

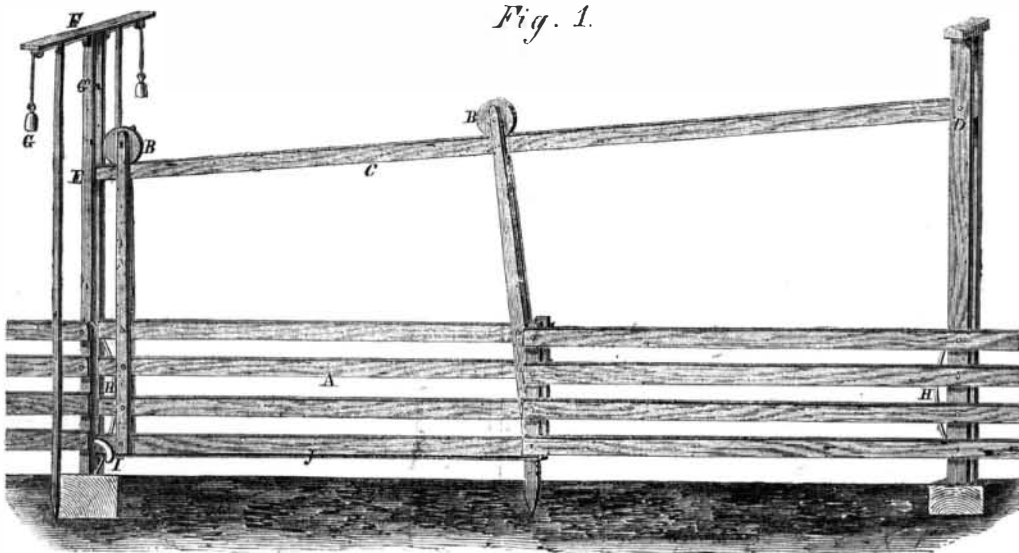
Patent Self-acting Gate.

It happens not unfrequently that farmers or others find themselves suddenly opposed in their progress over their premises by a heavy wooden gate, to open which they must get out of their vehicles before they can go further. This is not easily accomplished sometimes, as in the case of a restive horse; or when a young gentleman finds himself so completely engaged in conversation with his "cousin," that to descend and do so unromantic a thing as to open a gate would entirely destroy the thread of his discourse. To avoid this and similar inconveniences, the self-acting gate herewith illustrated, has been invented, and we can certify that it is a very conve-

The reverse of this operation is performed when the gate is to be closed; the rail is lowered from the shoulder on which it rests by the opposite cord, and the gate then descends by its gravity and completely stops the way. Fig. 3 shows the way in which the shoulder that the rail rests upon when the gate is open, is made, and Fig. 4, shows the manner in which the rail latches on the shoulder of the front post, and also on the pin, thereby gaining the full strength of all the parts. All the parts are easily operated by a child twelve years old, and the perishable materials, such as the cords (or chains when required), are sheltered from the weather and will last a long time. The cost of such a gate is, we are assured,

beneficial as a paint for iron. In the month of April last he inspected a well, 200 feet deep, a short distance out of London, where he had put up an engine forty-five years ago; the long iron rods which had been placed in it had been painted with red lead, and the metal had remained unchanged in all that period. The same preservative effects of red lead paint on iron he had witnessed upon other iron-work which had been many years in use.

The pay of the engineers on the blockade-runners is said to be \$1,500 per month. It is not stated whether the sum is paid in gold or Confederate money—if in the latter, their services are cheap enough!



PIERCE'S PATENT AUTOMATIC GATE.

venient arrangement, and will we think be generally appreciated by the public. Fig. 1, is an elevation of the gate, A; this is suspended on rollers, B, which run upon the upper rail, C. This rail is jointed at D, and moves freely at the further extremity between the uprights, E. These upright timbers have a plank, F, common to both, crossing their tops, on the underside of which the cords, G, running in rollers, are carried, and connected with the loose end of the rail. There are also two uprights under each end of the cross timber which brace the main uprights that can be used for a hitching post. The cords have weights depending from them which balance the rail, C, and there are also two shoulders, G', in Fig. 2, on which the free end of the rail rests

not above that of an ordinary one, and the advantages it presents over those not so constructed, it will be apparent to every one, make it actually cheaper than a cumbersome, slamming affair, that takes two men and a boy to swing on its hinges. This gate is the invention of James M. Pierce, of Mokena, Ill., and was patented through the Scientific American Patent Agency on April 28, 1863; further information can be had by addressing him at that place.

RED LEAD FOR PROTECTING IRON.

At a recent meeting of the Society of Arts, London, the question of preserving iron from rusting formed a subject of conversation, and important remarks were made by members, who stated that gal-

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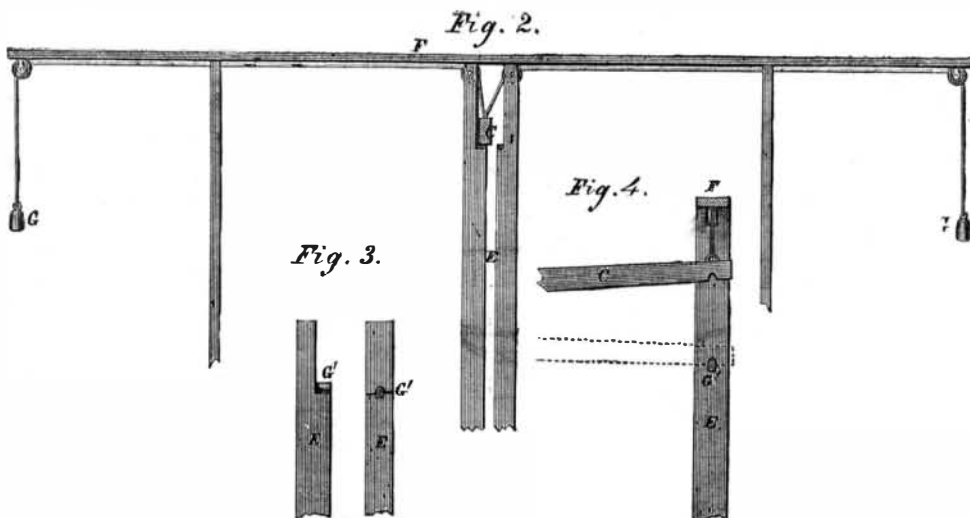
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FROM THE STEAM PRESS OF JOHN A. GRAY



vanized iron wire for telegraphs was not affected with rust in passing through rural districts, but the coating of zinc on the iron afforded no protection to wires in cities. The acid gas generated by the combustion of fuel attacked the gas and decomposed it. A new substitute for covering telegraphic wire was desirable.

With respect to paints for coating iron, such as the plates of iron vessels, machinery, &c., Mr. John Braithwaite stated that pure red lead was the best. His experience dated as far back as 1806, with the use of red lead, and for fifty years he had used it with success. White lead was more injurious than

when the gate is opened or closed. The springs, H, mitigate the shock of the gate when it closes, and the guide, I, is provided to insure the proper position of the gate at all times, and prevent it from being blown open by the wind. The lower side of the bottom rail is faced with a board, J, three inches wide, so that the gate will work freely between the posts when running back and forth. It will be seen that when the cords are pulled, the free end of the rail, C, will rise through the uprights and carry with it the gate; the latter will then be upon a plane inclining from the upright E to D, and will run down the same past the fence, and leave the passage clear.