

L. W. POND.
Devices for Sorting Logs.

No. 155,842.

Fig. 1.

Patented Oct. 13, 1874.

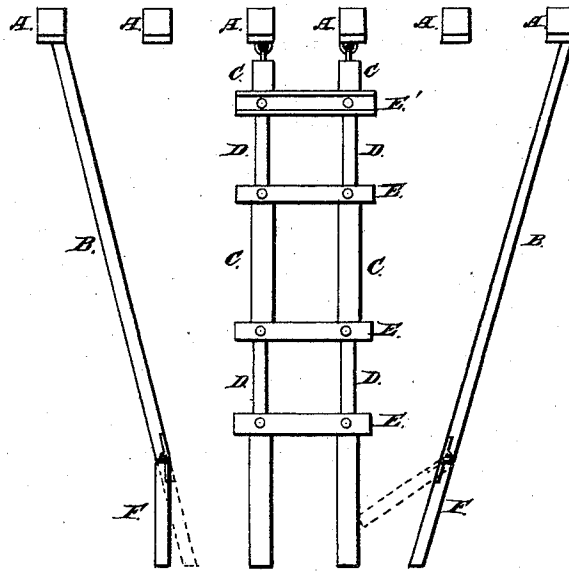


Fig. 2.

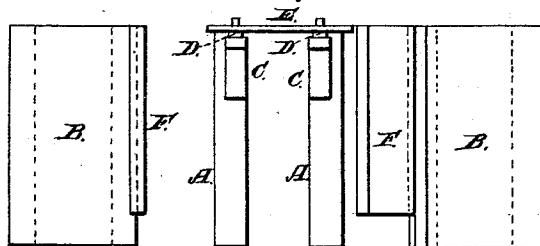


Fig. 3.

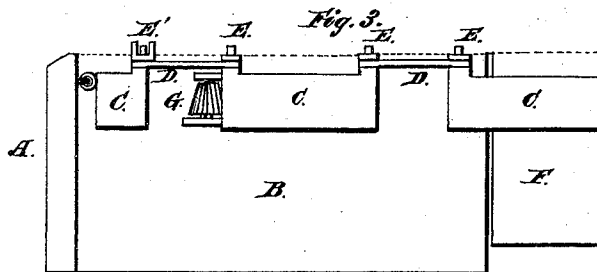
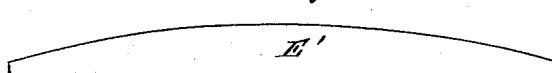


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEVI W. POND, OF EAU CLAIRE, WISCONSIN, ASSIGNOR OF ONE-HALF HIS RIGHT TO EAU CLAIRE LUMBER COMPANY.

IMPROVEMENT IN DEVICES FOR SORTING LOGS.

Specification forming part of Letters Patent No. **155,842**, dated October 13, 1874; application filed June 15, 1874.

To all whom it may concern:

Be it known that I, LEVI W. POND, of Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented new and useful Improvements in Devices for Sorting Logs, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view; Fig. 2, an end view; Fig. 3, a side view with the wing removed; and Fig. 4, an enlarged side view of the trussed cross-plank.

The object of my invention is to provide a device by the use of which logs can be easily and rapidly sorted, and this I accomplish by placing a row of jam-piers across a stream, and attaching to the inner ones floating timbers or booms, provided with runways, as hereinafter described, and in some streams or localities, where the current is rapid, wings to slack the current sufficiently to give the necessary time to handle the logs.

In the drawings, A represents the jam-piers; B, the wings; C, the floating timbers or booms; C', the upper end or ends of the store-boom; D, the runways between the sections of booms C; E, the staging or cross-planks; E', a trussed cross-plank, and F the gates. The jam-piers A are built of piles or logs, or other suitable material, and are connected together by a boom attached to the down-stream side, to prevent the logs from passing in at the sides, or between the piers, leaving the full space between the inner ones. To the inner piers are attached the floating timbers C, by chains or other suitable means, which will permit them to rise or fall. These floating timbers or booms C are ordinarily made from ten to thirty feet in length, but may be made longer, if desired, and are connected together by elevated planks or pieces of timber, which form a part of the staging, and are sufficiently high to permit the passage of the logs under them through the runways D. The floating timbers or booms C are connected together also by the cross-planks E, which planks form a part of the staging. These cross-planks E are provided with a series of holes, as shown, so that the space between the floating timbers

which forms the main passage can be varied in width through the whole or any part of its length by the use of loosely-fitting pins, which permit not only the changing but the entire removal of these cross-planks, if desired, for any purpose. The sections C float in a line with the current, and are usually connected at the lower end with the upper end of a store boom or booms, C', which also float. When the current is strong, I provide this sorting-boom with wings B, which are placed at an angle, and gradually approach each other at the lower end. These wings are made of piling, masonry, or crib-work, according to the nature of the bed of the stream, and as high as the highest stage of water.

In order to prevent an unnecessary deepening of the channel, and also to further check the flow of the current, I provide the lower end with gates F, suitably hinged or connected, which are swung in when the sorting-boom is in operation, leaving just sufficient space to pass the logs into the store-boom, or far enough to slack the current to suit the work being done. These gates are held in the required position by means of cords, chains, or ropes; or, as the upper end of the store-boom C' is usually provided with a pier of its own, these gates F might be fastened to such piers, and as they are hinged to the lower ends of the wings B when not fastened, they will float loosely in the current. The cross-plank E', (and I prefer to make them all the same way,) is trussed by spiking to its sides arched or curved pieces, which will prevent its sagging at the middle, and enable me to make them very much lighter and stiffer than they can otherwise be made, which is important, as they are of considerable length, sometimes as long as forty feet, and when so made it furnishes a receptacle for the tools, and also a safer place for the men to work on. As many sections C as may be desired can be added onto this sorting-boom.

As shown, the runways D are opposite to each other; but they may be made to alternate, if desired, by simply changing the longitudinal staging-planks, and lengthening one side of the upper section. The cross-planks

E may be located at any desired point on the sections, and one or more may be used to each section.

It will be found advantageous to put a conical roller, G, in the upper end of each of the floating timbers or booms C, which will prevent the sticking of the logs at the upper end and counteract the tendency to roll under.

In operation, the logs are loosened from the jam and sent into the channel or middle of the sorting-boom, the workmen are stationed along on the staging or boom, and such logs as are to go further down stream are permitted to pass through, and those that are to be selected or stopped are passed out through the gaps or runways D, from whence they pass down into the store-boom or booms.

If there is but one store-boom, the gaps or runways D will then be all located on one side, and the opposite side will be a continuous length of boom.

On navigable streams, the sorting-works and store boom are usually located at one side; but on smaller or unnavigable streams it may extend clear across.

I prefer the mode described of connecting and holding the separate sections of floating timbers C, as it allows them to float free in the current; but a pile or pier may be located at the upper end or side of each section to which it may be attached, to hold them separately in position, the staging being arranged as before.

What I claim as new is as follows:

1. The floating sections C, in combination, with the longitudinal staging-planks and cross-planks E, substantially as and for the purposes described.

2. The wings B and gates F, in combination with a floating boom, substantially as described.

3. The combination of the floating boom C D E with the wings B and store-boom C', substantially as specified.

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Witnesses:

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