Correspondence.

Grindelia Spirosa.

To the Editor of the Scientific American:

It may be of interest to your botanical readers to know that, while collecting plants, early in last September, I found a specimen of *Grindelia spirosa.* It was in rich soil, about five hundred feet from the shore of our lake (Michigan).

Since it belongs to Rocky Mountain botany, and has a habitat not farther east than Colorado, it would be interesting to know how it found its way to our town.

It could scarcely have been brought by the railroad, fo it was fully half a mile from any track.

Since finding the "*spirosa*," I have been informed that another species has been found in Michigan. Perhaps you can offer an explanation of how it was likely to be brought here, or your correspondents may be able to give instances of finding some other *Grindelia.*

WM. H. DUNHAM.

No. 721 Greenwood Street, Evanston, Ill.

The Rock Salt Find at Ellsworth, Kansas.

To the Editor of the Scientific American:

A paragraph copied from your columns has been apparently going the rounds of the press. I have seen it in two Kansas papers. It is to the effect that recent discoveries of rock salt at Ellsworth, in this State, were made by prospecting parties against the advice of professional geologists, who assured the parties that they would get only their labor for their pains. This statement is altogether incorrect. The discovery of rock salt was predicted twenty years ago by Professor Mudge. The present writer only a few months before the Ellsworth discoveries assured citizens of Ellsworth County that salt as strong brine or rock was one of the certainties to be found by deep drilling in almost any part of Kansas. Warnings against the expectation of finding coal by deep drilling in middle and western Kansas have been given by geologists, and every boring made has justified the warning. The present writer, in the last biennial report of the State board of agriculture, has suggested that rock gas may be found in those regions. The drillings made have mostly yielded it, but so far not in any large quantity. As far as Ellsworth is concerned, it is not believed that any expert geologist was consulted, as there are only two or three in the State. To put the professors of science right on this matter, will you insert this?

ROBERT HAY, Geologist.

Junction City, Kansas, December 7, 1887.

The Uncertainty of the Law—The Driven Well Case.

It would be hard to find in the history of litigation a more striking instance of the uncertainty of the law than the driven well case recently decided by the Supreme Court of the United States. The patent was granted January 14, 1868, and reissued May 9, 1871. It expired January 14, 1885. The litigation concerning the invention began in the Patent Office, in an interference proceeding before the letters patent were issued, and it survived the patent nearly three years, ending only with this last decision of the Supreme Court, if that shall in fact finally end it.

The act of 1836, entitled "An act to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose," did not allow a patent for any invention which had been in public use, or on sale, *with the consent or allowance of the inventor*, for any period, however short, before his application.

An amendment to this act, passed in 1839, provided that every person who had purchased a new invention before the application should have the right to use and sell it, and that "no patent shall be held to be invalid by reason of such purchase, sale, or use, prior to the application for a patent as aforesaid, except on proof of abandonment of such invention to the public, or that such purchase, sale, or prior use has been for more than two years prior to such application for a patent."

The whole case turned upon the question whether, under this amendment, the public use for more than two years must be with the consent or allowance of the inventor, in order to invalidate the patent, or whether any public use of it for more than two years, though without the inventor's knowledge, would have the like effect.

The Supreme Court held the latter, and declared that "the purpose of the section was to fix a period of limitation which should be certain, and require only a calculation of time, and should not depend upon the uncertain question of whether the applicant had consented to or allowed the sale or use. Its object was to require the inventor to see to it that he filed his application within two years from the completion of his invention, so as to cut off all question of the defeat of his patent by a use or sale of it by others more than two years prior to his application, and thus leave open only the question of priority of invention."

There has never been any controversy as to the facts to which the construction of this statute was to be applied in relation to the driven well patent. It was proved in the interference case, before the patent was granted, that Col. Green invented the driven well process in 1861, and put one in operation in Cortland, N. Y., while he was drilling his regiment there, and that during the next three years, and more than two years before he made his application for a patent, several driven wells were constructed in that town and publicly used. Col. Green denied all knowledge of these wells, and excused his delay in making the application by proof of his troubles arising out of his indictment for shooting one of his officers, and his discharge from the army.

During the litigation concerning this patent for nearly twenty years, the Patent Office, five circuit judges, and three justices of the Supreme Court had concurred in a construction of this statute which required the knowledge and allowance by the inventor of more than two years' use of his invention, to defeat his patent. In fact, it had come to be regarded as settled law; so much so, that Walker in his recent work on patents stated that under the law of 1839, "the consent of the inventor was a necessary element of the facts upon which the old law raised a constructive abandonment;" that this was changed by the act of 1870; and that "the old law on the subject of consent can still be invoked on behalf of any patent granted before the approval of the act of July 8, 1870." This only followed the views expressed in Curtis on Patents, which was published and regarded as authority long before this patent was issued.

It was solely by the overthrow of this construction of the statute, which seemed to have become so firmly settled, that the Supreme Court reached the result of invalidating this patent. It seems a hard fate for the acknowledged inventor of a process of world-wide utility that he could not have been told by the patent offices or the courts, at the outset of his efforts, what was the right construction of this act of Congress. And it seems doubly hard that he should have been led by repeated decisions of the federal courts to rest upon their wrong construction of the act, and to spend vast sums of money, and involve the interests of others, in maintaining his character as the inventor of a thing which could not, as it now turns out, be lawfully patented, and in defending a patent which, on the admitted facts, shown in the interference case, ought never to have been granted.

It was, however, no fault of the Supreme Court, for it happened that in the three cases decided by that court the fact that driven wells had been constructed in Cortland more than two years before the application did not appear, and the construction of the act of 1839 did not become a subject of controversy. In fact, until Judge Love, in the Hovey case, read his able opinion declaring the view of the section now sustained by the Supreme Court, the contrary view had been regarded by the circuit courts and the profession as definitely settled.

The remark with which this article opened is, therefore, justified by the facts. This driven well case is a signal instance of the uncertainty of the law.

To sum up the situation: Col. Nelson W. Green was the first inventor of the driven well. The fact has been finally established by the Supreme Court, after a struggle of nearly twenty years. He never voluntarily abandoned his invention to the public. That fact was also finally established in the Supreme Court. He delayed his application over four years, through stress of circumstances arising out of the war. But in Beedle *vs.* Bennett the Supreme Court, stating those facts, said: "These circumstances sufficiently rebut and presumption which might otherwise have arisen of an intention on his part to abandon and dedicate to the use of the public the invention described in his patent."

The patent itself was effectual in form and substance to secure to him the broadest rights arising out of his invention. This was established by the concurring opinions of Judge Fisher, Commissioner of Patents, and Judges Benedict, Nelson, Dillon, Gresham, Wheeler, Blatchford, Nixon, McCrary, Shipman, and Sage, ten members of the federal judiciary. And it was finally affirmed by the Supreme Court in three cases on appeal. The reissue of the patent, strenuously attacked after the new ruling of the Supreme Court on that subject, was sustained in the circuits, and finally sustained in the Supreme Court, in Andrews *vs.* Eames.

But all this was of no avail. The invention was made and publicly shown in Cortland, N. Y., in 1861. It was so useful and so simple that some citizens who saw it put it in public use without the inventor's knowledge more than two years before his application for a patent. This fact was proved in the Patent Office, but Judge Fisher, on appeal, followed the construction of the act of 1839, then established by the courts, and adopted in Curtis on Patents, then the standard authority, and ordered the patent to issue. This construction had the sanction of Judges Shepley, Woodruff, McKennan, Benedict, and Blatchford, circuit and district judges, and of Story, Nelson, and Clifford, justices of the Supreme Court. And this construction was maintained and acted on for a period of nearly fifty years after the statute was passed. Receiving his patent from the government in pursuance of it, Col. Green and his assignees, upon the faith of it, made vast outlays in defending the rights thus granted to him. Entrenched behind this construction, a great body of rights and interests throughout the country has been built up.

It is now finally overthrown, and held by the Supreme Court to have been wrong from the beginning, and the patent is declared to have been unlawfully issued. There have been cases where courts of last resort, finding a line of decisions not in accord with their matured views, and finding also that large interests have long securely reposed upon them, have invoked the maxim *stare decisis* as a just ground for refusing to overthrow a statutory construction long settled and acted on.

In view of all the facts, the parties interested in the driven well patent throughout the country may reasonably feel that their case was one which deserved such judicial forbearance.—*Abstract from the New Jersey Law Journal.*

Self-control.

An expert and experienced official in an insane asylum said to us, a little time since, that these institutions are filled with people who have given up to their feelings, and that no one is quite safe from an insane asylum who allows himself to give up to his feelings. The importance of this fact is altogether too little appreciated, especially by teachers. We are always talking about the negative virtues of discipline, but we rarely speak of the positive virtues. We discipline the schools to keep the children from mischief, to maintain good order, to have things quiet, to enable the children to study. We say, and say rightly, that there cannot be a good school without good discipline. We do not, however, emphasize as we should the fact that the discipline of the school, when rightly done, is as vital to the future good of the child as the lessons he learns.

Discipline of the right kind is as good mental training as arithmetic. It is not of the right kind unless it requires intellectual effort, mental conquests. The experienced expert, referred to above, was led to make the remark to us by seeing a girl give way to the "sulks." "That makes insane women," she remarked, and told the story of a woman in an asylum who used to sulk until she became desperate, and the expert said, "You must stop it. You must control youself." To which the insane woman replied, "The time to say that was when I was a girl. I never controlled myself when I was well, and now I cannot." The teacher has a wider responsibility, a weightier disciplinary duty, than she suspects. The pupils are not only to be controlled, but they must be taught to control themselves, absolutely, honestly, completely.—*Jour. of Education.*

A Noble Retriever.

The *Western Mail* first published the following remarkable story of a brave dog: On December 29 last the steamship Muley Hassan was passing through the Straits of Gibraltar, when Captain Thomson went on deck with his retriever Nellie. The sagacious animal at once ran to the rail of the vessel, raised herself on her fore paws, and commenced to whine. The captain looked, but could see nothing. The dog, however, got more and more restless, and finally jumped overboard, and swam astern. The engines were stopped, and a boat lowered, when the dog was discovered, firmly holding the collar of the coat of a drowning man, who was lying across two oars. It was afterward ascertained that he was the only survivor from a Spanish revenue felucca, which had been upset in a squall, and that he had been in the water four hours when rescued. It would have been impossible for him to have survived much longer. Both man and dog were in a very exhausted condition when taken on board the Muley Hassan. The above incident has formed the subject of a presentation to Captain Thomson of a silver medal and diploma, for his gallantry and heroism in saving the life of the poor Spaniard. Without in the least wishing to depreciate Captain Thomson's effort or deserts, we must say that Nellie most certainly deserves to have some sort of honor conferred upon her, and that she certainly ought to be ranked among the historical dogs who have earned name and fame for heroic deeds.—*Swiss Cross.*

Value of a Hobby.

If we ever became vindictive toward a fellow man, and desired to punish him, we would deprive him of his hobby; without that, he would be lonesome in a crowd, and crowded in a wilderness, and would seek what he had lost and find it not. The business man with a hobby that he rides is a happy man; but if the hobby rides him, the business will suffer sooner or later. The man without a hobby will be found in the club room, the billiard room, or card room. The hobbyist, with his loft of pigeons, his bird skins or eggs, bugs or beetles, takes more substantial happiness than all the members of the highest toned club in a city combined. Besides that, home and Dame Nature is all the world to him and all the heaven he ever aspires to.—*Wade's Fibre.*