AGRICULTURAL NOTES.

PRACTICAL INFORMATION FOR THE FARMER AND THE ORCHARDIST.

[This Department is prepared for the SACRAMENTO RECORD-UNION by its Agricultural Editor. All matter relating to the agricultural interest will be found under this head.

The National Department of Agriculture.

It would seem that there is some faint prospect of a waking up at Washington to the present inadequate facilities afforded by the Government to the Agricultural Department. In January last the Committee on Agriculture of the House of Representatives called Commissioner Le Duc before them, and put some questions to him which show that the members of this committee at least recognize the fact that there is some possibility of improvement in the way of greater facilities for the Department. These questions afforded the Commissioner an opportunity to lay before Congress and the world a statement of the many disadvantages under which the Department is laboring, and he embraced the opportunity in a manner that enables the people to see plainly how utterly the industrial interests of the country are neglected by the Government. The Commissioner says the needs of the Department are many and urgent, and he sets them forth in the order of their importance. First, the Department needs a building in which to carry on the limited business its restricted pecuniary assistance warrants it in undertaking. The rooms of the old building are so few and so small as greatly to crowd the employes and retard the work they have in hand. For instance the room devoted to chemical investigations—to the investigation of questions involving the entire science of American agriculture—is but twenty feet square, with a basement of the same size and a small closet. This is all the space that the United States—a nation occupying the largest and most important agricultural section of the earth—can afford for a practical investigation of questions in agricultural chemistry, upon the determination of which millions are involved to the farmers and to the Government. The Commissioner remarks: "It is simply an absurdity to think that a fraction of the required work can be done with such a lack of conveniences. I have already laid out work which the chemist informs me will take four years to accomplish with his present force." Think of the great agricultural interests of the United States waiting four years for a single chemist with one or two assistants, in a room twenty feet square and with a laboratory inadequate for the proper equipment of a common country academy, to determine whether within all our vast domain sugar can be produced successfully and profitably from sorghum, when upon the determination of this single question over fifty millions of dollars a year to those interests is at stake! The Commissioner says: "Any delay in performing some of this work and publishing the facts thus and thus only to be ascertained is a loss to the country. The work is daily accumulating. It comes to us from every part of the United States and her Territories. Its value can hardly be overestimated." In Germany the Government has three laboratories, each costing over $350,000, and a full force of trained chemists in constant employ for the investigation of just such questions as are daily being referred to our National Agricultural Department. In France, too, the Government has all these important industrial questions investigated and solved and gives the people the benefit of them. The wisdom of these two Governments and the want of wisdom in our own on these subjects is contrasted by the fact that in both of those countries sugar is largely produced and exported to the value of millions annually, while the people of the United States are annually sending millions out of the country to pay the Germans and the French for this same sugar. Thus these scientific questions are allowed to linger, while enterprise and capital await their solution and labor goes unemployed, and we buy of foreign countries what we can and ought to produce at home. Is there an intelligent man in the United States who does not believe that we have, somewhere in our vast country, soil and climate as well adapted to the cultivation of sugar as any in France or Germany? Is there a man so stingy that he would not contribute a few cents to buy the facilities and pay for a scientific investigation of the subject? The Commissioner states that "the people of the United States have consumed since 1849, when gold was first discovered in California, eighteen hundred and odd millions of dollars' worth of *imported* sugar and its allied products. During the same years there have been taken from the mines of California and other Western States and Territories seventeen hundred and odd millions of dollars. We see, then, that it has taken all, and more than all, the gold and silver we have produced to pay for the foreign sugar we have consumed. How this vast sum may be saved to the country is but one of the many important problems we have taken for solution in our chemical division. Very many other things of almost equal value might be accomplished by this division under better auspices." In regard to the division of statistics the Commissioner says "the burden upon this division is now too great. It should be enlarged to double its present strength, so as to be able to take up investigations which at present it is unable to touch." We of the Pacific coast have always been in a position to confirm this statement. The statistics of our crops have never been properly reported in the monthly or annual reports of the department. The fault, as we have always believed, has not been chargeable to deficiencies or imperfections in the system, or to carelessness or neglect on the part of the department, but simply to the inadequacy of the means afforded it by the legislative department of the Government. We have always held that partial or inaccurate statistics in regard to the resources and productive industries of a country published to the world were of more injury to that country than benefit. The statistics that have been gathered and published by the department heretofore in reference to the Pacific coast have always been partial and incorrect, and injurious instead of beneficial to the coast. The reason has been at all times patent to those who were conversant with the facilities at the disposal of the department. The correspondents of the department in this State, many of whom have been personally known to the writer, have never been compensated for the labor required or expected of them. They have generally been business men, who have not been able to give to the work of collecting and forwarding correct information to the department their own personal time and attention, and could not afford to hire and pay others for it when they received nothing themselves, and were expected to pay necessary postage expenses. A new departure has now been taken in this division, and money appropriated for the establishment of a branch department on this coast, and if properly organized by putting a practical man in charge, we may expect great improvement over the past. The division of entomology, the Commissioner truly says, "is of great importance to the agricultural industries of the country, and should be increased at once fivefold, with a further increase in the future—an increase not only of working entomologists but of space for breeding the different insects injurious to plants and those that make war on these plant enemies; and for the proper preservation, exhibition of prepared specimens, and their distribution to the different State institutions for purposes of instruction." Until within a few years we on this coast have felt no immediate interest in this division of the department, for the reason that insects injurious to agriculture and horticulture had not made their appearance among us. But now that our crops are being threatened in every branch of agricultural production; that our vineyards are unsafe from the phylloxera; that our apples and pears are being devoured by the larvæ of the codling moth, and that our orange groves are being injured by the scale bug, we feel a lively interest in having this division of the department made as effectual as means and skill can make it. The present ineffective condition of this division may be seen from the following statement of the Commissioner. He says in his communication to the committee:

But a few days since I received letters from North Carolina complaining of an eruption of a new insect—a sort of grasshopper—exceedingly small, but which is rapidly destroying the young wheat. It is an insect hitherto unknown there. Now, our funds available for the purpose are so low that to send an entomologist there to investigate the matter I am compelled to beg railroad passes, to enable me to accomplish the work of the department. The entomologist of the department is now in Florida making an examination of the scale insects which are affecting the orange trees of that State. I obtained railroad passes for him in order to save that expense, and he has been so hospitably received by the people of the South that he will be able to prolong his stay another month.

Think of a United States officer charged with so important a matter as the investigation of a cause that is threatening one of the most important agricultural productions of the country being obliged to beg passes from private corporations to enable him to travel from point to point while engaged in such investigation, and being dependent upon the hospitality of the people whose crops are being ruined, for something to eat while prosecuting his work. The Commissioner goes through all the divisions of the department, showing the specific defects and needs of each in so plain and straightforward a manner as to convince all who may read his communication; that he fully appreciates the present inadequacy of the department to the wants of the country, and the great value to the same of the prospective work of the department, when the needs he suggests shall have been supplied by the Government. He closes his communication with this strong appeal:

All of these needs might be summed up in a single phrase, to wit: The department needs opportunity; opportunity through enlarged accommodations; opportunity through the expansion of existing divisions; opportunity through the creation of new divisions. This opportunity afforded, and it is safe to say no other one department of the Government will more redound to the common weal. Alone of all the departments, the Department of Agriculture can be made to reimburse to the country, if it has not already done so, ten, twenty, aye, an hundred-fold any appropriation made to it.

Destroying the Apple Worms.

A practical orchardist suggests as the only sure way to destroy the codling moth in this State, an Act of the Legislature compelling every person who has bearing apple and pear trees to destroy all the fruit on them at a certain time for one year. He would fix the time for destruction when the larvæ have hatched out in the spring and have all entered the fruit. He contends that the destruction of the fruit at that time would effectually destroy the worms, and that would be the end of them. Could the worms all be found in the fruit at one time?

The Pear Blight.

PLACERVILLE, July 16, 1880.

AGRICULTURAL EDITOR OF RECORD-UNION: In your issue of the 14th you invite correspondence in regard to the pear blight outside of the low river bottoms. Three varieties (I send you a specimen)—Madeline, Winter Nellis and Seckel—are a total failure with me. I have never seen anything like it before. The Bartletts are not affected much, and will be a fair crop. P. J. ISBEL.

The samples received seem to be affected with the same blight or mold that has appeared on the pears in this vicinity, but in degree the blight is much worse than anything we have seen here. It has completely taken the life and growth out of the specimens attacked, leaving them but shriveled skins. This blight needs immediate scientific investigation, with a view to finding a remedy.

Back-Water.

AGRICULTURAL EDITOR RECORD-UNION: In the WEEKLY UNION of the 26th of May I notice an article on back-water on the Yolo side, in which you state that it is unusually high in proportion to the water in the river, and attribute it to two causes: First—That the breaks through which it flows from the river had worn, and carry more water than formerly. Second—That Schoolcraft Island, over which the water has to flow to again enter the river, has "filled up," thus obstructing its passage and acting as a dam. Your first reason is undoubtedly correct; the second is not. I have lived at the head of Schoolcraft Island seven years, and at no time of flood during that time has as much water passed over Schoolcraft Island, in proportion to the stage of water, as this year, owing to the washing away of old banks and levees that formerly kept the water back. A heavy growth of new tule in Yolo and Solano basins might in a measure account for it.

J. F. PARKER.

MORE POETS.

"More poets yet!" I hear him say
Arming his heavy hand to slay;
"Despite my skill and 'swashing blow,'
They seem to sprout where'er I go;
I killed a host but yesterday!"

Slash on, O Hercules! You may.
Your task's at best a hydra-fray;
And though you cut, not less will grow
More poets yet!

Too arrogant! For who shall stay
The first blind motions of the May?
Who shall out-blot the morning glow?
Or stem the full heart's overflow?
Who? There will rise, till time decay,
More poets yet!

—[From Dobson's "Vignettes in Rhyme."

BAFFLED CURIOSITY.

Miss J. was on the way South to spend the winter with some relatives. Her friends, Mr. and Mrs. H., were her traveling companions as far as Goldsborough, where they separated, Miss J. having about a hundred miles more of railroading to do alone, as a telegram received at Goldsborough stated that her expected escort could not meet her there. As usual, the passengers on the branch road were few, and Miss J. was the only lady on the train.

The conductor was an ex-Confederate Captain—a peculiar characteristic of Southern roads. He was a native of the town to which Miss J. was ticketed, and was very anxious to find out who his fair passenger was. His rather officious offers to assist her in finding her friends when she should reach her destination were rather coldly refused. He finally got desperate, and appealed to an ancient gentlemen in the car (a friend of his) to assist him. Presently the old gentleman crossed the car, took a seat immediately behind our fair traveler, and addressing her very politely, said: "My friend Captain P. is very anxious to know who you are."

Looking up from the pages of her novel, Miss J. said: "You didn't tell him, did you?"

He was so thoroughly taken aback that it was some moments before he recovered himself sufficiently to stammer, "No-no."

"Thank you," said Miss J., gratefully, and coolly resumed her reading.

The crest-fallen old "Mercury" retired to the smoking-car, and our traveller was annoyed no more.

OUTDOOR AMUSEMENTS.

ITEMS OF INTEREST TO THE LOVERS OF FIELD SPORTS.

[In this department, as the head indicates, we propose to make record of current sporting events. Communications to the paper concerning such matters should be addressed to the "Outdoor Amusement Department."]

THE FORESTER TOURNAMENT.—The Forester Club of Sacramento has announced, on its own responsibility, a wing-shooting tournament, to be held here during Fair week. In doing so it handicaps certain marksmen by distance extensions. In all other respects, we believe, the details are not criticised and are admittedly liberal. But as to the handicapping there have been some objections made, out of which a little bitterness of feeling has grown. It is charged that, as the club expects aid from the State Agricultural Society, it should have taken into its councils representative sportsmen from all parts of the State, and not having done so has acted selfishly. It is objected that handicapping three or four men is wrong, as twenty or thirty others are nearly as good, and that many marksmen object to shooting with odds in their favor, and consider themselves too highly to be thus placed as second rate, and would prefer that several prizes of equal or nearly equal value be given that the best shots may contest for them, and the other prizes be graduated, so that the real skill of all will be made manifest by the result of all shooting alike as to distance, etc. To these things, we understand the club members to reply, that it is a club matter, and those who do not like it need not come in. That it is not fair to assume that the club is to handle the Agricultural Society's money; that there is no State Association, and if a State tournament is to be given it must be under some local direction as a matter of necessity; that handicapping by distance is common; that the club has acted according to its best judgment; that at "State hunts" heretofore San Francisco clubs and shooters have not responded to any account, and that San Francisco aid in prizes has been trivial; that the Foresters have no money to make, no private ends to subserve, and give their time, labor and energy to the work free, etc. These are the issues. They seem to us to be easy of adjustment. The Forester Club had a right to announce any kind of a match it saw fit, and no one has any right to question it. If the State Agricultural Society asks it to disburse its prizes, then the Society must trust to the good judgment and sense of right of the Foresters. The attempt to form a State Society has been repeatedly made and as repeatedly failed, and we know that it has not been the fault of the sportsmen of the interior. We doubt very much if the San Francisco sportsmen who growl most, would come here and arrange the details of a match, and aid in the labor of its management. As a matter of policy the Foresters might well have written to leading sportsmen, and have asked their advice. That would have flattered personal vanity, and undoubtedly have forestalled all growling. It would have been discreet to have done that, and have affirmatively shown that they respected the advice of our resident sportsman, as we know they do; but, all the same, it does not appear that the Foresters have done any thing they had not the perfect right to do, or that they have invaded the rights of any one in the premises. Their tournament they have a right to manage as they please. Their proposed management is not new. Handicapping is sustained by precedent, and the judgment of the club has been exercised, we believe, honestly, and without the intention of treading on anybody's toes. Now, these being the facts, it is easy to adjust this whole matter. The "Bay" sportsmen have shown a very manly spirit of concession and good-will by appointing a committee to consult with the Forester Club. This consultation ought to bring about an amicable settlement, and we doubt not it will. The Forester Club has acted as it deemed right, and we have too much confidence in its membership to believe that it will intentionally do any wrong. While the tournament is to be its own, to manage as it pleases, yet it will undoubtedly, as it ought, receive the committee and treat it with every consideration. We cannot see that any request of the State Agricultural Society, when made, to the club to disburse its prizes will affect the question. If the Society asks the club to do this thing, it must trust to the club to do it in its own way, or else choose an independent committee to manage the Agricultural Society tournament. In that case, we shall have two tournaments, and we do not see that two would be entire failure. With about 80 good wing shots in the State, two sets of matches could be run. However, one would be better, for such rivalry will only beget bad feeling. In this connection we give place to the following communication: "EDS. RECORD-UNION: As the proposed handicapping of several gentlemen at the coming State pigeon tournament has given rise to considerable comment from newspapers and sportsmen, it might be well to inquire into the merits of the case. Handicapping is that system, the introduction of which into trials of skill, speed or endurance is supposed in a great measure to equalize the chances of the contesting parties, and is done by the concession of certain distance, time or weight to the supposed weaker contestants. Trap-shooting having struck a popular vein, has become one of the leading sporting features in California, and any proposed match is at once filled by those who deem themselves proficient in the use of the gun. There is a certain fascination about pigeon-shooting which leads the beginner to imagine that he is certain of securing a prize should he enter the list of contestants, and after he has done so, and proven one of the unsuccessful ones, he will attribute it to the victors having easier birds, or some of those excuses that come readily to the mind of the unfortunate. Such being the case, it can plainly be seen that, taking advantage of such condition of things, a few men, who have by long experience perfected themselves in the art of trap-shooting may be able to reap quite a harvest at these shooting matches, where the first moneys are from four to ten times as much as the entrance fee. One of the gentlemen who has been handicapped by the Forester Club has been always considered by his friends as the equal of any one in the use of the gun, and when Bogardus came to this coast several years ago a series of matches was gotten up between the two. It is not the intention of the writer to make any comments upon those matches only as they affect the subject under consideration. In the contests alluded to, so well matched were the two men supposed to be that the Californian asked no odds either in distance or money of him who was at that time regarded, and who has since proved himself to be, the champion wing shot of the world. Now, the world is very large, and California is certainly a small portion of it, and yet, regarding this sportsman, who was thought well enough of to be backed against the best shot in the world, and of whom the newspapers and sporting men at that time said that Bogardus had not the least advantage, now, because of his being handicapped in a match here, where only two or three have any reputation as good trap shots, and the balance scarcely any at all, his friends, and the very newspapers and men who were so loud in his praise, go wild over the 'outrage' that, they say, has been perpetrated. Verily, 'consistency is a jewel.'"

TO SPORTSMEN.—We will gladly publish scores and results of matches in California with shotgun, rifle or pistol. We must ask sportsmen to forward them. We cannot keep reporters all over the State to report matches. We have several representatives throughout the State who do look out for such matters, but club and match managers should nevertheless send us accounts of matches and the scores made.

IMPORTATION OF FOX HOUNDS.—By the Williams & Guion steamship Nevada, which arrived at New York on the 10th inst., Harry Bishop of Louisville, Ky., received three fox hounds, ordered by him for the Crystal Spring pack, Waverly, Tenn., of which A. M. Waddill, Louisville, Ky., is proprietor. The dogs were selected by George Lowe, Secretary of the Kennel Club. They arrived in fine condition. Fairplay and Abigail are from Viscount Galway's pack, "The Grove;" and Gratitude is from the Dartmoor pack, of which Admiral Parker is master. Gratitude was bred in England to Chorister, and is due to whelp August 1st. Abigail is by Reveller, out of Arrogant; Reveller by Parry's Archer, out of Runaway; Runaway by the Grove Furrier, out of Ringlet; Arrogant by the Meynell Baronett, out of Amazon. This bitch runs back through sire to Mr. Meynell's Gamestress, 1780, and through dam to Mr. Meynell's Guzman, 1780. Fairplay is by Plunder, out of Florence; Plunder by Playful, out of Lord Yarborough's Hymen; Playful by Furrier, out of Primrose; Florence by Gulliver, out of Fairmaid. This dog runs to Furrier, Belvoir—Guider and Drake's Duster—the most celebrated hounds in the Fox-Hound Stud Book. Gratitude is by Lord Yarborough's Glider, out of Sunbeam; Glider by Aider, out of Gaiety; Sunbeam by Royal, Jr., out of Susan; Royal, Jr., by Sir. W. W. Wynn's Royal. Royal was a great winner, and said to be the best looking fox-hound ever bred. Gaiety was never beaten, though constantly shown.—[Chicago Field, July 17th.

OTTO C. WILKINS.—A new claimant to fame in shooting circles is Otto C. Wilkins, of Cooperstown, Pa., whose most remarkable feat was that of breaking with a rifle 99 balls out of 100, and 479 out of 500, including one run of 100 straight; an average of 95 4-5. This was done at Franklin, Pa., May 4th, R. G. Lamberton referee; H. B. Cantner and J. B. Gordon scorers. The shooting was in the presence of the Franklin Sportsman's Club, hundreds of other spectators witnessing it. Mr. Wilkins is 20 years old, and has shot with the rifle only nine months, having previously earned the reputation of being one of the best wing shots in the State. His progress with the rifle has been very rapid. In about a month after he began he made a score of 91 out of 100 glass balls, at Mercer County Fair; and two weeks later, at a practice shoot at Cooperstown, he broke 149 straight. His next feat was breaking 985 balls out of 1,000, making one run of 272, at Greencastle, Pa., October 22, 1879. Otto C. Wilkins stands 5 feet 10 inches, is straight as an arrow, and has broad shoulders, light complexion, with light blue eyes. His shooting is graceful, his rifle being handled with ease. He extends his left arm straight out, grasping the barrel near the muzzle, covers his target quickly and always shoots with both eyes open. His gun is the Kennedy magazine rifle, which shoots the Winchester 44 caliber center-fire cartridges, 40 grains powder, 200 grains lead, 1873 model, the same as that used by Dr. Carver. It carries 15 balls, and with it Mr. Wilkins drives his bullets through pennies and nickels thrown into the air.—[Forest and Stream.

A HINT.—The devotees of the running and trotting turf indulge in many an argument in this country as to which is the superior sport; but however the discussion may result, there is one side issue upon which the racers have the best of it, and that is the handsome costumes which the jockeys wear at meetings, in contradistinction to the shabby appearance of too many drivers of trotters. This fault with the trotting turf is easily remedied. No expensive apparel is necessary, nor gaudy colors, but on important occasions, especially when ladies form a considerable portion of the assemblage, a driver should have sufficient respect for himself and for the spectators to at least present a neat appearance, and not look as if he had just been pulled out of a hay-mow. Now that the great trotting meetings are close at hand, we trust that this hint will have a good effect.—[New York Spirit. Yes, and we indorse the hint. More than that, we insist that the State Agricultural Society purchase and keep on hand a variety, say two dozen, knit jackets of bright colors and *compel* drivers to appear on the track in them. Then let the colors be announced. Colors are just as necessary in trotting as in running, to the pleasure and information of spectators.

STILL ANOTHER HINT.—Some of the drivers, like Mace, Turner, Van Ness, Green, Splan and Brassfield, are very particular about their personal appearance. A society man would sooner think of going to a formal dinner in a morning coat than they would of appearing before the fashionable crowd of the Circuit in frowsy jackets and with unshaven faces. Their neat dress is in striking contrast with the appearance of other drivers, who regard it a weakness to concede anything to the refinements of civilization. The rewards of their professional services are dependent upon the popularity of trotting. The very best people of the splendid social centers represented by Cleveland, Buffalo, Rochester, Springfield and Hartford, patronize the circuit meetings, and it is the duty of all drivers to respect their wishes. To offend them by careless dress is inexcusable. Those who take pride in their profession, who labor to elevate the standard, will not hesitate a moment about replacing the old and faded suits with new ones. A single soiled suit will spoil the picture and be rendered more conspicuous by the bright and clean ones clustered around it. Let no driver make himself conspicuous by bad dressing.—[Turf, Field and Farm.

NEW MATCHES.—Tanner has received his first challenge from a man in Baltimore, but others are probably in preparation. A fasting tournament—a "go-without as-you-please"—would compare favorably in several respects with the sort of pedestrian matches now in vogue, and would be more immediately fatal to many of the participants. As soon as this sensation has had its run we expect to hear from the man who can go without sleep for forty consecutive days and nights. Here will be more work for the doctors and reporters and more copy for the enterprising press, which used to rely, at this time of the year, upon showers of frogs and gigantic pumpkins. [New York Spirit of the Times.

HORSE VS. MAN.—Daniel O'Leary, wishing to settle a disputed question, will offer $4,000 in prizes for a contest between men and horses at Chicago, commencing September 6th and lasting 156 hours. There are six prizes, and the division is $2,000, $1,000, $500, $250, $150 and $100. Only six horses will be allowed to start, and it is stipulated that not more than two men shall relieve each other in riding or leading each horse. As many men may compete as wish to, and they shall make the best of their way on a track nine laps to the mile. The track for the horses will be eight circuits to the mile.

CARVER.—Dr. Carver, by his wonderful shooting, has attracted the attention of the crowned heads of Europe. The Prince of Wales presented him with a scarf pin, and the Emperor of Germany with a diamond ring. Will Oakland, his old home and charming little city across the bay from San Francisco, be large enough to hold the Doctor after these marks of royal approval?—[Turf, Field and Farm.

The operetta by Dr. Maclagen of Montreal, entitled "The Queen's Shilling," has been produced in that city with evident success. The principal tenor part was intrusted to Mr. Christian Fritsch, who is highly commended by the local press. He is said to have sung "with the air of a consummate artist, and to have fairly captivated his hearers."

When the Greeks were about to sail for Troy, Menelaus brought a bundle of straw and put it carefully away in his cabin. "What is that for?" asked Agamemnon. "To tell us the direction of the breeze," answered Menelaus. "You're crazy!" said Nestor. "Why," remarked Menelaus, "don't straws show which way the wind blows?"

NEW PUBLICATIONS.

THE CONGREGATIONALISM OF THE LAST THREE HUNDRED YEARS, as seen in its Literature; with Special Reference to certain Recondite, Neglected or Disputed Passages. With Biographical Appendix. By Henry Martyn Dexter. Large 8vo; 1,082 pages; cloth. New York: Harper & Bros. San Francisco: A. L. Bancroft & Co.

This is hardly a work for criticism. It is a compilation in twelve lectures of the literature of the Congregational Church, with the comentaries of the lecturer. How shall such a work be reviewed and its 1,082 pages considered without discussing the whole theological question? No, the work is one to be characterized and not criticised in its theories, except at the expense of more space than we can accord. We find then that the work treats in the main of these chief topics, and their statement will sufficiently introduce this valuable history of the literature of a Church. We present as nearly as possible the sentiment and thought of the subjects from the author's view. It begins with detailed statements as to the condition of mind and heart to which the Papacy reduced England, as tending to explain as natural and inevitable what otherwise would seem to be the inexplicable intensity of the early Puritan spirit. The designation of the true point of divergence of Separatism from Puritanism, as being not in the interest of polity, but of purity, and of pushing forward a nominal into a real Reformation. The discovery of the substantial early autobiography of Robert Browne, and of several of his treatises unknown before, and the development from them of a truer theory of his life and character, and a more exhaustive and symmetrical outline of his actual system. A more complete view of the Martin Mar-Prelate Controversy than has been previously taken; and the author's vindication of the real and great merit of the tracts of Martin himself, and their relation to early English prose satire; with a new theory as to who Martin was. The exhibition of the Presbyterio-Congregational nature of the Barrowistic separation, as distinguished from the practical, though unintended, democracy of Brownism. An account of the various English Separatist Churches which in the early part of the seventeenth century found refuge in Holland; with their relations to each other, and especially their points of mutual repulsion; and, in connection with this, the discovery at Cambridge of the long-lost book of George Johnson, describing the details of the sorrowful and amazing old-clothes controversy. The gradual successive development of Johnsonism, or High-Church Borrowism; of Ainsworthism, or Low-Church Borrowism; and of Robinsonism, or Broad-Church Borrowism. In connection with this the author's demonstration of the fact that John Smyth first separated from Johnson's "Ancient" Church at Amsterdam, not, as heretofore alleged, because he had become a Baptist, but for other reasons; seceding afterwards from his own seceded church, when he subsequently baptized first himself and then those who at that time followed him—and, as connected with this, the discovery of Smyth's "Retractation of his Errours" in the Minster Library at York. The elucidation of the fact that the famous "Farewell Address" of John Robinson, at Leyden, does not—as heretofore assumed—refer to doctrine, but solely to polity. Argument that the early Congregationalism of New England was Barrowism and not Brownism, and of the natural relation of the system of Ruling Elders to that fact. The discovery and description of the long-lost manuscript "Cambridge Platform," prepared for that synod by Ralph Partridge of Duxbury. The explanation of that unrest which more or less afflicted the New England Churches of the seventeenth and a part of the eighteenth century, as being due to the irrepressible conflict between the aristocratic and the democratic elements of which their Barrowism was composed. The pointing out of the manner in which the Congregationalism of New England was transferred from the old basis of Barrowism to its present basis of Brownism; with the relation of John Wise and Nathaniel Emmons to that transfer. The correction of the prevalent misconception that the original Brownism repudiated Councils, and the attempt to illustrate the full outgrowth and working of the system of Ecclesiastical Councils in this country, by a copious citation of actual cases drawn from a collection of more than twelve hundred of the "Results" of such bodies. The somewhat extended endeavor to intimate the actual condition of the world as to general knowledge, at the time of the first settlement of New England, as helpful to any just estimate of the real spirit and character of the fathers. The appendix to the volume is a list of collections toward Bibliography of Congregationism, and presents the titles of several thousand volumes and essays.

The contents of "Appleton's Journal" for August are as follows: "Edge-Tools," by Annie Bothwell; "Health at Home," by B. W. Richardson, M. D.; "Some Thoughts on Shelley," by Stopford A. Brooke; "The Influence of Art in Daily Life," by J. Beavington Atkinson; "German Dialect-Poets," by W. W. Crane; "Michael and I," by Julian Sturgis; "The Historical Character of the Spanish Stage;" "Landscape Painting," by Sir Robert P. Collier; "The Cook's Oracle;" Goldwin Smith's "Cowper;" Swinburne's "Songs of the Springtides;" "Captain Ortis's Booty: a Ballad," by A. Mary F. Robinson. Briefs on recent novels—"The Undiscovered Country;" "Odd, or Even?" "Uncle Jack's Executors;" "A Stranded Ship;" "Mrs. Beauchamp Brown;" "Mademoiselle de Mersac;" "Second Thoughts;" "Mary Anerley;" "Reata: What's In a Name?" "The Duke's Children;" "The Virginia Bohemians." Editor's Table—"Thought-Extirpation Process;" "Literature as Drudgery;" "Modern Poets as Verse-Makers;" "Sir Robert P. Collier on Landscape Painting;" "Signing Magazine Articles."

"The Atlantic Monthly" for August has these articles, beside the regular editoral departments: "The Stillwater Tragedy," Thomas Bailey Aldrich; "Sicilian Hospitality," Luigi Monti; "Kintu," Susan Coolidge; "The Surgeon at the Field Hospital;" "Mr. Hunt's Teaching," F. D. Millet; "Pepacton: A Summer Voyage," John Burroughs; "The Archbishop and Gil Blas," Oliver Wendell Holmes; "Sylvia's Suitors: A Little Episode," Louise Stockton; "Among the Pueblos," Susan E. Wallace; "Edward Mills and George Benton," a tale, Mark Twain; "Alien Sin;" "The Preceptor of Moses," Francis H. Underwood; "An Englishwoman in the New England Hill Country;" "The Red Immortal," T. W. Higginson; "Taurus Centaurus," Richard Grant White; "The Republicans and the Candidate;" "Professor Fisher's Discussions;" "Henry Armitt Brown;" "Natural Science and Religion;" "Italian Poetry."

"The Popular Science Monthly" for August (D. Appleton & Co., New York) presents this table of contents in adidtion to the regular reviews and departments: "The Kearney Agitation in California," by Henry George; "The Interior of the Earth," by R. Radau; "On the Method of Zadig," by Professor T. H. Huxley, F. R. S.; "The Medicinal Leech," by Dr. A. Berghaus; "Recent Original Work at Harvard," by J. R. W. Hitchcock, A. B.; "Geology and History," by Professor Grant Allen; "The Cinchona Forests of South America," by H. S. Wellcome; "Types of the Nubian Race;" "Algebras, Spaces, Logics," by George B. Halsted, Ph. D.; "Chemical Exercises for Ordinary Schools," by Miss Eliza Youmans; "The Extreme Rarity of Premature Burials," by Professor William See, M. D.; "The St. Gothard Tunnel;" "M. Fouque's Santorin and Its Eruptions;" "Biographical Sketch of Frederick Wohler," by Professor Charles A. Joy.

From Oliver Ditson & Co. (Boston) we have new music, as follows: "General Garfield's Grand March," by E. Mack, and "General Hancock's Campaign March," by Le Baron; a pretty recreation, by Cloy, called "Calla Lily;" a fine sea song, "Pilot Joe," by L. Diehl; a new English ballad, "Banbury Cross," and the melodious "Song for Me," by Michael Watson. These attractive songs and pieces are fair samples of the fifty or sixty which are published each month by the firm. We have also an attractive copy of Ditson & Co.'s "Musical Record." From the same firm we have "When Sorrow Dies," a graceful song by Pinsuti; "Birdie in the Cradle," one of fifteen attractive songs for children, by Franz Abt; the picture title is very pretty. "In Dell and Dingle," a very musical flower song, by Roeckel; and three good piano pieces, "Flower Bells," by H. Scott, "Bright as a Button," polka by Cloy, and "Queen of My Heart," polka by Fairbach.

"Morford's Magazine" for July (Henry Morford, New York,) presents these leading articles: "La Rose Blanche," by Cecelia Cleveland; "Baby Alice's Rain," by John Hay Furness; "John Keese, Wit, Literature, and Mæcenas," by Henry Morford; "The Spirit of Poetry," by Mrs. K. C. Murray; "Baby Things," by Thalia Wilkinson; "Torquato Tasso," by Lizzie P. Lewis; "By-Ways of East Indian Sport," by Colonel H. B. Vaugh; "Ten Minutes of Moore," by Henry Morford; "Memoirs of the Stage," by William Keese; "Gem Poems of the Century—Sixth Casket;" "About Snoring and Snorers," by Magnus Snoro, P. G. M.; "Summer Nights," by Mrs. M. J. Safford; and many breezy paragraphs on the editorial pages.

"Scribner's Monthly" for August is a holiday number, and is a very full one; indeed, bright. The leading articles are: "Our River," by John Burroughs; "About England and Dickens;" "The Plain Story of Savonarola's Life," by Linda Villari; "Will the French Republic Last?" by Juliette Lamber; "The Sweet of the Year," music and words by E. C. Phelps and Nellie G. Cone; "The Western Man," by Charles Dudley Warner; "The Dominion of Canada," by George M. Grant; "Peter the Great," by Eugene Schuyler; "Haden's Etchings," by Philip Gilbert Hamerton; "Curiosities of Advertising," by William H. Rideing; "The Book of Mormon," by Ellen E. Dickinson; "A Sketch of American Diplomacy," by Richard Henry Dana; "Marrying Titles," by Albert Rhodes; and the usual departments, editorial and otherwise.

"Harper's Magazine" for August in addition to the regular departments presents these papers: "Robert Burns," by Henry W. Longfellow; "The Happy Hunting-Ground," by Philip O. Sullivan; "Fish and Men in the Maine Islands," by I. W. H. Bishop; "By-Paths in the Mountains," by Rebecca Harding Davis; "Henry of Navarre before Paris," by Nora Perry; "Mr. Tolman," by Frank R. Stockton; "A Martin Summer in the Garden of France," by M. D. Conway; "The Cruising Canoe," by C. E. Chase; "White Wings: A Yachting Romance," by William Black; "Boat Song," by Emily Huntington Miller; "Washington Square," by Henry James, Jr.; "A Boating Adventure," by John Esten Cooke; "Mary Anerley," by R. D. Blackmore.

"The Magazine of Art" for July is a superior number (Cassell, Pelter, Galpin & Co., New York). Its contents are: "The Armada in Sight," by Seymour Lucas; "Treasure Houses of Art"—Wilton House; "The Commonplace in Art," by Wyke Bayliss; "Our Living Artists"—J. E. Boehm, A. R. A.; "Mosaic Decoration;" "Glasgow Institute of the Fine Arts;" "Pictures of the Year;" "The English Homestead;" "Decorative Art;" "The Art of Illuminating." The engravings are numerous, brilliant and new.

A GREAT INVENTION AND A GREAT INVENTOR.

A brief biography of Thomas Blanchard, the inventor of the mechanical combination for turning irregular forms, who died at Boston in 1865, has just been issued. The writer, Asa H. Water, says that although the name of Thomas Blanchard is not so popularly known as many others who have achieved fame from single inventions, the writer boldly asserts that it may be "questioned whether another inventor can be named in this country or in Europe, during the last century, who has produced so many different labor-saving machines, applicable to such a great variety of uses, and which have contributed so largely to the common necessities, comforts and economies of life." This language may seem extravagant, but it must be remembered that not an armory exists in this country or in England where guns are made—hardly a human being that wears boots or shoes—scarcely a vessel that sails upon the ocean—not a school where slates are used—not a carpet that is laid down, but that owes tribute to the

GENIUS OF THOMAS BLANCHARD

For producing articles cheaper and better. The same may be said of carriage wheels, plows, shovels, and various articles of furniture. Latterly his machines have been applied to carving, to architectural designs, and even to statuary—much to the surprise of artists. Indeed, there seems to be no limit to the uses made of Blanchard's inventions, and it is impossible at present to enumerate them. One can hardly go into tool shop, a machine shop, or a workshop of any kind, wood or iron, where motive power is used, in which he will not find more or less of Blanchard's mechanical motion. Blanchard was a native of Sutton, Mass., and was born June 24, 1788. His father, Samuel, was a farmer, and lived on a poor, remote strip of land, where there was absolutely nothing to suggest a mechanical motion. While on the farm Thomas gave little if any promise of the latent powers within him. There was nothing in his surroundings to excite them. He was misplaced; schools were remote and he seldom attended, for he was afflicted with a perverse impediment of speech, so that the boys called him

"STAMMERING TOM."

At the age of 18 he was engaged by his elder brother, Stephen, to assist him in his tack mill, which he had just started in West Milbury. Young Thomas's duty was to head the tacks in a vice, with a hand-hammer, one by one. Once in a mechanic shop his dormant genius began to wake up. Ere he had spent many months heading tacks, one by one, he had designed, constructed and put in operation a machine which would cut and head them at one motion twice as fast as the ticking of a watch, and better finished than those made by hand. So perfect was it in design and construction it was continued in use more than 20 years. It is said to be still in existence, and experts who have seen it say that no essential improvement has ever been made upon it. The reputation of the boy's success in his brother's tack factory led Asa Waters, who had in the same town of Milbury an armory, where he manufactured arms for the Government, to send for the budding inventor, and there young Blanchard, at almost a glance at the old process for shaping gun-barrels, suggested an improvement by which the irregular butt of the barrel could be turned by machinery, and afterwards produced a machine for turning out the gun-stock. The germ of the stocking-machine lay in the cam motion, and it was then and there, as he afterwards said, that the idea of his

WORLD-RENOWNED MACHINE

For turning irregular forms first flashed through his mind, although it required some months to elaborate and bring it out. Blanchard was afterwards called to the Springfield armory, where his machines were introduced and adopted by the Government. His machine for producing irregular forms was applied to a vast number of special purposes. Unlike many other inventions this was really the discovery of a new principle in mechanics, whereby the machine is made the obedient, faithful servant of man, to work out his designs after any given model, be it round or square, crooked or straight, however irregular, and made to reproduce the original shape exactly, every time. This perfect uniformity of Blanchard's work suggested the idea of having all the parts of the guns made at the armories perfectly uniform, so as to be interchangeable. Hitherto they had been fitted separately, like Swiss watches, and carefully lettered or numbered. This was the method in all workshops, even to the bolts of a carriage or a common bedstead, and woe to him who misplaced one. It was Blanchard who first rendered possible the accomplishment of the desired result with respect to arms, and to him the writer gives the credit of the origin of the

"UNIFORMITY SYSTEM,"

Which has revolutionized mechanical processes in all our workshops, perfected and greatly cheapened mechanic products, and driven from use the old system of numbering. Blanchard realized but little pecuniarily on his patents, for they were so pirated upon that he had to spend many thousand dollars in defending his rights in the Courts. He succeeded in getting an extension of his patent for producing irregular forms, but at the end of the extension he had made practically nothing on it, and began to think of trying for a second extension; but such a thing was unprecedented, and Blanchard, knowing that great opposition would be made to another renewal, thought he would resort to a little stratagem. He fitted up a machine for turning busts from marble blocks, took it to Washington, obtained plaster casts of the heads of Webster, Clay, Calhoun and others, and exhibited the busts in the rotunda of the Capitol. The members were quite astonished when they found that these busts were wrought out by a machine, and that they were more exactly like the originals than any human hand could make them. It produced

A GREAT SENSATION.

They all supposed it a new invention. Blanchard said, "No; not a new invention, but a new application of an old one of mine, from which I never realized much, and I want the patent renewed." A resolution was introduced into the Senate by Webster to renew it for a term of years, and it was rushed through without delay. When the news was first proclaimed from Springfield of a machine which turned gunstocks, mechanics came floating from near and far to see it. Among those attracted were two members of the British Parliament, then traveling in this country. When they returned to England they reported the wonderful invention of Blanchard, by which the Americans were getting greatly in advance of them in gun manufacture, and moved a resolution for the purchase of similar machines. A true John Bull member then arose and ridiculed them unmercifully for being so badly sold and played upon by the cunning Yankees. "The very idea of turning a gunstock is absurd on the face of it, as all must know whoever saw one." Finding the resolution would fail the two members withdrew it and moved for a committee to go to the United States Armory and report upon the facts. The committee came over, examined the workings of the machine, returned and reported the facts as first stated. The doubting Thomas rose and said that the Americans might get up something to work their soft woods, pine and poplar, but it would never stand the test of "our tough English oak and hickory." Upon this the

DOUBTING THOMAS

Himself was chosen a committee to go over and examine. He was not to be imposed upon; he would expose this humbug. Selecting three rough stocks of the hardest, toughest timber he could find, he went to the Springfield armory incognito, brought his stocks to the stocking-room and inquired of the overseer if he would grant him the favor of turning them. "Certainly, sir; take a seat." Without making the least alteration of the machine, the overseer run the stocks through in a few minutes, and then went on with his work as though nothing unusual had happened. The Englishman examined the stocks, found that they were turned all the better for being of hard wood, and he was completely dumbfounded. After musing a while, he frankly confessed who he was, why he came, and his thorough conviction of the utility of the machine. Before he left the city he gave an order in behalf of the British Government for this and the accompanying machines—some six or eight—which amounted to some $40,000. The machines were built at Chicopee, shipped to England, and have been in use there from that day to this.

FRUIT VS. GOLD.—About twenty-five years ago John Brattan located a placer claim near Vallecitos, Calaveras county, and has worked it with varying success ever since. Ten years ago, however, he decided to try fruit-growing, raising his trees from the seed, and grafting when necessary. Now as a result he has one of the best of orchards, growing all the hardier fruits and also English walnuts, of which he has seventy-five trees in full bearing. His cherries, of which he has several varieties, compare favorably in size, quality and quantity grown with any raised in the State. His grapes, some twenty varieties, are of the choicest, and yield abundantly. This experiment shows what a little energy may accomplish on the worked-out placer claims of the mountains and foothills of the State, and will yield a far better income than the original claims.

One hour after an "old master" had painted the name of a patent medicine on a big rock a cow came along, licked it off, and died before sundown. When the simple name of a medicine kills a cow, human beings want to beware of the stuff itself. A cow was never killed by licking the name of a patent medicine in a newspaper, and no other kind can be recommended.—[Norristown Herald.

Over $700 worth of strawberries, Downings, have been sold from less than an acre of ground at the Westborough (Mass.) Reform School this season, besides supplying the tables of the school. They have also sold 3,579 bunches of asparagus this season. Two acres of onions and a full line of other root crops are under promising cultivation.

It isn't often that a boy wishes that he were younger, but it is possible, at such times as he stands up before his teacher dear and pulls off his jacket for an afternoon matinee, that he longs for his earlier days when his jacket and trousers were made in one piece, precluding the possibility of such a cold-blooded preparation.

The name of Gramercy Park is not, as one would suppose, a form of the common French phrase, which is so frequent in tales of chivalry, but a corruption of the Dutch "Kroomassic," or shoe-knife, that name being given to a piece of land the shape of which suggested the implement.

The receipts at the last Richter concert in London, before Herr Richter left for Vienna, when Beethoven's Choral Symphony was performed, are said to have been nearly £900.

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