OUR MACHINERY IS FAR IN THE LEAD

AMERICANS TEACHING A NEEDED LESSON TO EUROPE.

Our Bicycles First Carried the Idea of Strength Combined with Lightness to the Old World, and Now American Patterns Have the Call in the Shops and Mills of England and Germany—But the Foreign Operative Is Still Behind His Rival on This Side of the Ocean in His Handling of the Machine.

Washington Letter, Pittsburg Times.

The report of Marshal Halstead, United States consul at Birmingham, England, would be a satisfactory document to a large proportion of the population of the United Staes if it contained no other informatin that that which alludes to the bicycle as a power in opening the door of the old world for American-made machinery. England and the continent until recently entertained but a poor appreciation of anything that originated in the land of the Yankee. While considerable agricultural machinery has been slowly making its way down into the fertile plains of the Danubian and Balkan country, the welcome given to anything of American manufacture was not over gracious in any section. The change is remarkable. According to Consul Halstead, the bicycle was responsible for breaking down much of the wall of prejudice that was met by American machines of all kinds. There is in Europe an idea that the American puts too little material in his machines. The superintendent of a large American manufactory of wood-working machinery spoke one day of that difference between the American and English patterns. The English machines are made from patterns that are huge, heavy, ungainly, and which require a much larger amount of iron than the American machine. The Englishman thinks he must have solidity and strength, and that the American is too economical of iron for either purpose. But the American, on the other hand, can never get away from the appearance of his machinery. He first calculates what work the machine will have to do. Then he makes allowance for the abuses it will encounter in the hands of ignorant men to whom in many cases it will be entrusted. Then he considers how many pounds of cast iron will be necessary, for he never gets away from the cost, and he makes his drawings of the machine with an eye for harmony of detail, and in the endeavor to have a piece of work that shall not be offensive in appearance, for grace of outline does not detract from the ability of a machine to do its work. The American has an efficient machine, and one that is economic of material and handsome.

CONVINCED.

It was impossible to make the Englishman agree with this idea until the bicycle came upon the scene. The English shopman maintained that looks add nothing to the capacity of the machine, and that pig iron is cheap, both of which are true. But the American insists that if the machine can be built to look well and likewise to do its work, and the material can be so disposed as to provide sufficient strength without throwing iron away, it is as easy to consider the saving of iron and the outline of shape as to disregard those points. This was brought into prominence in the bicycle more than in any other product of an American factory. The bicycle demanded strength with lightness. It became a study how to make use of the least possible material and get the best possible resisting qualities. And as the bicycle became a popular machine, it was impossible to keep a graceful appearance from taking a deserved place. The American bicycle went abroad, and it was so much the superior in appearance and in endurance and lightness over the foreign-made machines that the American wheel caught the public fancy, and proved that the American conception is the correct one.

The American has for years recognized the vast advantages possessed by his machinery as compared with foreign machines of any sort, but he could not get the old world to understand what was so palpable to him. An incident is recalled of some American manufacturers who were traveling in Europe. At one point visited they called upon a manufacturer in the same line as one of the party. They were shown through the extensive plant with the exception of a single department, which the manufacturer said contained some ingenious machines, and he would prefer that his American rival should not see them. The others of the party were welcome, and all might enter the forbidden enclosure if they insisted. But the manufacturer asked that the American in the same line would be courteous enough to not ask the favor. The others went into the room where the machinery was, and when they came out one of the party announced that the American manufacturer could learn nothing there, for he had used the same sort of machines when they were really novel, but that he had discarded then, from the American shop to put in machines that would do much more work in a given time than those he was not permitted to see. So loath was the English manufacturer to accept the statement that he still asked the American not to insist upon seeing the machines.

AN OBJECT LESSON.

The bicycle has changed this. The foreigner has been forced to recognize that the American style of construction has its advantages, and that they are decided advantages, and while accepting other things, Mr. Halstead says there are in the Birmingham district many factories that in the past two years have put in the first new machinery that they have bought in a generation. The introduction of American bicycle machinery stirred them up to a knowledge of their out-of-date equipment, and they made changes for the better. Much of the machinery they have been buying is of the American pattern. They begin to see that the American theory of construction is a money-making one, even if it does not coincide with the ancient British notions. To be without new machinery a generation would horrify the American shop superintendent. A few days ago a furniture manufacturer in a Pennsylvania town said that one of the most difficult things for his factory was to keep its machinery up to date. "We bought a machine one day to joint the ends of particular pieces that we use in the manufacture of beds. It was an ingenious machine, and simplified the work materially," he said. "But that machine is old already. Another machine has come out that joints both ends of the piece at the same time. In our machine a man must put one end of his slat in the machine, then turn the slat and offer the other end. The new machine does both ends when the slat is offered once. It increases the output of the one man just 100 per cent. I know a firm that uses a lot of machinery, and it is their practice to throw out two or three machines every year just to get more modern ones. Those removed are in no sense worn out. Many times they are in perfect condition, and capable of doing the work for which they were built, and sometimes a machine will be disposed of when not more than two or three years old. But a new machine has been built for doing the same kind of work, and doing more of it in a given time, and the factory cannot afford to keep the old machine, for it costs twice as much in wages tooperate it and get the same amount of work from it. The new machine costs less to buy than the old machine costs to operate.

PROGRESS.

Consul Halstead says that hundreds of thousands of dollars' worth of American machines were put into British shops as a result of the bicycle, and that the impetus given the one branch of trade in particular has awakened the American manufacturer to the new possibilities in other shop centers. While he finds that there is a field for American machinery in many directions, the bicycle has not sold all yet. The Englishman is conservative. There is much missionary work to be done before the American shop tools will become the common tools used in the shops of the world, and many of the European manufacturers are catching the other end of the American suggestion. In Germany, particularly, it is becoming the practice to build machines after American models. Germans who have been in America go back home after a few years of experience in American shops, and they carry with them a knowledge of American methods and American patterns. Americans are also encouraged to go abroad to assist in setting up machinery that has been sold from this country, and they are kept until they instruct the European mechanics to operate it after the American fashion. All these things are helping to make the foreigner a competitor in the line which American ingenuity and restless activity have placed pre-eminently in the hands of the designer and builder of the new world.

But even with American machinery, and its superior powers of production, the foreigner cannot get the results the American does. The European workman does not understand driving his machine as the American shop hand does, and the machine that it sold abroad as one capable of producing given results often fails of turning out the work because the shop hand cannot manipulate it at the speed which is common in this country. It is apparent that the American fashion of keeping strictly in the front with new machinery will in time, and not a very long time at that, give the American the same position in the markets of the old world, that the British and Germans once held in the markets this side of the water. Already the American is feared, but the marked superiority of his machines cannot be ignored, and if he adapts his efforts to sell his stuff to the peculiar trade customs of his prospective buyers the American machine is the machine of the old world in quantities that will grow greater every day.

THE NAILED BOARD.

What It Means to the Colored People of the South.

From the Chicago Inter-Ocean.

Just at this time of year down south men acting apparently in a strange and erratic manner are seen about the country lanes and in out-of-the-way plantation premises. Sometimes it is only one man thus encountered—an alert looking person, scouring the prospect with eyes that let nothing escape. Sometimes there are two or more men together hovering on the outskirts of a cornfield or cotton patch, scanning things witha wide-awake comprehensive gaze. Things that the gunman and naturalist and nature-lover would dote on—for people can love nature without regard to science or dissection—are discounted in their care for what, after all, seems a mere inanimate piece of board or staging, which some carpenter overlooked when he worked in that spot, and which strangers pounce on and appropriate as though it were the one thing above all others worth having.

"What are they going to do with that piece of board?" asks some one

"Shut up some negro's core house with it," comes the answer. "See, there's the place, through those trees to right." What are they going to do that for?" "Oh, because the negro hasn't paid out, and this is the only time of the year when he would be likely to have anything to pay out with. Those men are the sheriff's deputies. He has them all over the country now. They will take that board and nail it across the door of the corn house, fodder house or cotton bin, or whatever is levied on, and, slight as it seems, that board represents the seal of the law. Just now, lying on the ground, it was merely a discarded, weather-beaten piece of scantling, but once put up across the door and hammered in place, it has a vital meaning. "How long will it stay there? Until the owner of the corn or cotton shows a disposition to pay the debt, or makes some arrangement in regard to it. Maybe it will be taken down in two or three days, maybe not for as many months or weeks. It depends on circumstances. But, however much need or desire the owner may have to get into his barn, or how far out of the way he may live from the sheriff, he won't dare to lay a finger on the board. It's a penitentiary offense to tamper with it, and even the most ignorant negro tenant understands that. There is tragedy and comedy, too, abroad in the country at this time of year. Maybe it's only a beggarly $5 or so that someboby wants to collect and takes this summary means of collecting—the balance of payment on a sewing machine or for some piece of furniture or frippery, bought perhaps years ago, and which these simple folks in their inability to keep a reckoning thought was paid for. Perhaps in reality it was paid for, and they are being cheated and made to pay over again.

"Sometimes it is a grave matter that shuts up the corn house, relating to the payment of a mule or a man's farm lands. It maybe that the negro has been caught carrying his crop off by stealth somewhere else to sell, in place of paying his landlord or the man who has furnished supplies and crop-making gear during the year. For whatever omission or desert, trivial or serious, it was done, the negroes regard the sheriff's visit with awe, and feel themselves disgraced and outlawed when the talismanic board is tacked to their door.

"Sam Harley was shut up two years hand runnin' gedderin' time!" they say, with an ominous headshake and suggestive tone. And Sam Harley loses cast in society until he does something to make up for the experience.

"Zok Happy's a good, square, farmer. There ain't never been no sheriff board tech his cornhouse,' is an opposite argument. And those who, either through misfortune or duplicity, ever have to wear the brand feel it keenly."

SOME QUEER EMPLOYMENTS.

Veneer Cutting and Dragging for Lost Anchors as Examples.

From the Chicago News.

Veneer cutting is a trade in itself; veneers are both hand cut and machine cut, the former are generally considered the best. A leaf of veneer is no more than one-sixteenth of an inch thick, overlaid with it, common deal becomes to all appearances oak, walnut, satinwood, rosewood or mahogany, just as you please . Sixty square feet of veneering can be turned out by a machine within the minute, an inch of wood will yield thirty-two veneers. In this county a specially thick veneer is cut; instead of papering the walls of a house they are sometimes veneered with mahogany, walnut or birdseye maple. This veneer is so thin that it must be backed up with paper to give it strength. The best wood for the purpose is got from trees that have grown slowly in poor soil. Richly figured veneers are obtained from the roots of trees. There is a good market for them among the makers of pianoforte cases.

One of the queer occupations of mankind is that of dragging for lost anchors. It is carried on in bays and rivers, and even in the open sea along the coast. Several sloops and schooners are engaged almost exclusively in this pursuit. These hunters are as familiar with the ground where anchors are to be found as fishermen are with the favorite haunts of the living inhabitants of the sea. The matter of fishing for lost anchors is most simple. A chain is let down in a loop long enough to drag along the bottom and the vessel goes on her way, with all hands alert for a bite, and a bite usually ends in a catch. The recovered anchors are generally sold again at a price of about 5 cents a pound, which is a penny under the market price for new anchors. A big anchor will weigh 6,000 pounds, so that the fisherman make $250 out of it. More often, however, the anchors fished up weigh from 1,000 to 2,000 pounds, and there is a pretty profit in the business even then.

Evened Up.

He worked and schemed with all his might,
Year after year he toiled away,
But nature stopped him and he left
A fair young widow one fine day.
Yet weep not for the man who died!
He ground and hoarded to the end,
But the man who stepped into his shoes
Says money was but made to spend.
—Cleveland Leader.

Sunday School Lesson for January 8.

Christ's First Disciples.

JOHN I. 35-46.

BY J. E. GILBERT, D. D., LL. D.,

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CONTEXT.—In last lesson we had a bare mention of the purpose of John Baptist's ministry as a witness to Christ (verse 7). It is important for us to read those passages, part of them in this book (verses 15 to 34), and part of them in the other gospels, which show how he performed that important service. We shall there learn that he preached righteousness to the people who resorted unto him at the Jordan, and that he baptized those who repented; also that while he was at the height of his popularity Jesus came to him from Nazareth and was also baptized as an introduction to His office; and that in that baptism Jesus was made known to John by the sign of a dove (verse 32), and by an audible voice from heaven. Afterward occurred the temptation in the wilderness during a period of forty days, of which our author makes no mention. From the wilderness Jesus returned to the place of John's ministry (verse 28), where occurred the events of our present lesson.

TESTIFYING.—The Baptist's interest in Jesus did not decline during the forty days of absence, and he was prepared at the re-appearance to bear additional testimony. At the baptism he had learned that Jesus was the Son of God (Matt., iii:17), a title descriptive of His nature, but now he understood and announced His high mission (verse 29). On the day after the arrival John was standing in the open field with two disciples (verse 35), and the three were looking upon Jesus as He walked a little distance from them. Questions and remarks may have passed of which no record is given. But John seized the opportunity to say to his friends, "Behold the Lamb of God" (verse 36). From a Jew to Jews these words were full of meaning (Ex., xii:3). Associated as they were with sacrificial worship (Gen., xxii:8), and frequently employed in the writings of the prophets (Isa., liii:7), they could not be misunderstood.

FOLLOWING.—Immediately the two disciples left their old master and followed Jesus (verse 37). This act reflected credit upon all concerned. It must be that John the Baptist had been unselfish and true to his calling, else he would not thus give his followers to another. And they must have been sincere seekers after the truth, understanding the reason for attachment to the Baptist as a preliminary to a higher loyalty. And the whole story of Jesus, as then known, must have been sufficient to awaken faith in Him. The approaching men attracted attention. "What seek ye?" was Christ's inquiry, desiring to know the purpose, or rather to secure such a statement of the purpose (verse 38), for Jesus could not have been ignorant (Matt., xii:25). The two disciples answered in one word, "Rabbi," that is master, tendering themselves to Him to be taught, a declaration of a desire to be enrolled among those who should espouse His cause. "Where dwellest thou?" they inquired, delicately proposing a private interview.

ABIDING.—The approval of Jesus was quickly given to the two who had thus sought Him. They were invited to accompany Him, which invitation was promptly accepted (verse 39). The three entered the inn which Jesus for the time called His dwelling place—simple quarters they must have been in that rural section, rented doubtless at a moderate price. One of these visitors is known (verse 40). Andrew, the brother of Peter, and, inasmuch as John, the apostle, was accustomed to suppress his own name (John, xiii:23), he is supposed to have been the other. It was the tenth hour (4 o'clock in the afternoon by our time), when the interview began, and it continued through the remainder of that day which closed at 6 o'clock. Two hours of conversation with Jesus in the early days of His ministry, granted to John and Andrew, destined to be among His apostles. What themes were considered? What impressions were made? What plans were laid? These questions are unanswered. But we may be sure that the occasion was one of great profit to the two seekers.

FINDING.—When Andrew and John left the dwelling of Jesus at the close of their interview they did not return to John the Baptist, their former instructor, as they might have done with great propriety. But they went forth in behalf of Him whom they had visited, becoming thus His first missionaries. The first person sought was Simon, Andrew's brother (verse 41). To him they declare that they have found the Messiah. This is not quite the information they had obtained by the Baptist's testimony (verse 36), and may have been derived from other instruction, or from the lips of Jesus. As these three men were all Galileeans it may be assumed that they had been attracted to this region, as many others had been (Matt., iii:5), by the evangelical preaching, and that they rejoiced when the object of their search was found. Shortly, probably that very evening, Simon was taken by his brother and friend to Jesus (verse 42). A prompt recognition must have gladdened all hearts. As the Lord beheld His third disciple and recognized his stern qualities and his possible future He gave him a new name, Cephas, or Peter (Matt, xvi:18).

INVITING.—It was now time for Jesus to begin His own separate work. To remain longer near the Baptist might have caused misunderstanding and even antagonism. The three men who had identified themselves with Him had their homes in Galilee, and it was His purpose to select others from the same region of country, where the people were less under the control of the priests. Hence He determined to proceed thither at once (verse 43), not to remain permanently, but to open His ministry. When ready to depart he met another Galilean, Philip, a friend of the others, a resident of Bethsaida, a fishing port on the sea of Tiberias (verse 44). To him Jesus gave His first invitation, "Follow Me." The meaning of those words could not be doubted. It was a form of expression common among Jewish rabbis who sought to gain learners. In those days a disciple or learner attached himself to a teacher or master, journeyed with him, and received instruction (John, viii:31).

PREACHING.—Philip immediately responded, becoming in point of time, the fourth disciple of Jesus, and he quickly exhibited the same zeal that characterized Andrew and John. Rejoicing in his new association he hastened to inform Nathanael, another Galilecan friend, who resided in Cana (John xxi, 2). Philip appears to have been well instructed, possibly by those who became disciples before him, yet the words spoken by him to Nathanael were quite unlike any message previously delivered. The Baptist conceived of Jesus as Son of God and Lamb of God (verses 18, 29). Andrew called Him the Messiah (verse 41). Philip spoke of Him as the one of "whom Moses in the law and the prophets did write" (verse 45), adding personal data, "Jesus of Nazareth, the Son (reputed or legal Son) of Joseph." These three forms of expression were evidently parts of the one complete statement concerning the Messiah, who should be Divine, who should die for sin, who was foretold. But Philip's expression is fuller ...an any preceding and indicates the grasp of his mind.

QUESTIONING.—The larger message delivered by Philip was discounted by Nathanael because of a single expression contained in it. He may have expected the Messiah and earnestly longed for His coming, and he may have known that the prophets declared He should be born in Bethlehem (Micah v. 2). Or he may have been governed only by a spirit of prejudice. Whatever his motive, he exclaimed: "Can any good thing come out of Nazareth?" That was the same as to question the enthusiastic statement of his friend. "Impossible," he would have said, "you have made some mistake. Messiah could not come from such a miserable and despicable community." It was perfectly natural for him to feel and speak thus. In all ages men have been esteemed to be the product of their environment. However, many times the law of descent and of association may fail to account for qualities men turn instinctively to re-enforce that law. Philip did not argue, as some unwisely do. He calmly said: "Come and see" (verse 46), "and decide for yourself"—the Gospel's challenge to all men.

CONCLUSION.—By many it is thought that large numbers of people must unite with enthusiasm in order to achieve great results. But our lesson shows what may be accomplished through personal influence exerted in a quiet way. John the Baptist spoke a single sentence and John the Evangelist and Andrew follow Jesus. By another sentence Andrew gained his brother, Simon Peter. By two words Jesus secured Philip, and by one sentence Philip brought Nathanael. And so the first five apostles were gained in two or three days—Andrew, John, Peter, Philip, Nathanael—all Galileeans, sojourning for a little time to hear the great forerunner. Think of the ability and future of those men, and then say how much was done toward advancing the kingdom of heaven. But think, also, of the starting point, the first word spoken. Had that been withheld or spoken timidly, or had some other word been delivered, the result might have been far different. Every man in his place, by such opportunity as may be presented, should do his part, not knowing but the deed quietly done may set in motion influences for good that shall extend far and wide.