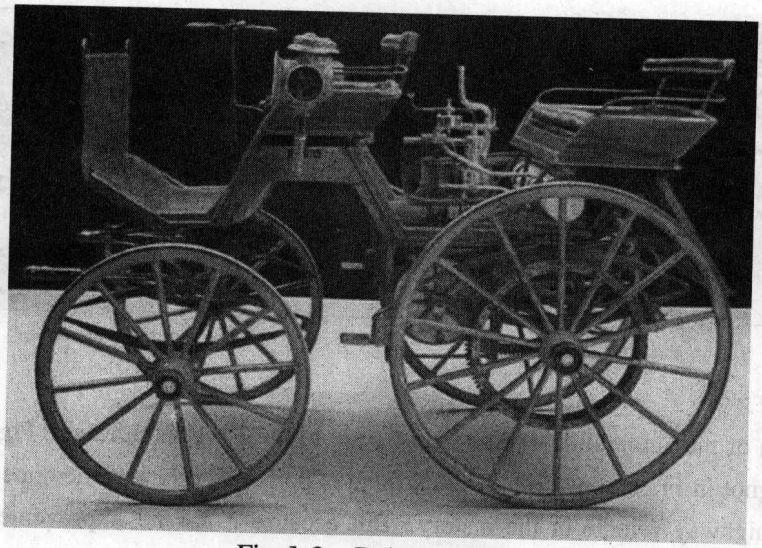


Fig. 1-2 Daimler 1886

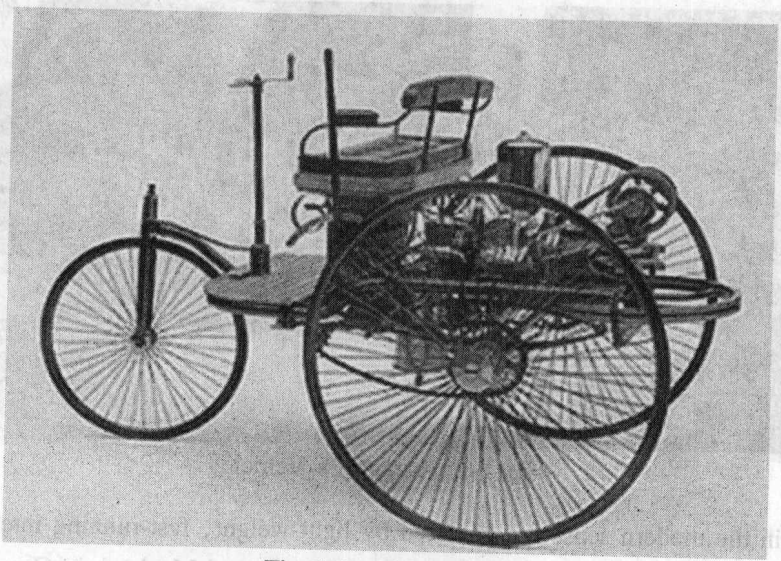


Fig. 1-3 Benz 1886

The first American automobile was developed by two brothers who were bicycle mechanics—Charles and Frank Duryea(Fig. 1-4). They copied a published description of Benz's automobile and built a motor car with a one-cylinder engine in 1893.

At that time the motor car was an expensive plaything for the very rich. Henry Ford in America successfully adopted mass production techniques from the small arms industry. These techniques were rapidly adopted by some far-sighted entrepreneurs in the Europe, such as Andre

Citroen in France and Austin and Morris in England. The adoption of mass production techniques can be seen as a revolution in car making history. But by then there was still little change in the basic design of the car.

The next revolution in car making is the development of the all welded steel body by Budd in America. This made the industrialization of car production possible, with press-shops manufacturing panels welded into a body shell. This also enabled the development of the unitary construction or monocoque body dispensing with the chassis.

Fig. 1-4 Duryea 1893

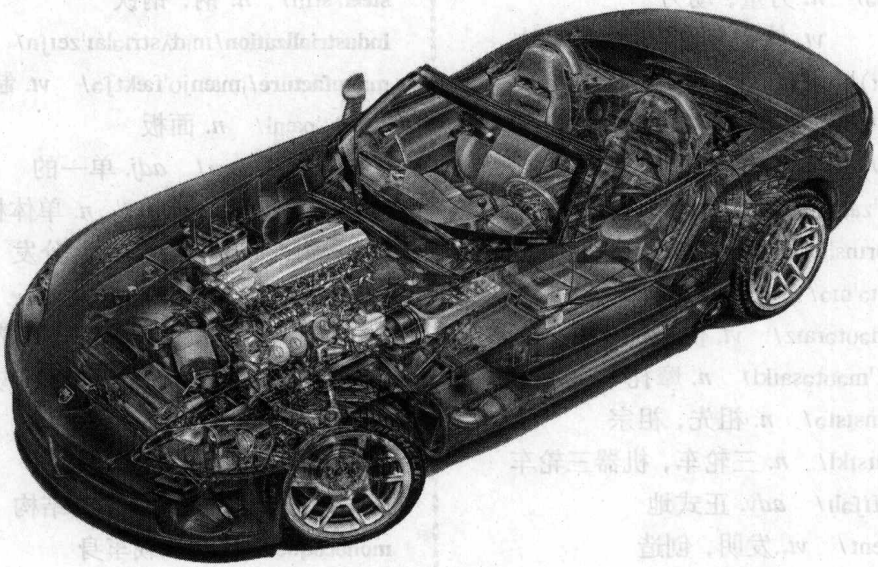


Fig. 1-5 A cutaway of a late-model car

Although the basics of an automobile have changed little in the past 100 years, the parts and the control systems have changed greatly(Fig. 1-5). The use of new technology has changed the slow, unreliable, user-hostile vehicles of the early 1900s into modern vehicles, which travel at very high speeds, operate trouble-free for thousands of miles, and provide comforts that even the rich had not dreamed of in 1886.

# Words & Phrases

**engine** /'endʒɪn/ *n.* 发动机
**gasoline** /'gæsəli:n/ *n.* 汽油
**ox** /ɒks/ *n.* 牛
**propel** /prə'pel/ *v.* 推动,推进
**patent** /'peɪtənt, 'pætənt/ *n.* 专利权,专利
*adj.* 特许的, 专利的
**origin** /'ɒrɪdʒɪn/ *n.* 起源
**trace** /treɪs/ *vt.* 追踪, 回溯
**carriage** /'kærɪdʒ/ *n.* 马车
**develop** /dɪ'veləp/ *v.* 发展
**power** /'paʊə/ *n.* 力量, 动力
*vt.* 使…有力量, 供以动力
**replace** /rɪ(:)'pleɪs/ *vt.* 取代, 替换
**internal** /ɪn'tɜ:nl/ *adj.* 内在的, 国内的
**combustion** /kəm'bʌstʃən/ *n.* 燃烧
**designer** /dɪ'zaɪnə/ *n.* 设计者,设计师
**principle** /'prɪnsəpl/ *n.* 原则, 原理
**pioneer** /ˌpaɪə'nɪə/ *v.* 提倡, 发明
**motorize** /'məʊtəraɪz/ *vt.* 使机动化
**motorcycle** /'məʊtəsaɪkl/ *n.* 摩托车, 机车
**ancestor** /'ænsɪstə/ *n.* 祖先, 祖宗
**tricycle** /'traɪsɪkl/ *n.* 三轮车, 机器三轮车
**officially** /ə'fɪʃəlɪ/ *adv.* 正式地
**invent** /ɪn'vent/ *vt.* 发明, 创造
*v.* 发明
**mechanic** /mɪ'kænɪk/ *n.* 技工, 机修工
**copy** /'kɒpɪ/ *v.* 复印, 复制
**publish** /'pʌblɪʃ/ *v.* 出版, 刊印
**description** /dɪs'krɪpʃən/ *n.* 描述; 产品说明书
**plaything** /'pleɪˌθɪŋ/ *n.* 玩具
**cylinder** /'sɪlɪndə/ *n.* 圆柱体;气缸
**successfully** /sək'sesfʊlɪ/ *adv.* 成功地
**adopt** /ə'dɒpt/ *vt.* 采用
**mass** /mæs/ *adj.* 大规模的
**technique** /tek'ni:k/ *n.* 技术, 方法
**adoption** /ə'dɒpʃən/ *n.* 采用, 收养
**revolution** /ˌrevə'lu:ʃən/ *n.* 革命
**change** /tʃeɪndʒ/ *n.* 改变, 变化
**weld** /weld/ *vt.* 焊接
**steel** /sti:l/ *n.* 钢, 钢铁
**industrialization** /ɪnˌdʌstrɪəlaɪ'zeɪʃn/ *n.* 工业化
**manufacture** /ˌmænjʊ'fæktʃə/ *vt.* 制造, 加工
**panel** /'pænl/ *n.* 面板
**unitary** /'ju:nɪtərɪ/ *adj.* 单一的
**monocoque** /'mɒnəʊkəʊk/ *n.* 单体构造
**dispense** /dɪ'spens/ *v.* 分配,分发
**chassis** /'ʃæsɪ/ *n.* 底盘
**unreliable** /'ʌnrɪ'laɪəbl/ *adj.* 不可靠的
**hostile** /'hɒstaɪl/ *adj.* 敌对的, 敌方的
**trace back to** 追溯到
**press-shop** 冲压车间
**unitary construction** 整体式结构
**monocoque body** 承载车身
**dispense with** 无需
**control system** 控制系统
**new technology** 新技术
**thousands of** 数千的

# Notes

1. The origin of the automobile can be traced back to the 3-wheel carriage (Fig. 1-1) developed by Nicolas Cugnot in France in 1769. The carriage is powered by a steam engine. This is the first self-propelled highway vehicle in the history.
汽车的起源可以被追溯到1769年Nicolas Cugnot研制的3轮车。这辆车是用蒸气机推动的。这是历史上第一辆机动式的公路车辆。
self- 构词成分。意思为自己的,向自己的,由自己的。self-propelled 机动式的,自力推进的。
2. The first designers of cars of this kind are Daimler and Maybach in Canstatt and Benz in Pforzheim, Germany. All the three used the principle that was pioneered by N. A. Otto and patented in 1877.
这种汽车的最初设计者是德国坎斯塔特的Daimler和Maybach与福尔茨海姆的Benz。他们三人使用的都是N. A. Otto提出并于1877年获得专利的原理。
3. They copied a published description of Benz's automobile and built a motor car with a one-cylinder engine in 1893.
他们根据一份出版了的奔驰汽车的说明书,于1893年制造了一个单缸汽车。
4. These techniques were rapidly adopted by some far-sighted entrepreneurs in the Europe, such as Andre Citroen in France and Austin and Morris in England.
这些技术很快被欧洲一些有远见的企业家采用,例如法国的Andre Citroen和英国的Austin和Morris。
such as 诸如,例如。如:
Wild flowers such as orchids and primroses are becoming rare. 兰花和报春花之类的野花越来越少。
5. This made the industrialization of car production possible, with press-shops manufacturing panels welded into a body shell. This also enabled the development of the unitary construction or monocoque body dispensing with the chassis.
这使得汽车生产工业化成为可能,该技术是在冲压车间制造面板,然后再焊接到车身上。这也使没有底盘的整体式结构或者承载车身得到了发展。
enable sth. 使某事成为可能,enable 的常用结构为:enable sb. to do sth. 使某人能够做某事。

# Test Yourself

**A** ***Complete the following sentences according to the text.***

1. The cars in the modern sense are powered by _____, fast-running _____.
2. Daimler and Maybach's first motorized vehicle was a kind of _____. And they created the ancestors of the modern motor car in 1886.
3. Henry Ford in America successfully adopted _____ techniques from the small arms industry.
4. Although the basics of an automobile have changed little in the past 100 years, the _____ and the _____ have changed greatly.
5. They travel at very _____, operate trouble-free for thousands of miles, and provide _____ that even the rich had not dreamed of in 1886.

**B** ***Match the following figures with their descriptions.***

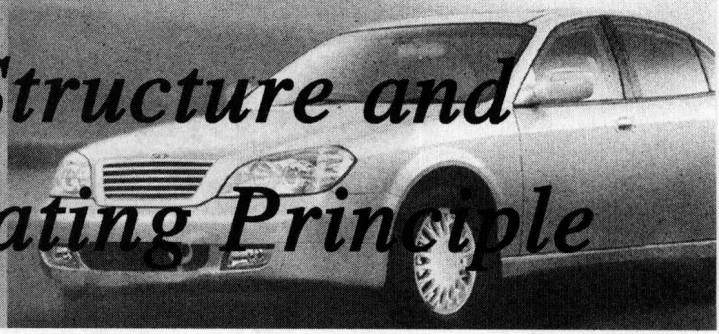
| | |
|---|---|
| 1. Nicolas Cugot | A. He successfully adopted mass production techniques from the small arms industry. |
| 2. Karl Benz | B. His vehicle is officially considered the birth of the first car invented. |
| 3. Henry Ford | C. His vehicle is the first self-propelled highway vehicle. |

**C** ***Translate the following sentences into Chinese.***

1. On January 29, 1886, Karl Benz applied for a patent for his tricycle. This is officially considered the birth of the first car invented.
2. The first American automobile was developed by two brothers who were bicycle mechanics—Charles and Frank Duryea.
3. At that time the motor car was an expensive plaything for the very rich.
4. The next revolution in car making is the development of the all welded steel body by Budd in America.
5. The use of new technology has changed the slow, unreliable, user-hostile vehicles of the early 1900s into modern vehicles.

# Lesson 2

# *Automobile Structure and Engine Operating Principle*



## Lead In

Bill has bought a new car. He enjoys the driving very much. Now he is talking about his new car with his friend Tony.

Tony: Hi, Bill! Your new car is so wonderful!

Bill: Thank you. But I am wondering how the car structure is designed so artful...

Tony: Maybe you haven't been be an expert yet. In fact, the automobile is really a sophisticated guy. It is made up of engine, chassis, body and electrical equipments. A typical car contains about 15,000 parts. They are connected to one another accurately.

Bill: Oh, that's so cool. You are really an expert.

Tony: Ha-ha... I'm just a car fan! Love car, study car!

Bill: En, fine! I'll learn the knowledge about automobile from you. I'm a car fan too!

Tony: No problem.

Q: From Bill and Tony's talk, do you want to learn some knowledge about car structure? Maybe you will be an expert soon after this lesson. Okay, try it!

## Text

### Automobile Structure

Nearly all of today's cars are made up of engine, chassis, body and electrical equipments (Fig. 1-6).