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Useful Notes for Masters and Officers of Screw Steamers. Spiral Slide Rule. A pertable calculating instrument invented by Professor George Fuller. I illustration.

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X. NATURAL HISTORY.—The Quince and its Prepagation. The tree creeper; certhia familiaris; wings and arms (verses.)

A PRAIRIE BOY'S EXPERIENCE.

the most enduringly valuable elements of any boy's education. Emphasis, however, is to be laid on the word "intelligent." Habitual hard work, with no other motive than my strawberries this year. compulsion, is sheer slavery; and many a parent has found his efforts to make his sons industrious thwarted and their \$390. To be sure my father has favored me in every way, lives spoiled, simply because he has unwisely undertaken to 'furnishing me with seed, feed for my stock, allowing me the give them the training of slaves, not that of free spirited and interested toilers. It is not the amount of work that boys do, but the manner of their doing it that makes them like or dislike hard work.

successful effort in riper years, on the farm or in the work- so far for our crops, and next year we may have grasshopshop, than a youth of unwilling drudgery. And one cause making their boys feel to the full the monotony and drudgery of farm life while restricting in every way its enjoyments. When boys are given a liberal foretaste of the freedom, the wholesome joys, and the profits of country living, they will be less likely to feel that anything is better than farming. And the same laws hold in every other industrial calling.

We are led to dwell upon this aspect of parental management by a Kansas letter to the New York Tribune, in which the writer tells the story of a prairie boy's experience at the space for. Suffice it to say that it came out of a casual encounter between a country boy and the writer, who had lost his way. While conducting the traveler to the road he had of encouraging his boys in being industrious and that of a neighbor.

winter.

"The first year I planted corn, and from my four acres I raised 120 bushels, which I sold for 30 cents a bushel.

"The next spring father let me have the use of his team, and I plowed my four acres and planted one and scapes seen in the prosecution of our work. Ideas of the a half acres in castor beans, one half acre I put out aspects of the State derived from maps have, in my own case, in strawberry plants, one acre in sorghum, two rods proved to be so false and vague, that I find in this survey in onions, and the remainder of the acre in sunflowers. the attractive novelty of exploring an unknown region. Father laughed when I told him my plans, but he said it was Colorado was not a greater surprise to me than has been the my own land and I could do as I liked with it. I told him structure of my native State. In the study of the origin of I wanted to experiment on different crops, so as to see which some of its most remarkable features lie untrodden tracts of was the most profitable. Well, my castor beans were a good knowledge which are yet to awaken great interest. The deal of trouble. I had to watch them so closely not to lose configuration of a part of central New York is as unique and them when they cracked open. It was necessary to pick as unknown to science as that of any part of the Rocky them immediately as fast as they ripened; but my little sister, 'Mountains." seven years old, could attend to them about as well as I, and she did this faithfully on my promising her \$5 when I sold my crops in the fall. I raised twenty-two bushels of beans off of my one and a half acres, which I sold at \$1.25 a bushel, so after paying my sister \$5, I realized for them \$22.50. Father had paring our sorghum, and I had from my one acre two barrels thus making \$22 from my sorghum crop. My sunflowers, Herald report of that date says: which were the laughing stock of so many, brought me for his poultry. He thinks they are better than corn. Those a very hot fire.

"Last spring I planted nothing but sorghum and onions, as they had brought me the most the year previous, and I have done better than either year before. My onions were the most profitable crop of all, as I made \$12 off of my two rods. So last fall I had, after disposing of my crops, \$71.50 in cash, of ten times their number of fellow workmen. nearly double what I had made the year before. I spent \$20 of this on my wardrobe, \$10 at Christmas, bought three more calves at \$10 a head, and had \$11.50 left for sundries. My onions didn't do quite as well as the year before. So this year I have made \$300 off of my four acres. I can assure you I am beginning to feel very much encouraged in being industrious. I have just bought twenty more calves. I had to pay \$12 a head for these, but they are beauties, I can tell | 10,000 bees fly out per diem—equal to 170 millions—each bee you. If they do well they ought certainly to be worth in a four times, equal to 680 millions, or, in 100 days, equal to

year from now \$450. I was offered \$90 to-day for my other The habit of intelligent industry is, all things considered, lot. I have no trouble in finding a market for my produce; not only the best legacy a father can leave his sons, but one of for what I cannot sell here I ship on the railroad, and, as they carry at reasonable rates, I often prefer shipping, as I get better prices in the larger towns. I shipped nearly all of

"I was fifteen years old last August, and am worth to-day use of his team and farming implements, etc. But now I can afford to be more independent, and hope before long to help him, instead of his helping me. Father is making money, too. This is a fine wheat country, and he has put Absolute idleness in youth is often a better preparation for the most of his land into wheat. We have had fine seasons pers or drought, or some drawback; but we have enough of the eagerness of country boys to abandon farm life has ahead now to stand one or two unprofitable seasons, so we been-and this the chief cause-the unwisdom of parents in don't worry. I intend to invest every year in stock, as I have found it far more profitable than anything else."

The moral of the story goes without telling.

UNKNOWN NEW YORK.

That the State survey of the Adirondack wilderness should have discovered mountains, lakes, and other geographical features as little known to the world as the mountains and lakes of Central Africa, was not surprising. It does strike one as strange, however, that the geography of the central hands of a wise father. The setting of the story we have no counties of the State should be little if any hetter understood. Yet the State surveyors found last year that every one of the cities and towns of that region, to the number of two hundred or more, were from one to two miles out of place, strayed from the young pioneer contrasted his father's plan on every map of the State hitherto published. And worse than that, the topographical features of that thickly settled and prosperous part of the State are sadiy misrepresented "Now, there is Mr. A., who lives on the quarter section on all our maps. In reviewing the work of the survey duradjoining ours, and he has two sons, John and Henry. John ing the past year, Director Gardner remarks that "few is a little older than I, and Henry a year younger. Well, people realize that in the central part of our State, repre the way he encourages his boys is by having them up by day- sented on their maps as level regions, are mountains rising light in the morning and keeping them on a keen jump all to such heights above the surrounding country that the eye day long. He hardly allows them time to eat their meals. can sweep at a glance 5,000 square miles of land and lakes, Why, last summer they worked till 9 o'clock every evening, touching here and there blue horizons over sixty miles and didn't find an hour all summer in which they could go a away." The deep pleasure which these broad but unvisited fishing, or even in swimming. Then to pay them the old views inspired very naturally increased Mr. Gardner's regret man gives them their board and his own worn out clothes, that the topography should be so unknown to educated peowith occasionally a pair of boots or something of the kind ple. "In Germany," he says, "every child is taught the thrown in. That is the way he teaches them to be industri- physical features of its native country; but in New York, ous. But father's plan is entirely different. He gave me neither young nor old know the aspects of those counties four acres of land which he had broken (this was two years which they have not personally visited. In this matter, like ago last spring), and I was to do just what I pleased with it. the Indians, they know only what they have seen." This and he would furnish me seed or means to obtain seed; all criticism he makes on the strength of a wide intercourse that he required of me was that I should attend to the gar- with the intelligent citizens of central New York, to whom den, do the chores at the barn, and go to school in the he has often put questions to test their knowledge of the topography of their part of the State.

"I am led to recur to this subject," he concludes, "because of the deep impression made upon me each season by the unexpected grandeur, beauty, and variety of the land-

STRIKE OF PITTSBURG PUDDLERS.

By the strike of the puddlers of Pittsburg, Pa., June 2. something like 40,000 men were thrown out of employment in that city and in Allegheny, with the prospect of stopping raised considerable sorghrum, and he had all of the arrange- the work of all the men employed in the coal mines and ments for pressing, boiling, etc. We worked together in pre- other establishments connected with the mills. A few mills which were practically independent of puddlers, remained of good sorghum molasses, which I sold for 35 cents a gallon, at work, but with small prospect of continuing long. The

"This morning, about ten o'clock, 200 puddlers formed enough to pay me for my trouble. I had planted and culti-into a line and marched up Liberty street and Pennsylvania vated them very much as if they were corn. The flowers avenue to the steel works of Hussey, Howe & Co. They were splendid, many of them measuring three feet six inches threatened the employes of this firm with unpleasant rein circumference, the stalks being from ten to twelve feet sults if they did not stop work. The firm has only sixteen long and three inches in diameter. I planted them principuddlers, although it employs 500 hands. The men would pally for the stalks, which I sold over at the next town for not stop work in the middle of the day, but said they would IV. RECENT SCIENCE.—Continuation of Paper in Supplement No. 17. fuel. I had ten cords off of that part of an acre, and I readminists. Nuclei of cells. (hemistry of yeast. Chlorophyl containing animals. Nuclei of cells.) Maturation and impregnation of the animals. Nuclei of cells. (hemistry of yeast.) Maturation and impregnation of the animals where they thought there were any black sheep, or male yeum. men who were disposed to work at less than regular rates, who bought the stalks say that they burn readily, and make and they ordered all such men not to go to work. This is the first strike in which the iron workers have stopped the steel workers."

> As usual this is not a strike of labor against capital, but rather the action of a few unscrupulous workmen who are willing to take advantage of their position to stop the wages

THE UTILITY OF BEES.

One of our foreign exchanges states that a great hee master, the Rev. M. Sauppe, in Lückendorf, has made the following calculation, intended to prove the eminent agricultural and economical importance of the rearing of bees:

Of each of the 17,000 hives to be met with in Saxony