Grasp New Concept English with Famous English & British Newspapers

跟英美名刊学透新概念英语

（第四册）

考天下名师团 编
格林 主编

中国石化出版社
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教·育·出·版·中·心

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前　言

在教学实践中，作者体会到阅读英语报刊文章是学生提高英语阅读能力和了解外界信息的重要手段。很多学生由于语言水平的局限，习惯于逐字逐句的阅读，注意力通常集中在词和句上，尤其是那些自己不认识的词上。这也就是为什么他们往往总觉得词汇量小，读不懂，不知作者所云。而有些英语学习者则是在掌握一定的词汇和基本语法之后，总是希望能够尽快独立阅读英语报刊，想验证自己的英语语言能力是否能够达到独立"放飞"的程度。

人类祖先发明的语言是人类交流和传递知识的工具，不是光用来考试的。换句话说，以考试为目的的英语学习很难学好英语。事实证明，一个善于使用英语的人，应付各种考试的能力也自然要强得多。在我们这样一个汉语占主导地位的语言环境里，要想学好英语，最简便易行而又经济实用的一个方法就是阅读。阅读可以提高多方面的素养，提高听、说、读、写、译等多方面的能力，可以学习多方面的知识，可以非常有效地复习、巩固所学语言知识点。阅读在给人们带来快感的同时，从根本上提高了读者的语言感受力。

事实证明，"英语报刊"不但能使学生获得最新信息和增长知识，而且也是提高英语水平，尽快掌握英语最新词汇最见效的途径之一。《跟英美名刊学透新概念英语》与国内现有的英语报刊图书相比有以下特点。

1.突破了同类书籍在题材和体裁方面的狭隘性。本书的编写重点以阅读和讨论为主要目的，旨在拓宽学生知识面，提高学生分析问题和判断是非的能力，扩大信息的交流。

2.词汇注解详尽，阅读词汇双赢。本书对每一篇选文中的生词、重点词汇进行说明，让学生在阅读的过程中学习和记忆单词。

3.背景材料简明扼要，尽量反映各专题的历史、文化背景。

4.附有长难句注释，便于学生理解文章。

5.选材新颖广泛，尽显时文本色。本书所选文段均来自英美名刊的最新刊载，使读者在洞悉世界最新动态的同时，体验学习英语的价值所在。

《跟英美名刊学透新概念英语》适合社会上不同层次英语学习者选择阅读。我们真心地希望读者朋友通过本套书的学习，逐步进入英语语境的阅读，提高英语实力。

由于时间仓促，书中不妥之处在所难免，敬请广大读者不吝批评指正。

编　者

目　录

Lesson 1

The relationship between dinosaurs and birds

恐龙和鸟类的关系

本文是一篇说明文，对新发现的恐龙化石所揭示的恐龙与鸟类之间的关系进行了说明。文章第一段介绍了一种认为恐龙与鸟类之间关系密切的观点以及科学界对这种观点的态度变化；第二段介绍了一个古生物学家研究小组的最新发现；第三段说明了这次发现的重要意义；第四段介绍了科学家对于恐龙羽毛的作用的看法；最后一段描述了恐龙和鸟类关系研究的前景。

The once radical notion that birds descended from dinosaurs-or may even be dinosaurs, the only living branch of the family that ruled the earth eons ago-has got stronger and stronger since paleontologists first started taking it seriously a couple of decades ago. Remarkable similarities in bone structure between dinos and birds were the first clue. Then came evidence, thanks to a series of astonishing discoveries in China's Liaoning province over the past five years, that some dinosaurs may have borne feathers. But a few scientists still argued that the link was weak; the bone similarities could be a coincidence, they said. And maybe those primitive structures visible in some fossils were feathers-but maybe not. You had to use your imagination to see them.

鸟类的祖先是恐龙——甚至鸟类本身就是恐龙，是曾经在亿万年前统治地球的这个家族中惟一生活到今天的一个分支——这样的说法曾经被视为极端学说，但自从古生物学家几十年前第一次认真思考这个问题以来，这种观点得到了越来越多的支持。恐龙和鸟类骨骼结构的惊人相似是第一条线索。接下来还有证据。过去五年在中国辽宁的一系列惊人发现证明一些恐龙也许还长有羽毛。但一些科学家仍然认为两者之间的联系缺乏说服力；他们说骨骼相似也许只是个偶然。那些化石里看见的原始结构也许是羽毛——也许不是。只有通过想像你才能看见它们。

Not anymore. A spectacularly preserved fossil① of a juvenile② dinosaur③, announced by a team of paleontologists from the Chinese Academy of Geological Sciences and New York City's American Museum of Natural History in the latest issue of Nature, is about as good a missing link as anyone could want. "It has things that are undeniably feathers," exults Richard Prum, of the

这种情况将一去不复返。由中国地质科学院和纽约市的美国自然历史博物馆的古生物学家组成的研究小组在最新一期《自然》杂志上宣布了一个保存极为完好的年轻恐龙化石，它极有可能是人们想要寻找的那个缺失的环节。"它身上的东西无疑是羽毛，"堪萨斯自然历史博物馆的羽毛进化专家理查德·普鲁姆高兴地说，"但它显然是

① **fossil** /ˈfɔsl/ *n.* 化石

② **juvenile** /ˈdʒuːvɪnaɪl/ *adj.* 少年的，没有完全长成的或没有发育完全的；年轻的

③ **dinosaur** /ˈdaɪnəsɔː/ *n.* 恐龙

University of Kansas Natural History Museum, an expert on the evolution of feathers. "But it is clearly a small, vicious④ theropod⑤ similar to the velociraptors that chased the kids around the kitchen in Jurassic⑥ Park⑦."

一只体型不大却性情凶猛的兽脚亚目食肉恐龙，有点像《侏罗纪公园》里在厨房追逐孩子们的那种迅猛龙。"

The find helps cement⑧ the dinosaur-bird connection, but it also casts new light on the mystery of why nature invented feathers in the first place. For the better part of a century, biologists have assumed that these specialized structures evolved for flight, but that's clearly not true. "The feathers on these dinosaurs aren't flight-worthy, and the animals couldn't fly," says paleontologist⑨ Kevin Padian, of the University of California, Berkeley. "They're too big, and they don't have wings." So what was the original purpose of feathers? Nobody knows for sure; they might have been useful for keeping dinos dry, distracting predators or attracting mates, as peacocks do today.

这次发现为恐龙与鸟类之间的联系提供了强有力的证据，还为破解自然最初为何发明羽毛这个谜团带来了新希望。将近一个世纪以来，生物学家一直认为这些特殊结构是为了飞行的需要而进化出来的，但这种看法显然错了。"这些恐龙身上的羽毛并不能用于飞行，而且这些动物也不会飞，"加州大学伯克利分校的古生物学家凯文·派迪恩说。"它们体型太大，而且它们没有翅膀。"那么羽毛最初的用途是什么呢？没有人能够给出确切的答案，它们也许可以帮助恐龙保持干燥，转移掠食者的注意力或者吸引配偶，就像今天的孔雀一样。

But many biologists suspect that feathers originally arose to keep dinosaurs warm. The bone structure of dinosaurs shows that, unlike modern reptiles, they grew as fast as birds and mammals—which dovetails with a growing body of evidence that dions were, in fact, warm-blooded. Says Padian: "They must have had a high basal metabolic⑩ rate to grow that fast. And I wouldn't be surprised if they had some sort of skin covering for insulation⑪ when they were small." Says

但许多生物学家猜想羽毛的最初用途是为了给恐龙保暖。恐龙的骨骼结构表明它们不同于现代的爬行动物，它们的生长速度像鸟类和哺乳动物一样快——这与越来越多证明恐龙是温血动物的证据相吻合。派迪恩说："它们的基础新陈代谢率一定很高才能长那么快。如果它们小的时候身上长有某种阻热的皮肤遮盖物，我不会觉得惊讶。"诺雷尔说："连幼年霸王龙跟它都很像。"

④ **vicious** /ˈviʃəs/ *adj.* (动物)凶猛的

⑤ **theropod** /θɪərəpɒd/ *n.* 【古生】兽脚亚目食肉恐龙(前肢小，主要用后肢行走)

⑥ **jurassic** /dʒʊəˈræsɪk/ *n.* 侏罗纪的，侏罗系的(属于或界定为中生代时代第二期的时间和矿床的，该时期以恐龙的存在和最早的哺乳动物和鸟类的出现为特征)

⑦ **Jurassic Park** 好莱坞导演斯皮尔伯格执导的《侏罗纪公园》

⑧ **cement** /siˈment/ *v.* 粘结，胶合，(像水泥一样)巩固

⑨ **paleontologist** /ˌpælɪɒnˈtɒlədʒɪst/ *n.* 古生物学家

⑩ **metabolic** /ˌmetəˈbɒlɪk/ *adj.* 代谢作用的，新陈代谢的

⑪ **insulation** /ˌɪnsjʊˈleɪʃən/ *n.* 阻热，隔热，绝热

Norell："Even baby tyrannosaurs probably looked like this one."

At the rate feathered dinosaurs are turning up, it shouldn't take long to solidify⑫ scientists' understanding of precisely how and why feathers first arose and when the first birdlike creature realized they were useful for flight. Meanwhile, kids had better get used to the idea that T. rex⑬ may have started life looking an awful lot like Tweety Bird⑭.

按照这种长羽毛的恐龙化石的发现速度，要不了多久科学家们就可以更确切地了解羽毛最初究竟怎样以及为什么会出现，第一只像鸟一样的生物是何时发现这些羽毛可用于飞行的。与此同时，孩子们最好习惯那种认为暴龙也许刚生下来的时候和小鸟崔弟长得差不多的想法。

长难句

1. The once radical notion that birds descended from dinosaurs-or may even be dinosaurs, the only living branch of the family that ruled the earth eons ago-has got stronger and stronger since paleontologists first started taking it seriously a couple of decades ago.

   解析： The notion has got stronger and stronger. 这是一个复杂长句，句子的主语 notion 带有一个同位语从句，这个同位语从句中又有一个含有同位语（the only living branch）和定语从句（family 后面由 that 引导的从句）的插入语，主句后面还有一个 since 引导的时间状语从句。

   译文： 鸟类的祖先恐龙——甚至鸟类本身就是恐龙，是曾经在亿万年前统治地球的这个家族中惟一生活到今天的一个分支——这样的说法曾经被视为极端学说，但自从古生物学家几十年前第一次认真思考这个问题以来，这种观点得到了越来越多的支持。

2. But many biologists suspect that feathers originally arose to keep dinosaurs warm.

   解析： Biologists suspect that.... 这个句子容易出错的地方就是对于 suspect 这个词的理解。虽然汉语翻译为"怀疑"，但它主要表示某种事情可能是真的，表达一种肯定，与 doubt 所表示的怀疑正好相反。

   译文： 但许多生物学家猜想羽毛的最初用途是为了给恐龙保暖。

⑫ **solidify** /səˈlɪdɪfaɪ/ *v.* 变凝固，使凝固；变结实；使坚强

⑬ **T. rex** 暴龙（体型最大的食肉恐龙）

⑭ **Tweety Bird** 小鸟崔弟，好莱坞动画片系列《崔弟和傻大猫》中的一只黄色小鸟

Lesson 2

Why is spider silk so strong?

为何蜘蛛丝如此结实？

这一篇主要讲述了蜘蛛丝的问题，说现在可以运用生物技术制作并运用这种类似蜘蛛丝的产品。

Spider① silk is not a single, unique material-different species produce various kinds of silk. Some possess as many as seven distinct kinds of glands②, each of which produces a different silk.

Why so many kinds of silk? Each kind plays particular roles. All spiders make so-called dragline silk that functions in part as a lifeline③, enabling the creatures to hang from ceilings. And it serves as a constant connection to the web, facilitating quick escapes from danger. Dragline silk also forms the radial spokes of the web; bridgeline④ silk is the first strand, by which the web hangs from its support; yet another silk forms the great spiral⑤.

The different silks have unique physical properties such as strength, toughness⑥ and elasticity⑦, but all are very strong compared to other natural and synthetic materials. Dragline silk combines toughness and strength to an extraordinary degree. A dragline strand is several times stronger than steel, on a weight-for-weight basis, but a spider's dragline is only about one-tenth the diameter of a human hair. The movie Spider-Man drastically underestimates the

蜘蛛丝并不是一种单一、独特的材料——不同种类的蜘蛛会吐出种类繁多的丝。有一些蜘蛛拥有多达 7 种截然不同的腺体，而每种腺体都会产生一种不同的丝。

为何有如此多种蛛丝呢？每一种丝都有其独特的作用。所有的蜘蛛都会编织所谓的牵引丝，其功能与生命线有部分相似，它能使蜘蛛从屋梁上悬挂下来。蜘蛛编织一张丝丝相扣的网，使其遇到危险时能够迅速逃离。同时，主要由牵引丝织成呈放射状的网状结构；搭桥丝是第一根线，使整个网依靠它的支撑县挂起来，而另一种丝则用来织成大的螺旋状。

不同的丝具有其独特的物理特性，如强度、韧性和弹性，但是与其他天然以及合成材料相比，它们都有很强的强度。牵引丝的韧性和强度都非常好。就重量上而言，牵引丝的强度是同样重量钢铁强度的好几倍，而一根蜘蛛牵引丝却大约只有人头发直径的 1/10。电影《蜘蛛侠》大大低估了蜘蛛丝的强度，真正牵引丝不需要像电影里的英雄所部署的那么厚。

① **spider** /ˈspaidə/ *n.* 蜘蛛
② **gland** /glænd/ *n.* 腺
③ **lifeline** /ˈlaiflain/ *n.* 生命线
④ **bridgeline** /ˈbridʒlain/ *n.* 搭桥丝
⑤ **spiral** /ˈspaiərəl/ *n.* 螺旋形之物
⑥ **toughness** /ˈtʌfnis/ *n.* 强硬，韧性
⑦ **elasticity** /ilæsˈtisiti/ *n.* 弹性，弹力

strength of silk. Real dragline silk would not need to be nearly as thick as the strands deployed⑧ by our web-swinging hero in the movie.

Dragline silk is a composite material comprised of two different proteins, each containing three types of regions with distinct properties. One of these forms an amorphous⑨ (noncrystalline) matrix⑩ that is stretchable, giving the silk elasticity. When an insect strikes the web, the stretching of the matrix enables the web to absorb the kinetic energy of the insect's flight. Embedded in the amorphous portions of both proteins are two kinds of crystalline⑪ regions that toughen the silk. Although both kinds of crystalline regions are tightly pleated and resist stretching, One of them is rigid. It is thought that the pleats of the less rigid crystalline regions not only fit into the pleats in the rigid crystals⑫ but that they also interact with the amorphous areas in the proteins, thus anchoring the rigid crystals to the matrix. The resulting composite is strong, tough, and yet elastic.

牵引丝是一种合成材料，它由两种不同的蛋白质组成，每种蛋白质都包含三种特定区域的鲜明属性。其中一个形成能够随意延伸非晶体的（非晶）矩阵，使丝充满弹性。当昆虫袭击蜘蛛网时，矩阵的延伸性使得蜘蛛网能够黏住飞行着想极力挣脱的昆虫。两种水晶蛋白植入非晶部分，使丝变得坚韧。尽管两种晶区紧紧折叠并抑制伸展，但其中有一种是坚固的。有人认为，不太坚固的晶区不仅融入坚硬的晶体里，而且与蛋白质里的非晶体组织结合，从而稳固了坚硬的晶体形成矩阵。这种合成使它具有强度、韧性，还有弹性。

Miss. M. Dawn of Brandon, asked the related question, "Why doesn't a spider get stuck on its own web?"

一位来自布兰登的 M. 多恩女士提到一个相关问题："为什么蜘蛛不会被自己织的网黏住呢？"

Over the years, three explanations for this phenomenon have surfaced. The first invokes⑬ an oil, secreted by the spider, that serves as an anti-stick agent. The problem with this hypothesis⑭ is that such an oil hasn't yet been discovered.

多年来，对这种现象已经出现了 3 种解释。第一种解释是，蜘蛛自身分泌的油状物可以防止被黏住。问题在于至今仍未发现假设的这种油。

The second scenario⑮ is based on the

第二种情况是基于丝的多样性。很多

⑧ **deploy** /di'plɔi/ *vt.* 部署
⑨ **amorphous** /ə'mɔ:fəs/ *adj.* 无定形的
⑩ **matrix** /'meitriks/ *n.* 矩阵
⑪ **crystalline** /'kristəlain/ *adj.* 水晶（般）的，结晶性的
⑫ **crystal** /'kristl/ *n.* 晶体
⑬ **invoke** /in'vəuk/ *vt.* 调用
⑭ **hypothesis** /hai'pɔθisis/ *n.* 假设
⑮ **scenario** /si'nɑ:riəu/ *n.* 情节，方案

diversity of silks. Many webs include strands made of silks that are much less sticky⑯ than the others are. The non-sticky strands appear in the hub⑰ of the web, the radial spokes and the threads by which the web hangs from plants or other supports. Some researchers have thus posited that the arachnids use only these strands when navigating their webs. If you watch them in action, however, you will see that although they do seem to prefer the non-sticky strands, the spiders are able to move around freely, touching many of the strands, including the very sticky ones that spiral out from the hub.

蜘蛛网的线都是由比别的丝黏性要差很多的丝织成的。没有黏性的丝处于网的中心，悬挂在蜘蛛网上呈放射状的辐条和细丝则是由植物和其他东西编成的。因此一些研究人员断定，蛛形纲动物只使用这些丝织网。不过，如果你观察蜘蛛的活动，你会发现虽然蜘蛛似乎倾向于非黏性丝，但当其移动时触及很多丝，包括远离中心区域的呈盘旋形的黏性很强的丝时仍能自由移动。

The third explanation appears to solve the sticky-strand problem. In short, the legs of at least some spiders feature a disengaging mechanism that enables the arachnid⑱ to detach itself instantly from a sitcky strand. This mechanism involves a clever anatomical adaptation. Each leg ends in a pair of "walking claws" that grasp vegetation⑲, among other functions, but a third claw collaborates⑳ with associated spiny, elastic hairs to detach the leg from a sticky web strand. This third claw grasps the strand, pulls it against the elastic hairs, and pulls them further, cocking the mechanism. When the claw relaxes, the strand away and springing the leg free.

第三个解释似乎能解决这个黏丝问题。简而言之，至少有一些蜘蛛的腿具有分离机制的特性，这使蛛形纲动物将自己立即从黏网中脱离出来。这一机制与一个聪明的生理适应有关。在蜘蛛每条腿的末端都有一对"能行走的爪"，这对爪除了能帮助蜘蛛抓住植物外，还有其他功能；而第三只爪满是带刺且有弹性的毛发，帮助蜘蛛将腿从黏性十足的网线上脱离出来。这第三只爪抓住丝，将丝朝具有弹性的毛发的反方向拉动，然后将它们拉得更远，从而激活这一机制。当爪放松时，这些毛发大力反弹，把线弹开，让腿获得自由。

Police, the military, physicians, and other groups are eager to obtain large quantities of dragline silk, which can be woven or compacted to make bulletproof clothing replacement ligaments, medical sutures㉑, fishing line, ropes for rock climbers, tethers to snag planes landing on aircraft carriers and myriad other products. It

警察、军人、医生和其他群体都十分期望能获得大量的牵引丝，因为牵引丝可以编织或者制成防弹衣置换韧带、医疗缝线、钓丝、攀岩绳索、飞机登陆航空母舰时用的绳索以及无数其他产品。由于蜘蛛本身的特性，我们很难从它们身上获取足够数量的丝。因此，生物技术学家已转向其他资源。

⑯ **sticky** /ˈstiki/ *adj.* 黏性的，黏的
⑰ **hub** /hʌb/ *n.* 中心
⑱ **arachnid** /əˈræknid/ *n.* 蛛丝纲动物
⑲ **vegetation** /ˌvedʒiˈteiʃən/ *n.* 植物
⑳ **collaborate** /kəˈlæbəreit/ *vt.* 合作，协作
㉑ **suture** /ˈsjutʃə/ *n.* 缝合用的线

is impracticable to harvest sufficient quantities of silk from spiders due to their territorial nature, so biotechnologists have turned to other sources. The Canadian company Nexia has demonstrated that goats and cows can be genetically㉒ engineered so as to produce dragline silk in their milk. Using a clone of such goats, Nexia aims to produce a modified dragline silk, which they call BioSteel, to meet the many demands.

加拿大尼克夏公司已经证实，在基因上做巧妙的处理可以将山羊和奶牛的奶制成牵引丝。通过克隆山羊等动物，尼克夏公司旨在生产一种名为“生物钢”的改良牵引丝，以满足众多需求。

长难句

If you watch them in action, however, you will see that although they do seem to prefer the non-sticky strands, the spiders are able to move around freely, touching many of the strands, including the very sticky ones that spiral out from the hub.

解析： 本句是包含多重从句的复杂句。主句是 you will see that...，If you watch them in action 是 if 引导的条件状语，在 that 引导的宾语从句中又出现了并列句，touching many of the strands 作 move around freely 状语，including the very sticky ones that... 修饰 strands。所以在翻译的时候一定要注意句中成分的关系和翻译的顺序。

译文： 不过，如果你观察蜘蛛的活动，你会发现虽然蜘蛛似乎倾向于非黏性丝，但当其移动时触及很多丝，包括远离中心区域的呈盘旋形的黏性很强的丝时仍能自由移动。

㉒ **genetically** /dʒi'netikali/ *adv.* 遗传（基因）地

Lesson 3

Straw bale house

稻草秆房子

使用稻草秆建的便宜房子有可能极大地增加地震地区房子的安全。这是美国一项试验得出的结论，这个试验中，一个简单的麦秸垛建造的房子能够抵御相当于一场大地震的晃动。稻草秆建造的房子最早始于一个世纪前的内布拉斯加州，现在这样的房子在美国和欧洲大受欢迎，因为这些房子使用绿色材料，而且可以提供很高的隔音和绝缘效果。但是这项技术同样可以在地震中提供保护作用。

CHEAP houses built from *straw bales*（稻草秆）could greatly improve building safety in earthquake zones. That's the conclusion from tests in the US in which a simple straw bale house withstood shaking equal to a major earthquake.

Originally① developed a century ago in Nebraska, homes with straw-bale walls are enjoying a new popularity② in the US and Europe because they use green materials and provide excellent insulation③. But the technology could also provid protection in quakes.

Civil engineer Darcey Donovan was designing straw-bale houses in Truckee, California, when she heard of the quake that had just killed more than 75000 people in the Kashmir region of northern Pakistan in October 2005. Most died when their homes fell down. She volunteered④ to help with the recovery, and in May 2006 spent a month in the destroyed area building a women's community centre made of straw bales. She was struck by the number of people who turn to or rebuild traditional stone-and-mud homes. "I had helped build one building, but I needed to do more," she says.

使用稻草秆建的便宜房子有可能极大地增加地震地区房子的安全。这是美国一项试验得出的结论，这个试验中，一个简单的麦秸垛建造的房子能够抵御相当于一场大地震的晃动。

稻草秆建造的房子最早始于一个世纪前的内布拉斯加州，现在这样的房子在美国和欧洲大受欢迎，因为这些房子使用绿色材料，而且提供非常好的隔音和绝缘效果。但是这项技术同样可以在地震中提供保护作用。

土木工程师达西·多纳文正在卡利佛尼亚的特拉基建造麦秸房，就听说巴基斯坦北部克什米尔地区发生了地震，死亡 7 万 5 千多人。多数人是房子倒塌的时候砸死的。她志愿去做救援工作，并且在 2006 年 5 月花了一个月的时间在地震区域用稻草秆建成了一座妇女社区中心。她非常震惊地发现，虽然在受灾地区有大量的无家可归的人，有的住在帐篷里，可是他们非常害怕重新回到或者重新建造传统的石头和泥浆房子。她说，"我帮忙建立了一座住宅，但是我还需要做得更多。"

① **originally** /əˈridʒɪnəli/ *ad.* 起初，最先
② **popularity** /ˌpɒpjʊˈlærɪti/ *n.* 普及
③ **insulation** /ˌɪnsjʊˈleɪʃən/ *n.* 隔音
④ **volunteer** /ˌvɒlənˈtɪə(r)/ *n.* 志愿者

Realizing that straw-bale houses might help, Donovan came up with a design that could be built cheaply with local materials. The foundations are made with sacks of gravel, while the building's base uses clay and sand mixed with cement. Straw bales form the walls, which can then be covered with a roof from clay, sand and straw. In western designs, the bales serve as insulation while a wooden frame supports the load, but Donovan was able to use the straw walls for structural support by keeping the houses to a single storey. Not only are the buildings stronger than stone, they are much lighter, so a collapse⑤ is less likely to kill anyone inside.

意识到稻草秆建造的房子可以发挥作用，多纳文就想到了一个设计，可以非常便宜地利用当地材料建造。地基是由一袋袋的砾石打成，而房子的垒座使用泥沙和水泥。麦秸捆垒成墙，上面用泥沙和稻草秆封顶。在西方设计中，稻草捆可以用来起到隔音效果，而木制的框架用来支撑屋顶的重量。但是多纳文却能够使用稻草墙通过建造一层的平房来支撑房屋。这样一来，不仅房屋比其他石头建造的房子结实，而且也轻了很多，所以房屋倒塌的话，砸死人的可能性会降低很多。

Donovan has since founded the Pakistan Straw Bale and Appropriate Building organization to promote the idea. PAKSBAB has already helped local workers build nine homes in Kashmir, all of which are now occupied.

多纳文自此建立了名为“巴基斯坦使用稻草秆建造合适房屋”的组织来推广她的理念。这一组织已经帮助当地的工人在克什米尔地区建立了九个家园，而且所有的家园都已经入住。

To test how the houses would work in an earthquake, Donovan built one on a quake simulation table at the University of Nevada in Reno. In tests late last month, it stood through a series of eight quakes of increasing intensity⑥. The roof was broken and broken parts fell in the final run, when the speen reached 0.82 times the force of gravity—stronger than the 7.6-magnitude⑦ Kashmir quake—but the house survived. In the final test, which was stronger than the Kashmir quake, the roof fell down but the house survived.

为了检验这些房子在地震中的效果，多纳文在里诺内华达大学的地震模拟台上建立了一个稻草秆建造的房屋。在上个月末的试验中，这个房屋经受了一系列的级别越来越强烈的八次地震。在最后一轮中，模拟台的速度已经达到重力的 0.82 倍，这比克什米尔地区 7.6 的地震还要强烈，这时候房顶塌了，其他部分也纷纷坠落。在最后一轮试验中，比克什米尔的地震还要强烈，虽然屋顶塌了，但是房子幸存下来了。

“The structure did exceptionally well,” says Ian Buckle, who runs the Reno test lab. Given improvement to speed up construction, he thinks the design has a great future in quake zones around the world.

里诺内华达大学地震模拟实验室的管理人评价说：“这一结构在对付地震方面效果非常好。”他认为，如果能够改善并加快建设速度的话，这一设计将来将会在全世界的地震区受到极大的欢迎。

⑤ **collapse** /kə'læps/ *n.* 塌陷
⑥ **intensity** /in'tensti/ *n.* 强度
⑦ **magnitude** /'mægnitju:d/ *n.* 地震级数

长难句

Realizing that straw-bale houses might help, Donovan came up with a design that could be built cheaply with local materials.

解析：本句主干为 Donovan came up with a design...。其中 realizing that straw-bale houses might help 为原因状语，而 that could be built cheaply with local materials 为定语从句，修饰句子主干中的宾语 design。

译文：意识到稻草秆建造的房子可以发挥作用，多纳文就想到了一个设计，可以非常便宜地利用当地材料建造。