(No Model.)

A. W. BALLOU.

STONE DRAG.

No. 533,981. Patented Feb. 12, 1895.

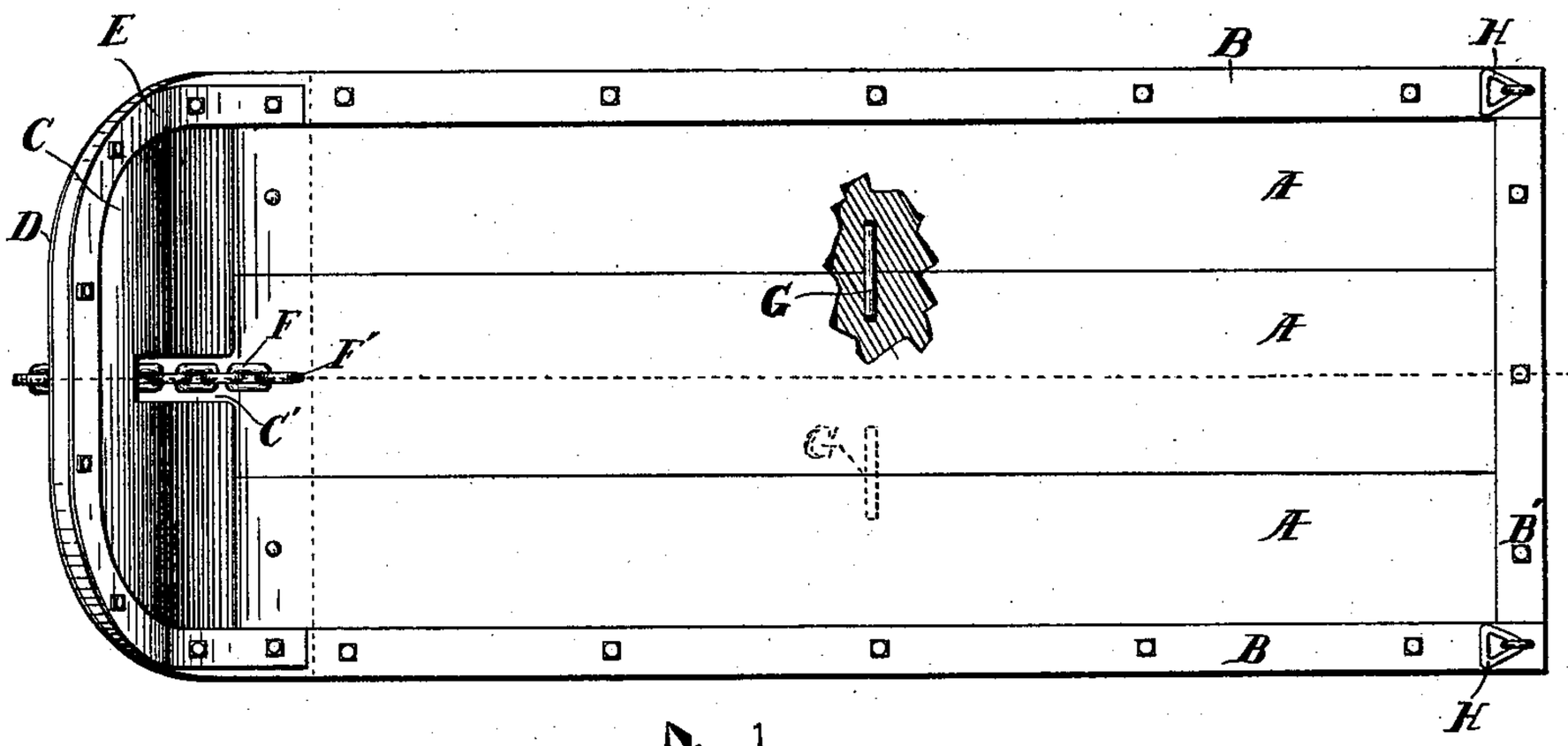

FIG. 1.

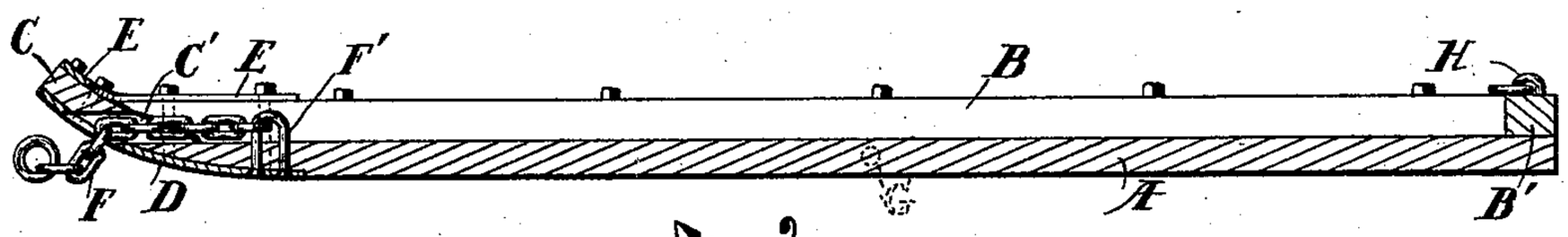

FIG. 2.

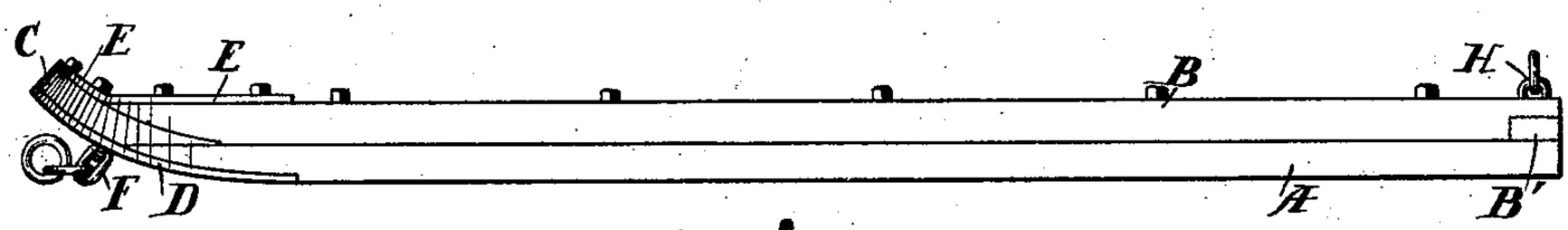

FIG. 3.

WITNESSES:

Lewis E. Flanders

Lois Moulton.

INVENTOR

Asa W. Ballou.

BY

Luther V. Moulton

ATTORNEY.

UNITED STATES PATENT OFFICE.

ASA W. BALLOU, OF DICKINSON, ASSIGNOR OF ONE-HALF TO ANDREW T. SQUIER, OF ASHLAND, MICHIGAN.

STONE-DRAG.

SPECIFICATION forming part of Letters Patent No. 533,981, dated February 12, 1895.

Application filed June 27, 1894. Serial No. 515,805. (No model.)

To all whom it may concern:

Be it known that I, ASA W. BALLOU, a citizen of the United States, residing at Dickinson, in the county of Newaygo and State of Michigan, have invented certain new and useful Improvements in Stone-Drags; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Heretofore stone drags have been constructed with metallic shoes, and with backing pieces, and also with metallic strips located at the front end of the wooden bottom, but the constructions of the drags have been such that the shoes had to be made quite thick and heavy in order to withstand the heavy strain to which the forward end of the drag is subjected when the drag is loaded with stone.

The object of my invention is to simplify and cheapen the construction of the forward end of the drag and also to so construct the same that its shoe may be made of thin metal—such as sheet steel—without buckling of the same when the device is in use.

To this end the invention consists in the peculiar detail construction hereinafter described and claimed.

In the accompanying drawings illustrating the invention:—Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a longitudinal vertical section on the line 2—2 of Fig. 1; and Fig. 3 a side elevation of the same.

Like letters refer to like parts in all of the figures.

The bottom consists of a series of planks A secured to each other at their adjacent edges by dowels G and suitably chamfered and shouldered at their forward ends, to engage and be secured to a concavo-convex upturned plate, or shoe D preferably of sheet steel, which shoe has a suitable backing C of wood made to fit the same. Side rails B, B, and a transverse rear rail B′ are bolted to said bottom planks. Said side rails B, B, are chamfered at the forward end to fit the backing C and a substantially U-shaped strap E extends across the front of the backing and rearward along the side rails a short distance, and suitable bolts pass through the same and the bottom A, backing C and shoe D, whereby the various described parts of the structure are firmly secured to each other. An opening C′ in the shoe and backing permits a chain F (for attaching the team) to pass through, and be attached by a suitable staple, or fastening F′ to the rear of the shoe and forward part of the bottom A, whereby the draft is brought lower down, and thus makes easier draft and also does not tend to break down the upturned forward part of the shoe, as would be the case if the draft chain were attached as usual.

None of the above parts are broadly new with me—that is to say, it is not broadly new to provide this class of devices with a backing piece, a shoe and a strap at the forward end, nor with a hitching chain extending through the forward end of the drag adjacent to the bottom thereof, nor with a continuous plate extending across the forward end of the drag; but while such features, separately considered, are not new, it is new, as far as I am aware, to insert the inner end of the backing into a space formed between the under side of the forward ends of the side rails and the upper surfaces of the end planks of the bottom (whereby it will be supported throughout its entire width and length partly by the bottom of the drag and partly by the shoe and also held by its engagement with the side rails) and to construct the strap of a U or other shape so that its ends or limbs will be in contact with the upper surfaces of the side rails and its intermediate or connecting part in contact with the upper surface of said backing. This specific detail construction is of prime importance, because by it a device is provided which is lighter, simpler and at the same time stronger than those heretofore proposed, permitting as it does the use of a thin metallic shoe—such as sheet steel—without liability to buckling thereof, instead of the heavy cast shoe heretofore used, and also obviating the necessity of employing a multiplicity of fastening bolts in order properly to secure the parts together.

The forward angles of the structure are rounded as shown, whereby they will more readily glance off from any obstruction that they may contact with. At the respective

corners are suitable handles H, H, whereby the device may be lifted, or ropes, chains, &c., attached for any purpose.

What I claim is—

1. A stone drag, embodying a bottom, side rails so constructed as to leave a space between their under surfaces and the upper surfaces of the side planks of the bottom, a backing piece projecting into said space and having its inner end resting throughout its entire length upon said bottom and also engaged with the under surfaces of said side rails, a shoe engaged with the under surfaces of the forward ends of the bottom and backing, a substantially U-shaped strap having its ends engaged with the forward ends of the side rails and its intermediate part engaged with said backing, and bolts for securing said parts together.

2. In a stone drag, the combination with the bottom and the side rails, so constructed as to leave a space between them at the forward end of the side rails, of a backing piece projecting into said space and having its inner end resting throughout its entire width upon the upper surface of said bottom and also engaged with the under surfaces of said side rails, and a shoe engaged with the under surfaces of the forward ends of the bottom and backing, substantially as described.

3. A stone drag, consisting of the following parts arranged as described, to wit, a bottom, side rails so constructed as to leave an opening between the under surfaces of their forward ends and the upper surfaces of the side planks of the bottom, a backing piece projecting into said space and having its inner end resting throughout its entire width upon said bottom and also engaged with the under surfaces of the side rails, a sheet metal shoe engaged with the under surfaces of said bottom and backing, a substantially U-shaped strap having its ends engaged with the forward ends of the side rails and its intermediate part engaged with said backing, bolts for securing said parts together, a chain extending through an opening in the backing and shoe, and a staple contiguous to said opening to which said chain is secured, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ASA W. BALLOU.

Witnesses:

LUTHER V. MOULTON,

LOIS MOULTON.