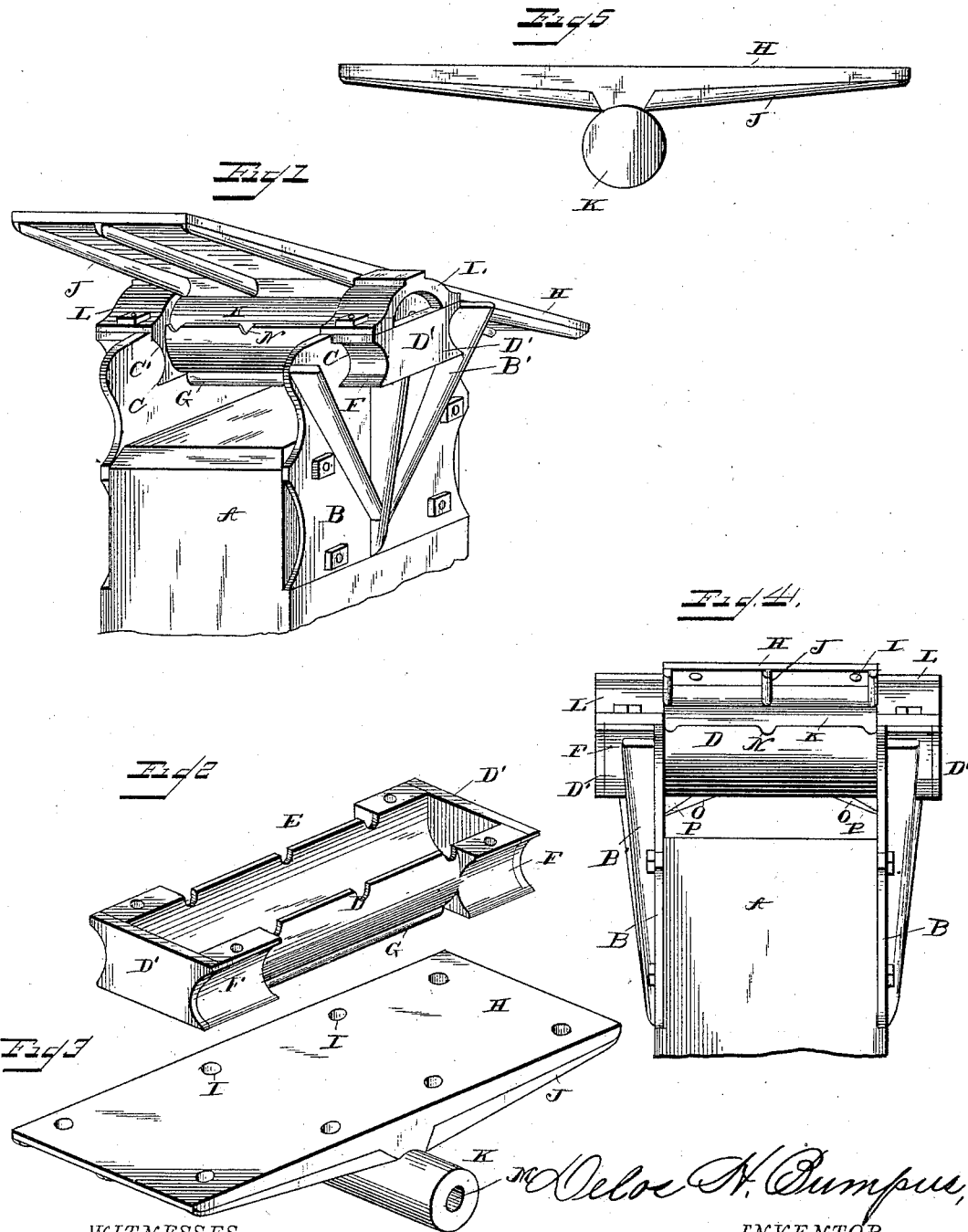


(No Model.)

D. H. BUMPUS.  
SADDLE FOR WALKING BEAMS.

No. 385,542.

Patented July 3, 1888.



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# UNITED STATES PATENT OFFICE.

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## SADDLE FOR WALKING-BEAMS.

SPECIFICATION forming part of Letters Patent No. 385,542, dated July 3, 1888.

Application filed November 21, 1887. Serial No. 255,702. (No model.)

*To all whom it may concern:*

Be it known that I, DELOS H. BUMPUS, a citizen of the United States, and a resident of Knox, in the county of Clarion and State of Pennsylvania, have invented certain new and useful Improvements in Saddles for Walking-Beams; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my new and improved saddle for walking-beams. Fig. 2 is a detail view of the trough. Fig. 3 is a perspective detail view of the saddle-plate and roller. Fig. 4 is a side view of a slightly different or modified form of my invention, in which the roller is also constructed solid; and Fig. 5 is an end view of the said roller.

The same letters of reference indicate corresponding parts in all the figures.

My invention consists in a new and improved saddle for the walking-beams of oil-wells and for all other walking-beams; and my invention will be hereinafter fully described and claimed.

Referring to the several parts by letter, A indicates the supporting or "samson" post, as it is called, on which the walking-beam is supported. To the upper end of this post are bolted, on each side thereof, the removable supporting-plates B B, which are preferably formed with the strengthening-ribs B' on their outer sides, as shown. In the upper ends of these side supporting-plates are formed the openings C, having the straight bottoms and the inwardly-curved sides C' C', and in these top openings, C, fit and are supported the ends of the trough D.

D indicates the removable trough, which forms an important part of my invention. The opening or space E in the trough is semicircular in cross-section to fit the round roller of the saddle-plate, which rests and turns in it, and this rounded space extends from end to end of the trough, the ends of the trough being closed by the end plates or ends D' D'. At each end the outer sides of the trough are en-

larged, and are recessed on their outer sides, these curved longitudinal recesses F F in the sides of the trough ends coinciding in their curvature with that of the sides C' C' of the openings C in the upper ends of the supporting-plates B B.

Upon the lower side of the trough is formed a longitudinal rib, G, which, when the trough is in its operative position, bears with its straight ends against the inner sides of the supporting-plates B B. The trough is secured in position by first bolting one of the plates B to its side of the upper end of the samson-post A, when one recessed end of the trough is slipped in place in the opening C in the upper end of that plate B until that end of the bottom rib, G, of the trough comes in contact with the inner side of the plate B. The other plate B is then slipped over the other recessed end of the trough until its inner side comes in contact with that end of the rib G, when the plate is bolted to that side of the samson-post, and the trough is thus secured firmly and securely in its operative position; while if for any cause it is desired to remove the trough for repairs or for any other purpose, this can be readily done by unbolting and removing either one of the supporting-plates B and then slipping out the trough.

H indicates the saddle-plate, which is formed perfectly flat on its upper side for the reception, to form a seat, of the walking-beam, and the walking-beam is centrally secured upon this saddle-plate by means of bolts passing through the holes I, which are formed, as shown, along the edges or sides of this plate. The saddle-plate is formed or cast with the strengthening-ribs J upon its lower side, and the roller K is cast integral with the saddle-plate. This roller K is cast at the center of the under side of the saddle-plate, so as to extend transversely across the under side of the same, with its ends projecting beyond the sides of the plate. This roller is formed of such size and shape, being round in cross-section, that it will fit exactly in the trough, thus having a bearing for the whole length of the trough, and when placed in the trough is retained therein by the end clips, L L, or by any other suitable device. This roller

K may be formed solid, as shown in Figs. 4 and 5; but I prefer to cast or form it with a central longitudinal bore or opening, M, the advantage of this construction being that the said opening, which is open at both ends, will act as an oil-cup in this manner: When the trough is secured in position on the top of the samson-post, the roller K is placed in the trough and the walking-beam securely bolted upon the saddle-plate H, the roller being secured in position against the possibility of slipping or working out by the end clips, L L. It will now be seen that as the walking-beam is reciprocated it will turn on the central roller, K, which thus gives a bearing for its entire length, and this bearing is lubricated by pouring oil into the trough, so that the lubricating-oil covers the entire surface of the roller which plays within the trough, thus thoroughly and completely lubricating the bearing for its entire length, all of the bearing-surface of the roller being coated with a film of oil, the bearing-roller thus working in oil. Now, when the roller is formed hollow, a considerable quantity of oil can be poured into its longitudinal central opening after the roller has been placed in the trough, the open ends of the roller being more than half covered by the ends of the trough, the trough being of such depth that when the roller is placed in position in it more than one-half of the roller fits down within the trough, and it will be seen that this central longitudinal opening of the roller will serve somewhat as an oil-reservoir, as the oil will escape gradually from its open ends down into the trough to lubricate the bearing, and as the oil is gradually used and evaporates it will be automatically fed out from the ends of the roller-opening, so as to keep the bearing always lubricated and save time and trouble in oiling the bearing.

The upper longitudinal edges of the trough may be made perfectly straight, or they may be recessed at N when these spaces are needed for the strengthening-ribs J on the lower side of the saddle-plate, leaving spaces for the said ribs to enter as the beam swings far down.

Instead of the single straight rib G on the bottom of the trough, the trough may have cast or attached to its bottom the two projecting ribs O O near its ends, the outer ends of which ribs project out and down, as shown, and inwardly-projecting lugs or ribs P P are in this case formed on the inner sides of the supporting-plates B B, which, when the removable trough is placed in position, will extend within the outer ends of the trough-ribs O O, as shown in Fig. 4 of the drawings, and thus prevent the trough from slipping out of position, while at the same time the trough can be readily removed when required by removing either one of the supporting-plates B.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily understood. It will be seen that my new and improved saddle is simple and strong in construction, is adapted to any walking-beam, and is exceedingly efficient in its operation. The trough may be denominated the "oil-trough," as it is filled with oil, in which the roller works. It will be seen that the walking-beam has a very long and strong bearing or pivotal point, and also works with very little friction, the entire bearing or roller working in oil.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a saddle for walking-beams, the combination of the ribbed supporting-plates having the openings in their upper ends, the removable oil-trough having the rib on its lower side, and the ribbed flat saddle-plate having the hollow roller extending across its lower side, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

DELOS H. BUMPUS.

Witnesses:

H. BATTZER,  
NELSON N. BOOTH.