

## THE TEXAN TARANTULA.

An Object of Terror to All Save Its Deadly Enemy, the Wasp.

Appropos to a brief reference to the insect reported to be the deadly enemy of the huge spider called the tarantula, Dr. Horn, Philadelphia's distinguished entomologist, sends us the following:

"In the not too fertile parts of the region from Texas to California lives a large spider known to the inhabitants as the tarantula and to naturalists as mygale hentzili. Its body is two inches or more in length, clothed with rusty-brown hair, the legs long, and when extended covering an oval of four or five inches. As may be imagined, the mygale is not a handsome insect, and while it is looked upon with terror by most people, no one cares to handle it unless quite certain it is dead.

"In place of the web which usually forms the house of spiders the mygale excavates a burrow in the loose soil, from which it wanders in search of its prey, consisting principally of members of the grasshopper family or cicadas. The jaws are large and powerful, armed with long, stout fangs, with which they can pierce and kill their prey. One full meal will at times supply their needs for several weeks. In fact, during the moulting period they remain torpid and take no food.

"During its growth the mygale makes an unknown number of moults, that is, it sheds its outer coat when that has become uncomfortably close-fitting, in the same manner as the common crab of our coast. At these times members lost from the body by accidents are partially replaced; if a leg is lost the first moult produces a perfectly formed but short leg, subsequent moults increasing the size of the leg.

"While the mygale is a dread to most forms of insect life, there is one of which it in turn stands in mortal terror. Abundant in the same regions is a large wasp, with bluish-green body and golden-red wings. The body is about two inches long, the spread of wings nearly an inch greater. These wasps (pepsis formosa) fly uneasily about in search of food for themselves until they discover a 'tarantula,' when a more definite course of action is assumed. The flight of the wasp is now in circles around its prey, gradually approaching it, the mygale, meanwhile in terror, showing fight, standing semierect on the two hinder pair of legs. A favorable opportunity presenting, the wasp stings the spider and renews the circle flight, repeating the sting until the spider becomes completely paralyzed. When the wasp is assured of the helplessness of the spider it seizes him and drags him to a previously prepared nest. The eggs of the wasp are then deposited and the spider covered up. The eggs soon hatch, the spider is gradually eaten, and a new wasp appears to repeat the actions of its parent.

"By the sting of the wasp the spider is not killed, simply paralyzed, so that during the time it is being fed upon it retains vitality, furnishing living food to the newly-hatched larvae, which, by a curious instinct, feed first on those parts of the spider not essential to the maintaining of the little vitality remaining.

"Our common mud-wasp, chalybion, has similar habits. Its nests, made of elastic mud, are familiar to most people, as they are found abundantly in sheltered places about barns and other out-houses. These, when opened, will be found filled with spiders, in the helpless condition already mentioned, among them a larva and some partly-eaten spiders."—Philadelphia Ledger.

## Age of Laying Hens.

It is wrong to thin out the old hens and depend on young pullets every year, as there is a temptation to breed from the pullets before they are fully matured, thereby weakening the stock if persisted in. When a hen is laying well she can be depended upon for another season's service. There is no necessity for disposing of her only to fill her place with a younger bird. It is a mistake to suppose that a hen is inferior after she is two or three years of age. She will lay until seven or eight years old, and it will be time to sell her only when she shows signs of falling. There is a loss of time raising the pullets to fill the places of the hens. It requires about ten months before the pullets of the large breeds will come in, from the time they are hatched, but the hen only loses three months, which is at the period of moulting, and if a certain date is used for a starting point, with a record kept of all the eggs laid, for two years, it will be found that the hen will lay more than the pullet. The hen produces stronger chicks than the pullet, which is a very important point when broilers for market are an object, and her eggs are heavier and more uniform in size. A hen is not old at four years of age.—Farm and Fireside.

A gentleman in Brussels has shown unusual enthusiasm for the game of whist. In the course of a game his partner trumped the trick which he had already won by deep calculation and skill. Instead of swearing, as a gentleman would ordinarily have done in such circumstances a few times, he gave his unlucky partner twenty stabs in the ribs with a long knife and left him dead.

A canary belonging to a family of Midland Park, N. J., becomes greatly excited when the six-year-old son comes into the room, and beats itself against the cage until released, when it flies on top of his head, jumps upon his finger, singing lustily, and then, for a rest, settles upon his shoulder. After its frolic, and a piece of apple or celery leaf from its little benefactor, it goes back to its cage.

## THE BLOODHOUND.

Sensations of a Gentleman Who Was Captured by One of Them.

As a rule the bloodhound is most docile and winningly affectionate. He can be trusted with children; so much so that a boy may safely do duty as "the hunted man" when the hound is being trained in hill or forest. The animal is nevertheless suspicious of the motions of strangers; he therefore makes a most efficient guard either to person or property; and his deep, ringing bell-like voice, heard at night in his own grounds, would be sufficient to keep at bay the boldest burglar that ever went on prowl. But instances of bloodhounds who, if not actually savage, will, to use a trainer's words, "stand no nonsense," are by no means rare. I had the pleasure of being hunted once by one of these. It was in a country where there were plenty of hills and rocks and running streams, but nothing worth the name of a tree. We were training a pup, and as he was already well up in his work I had got quite a long start, and had done my very best to puzzle him by wading through water, etc. When I had reached a cozy nook in a far-off glen, I sat down to rest on a stone; but a whole hour passed, and still no appearance of my friend and his pupil was put in. I was thinking I had got well away for once, when I was startled by the baying of a bloodhound, and next moment found myself a prisoner—made so, not by the puppy, but by the pupil's father. The dog, I afterward discovered, had escaped from the stable and come to the hunt on his own account, and here he was. I confess I felt a little uneasy. I knew the dog well enough, but just at the present moment he did not consider it convenient to know me. I felt that I wished to convince him that it was all fun, that we had only been playing at man-hunting. Unfortunately for my peace of mind, the bloodhound would not take that view of the matter. It was no good holding out a hand and saying: "Poor fellow, Draco! Good dog, come along, then." This only made him back astern and bay the more. Worse than all, a movement on my part as if to get up resulted in a threatening exposure of some teeth. Draco evidently wished me to understand distinctly that I was the prisoner and he the detective; I the captive, he the captor. That was the position in all its simplicity; and as it was more over pretty certain the bloodhound meant to do his duty, I had to do mine and sit there till my friend arrived with the pup. But the time had seemed very long. There is a scrutinizing calmness and dignity about the eye of a well-bred bloodhound that is quite a study in itself. If you are a perfect stranger to the animal, it is evident he is regarding you not with hatred by any means, nor with affection, but with thoughtfulness mingled with a little suspicion of your intentions, just as a human being would study an ape if one came hopping up to the hall door.—Gordon Stables, in Chambers' Journal.

## HINTS ON ADVERTISING.

The Importance of Having Announcements Written Up in Good Style.

The preparation of the copy for an advertisement is a matter of importance, and a subject for study. The time now is when the bare, tame and stereotyped advertisement is considered by the wide-awake advertiser as of little real value. Chestnuts are as little appreciated by the reader as by the advertiser. The advertisement of to-day must be unique. It must not only attract attention, but it must also interest, so as to hold the attention until it is carefully read. In a word it must be newsy, or very novel. The average country merchant can not write such an advertisement. None are better aware of this fact than himself, and he hates to attempt the task.

The newspaper man who has tact sees this point and very often secures a generous order and perhaps a long-time customer by preparing in advance a well-written advertisement, and one adapted to the whims or hobby of the merchant. The order secured and the advertisement running regularly, it is well, according to my experience, not to forget the new patron, but on the contrary, cultivate his acquaintance; hold up the points of display or position, and see to it that the advertisement is kept fresh and seasonable. This plan followed up, ten to one the publisher has secured a permanent customer.

As an example of the importance of a properly written advertisement, it has come to my knowledge that a Boston man has lately surrendered a lucrative position in order to make a business of writing advertisements. His terms are moderate—only \$10 an hour—and his time is so fully engaged that he can not fill his orders. Many large firms understand this matter so well that they are satisfied to pay salaries of from \$5,000 to \$8,000 a year to experts who do this work exclusively. The gentleman referred to goes so far as to say that the value of the medium in which an advertisement is to appear is of secondary importance; it is the manner in which an advertisement is written and worded which governs its value or worthlessness.—National Editorial Journalist.

A Kansan living at Pawnee Rock had sold part of his household goods and machinery and taking the balance in his wagon with his family, started for Western Illinois. He got as far as Great Bend and camped for the night. About dark it began to rain and the water fell in torrents all night. Early next morning the granger harnessed his team, turned them west, and by night was at home, ready to begin sowing wheat the next morning.

## AFRAID OF EARTHQUAKES.

How Domestic Animals Act When Terrified by Tremors.

Very fortunately for mankind the regions of the earth usually visited by earthquakes are sparsely populated, and when one of the shocks does visit a densely-populated region, the damage is comparatively slight. This is very fortunate, since there is nothing more terrifying than an earthquake. We are used to considering the earth as solidly personified, and when the earth trembles, all hope seems gone. It is said that residents of earthquake regions never get used to the shocks; each visitation is just as terrifying as the one that has gone before.

This is equally true in reference to dogs, horses, cattle and other domestic animals, which soon get used to the most violent thunder-storms.

Fish also are frequently affected. In the London earthquake of 1749, roach and other fish in a canal showed evident signs of confusion and fright, and sometimes, after an earthquake, fish rise to the surface dead and dying.

During the Tokio earthquake of 1880, cats inside a house ran about trying to escape, foxes barked, and horses tried to kick down the boards confining them to their stables. The same phenomena were exhibited during the Charleston earthquake in 1886.

More interesting than these are the observations showing that animals are agitated just before an earthquake. Ponies have been known to prance about their stalls, pheasants to scream, and frogs to cease croaking suddenly a little time before the shock, as if aware of its coming. The Japanese say that moles show their agitation by burrowing. Geese, pigs and dogs appear more sensitive in this respect than other animals.

Many birds are said to show their uneasiness before an earthquake by hiding their heads under their wings and behaving in an unusual manner.

At the time of the Calabrian shock little fish like sand-eels (*Cerretilli*), which are usually buried in the sand, came to the top and were caught in multitudes.

In South America, certain quadrupeds such as dogs, cats and jerboas, are believed by the people to give warning of coming danger by their restlessness; sometimes immense flocks of sea-birds fly inland before an earthquake, as if alarmed by the commencement of some sub-oceanic disturbance.

Before the shock of 1885, in Chili, all the dogs are said to have escaped from the city of Talcahuana.

The explanation offered by seismologists of this apparent prescience is that some animals are sensitive to the small tremors which are generally only known to man through the records of the seismograph. The alarm of intelligent animals would then be the result of their own experience, which has taught them that small earth tremors are premonitory of movements more alarming.—Golden Days.

## THE EGG IN PARIS.

There Hen-Fruit Never Seems to Lose Its Financial Value.

The Paris egg is the greatest of all mysteries, not so much for its sacred qualities as among the ancients, or for the strange germ of life that exists within it which has considerably worried modern scientists. It is still sacred, but to the dealers only, and the life principle which it contains sometimes, indeed, disturbs, in a non-scientific way, the digestion of the purchaser. To the American an egg is either fresh or it is nothing—that is, it is nothing but an abomination. As an edible it is of such extreme delicacy that it does not know and can not know degrees of excellence. When it is not the very virgin of freshness it is fit for nothing but to be thrown at an unpopular orator or to be assigned to the tender care of that symbol of maternal patience, the sitting hen.

It is not so in Paris. There the theory is quite different. The Paris egg loses its freshness, the line of demarcation between the yolk and the white becomes confused, there is an active generation of sulphureted hydrogen if it is kept in a warm place or the germ of life slowly but surely merges into the flesh, bones and down of the incipient fowl. Still it does not lose its financial value. The best eggs, and they are usually good, are sold for boiling at three or four sous apiece. This is the standard. Then comes the second quality, which decomposition has just commenced, but it is imperceptible except to fastidious persons, who object on principle to chemical changes in their food. As to other grades and qualities which the customer sees distributed in various places about the shop their price is not fixed.—N. Y. Graphic.

## Population of German Cities.

According to the latest statistical data, the population of the largest cities of the German Empire is as follows: Berlin, 1,415,000; Hamburg, 499,000; Breslau, 313,000; Munich, 278,000; Dresden, 259,000; Leipzig, 181,000; Magdeburg (with suburbs), 171,000; Cologne, 170,000; Frankfurt-on-the-Main, 164,000; Königsberg, 156,000; Hanover, 140,000; Busseldorf, 125,000; Nurnberg, 123,000; Bremen, 121,000; Chemnitz, 119,000; Dantzig, 118,000; Stuttgart, 118,000; Strasburg, 116,000; Elberfeld, 113,000; Altona, 112,000; Barmen, 107,000; Stettin, 104,000; Aix-la-Chapelle, 101,000. There are thus 25 cities having a population of over 100,000. In 1867 there were but seven above that figure in the territory now included in the German Empire, viz.: Berlin, with a population of 702,000; Hamburg, 225,000; Breslau, 174,000; Munich, 171,000; Dresden, 156,000; Cologne, 125,000; Königsberg, 106,000.—N. Y. Post.

## COSTUME DESIGNING.

Some of the Things to be Considered in the Art of Adaptation.

Those who know nothing of the mounting of an historical drama would probably suppose that for its successful accomplishment nothing is required but mere attentive plodding and perseverance; that the requisite authorities have been unearthed all serious difficulty is surmounted. As a matter of fact it is only at this point that the threshold of trouble is crossed. A wary experience as well as a cultivated taste have to be brought into play to steer safely between two rocks, the obviously incorrect and the fantastically true. The intentions of the actor must not be jeopardized. A seat must not suggest absurd discomfort; a dress must not impede the motions of a player. But neither need a costume be too much modified to meet the natural awkwardness or stupidity of the wearer. If an actor complains to me (no uncommon circumstance) that "he could not play in that," I always answer "try," and only consent to further modifications when convinced that that particular garment he would jeopardize the general success.

The costume of every period gave birth to peculiar department, required a special code of manners. A noble accustomed to the trailing skirts and dandified sleeves of Henry V. would be out of his element in the padded breeches of King James. An actor has to learn how to wear his costume with propriety. I remember once, when I had the honor of mounting "Masks and Faces" for the Bancrofts at the Haymarket, the young men vowed vengeance against me, declaring that I was making them look ridiculous. Their skirts plaited in many folds, were wired as well as buckramed, and their swords were stuck diagonally through them; ergo it was impossible to sit. I argued that the coats looked more natural than any George coats that I had ever seen, that they were wired thus in the days of Peg Woffington, and that it was highly probable that even the most ardent of her admirers was not always on his knees. The way of sitting must therefore have been other than that practiced in our era of Norfolk jackets, and it behoved us, by applying our minds to the problem, to evolve the necessary action. A very little practice brought out the secret, and though wired to my heart's content, the young men were made perfectly comfortable. Greek or Roman costume is a nightmare to many players, and yet what conspicuous examples of grace in the wearing in the classic robes are Miss Anderson and Mr. Wilson Barrett. Their draperies hang about their limbs in natural undulations, as if they had never heard of dress improvers or frock coats; and yet it must not be supposed that they acquired the knack without long and careful practice. I never realized Miss Anderson's skill in this matter until I strove to attire another lady in a costume similar to hers. The overdress, winding around her feet, nearly brought her down upon her nose; it was always in her way, twisted into ungainly angles, and arrived at last under her arm like a packet of crumpled linen. Although this lady was not exceptionally awkward, I was obliged in her case to revert to the old-fashioned hideous bedgown, which is any thing but statuesque.—Magazine of Art.

## Amusing Indian Fables.

The Indians of North America had a large stock of stories resembling the fables of Esop. They are stories of animals, and many of them are in form as if first told by animals, not unlike that of the Georgia negro stories popularized by Uncle Remus. Mr. Gordon reports the following from New Brunswick:

The clumsy butt of all the other animals was always Muween, the bear, and the cleverest were the panther, Shoks, and the fisher-marten, Pekquan, but these had not the same rank with the tortoise, who, to my surprise, was considered the great lord and chief among the beasts, although his awkwardness and helplessness led him into many and unpleasant and ludicrous positions.

There was one very comical story of his going out hunting, drawn on a sled or toboggan by two moose. Of course he met with many misadventures. The boughs swept him off his sled without its being perceived by his steeds; he got entangled in creepers, and finally his team became so tired of their load that they made a hole for him in the ice, and left him there. But, by dint of subtlety, he shot the moose of which they were in search, whilst his companions returned empty-handed. On another occasion he fell into the hands of enemies, and escaped from them only by a series of clever stratagems.—Youth's Companion.

## The Archaeological Treasure.

During some excavations for an enlarged heating apparatus at the Abbey Church, Sherborne, England, a leaden coffin was found about ten feet beneath the level of the floor of the nave, and near the west door. It was placed with the feet to the east. It was opened and was found to contain the remains, apparently, of a young girl, the outline of whose features was singularly clear, although entirely blackened by time. It was the opinion of a medical man present that the deposit was a thousand years old. Within the leaden coffin was a wooden shell, much decayed, and the remains themselves presented the appearance of charred paper.—N. Y. Post.

The damage done to summer resorts along the Atlantic each winter is estimated at \$2,000,000.

## DR. HOLMES' WEAKNESS.

The Autoerotic Vanity and Inexplicable Love of Notoriety.

The popular supposition is that Boston worships Dr. Oliver Wendell Holmes with a passion that is little short of idolatry. This notion, however, is a slight exaggeration of the fact. There is a considerable element here which is not at all prepossessed in his favor. Representing this element are very many intelligent people, who think that the witty poet is altogether overrated. His digestion is all gone, they say, and now he is reduced to the necessity of living upon his reputation.

This sounds very much like petty jealousy. Nevertheless it is undeniable that the doctor's vanity is the weak point. There is nothing he enjoys so much as being advertised, although a person who has justly earned so varied a celebrity might well dispense, one would think, with vulgar notoriety. Not long ago a newspaper man asked Mr. James Russell Lowell for some materials wherewith to construct a sketch of the then British Minister's life and career. Mr. Lowell politely declined.

This happened, by the way, just before Mr. Lowell's celebrated interview with Julian Hawthorne. The facts in the latter case, no fellow will ever be able to accurately find out. Here in Boston it was thought, and is still believed, that the interview in question was pretty correctly reported. At the same time, it is not for a moment to be imagined that the ex-Minister to Great Britain made all those scandalous remarks about the fat Prince of Wales, and so forth, with any idea that they were to be published. The most discreet of gentlemen, over his after-dinner port, is apt to relax his habitual caution in speech, but every body has always said that Julian Hawthorne was a goose. He is forever doing something absurd, and this was only an instance in point.

To return, however, to the Autoerotic of the Breakfast Table.

About four years ago the Critic, in New York, devoted an entire weekly number of contributions, advertised for in advance, eulogizing Dr. Holmes. It was called the "Holmes Number," and contained nothing but letters in prose and poetry from all parts of the country, with a few editorials in like strain. Now Dr. Holmes is an undoubted genius. Of all her citizens Boston takes most pride in him. He stands unquestioned in the first rank among the literary men of the age. And yet he could swallow all this cloying flattery at one gratified gulp, and write an appreciative letter in reply. It would have made any body else sick.—Boston Letter.

## NEW DYNAMITE GUN.

An Invention Which Works Upon a Well-Known Principle.

A gun without a barrel, which is to be fired without powder or other explosive, and whose discharge is comparatively noiseless, is the curious invention of Walter E. Hicks, of Brooklyn. The principal that this gun involves is the same as that which hurled the stone which killed Goliath. The gun consists of two solid steel wheels placed concentrically side by side, and made to revolve by means of a Westinghouse engine. In the circumference of each wheel are placed two projectiles at equal distances from each other. On either side of this double wheel is a quadrant, which is so arranged that the gunners may by means of it give the desired direction to the missiles. When all is ready he pulls the lanyard, and two shots on opposite sides of the disk are discharged simultaneously. Then, if desired, the lanyard on the opposite side may be pulled and the other two shots released. It is impossible to fire a single shot at a time. Either two or four shots must be discharged at once. The shots may be fired vertically, straight toward the ground, or in any intermediate direction. The apparatus is designed to be placed upon a turntable, so that missiles may be projected in any direction. The especially ingenious part of the invention is the contrivance to release the missile at exactly the proper time. Thus, if it is to be projected horizontally, it must be released at the exact fraction when the part of the wheel where it is confined is upmost. At that instant it may be considered as moving horizontally, and when it is released it will not change its direction, but will fly forward in a tangent to the top of the wheel.

Mr. Hicks calculates that a gun with wheels ten feet in diameter, revolving 4,000 times per minute will throw a projectile with an initial velocity sufficient to send 2,000 pounds five miles. If the wheels could be revolved in practice 4,000 times a minute the missile would in fact start at the rate of 2,000 feet per second. The velocity imparted to round shot by charges of powder vary from 1,400 to 1,750 feet per second.

The projectiles to be used for a machine of the size described are to vary in weight from 10 to 300 pounds. They are to be dynamite cartridges and must be designed especially for the machine. It is said there will be no shock at the moment of discharge and that, therefore, dynamite may be fired with safety.

It is asserted that the Hicks centrifugal dynamite gun, as the new invention is termed, will throw four shots in five minutes. It is Mr. Hicks' intention, after a little more preliminary work, to exhibit his model before the Ordnance Board of the National Government.—N. Y. Cor. St. Louis Republic.

## THE CHINESE GODS.

A Vast Variety of Deities for Every Condition of Life.

The Buddhist deities are almost without number, and the manufacture of idols is one of the most stirring industries of the Chinese Empire, writes the author of "The Dragon, the Images and the Demon." The gods are male and female, from the thousand-handed Kwanyin on down or up, according as you reckon in Chinese mythology. There is a god of theaters, a god of sheep, another of snakes. There are gods of scorpions and of locusts, of gold and silver, of tea, salt, snow, strength, happiness, the list even including Wang Pao, the chief of police in hades, whose statue is made a sort of bulletin board for articles lost or stolen. There are gods of travel, of archery and of cursing, of bridges, of lamps and of tents. There are seventy-two master gods, who are heads of celestial boards of deities, in whose hands are committed every thing that men can possibly use or think of.

The 360 trades, which, according to the Chinese, complete the number, are each provided with a god. There are gods of carpenters, of masons, of fishermen, of barbers, of tailors, of jugglers, and even a god of paper clothing. There are the monkey god and the fish god; there are gods of parasites, each kind having its own deity; there is a god of the Punch and Judy show, a god of cruelty, a god of firecrackers and a god of revenge. Shorter and Blower, the English translation of Hen and Ha, gods of storms and rains, are warlike deities, and their statues are frequently seen on the frontier. The thunder has two gods, Mr. and Mrs. Thunder, while every pestilence, every kind of disease, has its own god. The gods of tide were once enemies, but are now reconciled, one bringing in, the other taking out the tide.

The rivers all have gods each having his individual characteristics, the deity of the Yellow river being particularly fond of theatricals, which are always provided in his honor at his annual feast. Every tree has its god, and when a tree is to be cut down notice is sent to all the neighbors to remain indoors lest the tree god, finding himself deprived of his roosting place, should take summary vengeance on any unfortunate mortal who strayed out of doors from the protection of his own household deities. There are gods of the body: The god of the hair is called Chwang wa; god of the brain, Tsing Ken; god of the eye, Ming Chang; god of the nose, Yu Lung; god of the ear, K'ung Yen; god of the tongue, Tung Ming; god of the teeth, Muh Fung; god of the heart, Tan Yuen; god of the lungs, Kuo Wa; god of the liver, Lung Yen; god of the kidneys, Yuen Ming; god of the spleen, Chang Tsai; god of the gall, Lung Yao; god of the diaphragm, Tao Kung; god of the nape of the neck, Shang Kien; god of the neck, Yu Nu Kuei; god of the throat, Pah Lien Fung; god of the back, Nu Chah; god of the breast, Hu Pen; god of the ribs, Pih Kya Ma; god of the stomach, Tung Lien Yoh; god of the bowels, Chao Ten Kang; god of the hand, Wen Yin; god of the feet, Chuen Lien Lih; god of the skin, Tang Chang.

In short, there are gods for every thing; gods painted on the walls, at the corners, at cross roads, for the one anxiety of the Chinese life is to scare the devil and only by the intercession of the gods can this very desirable effect be produced; so when a Chinese funeral starts from the house to the cemetery it never goes in a straight line, but up the street to the corner, where stands the statue of some deity, then suddenly to the left or right, while the demon, appalled at the sight of the god's image, waits a moment and thus the funeral gets the start of him. Every deity, however, of the Chinese mythology—it is satisfactory to know—has definite work to attend to, and gives it the closest possible attention, no one ever intruding into the province of another, so that, on the whole, the Chinese consider their mythology very economical, for each and every person in any line of trade or occupation worships heaven and earth in general, and his only deity in particular, thus claiming exemption from devotion to the rest of the pantheon.—Boston Herald.

## Water-Proofing Woolen Goods.

What is asserted to be an effective process for water-proofing woolen goods has come into use among German manufacturers, the cloth in this case gaining considerably in weight, and, though perfectly water-proof, impedes neither air nor perspiration. A solution is made of one hundred parts of alum and the same of glue, five parts of tannin, and two parts of soluble glass, by dissolving alum in a moderate quantity of boiling water. The glue is steeped in cold water until it has absorbed twice its weight of water, and is then dissolved by heat; the tannin and soluble glass are well-stirred into the solution of glue, to which the alum solution is then added, and the whole stirred and allowed to cool. One kilo of the gelatinous mass is boiled for three hours in fifteen litres of water, fresh water being continually added to compensate for evaporation. The bath is now permitted to cool to eight degrees Cent., and in this the material to be rendered water-proof is kept for half an hour, then withdrawn, and the moisture allowed to drip from it for several hours. Finally the cloth is stretched on a frame, and dried at a temperature of fifty degrees, then calendered.—N. Y. Sun.

—It has been found in Norway that banks of snow will stop cannon balls, which penetrate only a little way when the snow is properly prepared.