IN THE FIELD OF REFORM

Practical Work in the District of Columbia School.

Operations in Extracting Pure Metal From the Dross of Juvenile Depravity—Excellence of the Home Established for Youthful Offenders of Laws—Pupils and Their Labors.

It is difficult for a visitor to the District of Columbia Reform School to realize the fact that only a few years ago the trimly-kept park and fruitful fields enclosing the several buildings and outhouses comprising that establishment was a wild and barren tract, offering apparently little encouragement to anyone hoping to reclaim it to usefulness and beauty. Such, however, was the case and it is perhaps not out of the way to draw an analogy between this fact in connection with the outward aspect of the institution and the purpose which it is accomplishing—to draw, even from the most abandoned, those elements of good which may lie beneath the surface, and present to them a career of honor and benefit to their fellow-creatures.

To the accomplishment of this great end the present Superintendent of the Reform School, Col. A. G. Shallenberger, lays down three simple, fundamental principles. The first of these is to instruct the pupil by giving him a thorough common-school education; the second, to develop his industrial faculties by ascertaining the trade or occupation toward which he has a natural leaning, and to give him opportunities for mastering the same, so that he goes out into the world fully equipped for obtaining an honorable subsistence; and third, but by no means last in importance, to instill into his heart those principles of chivalry and humanity which teach him to help one weaker than himself and to show kindness and consideration to all around him. The principles involved under all these heads are, of course, inculcated together during the inmate's residence in the Reform School, and it is very seldom indeed that they fail in producing good results.

The pupils of the establishment are divided into four families, denominated respectively A, B, C, and D, each comprising between seventy and eighty boys. One of these families is located in the main building of the school, and the other three in separate buildings, each of which contains its own school-room, play-hall, dormitories, toilet appurtenances, etc. The families are divided according to the ages of the boys, and as to whether they are white or colored. According to the present law, a boy must be under sixteen years of age in order to procure admission to the school, and the President of the Board of Trustees, Col. Cecil Clay, recommended in his last report that Congress make the limitation under seventeen years, for the reason that "boys are sent to the jail or workhouse because just too old for admission to the Reform School who at the same time are not so bad as younger boys who go to the school, and it would seem better to keep them from the associations of these places." The pupil remains in the school until he is twenty-one years of age unless sooner reformed. It is seldom found necessary, however, to keep a boy during the entire limit prescribed by law.

Inmates All Well Fed.

There are two great dining halls located in the main building in which the meals for the whole school are furnished. Good food and plenty of it, is one of Colonel Shallenberger's principles in regard to the care of boys, and no one leaves the great tables stocked with substantial victuals feeling disposed, like Oliver Twist, to ask for "more."

The white and colored pupils are kept separate, but both receive the same attention and privileges. Each family is presided over by a matron, at the head of whom is Mrs. Shallenberger, to whose supervision the institution owes much of its gentle care and efficiency. There is also a first and second officer appointed to each building, one of whom teaches school while the other overlooks the work of the boys on the farm and in the various shops. The vegetables consumed in the establishment are raised on the farm, and comprise nearly all the varieties which can be successfully cultivated in this part of the country. Several sorts of fruit are produced on the Reform School farm. Strawberries are there in their season, and melons of every kind and quality are in no sense a rarity. The fact that the boys themselves share in these dainties is no little incentive to their labors, and naturally induces them to do their best in producing the best specimens of fruits, while it serves also as an agency in the promotion of health and discipline.

The piggery, which occupies a wooden building of considerable extent, well stocked with fine specimens of the porcine tribe, furnishes all the pork needed. A dinner was given to the boys a few days before The Times' reporter's visit to their home, consisting entirely of that delicate and delectable of dishes, roast suckling pig, accompanied, of course, with sundry vegetable trimmings. A specimen from the piggery that furnished the main garnishment for this feast gained the prize at the Chicago World's Fair.

A large building is devoted to the stabling of the horses used upon the farm, as well as those employed in drawing the wagons which bring a certain class of merchandise from the institution to the city for disposal. Here also are stabled the cows, seventeen in all, which give the milk used in the establishment.

Bread From a Model Bakery.

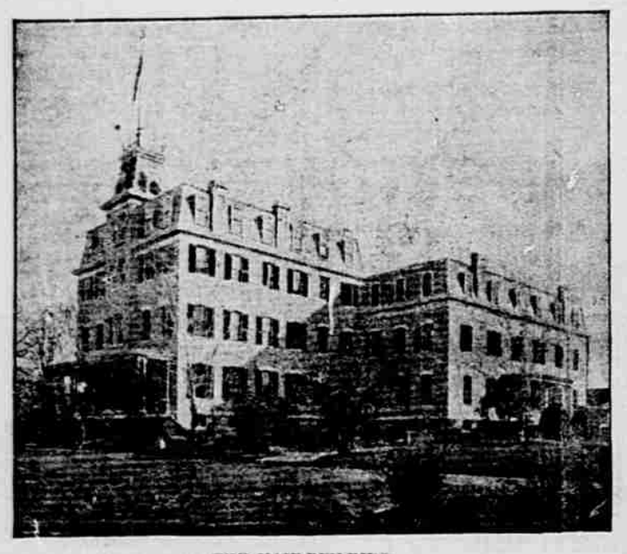
There is an ample sufficiency of milk therefore, and an abundance of cream and cheese. Bread is there in plenty for the hungry boys, and they eat no small quantity of the "staff of life." The bakery is a model institution. It is provided with the most improved form of oven, as well as the latest appliances for mixing dough. The kitchens, which are situated in the main building, furnish a bright spectacle of cleanliness, and the rich glow reflected in the huge copper kettles or boilers which are used in the cooking of soup, coffee, tea, etc.

Cleanliness, in fact, is one of the most notable features in connection with the establishment. It is reflected everywhere from the reception and board rooms in the main building to the most remote corners of the dormitories. The table covers in the dining halls and the bed clothes in the sleeping apartments are alike radiant with immaculate whiteness. This occasions no wonder after one has visited the laundry, a building not far from the main entrance fully equipped with mangle and wringing machine, and a perfect institution of its kind.

Personal cleanliness is most rigidly enforced. Hot swimming baths are connected with each family building, in which the boys bathe every Saturday. A pupil upon first being received is given a thorough cleansing and completely furnished with clean clothing. Abundant water is obtained by means of a steam pumping apparatus of 100-horse power, connected with an artesian well 280 feet deep. The water is raised to the top of a tower, at a considerable height above the other buildings, and an excellent supply of high pressure is thus furnished.

Cultivation of Flowers.

The greenhouses, which largely contribute to the ornamentation of the grounds, are of much value and utility to the institution, to which they yielded an income during the past year of $473.28. This sum is derived from sales to local florists, after the gardens and beds of the grounds have been stocked. The surplus farm products are disposed of in like manner. The greatest profit of the institution, however, is derived from the paper-box factory. The sums obtained from both of these do not go toward the support of the school, which is provided for by an annual appropriation of $26,000, but are turned into the Treasury to the credit of the Government and the District of Columbia jointly. The paper-box factory is a large and well-equipped manufactory, and supplies many of the florists and restaurant keepers of the city with this indispensable adjunct of their stock. There are about thirty boys regularly employed here, aided by the latest machinery and devices for their trade. Elaborate specimens of handiwork are turned out by these juvenile workers. This establishment has been in operation during ten years, and started, as did all the industrial branches of the school, in the most primitive manner, about half a dozen boys then devoting themselves to turning out the simplest kinds of boxes by hand. The proceeds from the work of this factory during the last year amounted to $2,850. Another most important industrial feature of the school is the manual training establishment.



THE MAIN BUILDING.

Dr. Shallenberger observes in his last annual report to the board of trustees in regard to the industrial opportunities given to the pupils:

"All have equal opportunities provided them for a trial in the mechanical shops, and their daily occupation is largely determined by the interest they manifest, whether it be in domestic, agricultural, or mechanical labor. To care well for a horse and to drive him acceptably to his employer is better for the individual boy than for him to signally fail in any forced effort he may make to accomplish impossibilities in a higher class of labor. We find many, however, who take naturally to the saw and the plane, who prefer the square and compass to either the milk pail or the hoe, and who are at home in the shop rather than on a farm. Hence it is always safe, when at all possible, to provide them with employment suited to their varied inclinations. This we try to do, believing it to be in their interest and for their present and future benefit."

The shoe shop, which is in reality a manufactory of considerable size, supplies the entire school with shoes through the labor of the boys themselves, and the specimens of work which it turns out would do credit to any factory in the country. Of course, all these industrial branches of the school are under the charge of trained artisans, skilled in the particular branch which they superintend, but the actual work is done by the pupils.

The family building besides containing the schoolroom, is the headquarters of the pupil where he retires after the day's labor and instruction, and no cleaner or better-appointed abode can be imagined. The dormitories are models of neatness and order. Each pupil is furnished with a separate iron bedstead, and the appointments are all under the care of an experienced matron. A watchman is stationed in a room surrounded by glass from which he can overlook the whole sleeping apartment. He is further required to visit the different parts of the building every hour, each visit being recorded by means of an automatic apparatus located at different stations.

The institution has suffered considerably from fire during past years, several of the outbuildings having been destroyed. This danger is well guarded against at present, electric communications exist between all the buildings and an alarm can be rung from any point visited by the watchman. An engine and hook and ladder with hose reel supplied with water plugs at convenient stations furnish a means of defense which can be put in operation in very short time. In addition to this the two family buildings erected during Dr. Shallenberger's superintendence are as nearly fireproof as buildings can be made, while alterations with the same design have been made in the older structures. The later erections have been made to conform in architectural style with those before existing and the whole group occupying as it does a commanding position upon the summit of a gently graded eminence presents a picturesque appearance from the Bladensburg road. The foundation has been dug for the erection of a chapel but further appropriations are needed to carry on the work.

ONE OF THE FAMILY BUILDINGS.

The leisure hours of the pupils are lightened by reading. There is an instructive library in connection with the main building from which the boys can borrow books, but they are not limited to the more weighty branches of knowledge. Periodicals and magazines are received by the superintendent from various sources which he distributes among the boys.

The schoolrooms are large apartments comprising the greater portion of the first floors of the family buildings and providing, as well as the dormitories, room for fully three times the present number of pupils. Many of the most advanced class of students are recruited from prisoners captured in Oklahoma and Indian Territory. They do not as a rule, convey in the least degree the popular idea of a bravo, and, when engaged in conning their books or reading aloud, appear particularly peaceable and studious. There is, in common with all schools, a spirit of emulation manifest and a general desire among the pupils to distinguish themselves. The school does not aim, even in the more advanced classes, to teach all that is taught in the District public schools, nor does it ever expect to compete with them even in the higher branches of a purly English education.

"It is sufficient for our average population," Dr. Shallenberger says, "if we can give to it the benefit of a thorough training in such practical lessons as will best serve to fit it for a good starting point in this every day business world." There are always a number of very clever boys in the school of this District, but there are also many others who are here because they are truants from their home schools, and others who, being mentally dull, never come to the front in their studies. Among this latter class often boys are found who are not wanting in habits of industry, who secure their promotions for faithful service and obedience to rules, but fail from want of mental capacity to advance with their classes in the school. This class of pupils has been more the object of special attention. Every individual is personally considered and his possibilities in every available line tested. The result of such treatment is held in good favor.

Legal holidays are all appropriately observed in the Reform School, and the boys look forward to these events with no little interest and expectation.

They may not, it is observed, reverence the day, nor even fully understand the occasion for these memorial observances, but they can tell you if the balls and bats provided for their favorite games are of the regulation pattern and of standard quality. Nor is this kind of knowledge regarded by any means despicable. As a rule, it is considered that the boy who has physical and mental ability to succeed on the playground is seldom found at the foot of his class in the schoolroom.

Another regular occasion for rejoicing in the school is "visitors' day," upon which the boys meet their relatives who may wish to see them. This day is set upon the first Tuesday in each month for the white boys and the second Tuesday for the colored. The occasion furnishes a lively scene in the large hall in the main building. The matrons sit upon an elevated stage, beaming upon the assembled multitude, who, divided into numerous little groups, are thoroughly engrossed in their own affairs. Here a party is talking and laughing in the pleasure of reunion, while again a poor woman may be seen exhorting her son earnestly to row the see a of a better and more hopeful life. In the midst of the apparently general gaiety of these meetings is revealed many a sad story, and the visitor contemplating them is often filled with pity for the sorrow of the parent while he deplores the obduracy of the child. Yet the hope inspired by the excellent results accomplished by the Reform School seems always present, and there are few instances where these fail in the desired end.

SAVED FROM THE PLUMBER.

A New Invention to Oust a Despot From His Throne.

(From the Chicago Times-Herald.)

The imperious despot with his soldering can who takes a first mortgage on our homes when a water pipe bursts is about to be hurled from his place of power. No longer will the timorous householder get on his knees and implore this lord of the lead-pipe cinch to be contented with the piano and silverware as a reward for a few hours' work. Neither will this great mogul of the pipes divide your year's income with the walking delegate who fixes the price of your deliverance.

In other words, we will soon be able to give the plumber what is known in the street vernacular as "the merry ha! ha!" According to the statement of a technical journal, a German inventor has produced a pipe that will not burst by freezing. The pipe is designed to prevent bursting by providing an opportunity for its expansion by cold. Into the iron pipe there is inserted a second narrower pipe of thin sheet tin or lead, which is filled with an elastic substance. This insertion remains unaffected by ordinary pressure, but if extreme cold should cause the water to freeze the elastic insertion is compressed as much as the volume of water is increased by freezing. In thawing the insertion expands again to its original circumference, and the pipe is uninjured.

With such pipes as these in a house it is easy to see that every man could be his own plumber, and the only tool he would need is a kettle of hot water. But such pipes could not be put in without a desperate struggle with the National Association of Amalgamated Plunder Plumbers. The pipes would have to be sneaked in at night.

It could hardly be expected that the plumbers would peacefully submit to an "outrage" of this character that threatened to drive them to work for a living, same as bankers and railway presidents. But once in, a man could be master of his own pipes and give the laugh of defiance to the fallen plumber plutocrats.

NATURE'S WEATHER LAWS

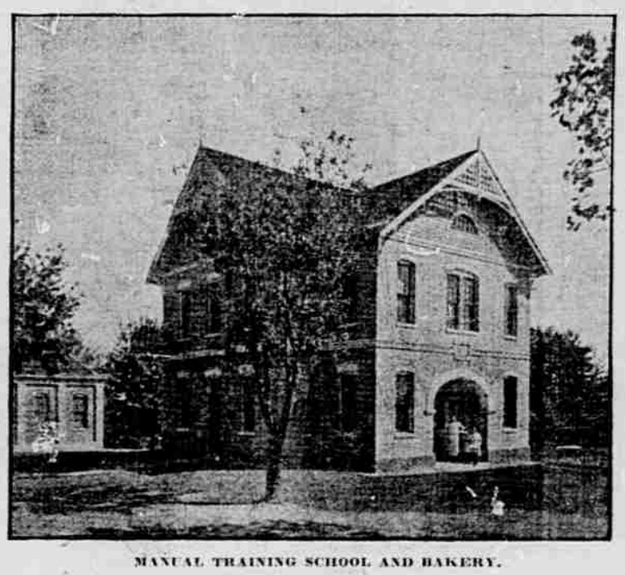
Warm Winters No Indication of Radical Climatic Changes.

No Meteorological Signs of Alterations in Atmospheric Systems—The Opinions of Sages Not Reliable. Civilization's Advances Unable to Upset Systems of the Universe.

The records of the Weather Bureau show that the present winter has been, so far, rather warmer than the average. "We have had," said a prominent official of the Bureau, "other winters equally warm, and the present season in some parts of the country has been about normal. The weather in New England and throughout the Lake regions has been particularly mild and pleasant, especially during November, which month usually brings rather severe storms in the Lake neighborhood. Owing to the mildness of the weather, navigation on the Great Lakes during this season was not interrupted as early as usual. Vessels continued to run during the whole of November and the first half of December without hindrance, a very unusual condition of affairs, and in marked contrast with the corresponding period a year ago.

"Last winter began with violent storms in October and November, and the weather continued stormy during the greater part of the season. Thus far there have been no really severe cold waves, or disastrous storms along the coast, and few if any casualties have been reported among the shipping. Along the Pacific Coast there has been an abundance of rainfall, a condition very gratifying to the residents of that part of the country. The last three years were very dry in this region and the supply of water for irrigation and even domestic purposes had been reduced to a low ebb. The rainfalls of the present season have about replenished the supply, and the immense agricultural interests of that part of the country have consequently benefited greatly."

Only a few years ago the impression was current that the climate of the Atlantic coast was changing, owing to a variation in the direction of the Gulf Stream. This was only one of the many false notions derived from the fact that variations in average heat or cold are very apparent in some seasons as compared with others.



MANUAL TRAINING SCHOOL AND BAKERY.

Prof. Willis L. Moore, Chief of the Weather Bureau, in a recent report, expresses the opinion that so far as can be ascertained there has been no radical alteration in the weather conditions of this country from the earliest periods of its history up to the present time; that is to say, he finds reason to believe that, while one or even more seasons may disclose very sensible differences with previous years, there has been no permanent variation of atmospheric conditions which would warrant the statement that the climate had undergone any alteration.

The Opinion of a Sage.

Thomas Jefferson, writing in 1781, said: "A change in climate is taking place very sensibly. Both heat and cold are becoming much more moderate within the memory of even the middle-aged. Snows are less frequent and less deep. They do not often lie below the mountain more than one, two, or three days, and very rarely a week. The snows are remembered to have been formerly frequent, deep, and of long continuance. The elderly inform me that the earth used to be covered with snow about three months in every year."

Prof. Moore writes: "But Jefferson and his neighbors were mistaken. Never during the period of authentic history has the snow covered the ground in Virginia (the State where Jefferson made his observations) for periods averaging three months per year for three years in succession. The old inhabitants of Jefferson's time were like those of today—they remembered only the abnormalities of the climate of twenty-five or fifty years before, and, in comparing the usual conditions of long ago with the average of the present, were deceived. I have known intelligent and truthful men publicly to declare that they knew from personal recollection that the climate of their particular places of residence had changed since they were boys; that they had reliable landmarks to show that the streams were drying up; that rain and snowfalls were becoming less frequent, and that the winters were becoming milder, notwithstanding the fact that carefully taken observations of temperature and rain for each day for the previous hundred years showed no alteration of climate at such places. Of course, wide variations, sometimes extending over periods of several years, had occurred, but a deficit at one time was made up by an excess at another."

Professor Moore believes that no sensible change has taken place, so far as can be ascertained, in the climatic conditions of any part of the world since the beginning of its history. Quite accurate records of the opening of navigation in the rivers of Europe and of the time of vintages for five hundred years show no change in the average data of the first ten years as compared with the average of the last ten, and the date palm, the vine, and the fig tree flourish as luxuriantly today in Palestine as they did in the days of Moses. Dried plants have been taken from the mummy cases of the Pharaohs exactly similar to those now flourishing upon the soil once the abiding places of those ancient monarchs.

It was noted in this country several years ago, when the tide of foreign immigration was strong, that there were several years of rather more than average rainfall in regions that theretofore had had little pecipitation. "These two conditions were coincident," says Prof. Moore, "by mere accident, but the fact probably gave rise to the theory that civilization brings an increase in precipitation. It was thought, at the time referred to, that the breaking of the virgin soil, making it more permeable, and thereby conserving the scant deposit of moisture; the planting of trees, and the propagation of vegetation, by restricting the sun off and by drawing up the moisture from below the surface of the ground through roots; the enormous quantity of aqueous vapor injected into the air by the combustion incident to a teeming population, had all combined to increase the rainfall and to render the sub-arid plains more responsive to the labors of the husbandman.

"It is to be regretted," Prof. Moore says, "that this beautiful theory cannot be supported by fact, but a moment's thought will indicate to the physicist that the volume of superincumbent air is so great and its capacity for retaining moisture so enormous that the additional vapor of water evaporated as above described, great though it be, is ineffectual to change appreciably the amount of rainfall which nature beforehand had ordained should be precipitated. The size of continental areas, the topography of the land surface, the proximity of large bodies of water, and the direction of the prevailing winds are all factors in determining the weather conditions of a region, and these, of course, are not subject to radical alterations in their nature, except perhaps in long geologic periods. Thus if the Rocky Mountains could be lowered to the height of the Appalachian chain the vapor-laden winds from the Pacific would blow inland, and probably cause copious rainfall as far east as Colorado, Western Kansas, and Western Nebraska."

Science owes the discovery of the rotary motion of storms and the laws governing their progression to Benjamin Franklin, whose recognition of these data long before anyone had ever seen any charts seems scarcely less than prophetic. Franklin's discovery was perhaps of greater scientific importance than his act of drawing the lightning from the clouds and identifying it with the electricity of the laboratory, yet his contemporaries thought little of his philosophy of storms, and it was soon forgotten. This determining of the path of storms and their centres is even now the most valuable feature in the work of the Weather Bureau.

At the time of the founding of the first of the thirteen colonies at Jamestown, in 1607, practically nothing was known of the properties of the air, or of methods for measuring its phenomena. Today, at about 200 hundred stations in America, electrically recording automatic meteorological instruments measure and transcribe for each moment of time the temperature, the air pressure, the velocity, and direction of the wind, the beginning of rainfall, the amount of precipitation, and the sunshine or cloud.

Scope of the Weather Bureau Work.

The vast region now included in the scope of the Weather Bureau system of observations embraces Canada and the Gulf of Mexico, the whole having an area extending 2,000 miles north and south, 3,000 miles east and west, and so fortunately located for the operations of the scientist as to include an important arc on the circumpolar thoroughfare of storms of the Northern Hemisphere. Simultaneous observations are made twice daily from the stations, distributed throughout this great area, and reported by telegraph at once to the main office in Washington.

This gives the bureau a complete record of atmospheric conditions over the entire country, and calculation determines the location of storm centers, the probability of cold waves, and of fair or unpleasant weather. Nowhere else in the world can the meteorologist find such opportunities for the study of storm and atmospheric changes. The widely differing elevation, topography, temperature, humidity, and aridity of the gigantic area under observation offer unequaled conditions for the study of the phases of storm development and progression, so far as such can be profitably studied, from the bottom of the great ocean surrounding the earth.

The great winter storms which originate south of the Japanese Islands are objects of no little observation by the Weather Bureau. These, after crossing the Pacific Ocean, successively surmount the Rocky Mountains with but little diminution of energy, sweep across the continent with increasing force, and within three days pass over our Atlantic seaboard, and heard from occasionally three days later as boreal ravagers of Northern Europe.

Progressive Value of Forecasts.

Prof. Moore says: "In 1870 and for some years thereafter our forecasts and storm warnings were looked upon by the press and the people more as experiments than as serious statements. The newspapers especially were prone to comment facetiously on the forecasts, and many were clamorous for the abolition of the service during the first years of its existence. There was some ground for the criticisms. We knew nearly as much about the mechanics of storms at that time as we do today, but we had not, by a daily watching of the inception, the development and the progression of storms, trained a corps of expert forecasters such as now form a part of the staff of the Chief of the Weather Bureau, and from which he himself was graduated. After a time mariners began to note that danger signals were, in the great majority of cases, followed by heavy winds, and they reasoned that it were better to take precaution against forecast storms that never came than to be unprepared for those which did come."

It is an acknowledged fact by the Weather Bureau officials themselves that notwithstanding the progress of meteorological science during the last hundred years or so the art of weather forecasting, as it exists at present, is based wholly upon experimental data, nor is there any indication that the accuracy attained by astronomers in predicting an eclipse will ever be achieved by the Weather Bureau.

Settling a Great Question.

(From the Memphis Commercial Appeal.)

If you took a $100 bill to the bank and asked the teller to give you 100 dollar bills for it, and he held out the first bill, on the ground that it was no dollar, and then counted you out 99 dollar bills for your complete $100, what would you think if you were told to haul down the American flag after you had paid $20,000,000 for the privilege of flying it in the Philippines, even admitting that Oom Paul has not granted the Outlanders full political rights? Of course, there are two sides to every question, and we recognize fully the value of English civilization and the importance of British paramountcy in South Africa, but even if Oom Paul does consume two gallons of beer a day and uses a knife to shovel pie, that does not prove that Aguinaldo, by starting at the 9-mile post, could have traveled several century runs of 99 miles each. If there is any flaw in this reasoning we should be glad to have it pointed out, but we are satisfied in advance that our position is simply unassailable.

STORIES TOLD BY GUIDES

Yarns Spun Out by Woodsmen of the Adirondacks.

The recent meeting of the members of the Brown's Tract Guides' Association at Booneville, N. Y., was one of the merriest gatherings of these men of the woods ever held. They had a fund of good stories and after the regular business of the meeting had been transacted all joined in a social session with enthusiasm. The meeting of the guides this year was one of the biggest ever held by them. In the association there are fifty-three active and one hundred and fifty associate members. All the members are not guides by any means. There are hotel men, camp owners of that part of the woods and visiting sportsmen.

At the last meeting of the association there was "Nelse" Chandler of White Lake Corners, who had passed the greater part of his life in the woods and who knows as much about the habits of the wild game in a minute as the books will teach in a lifetime. "Nelse" was accompanied by his neighbor and companion on many a hunting excursion, "Bill" Stell. There are a very few only who know more about the woods than this same Stell. Milo Bull, "Chick" Brown, Charley Barrett, Ben Parsons, Dave Charbonneu, and Bill Burke came down from Old Forge and represented in a fair degree the different stations in life that exist in the membership roll of the association. There were also Garry Riggs of Turin, "Dick" Crego of Booneville, Robert Roberts of Leyden, who moved from Remsen he said because there were so many other Robert Robertses that he never got his mail as it should come. "Dany" Ainsworth, father and son, from Big Moose, and "Gus" Syphert, who makes his home in the winter in Herkimer, but who in the summer is a fixture on Third Lake, Fulton Chain, were among the number.

After the dinner had been done away with and the set speeches were over there followed a session of story telling. By way of introduction Charley Barrett told a mild one. Charley is one of the most mild-mannered men one will meet in the woods in a summer's travel. He has a reputation for veracity among those who know him and almost any kind of a story that he might choose to tell would be received in good faith. Charley said: "Boys, I once lost a trout that weighed just two pounds and eight ounces."

"How did you know the exact weight?" asked Garty Riggs.

"You see it was this way," continued Barrett. "I had been fishing on the stream that comes down off the mountain on the south side of Third Lake and came to a waterfall. I had been fishing about in that spot, say twenty minutes, when I felt a strike. We began the battle, the fish and I, and soon I was in the middle of the stream with the water up to the tops of my boots. The bottom of the stream was very rough and I tried to make for the shore, and at the same time I tried to land that trout which was giving me a good fight. I staggered, fell in a hole and was nearly drowned in a minute. The loose line dropped from my left hand and I rolled off into a boiling torrent. I was almost helpless as the line became wound around my body and I gained my feet with considerable effrt. I unwound the line from me, but the fish had broken loose. He weighed just two pounds and eight ounces though."

"Guess we'll have to take your word for it," was the shot fired by Ned Ball.

"I'm positive of it," said Barrett, "for two months later I was fishing on that same stream further down. I hooked a fish and he was a spunky fighter. I landed him though, and there was the identical fly in his mouth that I had lost on my earlier trip. That is how I know about his weight."

When "Bill" Stell had finally been induced to say something he started off:

"The greatest fishing I ever saw was when they drew the water off Horn Pond over near Jock's Lake. Horn Pond was considered to be the strangest fishing grounds anywhere around. About the only time that fish would bite was in the spring when the ice was breaking up. Then we used to catch some big fellows. Why, I remember one spell there we caught fish, trout at that, that weighed three pounds. That was great fishing, boys, but it was not in it with the time they drew the water off that pond. You see that pond finally became State property, and it was made a storage reservoir. There was a time when the water got very low, and it was necessary to draw the water off Horn Pond. A few of us got around there to see the fun. We did not look for any trout in the pond, as none had been caught lately, and we thought the fish had run up into the streams. But there was a sight when the water went down. For a time nothing was to be seen but the flow of the water, but as it became lower and lower we could see fish jump up out of the water, and there seemed to be plenty of them. We hastened down to the dam, and you should have seen the assortment of fish that went over the few boards that remained in the dam. There were schools of fish of nearly every description. We got our fishing tackle out and soon caught 198. Then the fun stopped, for the fish had passed to other waters and other fishermen.

"The time they dynamited the Twin Lakes," continued Bill Stell, "was another time fish were numerous. The Twin Lakes were in the purchase of the club, which sought to make it a private preserve, and the manager of the club gave it out there would be no more fishing in those lakes for the natives that lived along the shore and who had fished there for many years. For some of the natives this was bread and butter. The fishing had always been very good and some great catches of salmon trout had been the result of the sport. Well, one night somebody put dynamite in that lake and touched it off. Talk about flying fish, why there was never anything like it before. Fish and pieces of fish were scattered along the shores of those two lakes by that dynamite and there has never been any fishing there since."

Milo Bull told of an experience he and his brother had while they were spearing pickerel in a pond on his father's farm, formed by the widening of the stream that flowed through the farm. Milo and his brother were in the habit of going out at night and spearing some good-sized fish with the aid of a huge light. On this occasion Milo's brother was doing the rowing, while Milo held the spear and stuck the fish when he saw them appear at the head of the boat. Suddenly Milo's brother stopped rowing and whispered in an awe-stricken tone to look ahead. Milo did so and there he saw two piercing black eyes staring at the boat and its occupants. Milo was startled. He had no idea what sort of an animal or creature it was that he saw. The thing was evidently attracted by the light and there was no immediate danger from it. Milo raised his spear and asked his brother to row the boat slowly and carefully along to the place where the thing was. The oarsman did as he was directed. Milo held the spear poised ready for instant action and waited until he could get near enough to throw it. He saw the thing move and his blood almost froze within him. The oarsman had stopped his work, but the boat still continued its forward motion. Frightened nearly stiff Milo gathered his strength and with a great effort shot the spear at the huge object that had now become distinct under the rays of the light and its outline appeared to be that of a bird. The spear sped truly and the bird was nailed as it sought to escape.

The bird fell into the water near the stump where it had been sitting. It was gathered in the boat and then it was seen that the spear had caught the wings. The extreme prong of the spear on one side had fastened itself in the feathers of one wing while the extreme tooth of the spear on the other side had caught the other wing. The spear had been thrown just as the wings were raised for flight and caught them in the manner described. The bird was taken to the home of the Bulls and measured. It was found to measure four feet eight inches from the tip of one wing to the tip of the other wing.—New York Sun.

AMERICAN FOREST FIRES

Progress of Investigation Into Their Ravaging Character.

Natural Causes Thought to Exist for Their Periodical Recurrence—Recoveries of Great Timber Lands After Conflagrations—The Origin of the Flames Shrouded in Mystery.

The investigations of the Forestry Division of the Agricultural Department upon the subject of forest fires, besides resulting in obtaining valuable data regarding past devastations, have presented the subject in an entirely new light from that in which it has hitherto been regarded.

Although further data is required to fully establish the case, it may be reasonably inferred from that already gathered that these scourges of the forest are provisions of nature for the periodical renewing of certain kinds of trees, sometimes of an entirely different species.

A typical illustration of the relation of fire to the existence of a great forest, and an indication of its power in determining the kinds of trees of which the forest is composed is found on the north side of the Olympic Mountains of western Washington. The magnificent forest about the base of this range would seem at a first glance to be wholly untouched, yet upon close investigation the fact is shown that the greater part of it has been burned over within a comparatively recent time. Underneath and among the roots of the standing trees there is a layer of charcoal left by the fire that cleared the ground for their occupation, which may be brought to light by a little digging, or which can be seen with less trouble when the wind has overthrown the trees and exposed the earth in which they stood.

"Here is a perfect example," says Mr. Gifford Pinchot, expert forester of the Agricultural Department, "of the entire recovery of a forest after its apparent destruction by fire, but the case has yet another interest. The red fir is the most important timber tree of that forest, through which it is very widely scattered. It is a curious fact that, in a recent exhaustive exploration there was not to be found a single seedling of this tree under the forest cover. Yet, wherever there was an opening cleared by fire they were plentiful. This seems to show, although further evidence is being awaited by me, that the composition of this great forest is largely determined by fire."

Perhaps the most apparent fact in connection with forest fires is their frequency. In all wooded regions and their vicinity they form a large item of news gossip, and accounts of their ravages are being constantly brought to public attention. Few forest regions escape, and by far the greater part of the whole wooded area of the country bears the marks of fire. Still, the fact remains that the forests have not disappeared. They have been ravaged, in some cases hundreds of times, yet they still flourish, and will, in all probability, continue to do so. The homecoming of the forest to land from which it has disappeared is often a very slow and delicate process, but in the end some sort of forest cover may be counted on to take the place of that which is gone. Hence it is that the devastating fires which have swept over this country for centuries have not succeeded in leaving it barren of trees.

Study of Forest Fires.

It is only lately that the study of forest fires in this country has engaged the attention of scientists. As the investigations are now being carried on by the Agricultural Department the subject is divided into two parts, one largely statistical; the other dealing with the natural history of the fires. About neither of them has a satisfactory volume of facts been gathered, although much more is known of the damage they do, and the area they cover than of the details of their behavior and the effects they have on the soil, the trees, and the general character of the forest. The records of fires, for the most part, are found only in the forests themselves, in the vast number of scattered references to them in the newspapers, and in the statistical files of insurance companies, whose policies, directly or indirectly, they affect. It is chiefly from these sources that the Agricultural Department is gathering a valuable record of the number, date, extent, and damage of the fires, which both before and since the advent of the white man, have swept from time to time throughout the forests of America.

Commencing with the year 1754, 1,155 volumes of newspapers have been examined, and in addition to these about 500 other records. When the record is complete it will furnish the best available means for estimating the prodigious loss yearly suffered by the country from forest fires, and at the same time will show more clearly than is possible at present, the dangerous zones, the centres from which fires spread, and the relative degree in which particular localities throughout the country have already been heavy losers in the past, or are likely to need special precautions in the future. It is true, of course, that the great danger belts are already known, and that the people who live in places specially exposed to fire are already acquainted with the risks they run; but until the record of fires is far more complete than it is at present, many of the facts vitally needed to provide against loss or to awaken public sentiment will remain out of reach of any but local enquiry.

Little Known of Their Nature.

Beyond the somewhat trite fact that they burn and do indefinite damage, nothing is practically known about the real nature of forest fires except what can be reasonably inferred from the slight data already gathered. How they move over the ground in wet and dry weather, how they are helped and hindered, how they affect the soil, what harm they do the standing trees, and how they affect the reproduction of the forest, and determine the kinds of trees of which it is made up—all these questions are as great an enigma to the scientist as they are to the less tutored observer. Field work for the purpose of throwing light upon these questions is now in progress in various parts of the country, and the Agricultural Department hopes to gather an amount of valuable data.

"It may fairly be asked," says an eminent scientific authority, "what is the practical value of such studies as the history and nature of these forest fires. The answer is that every kind of knowledge of an enemy may be used against him. Thus, if it is learned that in a certain region fire travels in a wedge-shaped mass, with the fiercest heat and most rapid progress at the point, it follows that the place to attack it is at the point of the wedge, and that the ordinary mehod of attacking the wings is simply a waste of time. In a similar way an accurate knowledge of the great damage which follows hasty and unwise back-firing in any given region will be of use in suppressing it. The study of how the fires burn yields direct assistance to the men whose homes lie in the threatened district. In a somewhat different way the historical study of fires will be of use, for whatever helps to call attention to the magnitude of an evil also helps to weaken its capacity for harm. If the vast destruction forest fires have occasioned can be brought thoroughly home to the public mind in terms of lives lost, homes destroyed, and wealth gone up in smoke, a factor of no able power will be set to work in bringing about the final extinction of this gigantic leakage of the national resources."