(No Model.)

J. ELMER.

SWAMP RAILROAD BED.

No. 250,902. Patented Dec. 13, 1881.

Fig. 6.

Fig. 5.

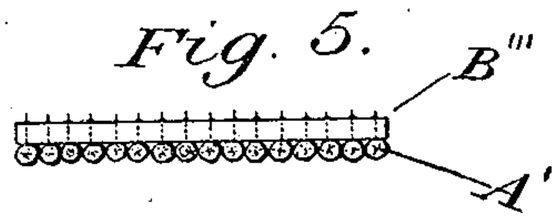


Fig. 4.

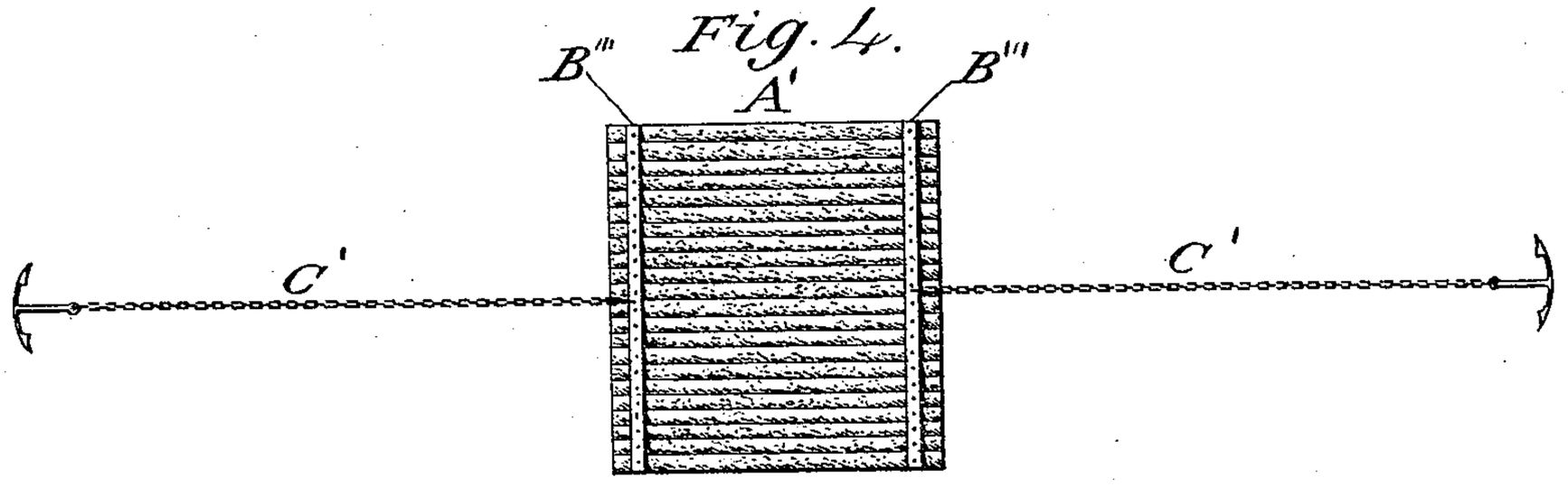


Fig. 3.

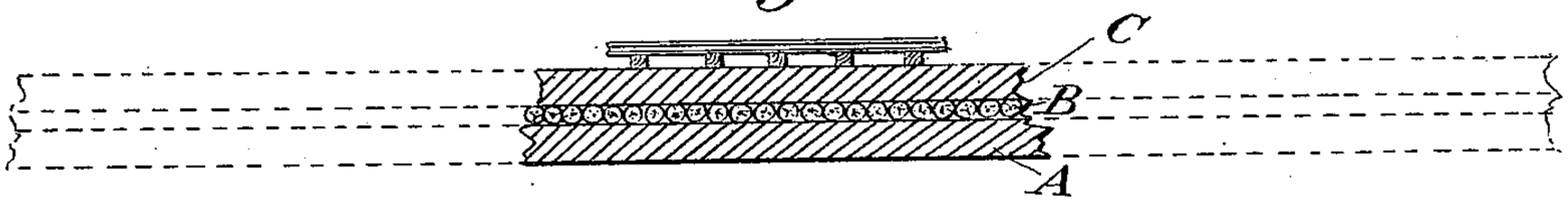


Fig. 2.

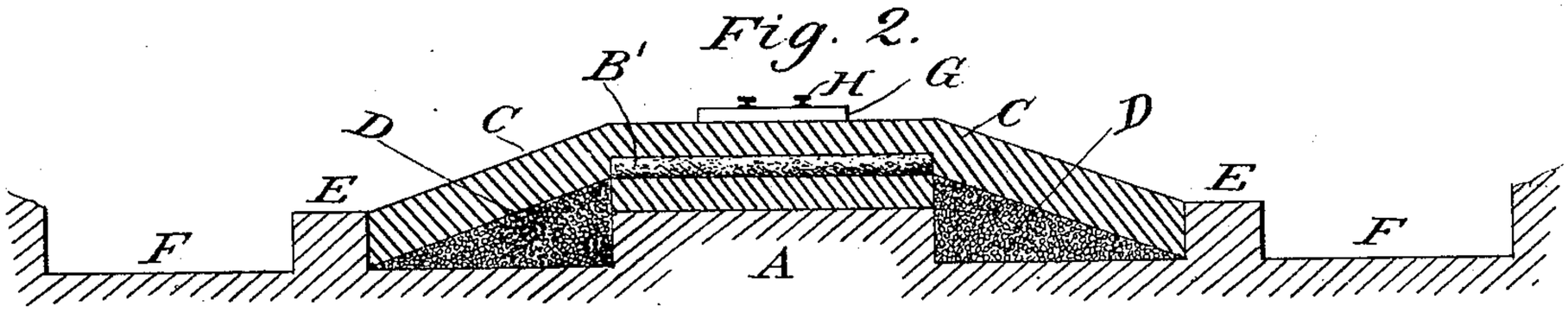
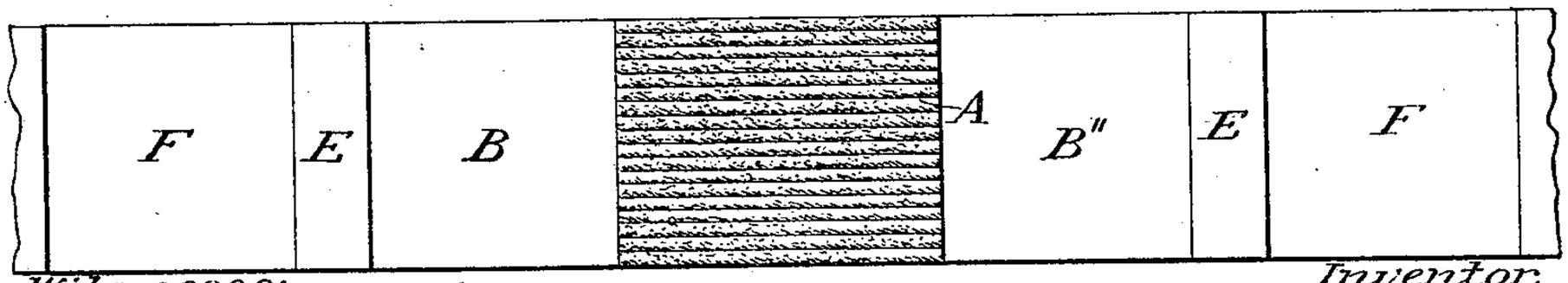


Fig. 1.



Witnesses:
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UNITED STATES PATENT OFFICE.

JACOB ELMER, OF BILOXI, MISSISSIPPI.

SWAMP RAILROAD-BED.

SPECIFICATION forming part of Letters Patent No. 250,902, dated December 13, 1881.

Application filed August 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, JACOB ELMER, a citizen of the United States, residing at Biloxi, in the county of Harrison and State of Mississippi, have invented a new and useful Bed for Railroads Across Swamps, Ponds, and Bayous, of which the following is a specification.

My invention relates to the construction of a permanent bed for railroads across swamps, ponds, and bayous.

The object of my invention is to construct the bed in such a manner that the timber used will not decay or rot and the heaviest trains run over without the bed sinking or washing out on account of heavy rains or high tides. I attain these objects by the constructions illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a road-bed constructed according to my invention. Fig. 2 is a transverse vertical section. Fig. 3 is a longitudinal vertical section between the rails of the track. Fig. 4 is a plan view, showing the anchorage; Figs. 5 and 6, detail views.

A ditch, B, twenty or twenty-five feet in width, is dug alongside of the road-bed A with dredge-boats, (such as are in use at present,) of a sufficient depth to float the boat, the mud from the ditch to be thrown on the road-bed and leveled to the width of twenty-five feet the whole length of the swamp. Then the bed A is to be covered with logs or timbers B′ laid close together, every piece reversed with relation to its adjacent pieces, and not less than ten inches in diameter and twenty-five feet long. Then a ditch, B″, is dug on the opposite side of the bed, parallel and of the same size and width as the former, the mud from this ditch to be thrown on the timber or causeway B′, entirely covering the timber, for the purpose of preserving the timber for all time to come. This bed, when leveled, will be ready to receive the cross-ties and rails. The two ditches will facilitate the laying of the track, as the material can be transported through these canals. This will elevate the bed at least three feet above the adjoining land.

When the road has to cross sinks, bayous, or ponds where there is six feet water, or less, rafts A′ are to be constructed of logs twenty-five feet long, and not less than twelve inches in diameter, fastened together with stringers B‴ on each side, of not less than eight inches in diameter. These stringers are bolted on top on the end of the logs on each side. The rafts are then covered with small stones or rocks from twenty to thirty pounds in size and in number sufficient to sink the raft and hold it to the bottom, and so on with additional rafts, one upon another, until the last raft will be on a level with the road-bed. The first raft has to be fastened with anchors and chains C′, to place the raft and hold it in proper position until the road-bed is completed; then the anchor and chain can be removed. When the rafts are of a proper height they are to be covered with mud, the same as other parts, to keep the timbers from decaying. After the cross-ties and rails are applied the road is ready for travel.

For a proper protection of the bed, poles, saplings, or brush made into bundles D, Figs. 2 and 6, and tied together, from fifteen to twenty-five feet in length, not exceeding three hundred pounds in weight, may be placed lengthwise in the ditches alongside of the road-bed, on top of each other, to within one foot of the top and the full length of the bed. The bundles, when so laid, are to be covered with mud C even with top of the road-bed. This will keep the bed from washing and the bundles from decaying.

The mud for covering the bundles is to be had by digging an additional ditch, F, along each side of the first ditches, and leaving a partition-wall, E, of six feet between the two ditches. This partition-wall will brace and keep the road-bed from washing.

The following I claim as my invention:

1. In a swamp railroad-bed, the roadway composed of layers of soil taken from adjoining lateral ditches, and a layer of logs interposed between said layers of soil, and a filling of poles, as faggots, laid lengthwise in said ditch and suitably protected by soil, substantially as and for the purpose set forth.

2. A railroad-bed across submerged ground, consisting of rafts formed of parallel logs

clewed together and loaded with stones and piled one upon another to the level of the road-bed, the uppermost loaded raft being covered with soil, substantially as and for the purpose set forth.

3. In combination with a road-bed constructed as described, and its lateral ditches filled and protected as described, the partition E and additional ditch F, substantially as and for the purpose described.

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