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Improved Convertible Fence.

The object of the inventor in designing this structure has been to obtain one that could readily be converted into many different kinds of fences, and also be applied to other uses not generally attainable in structures of a similar nature. In Fig. 1 we present a view of the fence as arranged in straight panels; in Fig. 2 the same pieces or parts of the fence are shown in the form of a rail, or worm fence, as it is sometimes designated; and Fig. 3 is a representation of a shed or hut, also built up from the

The fence is made in sections or panels, and it will be seen by looking at the engraving that several panels are joined together by the diagonal braces, C. These braces are supported by a rod, D, running through the tops of the adjoining uprights, and a cross-stay, E, is further pinned to each leg of the braces in the manner shown. It will also be seen that the bars of each panel are embraced by the cross-stay, E, in a notch cut to receive them. In this manner the several panels are firmly secured against accidental dislodgement. In the rail plan of

double duty is thus obtained from the parts of which the fence is constructed.

This fence is the invention of H. C. Foote, 127th New York Volunteers, and was patented on Dec. 17, 1861. For further information address the inventor, Company A, 127th Regiment, N. Y. V., Port Royal, S. C.

ON PACKING METALLIC RODS.

The rods about steam engines which work through vessels or chambers containing steam, or liquids,

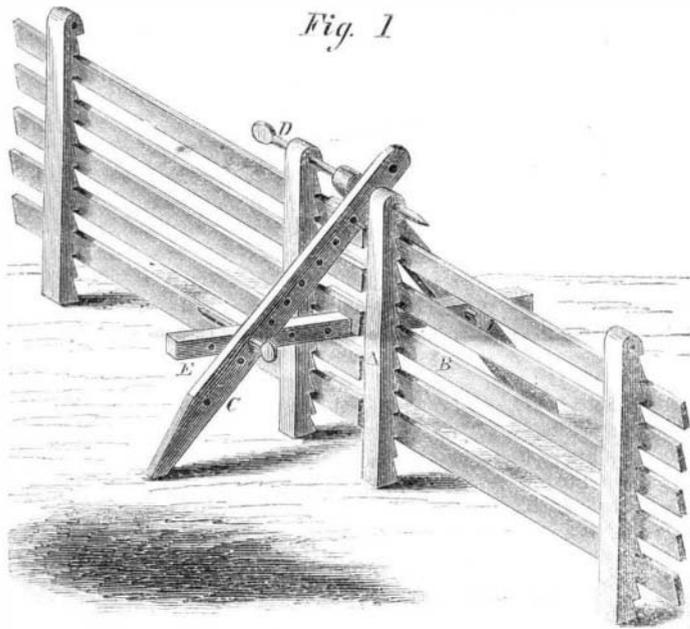


Fig. 1

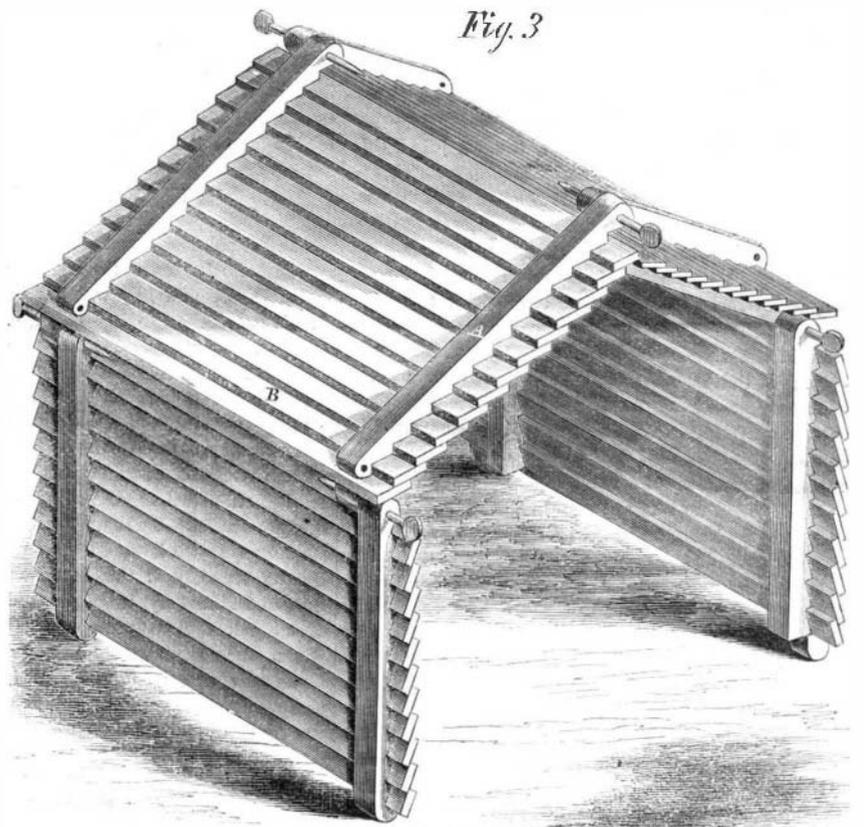


Fig. 3

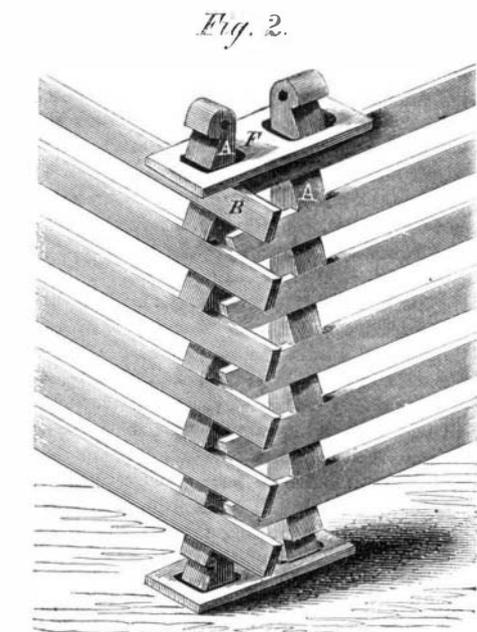


Fig. 2.

FOOTE'S IMPROVED CONVERTIBLE FENCE.

this fence the uprights are notched in the same manner as the others and the bars nailed to them; the ends of the bars, however, are extended beyond the notched uprights, so as to permit the several panels, or sections, to be set angularly, as shown. When this plan is desired, the braces, C, in the straight plan of fence are omitted, and the caps, F, used instead. In Fig. 3 the house, or shelter-hut, is shown, and to change the fence into this form it is only necessary to remove the braces and separate the panels, then to invert each alternate panel and adjust the ends of the bars thereof opposite the spaces between the bars of the panels which have not been inverted, and to shove the inverted panels along a sufficient distance to cause the bars thereof to occupy the said spaces, and the posts of each pair of panels to come opposite one another as shown. The panels thus doubled are set up in the form of barracks or a shanty, and are extremely useful for sheltering stock and farm produce in the winter.

These fences can be set up temporarily around the growing crops in the summer season, and, later in the year, when the grain has been harvested, taken down and erected as shown in Fig. 3; so that a

are fitted with glands and stuffing boxes in the latter the packing is placed and the gland compresses it against the rod, so as to form a perfectly steam-tight and yet an easily-working joint. All this is well known to mechanics and engineers, but so many plans for and such erroneous ideas prevail respecting the performance of this duty, that we have thought a little discussion on the subject not inappropriate.

To judge from the number of scored, three-sided, bent and otherwise damaged piston and valve rods which we have seen at various times about steam engines, there would appear to be a necessity for some radical reform. To insure ease of action and economy of work, an engine should be very carefully packed, for the absorption of power from this source is enormous, in a large engine, and would scarcely be believed. We have seen engineers in charge of large low-pressure engines take a wrench three feet long in the handle, apparently made especially for the purpose, and heave down the nuts on the standing bolts with main force, merely in order to check the escape of a small jet of steam. Such practices are reprehensible from the fact that the expenditure

same parts as the preceding plans are. The construction of the fence is quite simple, inasmuch as it consists only of a few distinctly different details. Many pieces are required in the aggregate, but the essentially different nature of them is not changed in building the lines of fence herewith illustrated. In the straight panel fence, Fig. 1, the uprights, A, are notched, and the bars, B, placed on every alternate notch; these bars are then secured by nails.