

and any necessity to the existence of animals, and what of it is human's should be disposed of by hibernation for three or four months in the year. Why, Mr. Editor, it does me good just to think of the thing, and to go into it would more than rejuvenate me for another three-score and eleven.

JOHN WISE.

Elm Cove Cottage, near Louisiana, Mo., April 2, 1879.

IMPROVED BARREL FOR BREECH-LOADING SHOT GUNS.

The accompanying engraving represents an improvement in rifle barrels for breech-loading shot guns, recently patented by Mr. Joshua Stevens, of Chicopee Falls, Mass., Fig. 1 being a perspective view showing the gun and attachment; Fig. 2 shows the breech of the rifle barrel; and Fig. 3, a longitudinal section of the same.

The rifle barrel, B, is fitted to the shot gun barrel, A, and provided with a longitudinal recess for receiving the slide, D, in which is pivoted a lever, E, having at its rear end a short projection, c, extending inward. The rifle barrel, B, is inserted into the rear end of the barrel of an ordinary breech-loading shot gun, the flange formed on the end of it entering the recess made in the shot gun barrel for the reception of the cartridge flange. The cartridge is now inserted and the gun is used in the ordinary way. After the discharge the

barrel of the gun is tilted down, and the extractor starts the rifle barrel out of the shot gun barrel; this operation moves the slide, D, slightly and starts the cartridge shell. Should this prove insufficient the rifle barrel is drawn out far enough to admit of raising the lever, E, which operation moves the slide, D, and ejects the shell. An attachment of this kind must prove a valuable acquisition for the sportsman.

THE GREAT CRAB-SPIDER.

The great crab-spider belongs to the typical genus of this family, and is one of the formidable Arachnida that are said to prey upon young birds and other small vertebrates, instead of limiting themselves to the insects and similar beings which constitute the food of the generality of the spider race. All spiders are carnivorous, the dimensions of their prey varying with those of the destroyer, and it is by no means an illogical supposition that a spider whose spread of limb equals that of a human hand, might suck the juices of some of the smaller and more helpless vertebrates.

In Madame Merian's well known work on the insects of Surinam, there is a careful and forcible sketch of one of these great spiders (*Mygale avicularia*) engaged in preying upon a humming-bird, which it seems to have taken out of its nest. She gives also a description of this spider, mentioning that it chiefly feeds upon ants, but that when they fail, it climbs the trees and catches the humming birds. For a time this account was believed, and the spider received the specific name of *avicularia* in consequence of its bird-catching propensities. After a while, however, several persons ventured to discredit the story, and at last both the account and the illustration were set down as simple fabrications of the imagination. Experiments were also tried, dead humming-birds being put into the dens of these spiders, without any result, and the whole of Madame Merian's account was bodily denounced as fabulous.

Lately, however, the *Mygale* has been seen repeatedly to kill the young, not only of the humming-bird, but of other vertebrates, and thus Madame Merian's reputation for veracity remains intact.

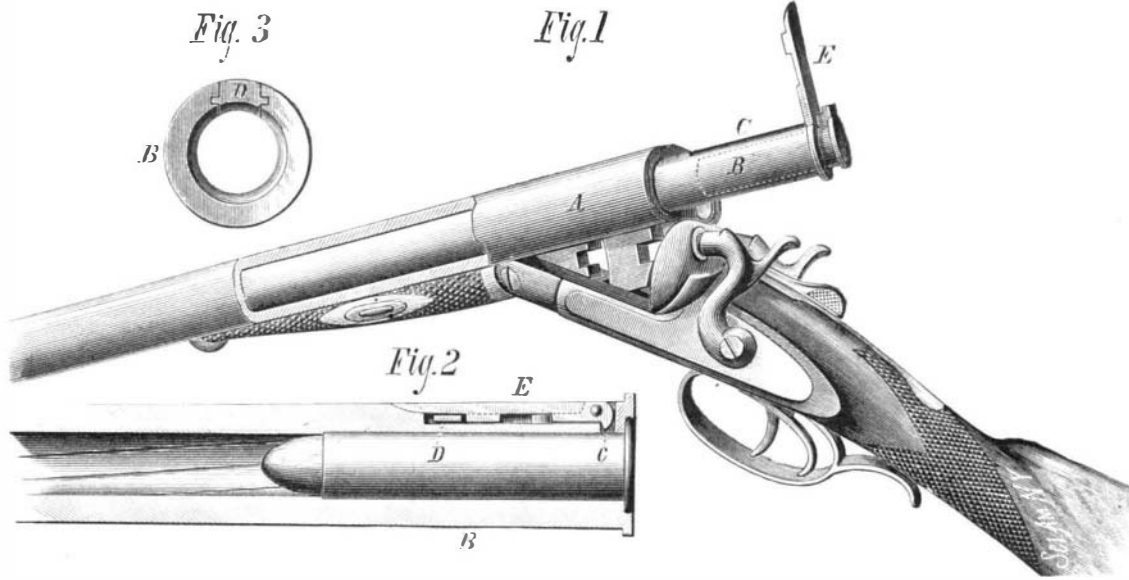
The *Mygale* spins no web to serve it as a dwelling. It burrows and lies in ambush in the clefts of hollow ravines, in volcanic tufas, or in decomposed lava. It often travels to a considerable distance, and conceals itself under leaves to surprise its prey, or it climbs on the branches of trees to surprise the colibris (*i. e.*, humming birds) and the *certhia flaveola* (a bird allied to our common tree creeper). It usually takes advantage of the night to attack enemies, and it is commonly on its return toward its burrows that one may meet it in the morning and catch it, when the dew, with which the plants are charged, slackens its walk.

The muscular force of the *Mygale* is very great, and it is particularly difficult to make it let go the objects which it has

seized, even when their surface affords no purchase, either to the hooks with which its tarsi are armed, or to the claws which it employs to kill the birds and the anolis (a kind of tree lizard). The obstinacy and bitterness which it exhibits in combat cease only with its life. Some, pierced twenty times in the corselet, continued to assail their adversaries without showing a desire to escape.—*Wood's Natural History.*

The Peanut Crop.

The following facts gathered by a Virginia peanut dealer, and submitted by him to the *Commercial Bulletin*, show the peanut crop to be of much greater importance than most



STEVENS' RIFLE BARREL FOR BREECH-LOADING SHOT GUNS.

people imagine. During the past five years the Virginia crop has ranged between 225,000 bushels and 780,000 bushels. The lowest crop of Tennessee was 175,000 bushels; the highest, 305,000 bushels. Of North Carolina, the lowest crop was 60,000 bushels; the highest, 125,000 bushels. The largest crop of the whole country was that of 1876-77, amounting to 1,405,000 bushels. The estimated crop of the coming season is 1,290,000 bushels. The Virginia nuts are the largest and have the finest flavor.

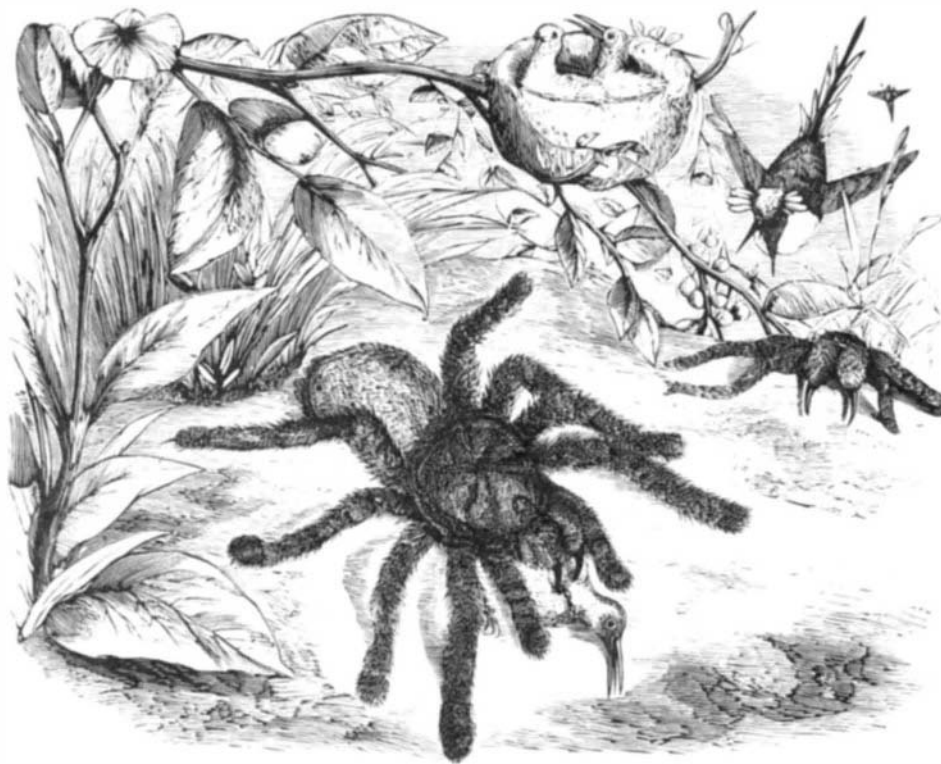
The grades of the Virginia nuts are, respectively, common, prime, strictly prime or choice, and fancy. The prices for nuts during the present season, on a basis of prime to strictly prime, have ranged as follows: October 7, first sale, new crop, at \$1.25; and during the rest of the month at

Where it is found in sufficient quantities to be employed for works underground, such as water pipes, pumps, etc., the yew will last longer than any other wood. Gate posts and stakes of yew are admirable to wear, and in France the wood makes the strongest of all wooden axletrees. Of the beech are made planes, screws, wooden shovels; and common fowling pieces and muskets are also stocked with it, and beech staves for herring barrels are not unknown. The sweet or Spanish chestnut furnishes gate and other posts, railing, and barrel staves, hop poles, and other such matters, such as strong and good charcoal, though scarcely equal to that of oak for domestic purposes, but considered superior to that of any other for forges.

Hornbeam is the best wood that can be used for cogs of wheels, excelling either the crab or the yew; but its application in this manner is about at an end. As a fuel it stands in the highest rank, emitting much heat, burning long, and with a bright clear flame. In charcoal it is highly prized, not only for culinary purposes and the forge, but also for the manufacture of gunpowder, into which, on the Continent, it enters in large proportion.

In Russia, many of the roads are formed of the trunks of the Scotch pine, trees from six inches to a foot in diameter at the larger end being selected for the purpose. These are laid down side by side across the intended road, the thick of one alternately with the narrow end of the other, and the branches being left at the end to form a sort of hedge on each side of the road. When thus laid, the hollows are filled up with earth, and the road is finished, being analogous to the corduroy roads of North America. In Germany casks are made of larch, which is almost indestructible, and they allow of no evaporation of the spirituous particles of the wine contained in them. In Switzerland it is much used for vine props, which are never taken up, and which see crop after crop of vines spring up, bear their fruit, and perish at their feet without showing symptoms of decay. The un-

injured state in which it remains when buried in the earth or immersed in water renders it an excellent material for water pipes, to which purpose it is largely applied in many parts of France. The butternut is esteemed for the posts and rails of rural fences in America, for troughs for the use of cattle, for corn shovels and wooden dishes. Shellbark hickory provides baskets, whip handles, and the backbows of Windsor chairs. The pignut hickory is preferred to any other for axletrees and ax handles. The sugar maple is used by wheelwrights for axletrees and spokes, and for lining the runners of common sleds. Dogwood is used for the handles of light tools, such as mallets, small vises, etc. In the country it furnishes harrow teeth to the American farmer, and supplies the harness of horses' collars, etc.; also lining for the runners of sledges. The mountain laurel



CRAB-SPIDER, OR MATOUTOU.

\$1.20 to \$1.10. November—Sales during month at \$1.05, \$1, 85 and 80 cents. December—80 and 85 cents. January—75, 80, and 85 cents. February—85 and 80 cents. March—80, 82½, 85, 90, 92½, and 95 cents.

Important and Excellent Appointments.

The appointment of Clarence King to the Directorship of the Consolidated National Surveys was confirmed by the Senate April '3. The same day the Senate confirmed the appointment of Dr. John B. Hamilton as Surgeon-General of the Marine Hospital Service.

A few days earlier Professor Francis A. Walker was appointed Superintendent of the coming Census.

It is doubtful if these offices could have been otherwise filled so wisely and acceptably.