

## Correspondence.

## A New Plan of Education.

To the Editor of the SCIENTIFIC AMERICAN :

The sketch I gave of a plan to promote international correspondence and mutual help, that you kindly inserted in the SCIENTIFIC AMERICAN of January 14, 1899, has brought me many very sympathetic comments from your readers and more inquiries than I know how to answer, unless you can find a place for this letter in your correspondence columns. I shall try to condense my reply as much as possible.

First : No such association as I propose yet exists ; whether it ever shall be realized depends entirely on the reception this idea meets with generally. If such an association is really as useful as I believe it to be to thousands of intelligent people all over the world, it will certainly appear, grow, and become as common an institution as the post office. If the time is not ripe for it, it will have to wait. I am the last man to know anything about that.

Second : I am quite alone in this, and have neither the time nor the means to work out the plan single handed.

Third : Since many correspondents ask me where the money is to come from, I must have failed to explain that the very pith of the plan is that no capital is needed to run it. All is based on mutual service. A comparatively small sum must be collected to pay for work in drawing up the programme, printing and posting the lists of associates, etc., these expenses to be covered by sale of lists at a moderate price. Once started, the bureau should soon become self-supporting.

Finally : My idea of commencing the business was as follows : In each of the greater countries a newspaper or journal that would lend its temporary assistance to the plan would request people who were universally known in their country (statesmen, authors, artists,

capitalists, etc.), and who approved the proposed association, to send their names and addresses to the editor. A list of these names would then be sent to each of these gentlemen, with the request to name one representative, the one who received the most votes to be the representative of his country. In case of refusal, the next, etc. Once elected, the representatives of all countries, perhaps 12 or 15 in all, might arrange the time and place of meeting, say at the Paris Exhibition. This meeting to nominate a board of three or more persons, at their choice, who would constitute the central bureau mentioned in my paper. Immediately on being nominated, the bureau would commence work, i. e., draw up and publish the circular, elaborate a programme, etc.

This co-operation of universally known men would be invaluable, as it would immediately place the whole scheme on a serious footing and earn for it the confidence of all people. At the same time, I fail to see on what grounds we could expect them to refuse their assistance. The plan is in no way a speculation or commercial enterprise—rather a kind of mutual education and assistance scheme. The trouble would be limited to writing and sending two cards to a newspaper, the first containing writer's name and address ; the second, name of representative. The work of the representatives on meeting each other would also be limited to the organization of the central bureau. When matters would have reached that point, I think it would be an easy matter to realize the small capital necessary to commence work.

A last word. Some correspondents tell me that it would be unreasonable to expect special or detailed information free of all charge. Evidently ; nor do I think there can be two opinions on that point. But as things stand at present, most of us do not know where to ask for the reliable information that we are quite willing to pay for.

Simbirsk, Russia.

N. SHISHKOV.

## The Current Supplement.

The current SUPPLEMENT, No. 1213, has many interesting articles, of which "The Nicaragua Canal" is undoubtedly the most interesting. This is a digest of a lecture delivered by Prof. Lewis M. Haupt, member of the Nicaragua Canal Commission, and revised by the author. It is accompanied by nine interesting photographs. "An English View of the Spanish-American War" is a timely article. "The Production of Metallic Tubes by Extrusion" describes a new metallurgical process, by which all kinds of metallic sections, even of the most complex designs, are obtained by forcing metal melted to plasticity through a die under hydraulic pressure. "Trade Suggestions from United States Consuls" are particularly interesting in this number. The usual notes are also published, including a number of formulas for shoe dressings. "New Jersey Corporations" is an article describing that State's great income derived from corporations which come to the State because they are not excessively taxed. "The Patent Systems of the United States and Foreign Countries Compared" is by W. Clyde Jones. "The North American Porcupine" is an interesting article by Dr. G. Archie Stockwell.

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## RECENTLY PATENTED INVENTIONS.

## Agricultural Implements.

**CHECK-ROW CORN-PLANTER.**—CHARLES H. BAKER, St. James, Mo. The invention provides a machine which is capable of varying in an effective and simple manner the distance between the points at which the corn is dropped. The mechanism includes a rotary feed-wheel and means for imparting a continuous rotary motion thereto. A rotatable drop plate is mounted below the feed-wheel and is provided with means for imparting an intermittent motion thereto, and with means for varying the length of each movement thereof. The invention, it will be observed, embodies a new method of regulating the movement of the drop-plate. By reason of this construction, the intervals between the drop pings can be varied as desired, it being also possible accurately to measure the exact adjustment of the parts necessary for any given distance between the droppings.

## Bicycle-Appliances.

**DEVICE FOR TRUING WHEELS.**—JOHN G. SCHMIDT, Portland, Ore. This truing device for bicycle-wheels has a body-plate with a fixed and an adjustable jaw adapted for engagement with the forks of the bicycle-frame. An adjusting-bar is pivoted on the body-bar and extends below the jaws and beyond the body-plate. A truing-point is carried by the body-plate, and a second truing-point is adjustably located on the adjusting-bar to take eccentric deflection off the wheel. The device is of such size and form as to permit its being carried in a tool-bag.

## Engineering-Improvements.

**ROTARY ENGINE.**—WILLIAM H. WILSON, Hinton, W. Va. The engine has two rotary exhaust valves which have a link connection. These valves are each directly connected with oscillating pistons which are operated by steam led to them from the main inlet ports of the engine. These main ports are two in number—one for forward motion and one for reversing. They are opened and closed by a valve consisting of two concentric tubular segments, fitting one within the other and operated by a single lever connected with them on the outside.

## Mechanical Devices.

**CARDING-MACHINE.**—ALEXANDRE VINCHON, Roubaix, France. The ordinary method of cleaning wool in carding machines, by means of the picker roller, gives imperfect results, because the wool is very slightly divided, and because it becomes entangled by large fibers, thus hiding and retaining in the wool burs and other impurities. The object of this invention is to overcome these two defects by placing directly behind the picker roller a cleaning-roller having rows of fine teeth arranged longitudinally around its periphery. These teeth open out the fibers and expose the burs, which are then removed by another picker-roller without injuring the fiber.

**COIN-CONTROLLED VENDING-MACHINE.**—WILLIAM TRIBBLE, Alton, Ill. This machine is intended for the automatic vending of cigars. The cigars are placed in a box in the top of the machine. They are arranged with a ribbon running back and forth between the layers, so that when the ribbon is wound off on a reel the cigars are displaced one at a time and fall into slots in a delivering roller, which turns and drops them in a chute. The machine is so constructed that it may be set to deliver two cigars or more at a time if desired.

**SINGLE TRIGGER FOR DOUBLE-BARREL FIRE-ARMS.**—PETER C. KOLL, Walnut, Iowa. The invention provides a single trigger which may be used with perfect safety for two hammers, and which is constructed so

that the right-hand hammer will drop first without the possibility of the left-hand hammer's being brought into action. Upon pulling the trigger a second time after the first firing, the left-hand hammer will be operated. Novel means are provided for safely lowering the hammers when cocked and when the gun is opened, this result being attained mainly by the forward movement of the trigger. If, however, the hammer be cocked and the gun closed, the hammers can be dropped by firing, the trigger being locked against forward movement.

## Miscellaneous Inventions.

**ENVELOP.**—JACOB SCHAUB, Salt Lake City, Utah. This invention seeks to provide an envelop which cannot be opened without detection. The improved envelop is provided with a bottom flap having an inward fold forming a pocket, with two side flaps overlapping each other and the bottom flap, and separated at their lapped ends by a narrow space, so as to permit the tongue of a mutilated sealing-flap to enter the pocket. The envelop is of especial service in the sending of second class matter through the mails.

**HOSE-COUPLING.**—HENRY O. PAUL, Clear Lake, Iowa. One of the two sections of this coupling is formed with a conical, shouldered head, and with a second shoulder back of the first. The mating section is connected with the first section by means of a collar, the rear shoulder previously mentioned being located within the collar. Locking-pawls on the collar engage the first shoulder of the first named section, and prevent the uncoupling of the parts. In order to make the coupling watertight, a cone-shaped washer is fitted on the conical shouldered head of the one section, between the two coupling sections.

**WIRE-FENCE.**—LINGUE S. MORAN, Kendall, Kan. This invention provides a wire-fence whose longitudinal wires may be easily applied and locked to the posts or detached therefrom, and whose corner-posts may be readily adjusted to take up the slack of the wires, or to restore the posts themselves to their original vertical positions when they have departed therefrom. The fence-posts are notched to receive the wires and to hold them in place. In order that these wires may be still more securely locked, a spring-loop is provided which is adapted for engagement with the wire. The corner-posts of the fence are formed with a body portion comprising a flat inner plate, a V shaped outer plate, and a flat-base. In order to adjust the post, an adjusting stay-rod, formed of two parts connected by a swivel-nut, and two shorter brace-rods with nuts applied to their ends, are employed. In adjusting the corner post, the swivel is rotated and the nuts turned on the brace-rods, until the desired position of the posts has been obtained.

**CASKET-HANDLER FOR HEARSE.**—WILLIAM P. FEST, Rochester, N. Y. The improvement provided by the inventor for moving burial caskets to and from hearses, consists of a platform and bars designed as a permanent attachment to a hearse, and adapted to slide underneath the vehicle-body when not in use. By means of the device a casket may be easily lowered or raised.

**DRESS-SHIELD HOLDER.**—AUGUST F. BEESE, Buffalo, N. Y. The purpose of this invention is to provide a device adapted readily to attach a dress-shield to the arm-eye of a garment, the attachment being so made that the shield may be quickly detached from the garment and another substituted. The device consists essentially of two parts : a gripping-section having two jaws, and a locking-section, the two sections coacting to hold the shield in place.

**TELEPHONE DESK AND REGISTER.**—HORATIO F. FORRETT, Brandon, Canada. The desk comprises a

vertical backboard in which the desk proper is removably held. The desk is provided at its under surface with two rollers, one of which is adapted to pass through the core of a roll of paper, the other receiving the paper after it has been unwound. Two openings in the desk permit the paper to pass from one roller to the other over the desk, after the desired records, notes, or memoranda have been made.

**PIPE-COVERING.**—JOHN A. SCHARWATH, Jersey City, N. J. The covering is especially designed for use on ammonia, brine, or other pipes, and comprises a split layer of waterproof material, surrounded by split rings, a split layer of felt held together by staples and surrounded by a tube, and a fabric the edges of which overlap and are held together by glue. The covering is designed to prevent the formation of frost on the pipe and the loss of cold.

**CARTRIDGE-BELT.**—LOUIS SANDERS, Brooklyn, New York city. The novel feature of this invention is found in the use of a clamp comprising a box-loop fitted to embrace the belt-leaf and having opposite, connected arms arranged to be outwardly bowed. Spurs or prongs are arranged to be forced through the belt-leaf when the arms of the box-loop are readjusted to clamp the belt-leaf. The clamp is adapted to form pockets in the extension leaves of the belt, and to increase or decrease the diameter of a cartridge-pocket originally formed in the belt.

**REPAIRING DEVICE.**—GEORGE B. LEONARD, Chicago, Ill. The purpose of the invention is to provide a repairing device for use on water-closet bowls, arranged to permit a quick connection between the water-supply pipe with the bowl, should the water-inlet be broken off. The device includes a thimble with a flaring end, means for drawing the thimble outwardly, and a coupling comprising two pivotally-connected links extended loosely through the flared portion of the thimble, the coupling serving to limit the outward movement of the thimble.

**EGG-PRESERVING CRATE.**—BENSON H. SHEARER and WILLIAM O. LEWIS, West Clarksville, N. Y. The body of the crate is so constructed that it will be surrounded by air and moisture-proof chambers, the air contained in the chambers or passageways serving to prevent the absorption of water by the eggs, thus keeping the eggs clear and bright. The lid of the crate is so made that, when placed in position, the eggs will be prevented from becoming tainted.

**DOOR-HANGER.**—JACKSON D. SCHOOLER, Sedalia, Mo. The hanger at its upper end is journaled on balls mounted to travel in a tube split to permit the passage of the hanger. The tube is supported on eyebolts, each having a shank and an open eye, the connection between the shank and eye being split. When each eyebolt is screwed up by means of a nut, the split portions are closed, thus causing the eye firmly to hold the tube in place. The hanger is especially designed for freight-cars, barns, and dwellings.

## Designs.

**CORN-HUSKER PAD.**—JOHANN G. KEES, Nebraska City, Neb. Pads of this class are secured to the hand by straps and are provided with iron hooks to open the corn-husk. In the present pad, V-shaped end slots are made for the purpose of relieving the ends of the pad of undue stiffness, and also for the purpose of preventing wrinkling as the ends are drawn and bent around the hand. Slits are provided for the passage of the strap used to secure the pad to the hand.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please send the name of the patentee, title of the invention, and date of this paper.

## NEW BOOKS ETC.

**THE ELEMENTS OF PHYSICS.** A College Text Book. By E. L. Nichols and William S. Franklin. Vol. I. Mechanics and Heat. New York: The Macmillan Company. 1898. 8vo. Pp. 218. Price \$1.50.

The volume before us is the new edition, revised, with additions. The study of physics is an entirely different matter from what it was fifteen or twenty years ago, and the conditions call for new text books and systems of teaching. Now, when the student takes up physics, he must necessarily have a familiarity with mathematics, so that he can take hold of the matter intelligently from a mathematical standpoint. The present volume is admirably adapted for a text book where the knowledge of elements of the calculus is understood. Combined with supplementary lectures and laboratory work, the three volumes cannot fail to give the reader a most admirable knowledge of physics as understood and taught to-day.

**AMERICAN TRADE INDEX.** A Description and Classified Directory of the National Association of the Manufacturers of the United States. Arranged for the Convenience of Foreign Buyers. Philadelphia: National Association of Manufacturers. 1899. 12mo. Pp. 276.

The National Association of Manufacturers was formed in 1895, for the advancement of American trade. The membership of the association embraces 1,000 of the largest and most responsible manufacturers of the United States. It is a thoroughly representative organization, as its members are of all the important branches of industry and the principal producing sections of the country. A well equipped bureau of information is maintained by the association, and a great deal of good has already been accomplished by it. The association neither buys nor sells merchandise, and charges no fees for furnishing information. The classified list, which is before us, is a large American trade index, and will undoubtedly prove of great value.

**THE EVOLUTION OF THE ENGLISH HOUSE.** By S. O. Addy, M.A. London: Swan, Sonnenschein & Company. New York: The Macmillan Company. 1898. 12mo. Pp. 223. 42 illustrations. Price \$1.50.

We do not know of a more interesting subject than the evolution of the English house, in which we are more or less interested, because the English house is the prototype of our own. The volume before us deals with round huts, which were the earliest form of European houses, underground houses, rectangular houses, the town house, manor house, the castle, watch tower and church or "Lord's house." The author has treated a very difficult subject with marked success, and it is to be hoped that a large number of readers will appreciate his efforts. The volume forms one of the "Social England Series," and the only criticism we have to make regarding it is the totally unnecessary badness of the half-tone engravings, which are almost useless. It is a pity that such a scholarly and important book should be so badly made. It is accompanied by an excellent index, which is usually missing in books of this kind.

**THE YARN OF THE YAMPA.** A Transatlantic Cruise. By E. L.H. McGinnis. New York: Outing Publishing Company. 1898. 16mo. Pp. 160. Illustrated.

This little book before us is admirably illustrated by half-tone engravings. The book is well worth reading, since it sums up in an entertaining way the account of the author's trip, and it gives good descriptions of many