No. 619,443. Patented Feb. 14, 1899.

C. E. SMITH.

SAND SCREEN.

(Application filed Sept. 17, 1898.)

(No Model.)

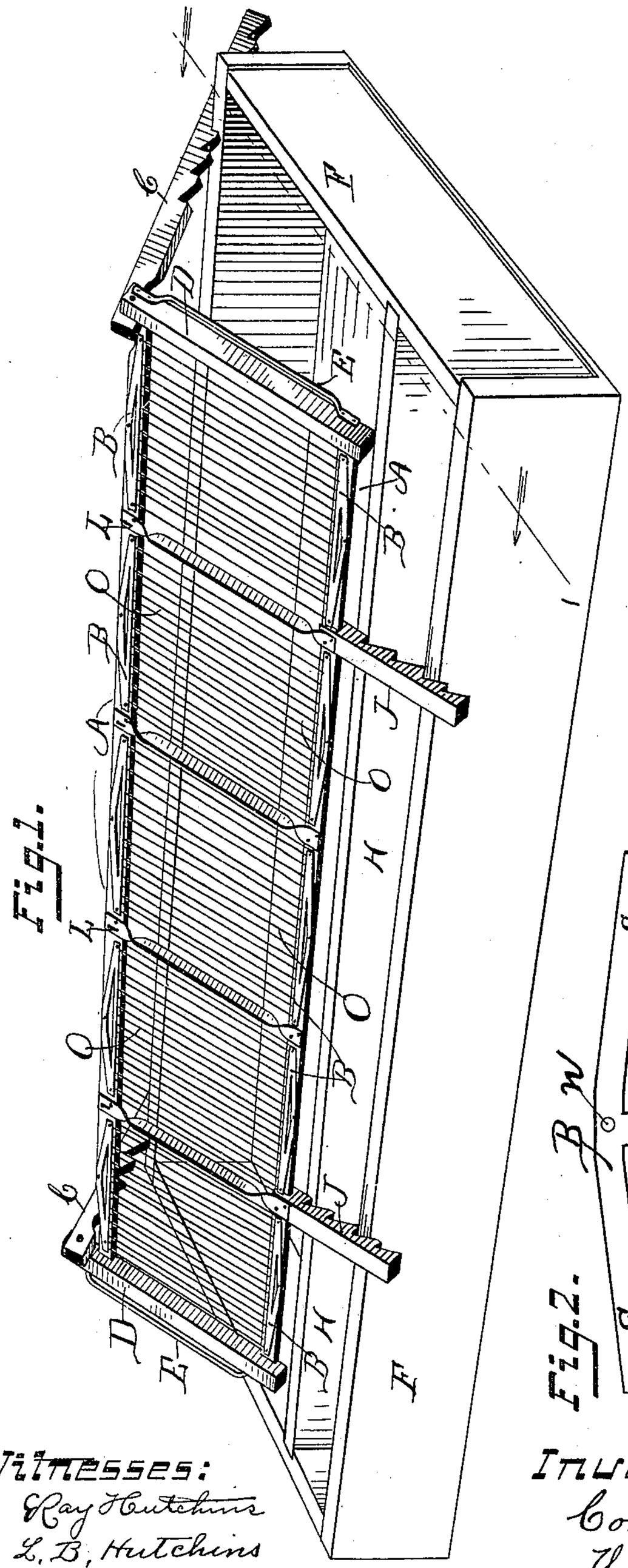

Fig. 1.

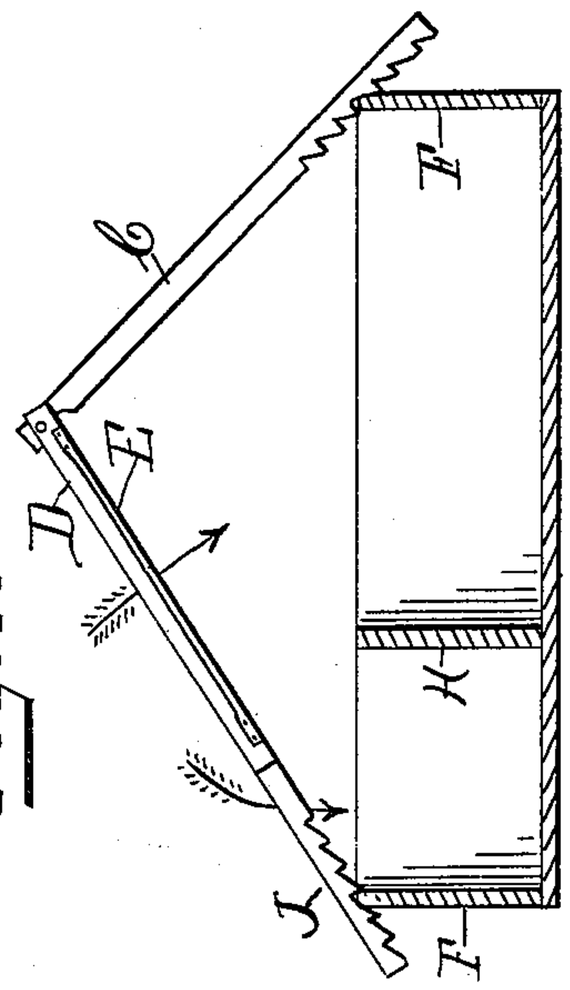

Fig. 4.

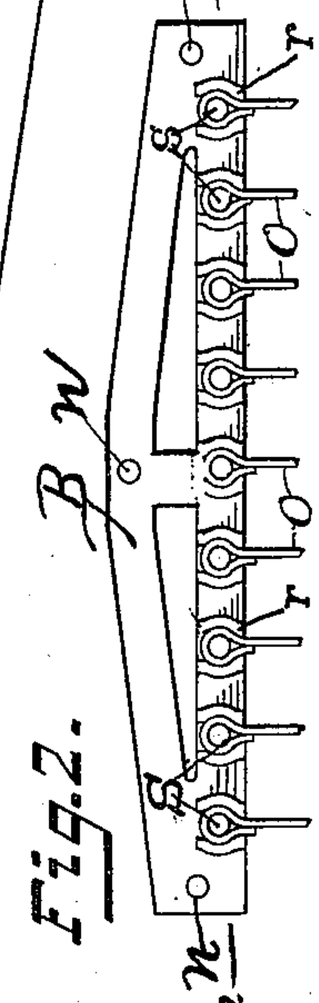

Fig. 2.

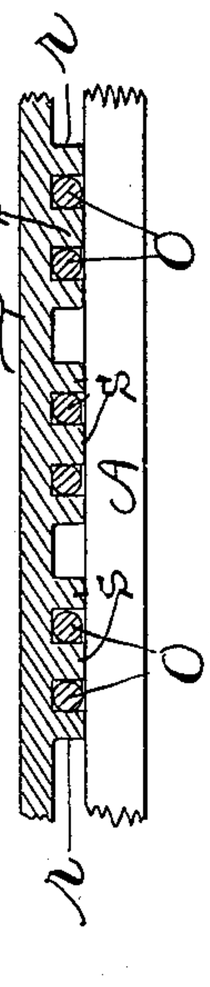

Fig. 3.

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CONRAD E. SMITH, OF PLAINFIELD, ILLINOIS.

SAND-SCREEN.

SPECIFICATION forming part of Letters Patent No. 619,443, dated February 14, 1899.

Application filed September 17, 1898. Serial No. 691,154. (No model.)

To all whom it may concern:

Be it known that I, CONRAD E. SMITH, a citizen of the United States of America, residing at Plainfield, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Sand-Screens, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a perspective view of the sand-screen, showing it as it would appear applied to the top of a wagon-box ready for use. Fig. 2 is a plan on the under side of a metal plate for holding the screen-wires attached thereto. Fig. 3 is a vertical section of Fig. 2, taken on line 2; and Fig. 4 is an end view of the sand-screen as it would appear on a wagon-box, looking at it from line 1 in the direction of the arrow.

This invention relates to certain improvements in sand or gravel screens designed for use on the top of a wagon-box and adjustable thereon, so as to cause the coarser gravel to be deposited in one part of the wagon-box separate from the finer gravel or sand or be carried over the wagon-box and fall on the ground, as may be desired, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, A D represent a rectangular frame having stay-bars L for holding the beams A apart and preventing strain on the screen-wires from drawing them toward each other and for dividing the screen up into several sections.

C C are a pair of brace-bars for adjustably supporting the upper side of the screen on the wagon-box and to regulate its inclination thereon, and J J are a pair of extending arms for adjustably supporting the lower side of the screen on the wagon-box and for adjusting it to cause the coarse gravel to be either deposited in a separate part H of the wagon-box or be carried over the wagon-box to the ground, as may be desired. The notches on the under side of said brace-bars and arms furnish means for such adjustment of the screen on the wagon-box.

O represents the screen-wires, which are formed with loops on each end.

B represents a metal plate, to which the screen-wires are attached, as shown in Figs. 2 and 3. Said plate is shown in Fig. 2 as inverted, so as to show its under side and show clearly an integral row of studs S, over which the looped ends of the screen-wires O are placed. *r* are integral ledges or keepers arranged one at either side of said studs S, as shown more particularly in Fig. 3, for the purpose of preventing the loops of the screen-wires from being straightened out by reason of tension on the screen-wires. It is designed to secure each end of the screen-wires to such a plate B, as shown in Fig. 1.

The plates B are intended to be bolted to the frame or beams A by means of bolts passed through the bolt-holes *n* (shown in Fig. 2) and are so attached or secured to said beams as to have the screen-wires O between them and said beams, as shown in Figs. 1 and 3, so they may be held firmly in place on said studs between said plates and beams. In case a screen-wire should break a new one may be easily inserted by simply removing the plates B, to which either end attaches, as shown. The form of the plates B prevents any sagging of the central part, or of the beams to which they are attached.

If desired, the wagon-box F may be provided with a division-board H, so that the coarse and fine gravel or sand may be separated from each other, or if it is not desired to run the coarse gravel into the wagon-box the screen may be so set and adjusted on the wagon-box as to cause the screen to carry the coarse gravel over the box to the ground. The notches on the under side of the brace-bars C and arms J furnish means for setting the screen at any inclination to adapt it to the kind of material to be screened and to regulate the quantity of coarse material desired to be placed in the wagon-box. The handles E furnish means for lifting the screen on or off the wagon-box.

The screen is designed for use in a gravel or sand pit where it can be placed on a wagon being loaded, and for screening the material as it is being placed on the wagon. In case it is desired to take up any slack or sagging of the screen-wires the bolts holding the brace-bars L may be loosened and the beams A A spread

apart farther, which is permitted by the slotted bolt-holes of said bars. (Shown in Fig. 1.)

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. The sand-screen shown and described consisting of the combination of the frame A, D having the stay-bars L, plate B having the integral studs S and keepers *r*, screen-wires O having each end formed in a loop for fitting on said studs and the brace-bars C and arms J provided with notches on their under sides for adjustably supporting said screen on a wagon-box, all arranged to operate substantially as and for the purpose set forth.

2. In a sand-screen the combination of the frame A, D, metal plate B, having the integral studs S, integral keepers *r*, and screen-wires O having their ends adapted to fit on said studs substantially as and for the purpose set forth.

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