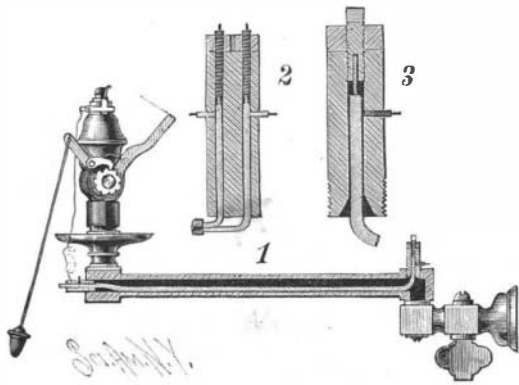


**AN ELECTRICAL BINDING POST.**

An improved binding post for insertion in gas fixtures, for making connections between the house wires and the burner wires, is shown in the engraving, and has been patented by Mr. Arnold Kohl, of Centralia, Ill. Fig. 1 shows the improvement applied to an electrical gas lighter, Figs. 2 and 3 being transverse sections of double and single binding posts, the former being used where the return current is conveyed by a wire instead of the fixture itself. The body of the post is of hard rubber or other insulating material, bored axially to receive the wires, the end to be inserted in the gas fixture having an external thread, while the other end has an internal thread to receive the contact screw. The latter is threaded, and upon it is placed a metallic nut, between which and the binding post body the house wire is clamped, the wire leading to the electrical gas lighter being similarly



**KOHL'S BINDING POST FOR ELECTRICAL CONNECTIONS.**

clamped by the nut of the binding post adjoining the burner. In the side of the post is a binding screw, for clamping the wire, and the inner end of the contact screw has an axial bore in which is received the exposed end of the wire in the fixed end of the fixture. Two such binding posts are necessary for completing the circuit through a gas fixture.

**A STEEL PEN EXHIBIT AT THE FAIR.**

One can readily believe that even so small an article as an ordinary steel pen may be the basis of an industry of considerable importance on looking over the fine exhibit of the Esterbrook Steel Pen Company at the World's Columbian Exposition. The business was established in 1860, and the works of the company are at Camden, N. J., where over one hundred and fifty different styles of the Esterbrook pens are made, the pens finding a market in all parts of the world. The house is the oldest and largest manufacturer in the United States, and makes pens for every purpose, and to suit all writers. It is a business that cannot be successfully conducted in a small way, the process of manufacture being intricate and complicated, each pen being subjected to a high degree of heat four or five times, and going through from thirty to forty hands before it is completed. The quality of the Esterbrook pens is concededly of the highest class; hence their universal popularity. It is one of the wonders of our modern progress in

**THE CAW'S PEN AND INK COMPANY EXHIBIT.**

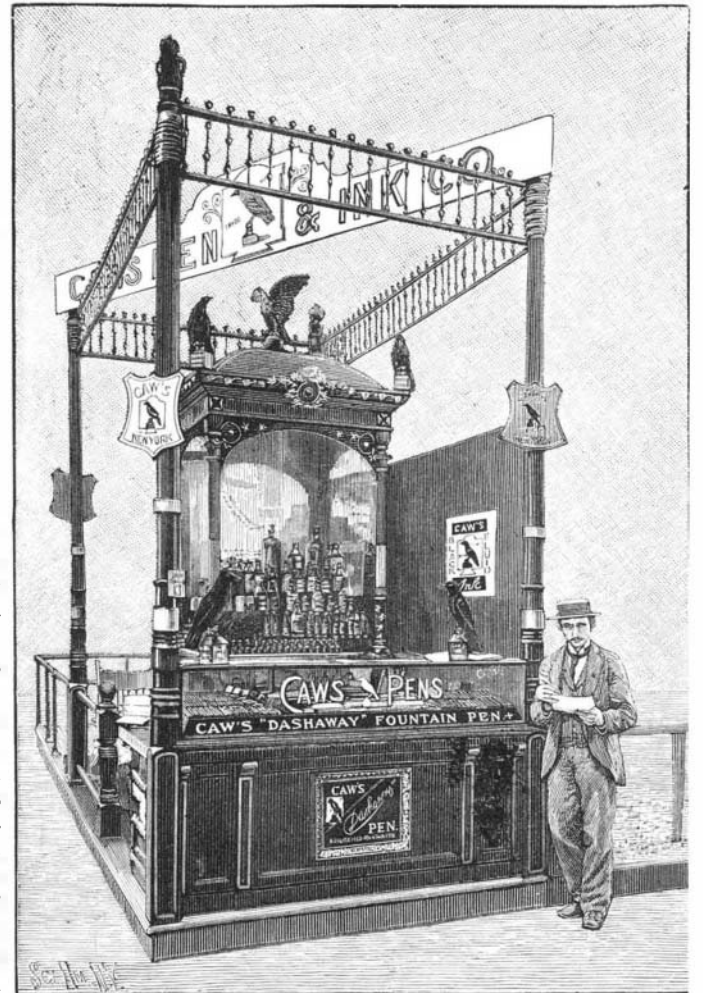
Among the exhibits in the great Manufactures and Liberal Arts building at the Fair, one very beautifully arranged showcase is devoted to the display of the well-known Caw's pens and inks. These articles have become so popular from their large use by all who have any writing to do in every department of business and in all walks of life, as well as from the numberless unstinted indorsements of men prominent in the leading professions, that any detailed description would be superfluous. Fountain pens, for many years used almost exclusively by reporters and traveling men, have within a comparatively short period become almost indispensable to the business man and to those whose avocations are of a literary character in any way. This is because these pens have of late been made so simple, clean, and thoroughly effective that one can now, with the least care, depend upon always having and conveniently carrying upon the person a pen in good working condition, without danger of soiling the clothes or fingers therewith, the ink carried in the holder, and readily replenished, being sufficient to do a large amount of work. In consequence, also, of this largely increased use, and of the improvements introduced in the manufacture, the prices of this class of pens have been very greatly reduced. In Caw's "Dashaway" fountain pen, a regular first quality gold pen of any standard shape or size may be used. In this respect it differs from all other fountain pens. Another difference is in its "double feed," one on each side of the gold pen, which insures a more uniform and reliable delivery of ink than can be obtained from a single feed. President Cleveland uses one of these pens, and has furnished the company with a handsome testimonial. In Caw's stylographic pens the inventor seems to have obtained the acme of perfection and simplicity. The writing is done with a circular point similar to a pencil, but being tipped with an alloy of iridium and platinum, making it almost as hard as diamond, it will last many years. The stylographic pen carries ink in the holder the same as the fountain pen, and by many it is preferred to the ordinary split pen. With both of these pens any good writing or copying ink may be used, but the ink manufactured by the Caw's Pen and Ink Company has as high reputation as the pens, and has had a very large sale in the stationery trade for many years. It is a good black when first used, and in its manufacture an especial point is made to produce an ink which will not fade or mould, and will not gum or corrode the pen. The company displays its medals from the New Orleans Exposition of 1884 and the Paris Exposition of 1889, and expect to be equally successful in competition in Chicago.

**The New 13 Inch Guns.**

Twelve of the new 13 inch guns are needed for vessels now under construction. Four will be furnished to each of the following vessels, Indiana, Massachusetts and Oregon. It is now decided by the British Admiralty that guns of smaller caliber are better than the huge 110 ton guns, which are liable to many mishaps in firing and are entirely dependent upon machinery which might be disabled at a critical moment. The disaster of the Victoria, in which the guns played an important part, strengthens this opinion. The 13 inch gun is nearly 40 feet long and has a diameter of 4 feet at the breech and 21 inches at the muzzle. It is constructed on the built-up principle, in which a central steel tube has bands or jackets shrunk on. The projectile will be fired with 550 pounds of powder and will weigh 1,100 pounds. As soon as the projectiles can be constructed and the guns mounted a series of tests will be made with Harveyized armor plates as targets. The Brown segmental gun has shown a remarkable ability to stand heavy charges producing a high velocity and to resist great pressures.

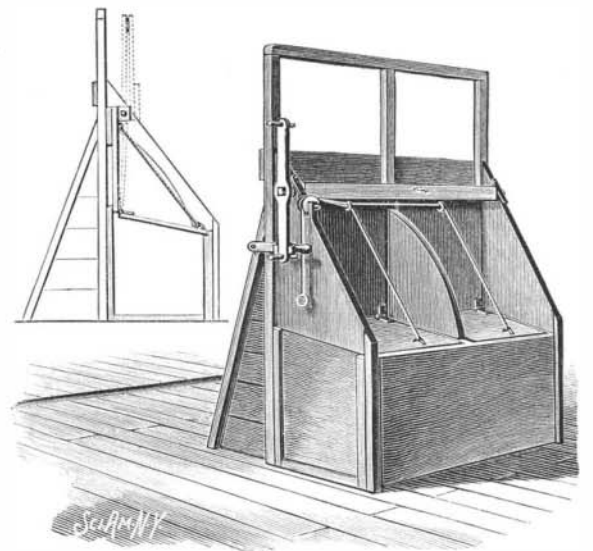
**AN IMPROVED STALL FOR MILK CATTLE.**

The stall shown in the illustration is designed to enhance the comfort and conduce to the regular feeding of the animal. The improvement has been patented by Mr. Jakob Aeberly, of St. Paul, Minn. The stalls



**THE WORLD'S COLUMBIAN EXPOSITION—CAW'S PENS AND INKS.**

are preferably built in pairs, and have a transverse gutter at the rear of the stall flooring. The feed cribs are of such height as to readily permit the cattle halted thereto to feed over their top edges, and at each wall of a crib are vertical stanchions, from the base of which a short vertical partition wall is extended rearwardly. The crib covers are hinged on pendent gates, whereby the cribs are not only closed at their tops, but the space above each crib is shut off from the stall. The



**AEBERLY'S CATTLE STALL.**

gates, to the lower edge of each of which is hinged a crib cover, are secured upon a rotatable transverse shaft, on the outer end of which is a transverse handle bar. A cord extending upward from the outer edge of each crib cover connects with a transverse cord passing over a grooved pulley at the side, the covers being raised and folded against the gates by pulling upon the cord, when both the covers and the gates may be raised, as indicated in dotted lines in the outline figure, by rotating the handle bar, thus affording a clear opening from each stall into the crib opposite it. A latch piece is adapted to be swung across the path of the handle bar to hold the gate locked in elevated position.

Further information relative to this improvement may be obtained of the patentee or of Mrs. M. Schembri, No. 396 Van Buren Street, St. Paul, Minn.

**Sir Benjamin Ward Richardson, M.D.**

The honors of knighthood have been conferred upon Dr. Benjamin Ward Richardson, of London, in recognition of his valuable discoveries in medicine and his great abilities as an instructor and writer.



**THE WORLD'S COLUMBIAN EXPOSITION—THE ESTERBROOK STEEL PEN EXHIBIT.**

manufactures that the cost of making these now indispensable articles has been reduced to so small a figure.

The coast survey of the United States was begun in 1817.