Fruit Drying.

[From the Pacific Rural Press.]

In our issue of August 8th, we described a machine for drying fruit which it was claimed had been "thrown open to the public" over twenty years ago. We do not understand, from the article, which was clipped from the *Horticulturist* and which we republished in the PRESS, that the machine was ever patented; but on the other hand we should judge that the writer meant that the invention was "thrown open to the public" by the fact of its being described and illustrated in a public journal. Since writing our previous article we have taken some pains to inquire into the merits of the various fruit-drying machines now offered to the public, and to learn the difference in treatment and the quality of the final product of the different machines.

The process of placing the fruit in a closed chamber like a stove oven, and then heating the air in the chamber until the fruit is dry, is not a dessicating process, practically speaking, but rather a baking of the fruit. A small quantity of the moisture in the fruit is taken up by the air in the oven, but as the air has no escape it soon becomes charged with water and a steam is generated in the oven, which partially cooks the fruit.

When the fruit is dried in kilns, which are distinguished from the oven process by the fact that the air has free access and exit to the fruit during the drying process, the fruit is liable to become burned or scorched by the heat before it is properly dried, as the organic moisture in the fruit is soon carried away by the heated air, especially if the temperature is not high enough to seal the outside of the fruit, so as to prevent the escape of the moisture; and the consequence is that if the fruit is not scorched it is shrivelled and dried so completely that it is tasteless and incapable of being restored to its original flavor.

The secret of drying fruit, so as to leave it in a thoroughly preserved condition, without detracting from its original quality, the inventor of the Alden process, which is now being introduced quite extensively upon this coast, claims to have discovered. Mr. Alden claims that, to properly preserve fruit and vegetables by drying, only a small portion of its moisture must be removed. The fixed moisture which is not removed but remains in the fruit, he asserts, can be so chemically combined with the constituent elements of the fruit and vegetables that its presence, instead of being an objection, is absolutely necessary to prevent the succulent properties from being destroyed. This combination is effected by exposing the fruit or vegetables to a gradually decreasing temperature and increasing moisture. For this discovery Alden secured his patent, and although he uses an upright furnace with a chain carrier similar to the one described as having been thrown open to the public over 20 years ago, his process could be carried out in almost any style of furnace. In the old process it is evident that the fruit was carried from top to bottom of the stack or chamber. It is also evident that the heated air was admitted at the lower end of the chamber, and passed out at the upper end. The fruit was therefore exposed in its passage down the stack to increasing heat, dryness and decreasing moisture, just the opposite of the process employed by Alden. The 20 year-old process is therefore quite a different thing from Alden's. The apparatus, however, being old, can be used by all who desire to use it without infringing, as long as no patented improvement is added to it, and as long as the old process is followed out.

The rationale of the Alden process is that when the fruit is subjected to the high degree of heat at the lower part of the chamber or stack, the heated air commences to eliminate the moisture, and is converted into steam. This steam, rising upward in the stack, envelops the fruit above so as to keep the pores of the fruit open, and thus permit the free water to escape, while the remainder forms a component part of the fruit. Thus we see the difference between the Alden process and other processes which were previously in use. And if anything is needed to show us the superiority of the process, it is the excellence of the dried fruit produced by it.

Another fruit drier which is offered to the public, and which deserves especial mention on account of its cheapness and great efficiency, is the American Fruit Drier, patented Nov. 12th, 1872. Mr. Ryder, the inventor of this machine, agrees with Alden, that the fruit should be subjected to the greatest heat at first, so as to seal its exterior, and be gradually moved towards a lower temperature; but, instead of keeping the fruit surrounded by the steam of the newly introduced fruit, or other moisture, he carries the steam off as soon as it leaves the fruit; thus moving the fruit towards both a decreasing moisture and a decreasing temperature. The operation is carried on in an inclined chamber, through the middle of which the fruit is conducted on trays. The heat is admitted to the under side of the fruit line from the furnace, and rises through the fruit to the space above it, where the current of hot air carries the moisture off through the upper end of the chamber, without allowing it to strike the fruit above the point where the steam is generated. The goods produced by this drier are thoroughly desiccated, and, instead of being damp and clammy, like the Alden goods, are dry and firm. Either of these processes unquestionably preserves the fruit, and at the same time retains most of the properties of fresh fruits and vegetables in a condition ready to be developed again by returning their quantum of water. Fruit-drying machines are destined to become as necessary, in a commercial point of view, as the flour mill, sugar refinery, or other well established manufacturing apparatus. Every farmer who has a surplus of fruit or vegetables above what is necessary for home use, will require some arrangement for preserving them, and thus render them available during the months when fresh fruit and vegetables cannot be obtained. California, with her superabundance of fruits of all kinds, will appreciate the great value of these machines, and will use them for the purpose of enabling her to send these otherwise perishable products to all portions of the world where a demand exists. The fruit drying industry is now in its infancy. A few years hence, we believe, will show a different state of things. Large drying establishments will be in full operation. Large farmers will have their own driers, and the dried products will be found on every table. Time alone will tell which of the machines offered to the public is the best.

In the province of Silesia 260,000 colonies of bees are kept, representing a capital of more than one million of dollars. These, even in the most unfavorable years, yield a profit of ten per cent; and in propitious seasons, such as the year 1846 was, the yield was fully 100 per cent., or more than $1,000,000. It is well ascertained that the whortleberry and buckwheat blossoms are much richer in saccharine juices on the poor soil of Silesia than in more fertile districts.

GRASSHOPPERS are making sad havoc with the hay harvest in Montana. It is estimated that ranches yielding 100 tons last year will not yield 10 tons this year.

Progress of Life.

In our issue of August 22d we gave an illustration showing the building up of the earth's crust, and the various periods into which it has been subdivided by scientists. To-day we illustrate the progress of life, as developed by an examination and study of the fossils contained in the various deposits and geological subdivisions of so much as is known of the earth's crust.

Referring to our illustration, it will be observed that the diagram is separated into two general divisions, the one for animals, the other for plants. It is again divided into seven subdivisions, corresponding to the geological "periods" already alluded to. Commencing with the lower or Azoic period, we find the first appearance of life was vegetable—the *Algæ* (sea-weeds), a flowerless order of plants, propagated by spores instead of seeds, and vegetating in low, swampy places, or such as are entirely covered by water. This is the lowest form of life, and just what we might expect to find at the very beginning thereof.

As soon as we leave the Azoic period we come into the lowest order of animal life, which consists of Radiates, Mollusks and Articulates (crustaceans and worms). Each of these have continued in slightly varying quantities through all geological periods to the present time. The width of the shadings represents their increase or decrease through the several periods.

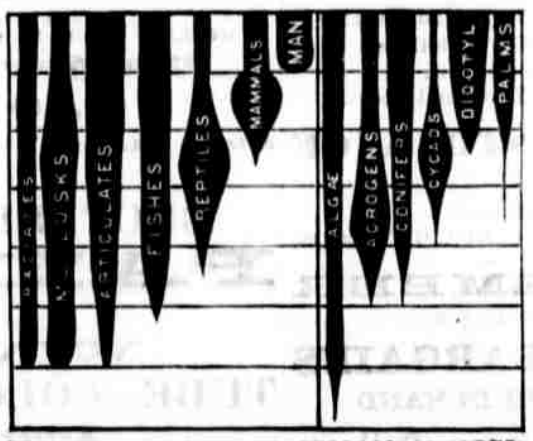
Fishes next commenced their existence, and have slowly increased in numbers up to the present time.

Next follow Reptiles, and after them Mammals, with very important variations in quantities until we reach the age of man, the last and crowning act of creation.

In Regard to Plants.

As we have already said, we first find the *Algæ* or sea-weeds—flowerless plants; next come the Acrogens, a second class of flowerless plants, embracing the coal-plants, the wonderful abundance of which, during the carboniferous age, is strikingly manifest from our diagram. The Conifers also began to appear about this time, and, as will be seen, have steadily increased to the present time. In subsequent succession came the *Cycads*, the *Dicotyls*, and lastly the palms—the most magnificent of vegetable creations.

The remains of all these animals and vegetable creations are found as fossils, and always



PROGRESS OF LIFE IN GEOLOGICAL AGES.

in the order of superposition as here given. This diagram presents a most interesting and instructive study.—[S. F. Pacific Rural Press.

Grasshoppers to be Utilized.

The biter is to be bitten, the grasshopper is to have a tooth for a tooth. Emperor Napoleon III. succeeded in a measure in educating the French people up to the habit of eating horse-flesh; the *American Naturalist* has embarked in the undertaking to induce the Yankee nation to place the grasshopper on its bill of fare. The authority mentioned above wishes to institute experiments as to the best styles of preparing the grasshopper for human food. The editor suggests, among other modes, that it may be a good way to fry them in butter—first killing them with boiling water—and declares his belief that they would thus become as palatable a dish as many that are now eaten.

This effort to make other people eat horse-flesh and grasshoppers will hardly be appreciated. Why don't these philanthropists take hold and show us how it is done? Let some advocate for grasshopper diet practice what he preaches for a season; then exhibit himself through the country as an example of what this food does for a man. We sincerely hope that the editor of the *American Naturalist* will succeed in making this a standard dish, because we shall expect to see this insect taken from us about as soon as its possession becomes desirable. We do not, however, hope to see the day when there will be any provision made in our game laws for the preservation of the grasshopper.

ANOTHER INCENTIVE TO HONESTY.—An electrical recorder has been invented in England which is used to record the number of passengers in an omnibus or street car. This ingenious instrument is fixed in some convenient part of the vehicle; all the seats are in connection therewith, and every passenger by sitting down makes contact and records his presence. The record is a strip of paper on which four pens make a series of lines and marks. The first line counts the minutes spent on the journey; the second line marks the speed and the stoppages; the third line counts the number of inside passengers within each minute of the time line, and the fourth line does the same for the outside passengers. All this goes on, so to speak, of itself; the passengers are unconscious of it; the conductor cannot hinder it, and so at the end of each journey the inspector tears off the strip of paper, and finds thereon an exact account of the number of fares he ought to receive. The applications of this instrument are obviously manifold, but in the manner described it is likely to be of most utility and supersede all other contrivances for the purpose.

CURE FOR THE CATTLE PLAGUE.—The *Mark Lane Express* says that at the time of the cattle plague, a farmer was seized with the strange idea that he was suffering from it. No doctor could persuade him to the contrary. At last one medical man gave him a prescription to take to a chemist. The chemist soon understood the nature of the case, and read aloud the note: "This man has the cattle plague; take him into your back garden and shoot him, in accordance with the act of parliament." The farmer vanished, quite cured.

PENNSYLVANIA COAL MINES.—All of the coal companies doing business around and in the Wyoming and Lackawanna valleys have stopped work, the market being overstocked. They expect to resume by September 1st. About 20,000 men and boys will have no employment during suspension.

Agricultural Implements at the Great Industrial Exposition.

It is not necessary that people should be acquainted with farming in order to be informed as to the great improvement made of late in agricultural implements. If they read their papers, even as much as they read their bibles, they will learn that in nothing upon which mechanical labor has been employed has greater progress been made than in this department. Nor does it require a continued familiarity with agriculture during the last fifteen years to realize the improvements made in implements within this period. It may be questioned whether the realization is not stronger, even in the minds of those who have no practical acquaintance with the farming implements of the present day, and only think of them in contrast with the tools of the period when they left the farm, perhaps a quarter of a century ago, than in those of the farmers who have been adopting these improvements as they have made their appearance in the field. The visitor to the Mechanics' Institute Fair who has been out of practice in farm life for a term of years—and there are many such among the crowds that frequent the Pavilion—will be astonished at the progress made in this department of mechanism.

The attendance of agriculturists proper has been quite large, even up to the present time; and will undoubtedly be still larger; but the visitors to this department of the exhibition have by no means been confined to this class. There is apparently as much interest manifested here by the residents of cities as by farmers themselves. A goodly proportion of the visitors to the agricultural implement department are ladies, who display a high degree of interest in the articles. The new style demagogues who are exerting themselves so strenuously to set class against class, may possibly succeed in measure in creating in the minds of the farmers a feeling of distrust and disrespect toward city people and their callings; for it is for this purpose that demagogueism is now doing its best; but they can never destroy in the minds of the professional, mercantile and laboring classes of the cities a longing for the charms of country life, and respect for those who follow it. But while they respect the farmer who guides the plow, they are disposed to give due credit to the mechanic who invented and made the implement.

A large space on the west side of the first floor of the Pavilion is appropriated to the exhibition of agricultural implements. As the visitor approaches this department from the front he first meets with the Stockton gang plow, H. C. Shaw, inventor and manufacturer. Only the smaller sizes of this plow are on exhibition. They are fine specimens of an implement that has been well tested. The same exhibitor has the Royce Economical Reaper and the Chisel Cultivator; both of which are well and favorably known.

The Kimball Manufacturing Company exhibit the M. L. Gorham Feeder and Cultivator combined; the California harrow—an adjustable and convenient implement—and the model of a scraper, which is said to be of great efficiency in road-making, grading railroads, etc.

Treadwell & Co. have a goodly array of agricultural implements here; among which are a corn sheller; the improved Hooker drill; the Wolverine cultivator; gang plows; Clark's patent double shake fan mill; the Whitewater wagon; the Swift mill; the Junior Excelsior cider press; lawn mowers; Huchinson's family cider press, etc.

Marcus Hawley & Co. have on exhibition the Illinois harvester; the Buckeye mower and reaper; the Deere gang plow; the National hay cutter; the Chicago wagon; the John Deere cultivator and single plow, the Buckeye cider mill, etc.

Walter A. Wood exhibits harvesting machines. J. D. Arthur & Son exhibit the Jackson Michigan wagon.

Baker & Hamilton have a large and meritorious exhibit; comprising the Sweepstake plow; the Excelsior lawn mower; the Buffalo Pitts thresher and separator; the Hickory Valley feed cutter; a corn and wheat mill of five-horse power; Rose's vineyard plow; the Price hay press, and many other articles not strictly agricultural.

Among the implements mentioned above are many that deserve special mention. In fact, there is scarcely one of them that is not worthy the space here given to the whole list. Still we have not been able to mention all the agricultural implements on exhibition, even in this condensed form. We will continue the list in a future number of our paper.

—[S. F. Pacific Rural Press.

THE POLYSPHERIC SHIP.—This is the name of a novel vessel, recently invented in England by Mr. Charles M. Barnes. The bottom is flat and fitted with three inclined planes with square ends, the effect being as though three teeth of a gigantic saw were moved through the water with the sloping portion of the teeth first. The inventor has tested the device by means of small models impelled by rockets. A seven pound model was driven, by a three pound three ounce rocket, a distance of 105 yards in three seconds, or at the rate of 63 knots per hour. The motion is said to resemble sliding over ice. There is scarcely any water disturbance, and the decks were apparently motionless. When drawn slowly over the water, the vessels offered more resistance than models of the ordinary shape; but when the equilibrium, between the horizontal pressure of the inclines forward and the pressure of the water in the contrary direction, is destroyed, the model at once rises in the water and passes over the mass of hitherto obstructing fluid.

TAN oaks of Lake county being large, afford excellent material for the manufacture of staves. William Curry, of Sonoma county, is at present engaged in making oak staves in Scott's valley, for Fuller & Co., of Petaluma. He will have 30,000 staves ready for delivery by the 1st of September. They will be of different sizes, and used in the manufacture of wine pipes, barrels and butter kegs.

Grapes Without Irrigation.

One of the most successful grape-growers of Los Angeles called at our editorial rooms recently, with whom we had a very pleasant chat about matters pertaining to grapes. This gentleman claims to be the first grape-grower to adopt the non-irrigation system. Yankee enterprise—impelled somewhat by necessity—induced him to break through some of the established rules of grape culture.

His place being up in the foothills, where surface water was not available, and where it could not be reached by digging 125 feet, there was a "poor show" for his grape vines obtaining the moisture which was supposed to be indispensable to their growth. Some parties encouraged him with the suggestion that the vines might possibly thrive if they could be pretty thoroughly irrigated up to the first of July; while others went so far as to hope that watering up to the first of June would do. But our friend could not depend on water after the first of May; still he planted a few vines, depending on the limited amount of water which he could supply from buckets. It is generally conceded that the vines do best on the somewhat dry foothills, when they are once established there, but it is generally believed that they require a liberal supply of water for one season, at least. But the gentleman alluded to proved that the vine, even in its first season's growth, needs but little water. It manifests at once an affinity for its natural home, the hill side.

It has been proven that the vine can thrive without irrigation; and that the fruit is better without it. The grape-root naturally strikes deep, very deep; and it is probably from its lower depths that it obtains the richness and fine flavor that the fruit possesses. Although the roots of the vine naturally strike deep, they will be attracted to the surface if the vines are irrigated. As a consequence of the roots imbibing this artificial moisture, the juice of the grape becomes too watery; and the fruit, obtaining sustenance from the surface soil, does not possess richness or flavor, whose reservoirs are located deeper down in the earth. The wine from grapes grown under irrigation does not possess the character or keeping qualities of that produced under more natural circumstances; and but little of even natural moisture is desirable.

We have tasted of several varieties of the wine, and also of the brandy, produced by the gentleman alluded to above, and find them of a superior quality. The quality of the unpressed grapes grown on the red hills of Nevada county—the soil and situation being decidedly similar to those where the fruit under consideration was grown—was known to us; and we were not surprised to find the wine of our Los Angeles friend of a corresponding richness and flavor. It has long been the opinion of many that such localities, offering but little encouragement for growing grain and some other crops, are destined to be the favored spots for grape culture.

Since the peculiar grape-producing merits of certain localities have been demonstrated by the experience of Californians, our people are not so incredulous about the marked variation said to exist in the quality of wines produced in localities separated merely by a range of hills or a river.

The difficulty of realizing how places in such close proximity could produce the same article, under the same treatment, yet differing in so marked a degree in strength and flavor, arose principally from the point of observation, the difference in the product being supposed to depend mainly on the climate. But soil, we apprehend, gives character to the grape; and anyone who has worked the soil is aware of the great difference which a trifling separation will sometimes produce.

—[S. F. Pacific Rural Press.

The Alfalfa Parasite.

Henry Stewart, Esq., editor *American Agriculturist*, writes us as follows on the subject of the alfalfa parasite, which was noticed in a recent issue of the RURAL:

The parasite upon alfalfa, which is described in the RURAL PRESS of August 15th, is without doubt the "dodder," a species of *cuscuta* which preys extensively upon this plant and clover in Europe. It has probably been introduced into California with the seed of alfalfa. I should be greatly obliged if your correspondent, who sent you the specimen, would send me one; or, if you would procure one for me, that I may verify my suspicion, and identify the species. It is a very destructive pest, and is very difficult to get rid of. Probably the best plan is not to cut any infested crops for seed, and mow it before the "dodder" seeds are ripe.

It will be seen that the opinion of Mr. Stewart and that of Mr. Elliott, as expressed in the correspondence department of our present number, exactly coincide. These gentlemen are both reliable authorities on this subject. Will our Colfax correspondent, who sent us the sample of the parasite that has been the means of drawing out these opinions, confer a still further favor by sending us another specimen? If he will do so we will see that the request of Mr. Stewart is complied with.

—[S. F. Pacific Rural Press.

CHEAP ICE HOUSE.—At a meeting of the Elmira Farmers' Club, some time since, W. A. Armstrong said that a cheap ice house could be made out of a simple, well-roofed enclosure, without hollow walls or pits, or other costly apparatus. He leaves six inches of space next the sides all around, into which he rams clean sawdust closely, and covers the ice when packed with a foot of the dust. The ice is cut into large blocks and made to fit at the joints as closely as convenient, but where edges are jagged he fills in with pounded ice or sawdust—the latter being the cheapest. Drainage is important, but if the house stands on porous soil, or is so elevated that the water will run off readily, it answers every purpose. He had kept ice several years in such a building, nine feet square and the same in hight, the sides being only of inch boards. When the ice is taken out, be careful to keep all cavities covered with sawdust or it will waste away rapidly. In answer to a question as to the cost of a house 14 feet square, he said that $50 would pay for it and the sawdust, and built of cheap lumber it might cost only $25. In packing, spent tan or cut straw would answer nearly as well as sawdust.

WIRE FENCE.—The grassy angles between the walks in the dooryard can be kept free from intrusive footsteps by a low fence of telegraph wire painted green. Cut the wire in lengths of six or seven feet, and put each end in the ground, forming a semicircle. Midway between the two extremities of the first semicircle place one end of another length, and continue this simple fence as far as necessity requires. It should be about two feet and a half high.

ARAGO says that "he who, outside of the range of pure mathematics, utters the word *impossible*, is wanting in prudence."

Mohair.

The Angora goat still has its true friends, though it is not worshiped as a sacred animal, as it was, apparently, a few years since. The delusive form which the subject assumed in its early stages was unfortunate in several respects. As a brief business delusion, it deserves to be classed among the most unreasonable of the hobbies that have run away with our impatient people. The failures growing out of it, it is true, have not been of a disastrous character, any farther than as a waste of energy, and causing discouragement and lack of confidence in new enterprises generally; though this is really in itself a disaster.

It is hardly to be wondered at, from a business standpoint, that the importers and breeders of Angora goats should encourage, or should at least make no effort to dispel the delusion that the possession of an Angora goat would insure a fortune in a few seasons; but sales that impoverish and disgust the buyer are of no profit to the seller, in the end. But the impoverished and disgusted purchasers of Angora goats have but little claims to our sympathy; for they, in their turn, were but pandering to this somewhat trickish delusion. It was from the progeny of the animals, and not their fleece, that owners looked for profit. In many things it is easier to produce than to dispose of the product; and, in the matter of mohair, especially, the services of the manufacturer and the dealer in the raw material are more needed at the present time than those of the breeder. The business is without form and void. Even when mohair becomes a staple product in this country—and this will undoubtedly happen in due time—we must expect fluctuation in prices, to an extent fully as great as in wool; but this uncertainty would be far more satisfactory than the present chaotic state of the business.

In regard to the present surroundings of this product the San José *Mercury*, of Aug. 21st, speaks as follows:

"The present rate of increase of Angora goats on this coast, both in regard to number and grade, indicates that California will soon derive an immense revenue from the sale of mohair, if not from its manufacture either into threads or fabrics, or both. At the present time the huge herds of Landrum & Rogers, of Watsonville, Lewis & McCracken, of this county, together with the smaller flocks scattered here and there over the State, have been brought very near perfection. Indeed, it has been pretty thoroughly demonstrated that the California fleece is superior in quality and heavier per goat than that in the animal's native country. We make this statement from the figures. The Asiatic fleece brings in the European market from 75 cents to one dollar per pound. In 1871 Butterfield & Sons shipped to Philadelphia some 3,000 pounds of fleece taken at random from flocks throughout the State. This consignment was graded by the dealers into five classes and brought the following prices per pound:

1—Fine, not kempy	$1 20
2—Low, " "	1 10
3—Fine, kempy	80
4—Low, "	70
5—Shorts and breech	40

This makes an average price in gold coin here of 85 cents per pound. The following year another shipment was made at the same figures. Since that time the goats have been so much improved by breeding, that kemp is almost unknown, and the fleece takes a much higher grade, the third and fourth class being merged in the first and second."

There are reasons for suspecting that in this, as in some other industrial efforts, we have been the victims, in a degree, to foreign prejudices, and, possibly, of foreign interests. Among the American people there is a lack of mutual confidence and concert of action. The very air we breathe is filled with foreign preferences and prejudices, taking the form of clannishness—depreciating and, indirectly, hindering advancement in industrial, artistic and social matters; and especially pervading American journalism, from our heaviest quarterlies to our lightest dailies. Nothing is considered worthy the commendation of this foreign partiality, only in so far as it approximates the same class of productions "at home." This charge, however true it may be, will probably be considered of too trivial a character to deserve serious notice, being simply irritating; but those who have given the matter due attention declare that the prevalence of this foreign partiality is seriously detrimental to American enterprise. As a people we have been sufficiently willing to accept and apply the benefits of foreign experience; but much that is not at all transplantable has been crowded upon our notice, and we are supposed to be stubborn or stupid for not adopting it. American industries—our farming system, especially—have peculiar wants which cannot be supplied from foreign sources.

We must look out for this undefined form of "foreign intervention" in connection with mohair. Let us cultivate a little clannishness on our part, to protect us against the clannishness of our neighbors. The almost sacred tradition of "skilled foreign labor," and the bugbear of the cheapness of foreign labor, will have to be encountered at every turn. French and English monopolists have done much to retain the manufacture of mohair, and to retard the production and manufacture in this country, by favoring the impression that the processes of manufacture were extremely difficult, and the machinery enormously expensive. Both of these fallacies were practically disproved at the Paris Exposition; where it was demonstrated that the process was not difficult nor the machinery expensive. The cost of spinning machines ranges from $100 to $200, according to the number of spindles; and the double Jacquard loom, the best loom known, manufactured by Willibard Schrane, of Vienna, costs only $200. We should consider that, in the progress of mohair manufacturing in this country, the machinery required would undoubtedly become cheapened and improved by American mechanism.

In the present crude, undefined state of this business, it would not be at all surprising if the quality of the product should deteriorate; and the reputation of California mohair suffer accordingly; but this difficulty can soon be surmounted by a more careful system of breeding the animal and by the judicious assortment of the fleece. An established demand for the raw material is now the great desideratum.

—[S. F. Pacific Rural Press.

A POWER SUPPLYING COMPANY.—The Rochester (N. Y.) Hydraulic Co. carries on no manufacture, but rents its buildings to various manufacturers, supplying the power to them from the water flowing in the river beside the shops. A short time ago the rock was cut so as to make a deep well, and two of the largest water wheels, yielding over 1,000 horse power, were placed therein. It is the intention of the owners to add another wheel, which will swell the power attained to over 1,500 horse power. —*Commercial Bulletin.*

ROASTING COFFEE.—A new invention has for its object an improved mode of roasting coffee, and consists of means for roasting coffee by reflection of heat.