

C. D. PAGE.  
DUMPING TRAP.

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# UNITED STATES PATENT OFFICE.

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## DUMPING-TRAP.

SPECIFICATION forming part of Letters Patent No. 465,878, dated December 29, 1891.

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*To all whom it may concern:*

Be it known that I, CALEB D. PAGE, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented a new and useful Scraper-Trap to be Used in Loading Dumping-Cars or other Vehicles with Earth by Means of Drag-Scrapers, of which the following is a specification.

My invention relates to an improvement in scraper-traps in which the bridge approaches are provided with guides for confining the movements of the scrapers, are supported at the bridge ends by trestles to which they are firmly braced, and are used in connection with two light bridges which can be readily detached from the other parts, the sides of the bridges forming guides for confining the movements of the scraper; and it consists, further, of a dumping device, to be hereinafter described, for overturning the scraper, my object being to provide a light portable trap that will be firmly braced and substantial in its construction, yet with parts so joined that they may be readily detached, and with bridge-floor placed at the lowest possible elevation that will admit of the loaded vehicle passing freely from under it; and also to provide a convenient and certain dumping device for unloading the scraper as it passes over the trap. I attain these objects by the construction of the parts illustrated in the accompanying drawings and described below.

Figure 1 is a vertical section of my trap with drag-scraper on the dumping device. Fig. 2 is a top view of trap, with the end of one of the approaches broken away. Figs. 3 and 4 are sectional views of one of the bridge parts at the lines N M and C O, respectively; and Fig. 5 is a plan view of the device for dumping the scraper.

Similar letters refer to similar parts throughout the different views.

The trap, as shown in Fig. 1, is made up of seven parts, which may be readily detached one from the other—viz., the two trestles T T, the two approaches A A, the two bridge parts I I, and the dumping device D.

In Fig. 1 the vehicle V to be loaded is standing underneath the bridge. The approaches A A consist of any number of parallel stringers surmounted by transverse flooring, which

is made fast to them. They are provided with the guides G G, which serve to confine and direct the course of the scraper as it advances toward the bridge, one end of the approach resting on the ground, the other on the trestle T. The surface of the stringer of the approach bearing on the trestle is circular to conform to that part of the trestle-surface which it is intended to meet. This admits of the plane of the approach being placed at any angle with that of the trestle that may be desired. A little stop F, fastened to the trestle and meeting the lateral surface of the outside stringer of the approach, serves to keep the approach in place on the trestle, and it may be further secured by a pin passing through the stop and into the stringer. The ends of the stringer of the approach are formed on top to receive and hold in position the ends of the stringer-beams of the bridges I I.

In Fig. 4 is shown a vertical section of the bridge I. The strip of wood or metal P, secured to the lower side of the stringer-beam J by bolts, projects sufficiently to serve as a bearing for the floor of the bridge. The stringer-beam W has also the same construction; but on J it also projects sufficiently on the opposite side to form a support, which prevents the scraper from dropping through from between the stringers, and serves also as a support for the dumping device D.

The strip L may be secured to the beams of the bridge by screws or bolts, so that it can be readily removed when it is desired to renew the floor-boards, which rest loosely on the strips P P.

The stringers J and W are firmly united by a cross-piece, Fig. 3, which is secured to each by two bolts. The inner stringer-beams J J serve as guides to confine the scraper in its course over the bridge.

The braces B B, Figs. 1 and 2, give rigidity to the structure when set up ready for use. They are bolted to the trestle T, but may be hooked on any one of the pins H H H on the outside stringer of the approaches. They are thus adjustable to different elevations of the outer end of the approach.

The guides J J are adapted to receive and to support the dumping device D, which is of simple construction, consisting of two side parts d d, which serve to support the rollers

R R and the journals U U of the dog K, the rollers and dog being journaled into the sides in any convenient manner, and the sides are firmly and rigidly joined together by the cross-piece c. The coil-spring Q, of ordinary construction, serves to keep the dog K in position.

Stops p p in the guides J J hold the dumping device in place, preventing any movement along the guides.

- 10 The operation of my invention is as follows: As the team of two animals advances on the bridge it divides, one animal walking on one of the bridge parts I, the other animal on the other bridge part I. The scraper which they
- 15 haul is thus brought within the boundaries of the guides G, which give it the necessary direction over the anti-friction rollers R R, over which it freely passes, the guides J J serving to confine its movements, so that the
- 20 front edge of the blade properly engages the dog K, which, turning on its journals U, lowers the front edge of the scraper-blade until it strikes the projecting strips P P of the guides J J, where it is held until the scraper is over-
- 25 turned and the contents discharged into the vehicle placed underneath to receive it. The scraper then travels the projections P of the guide J, which prevent it falling through the trap-opening. The positive action of the
- 30 spring Q brings the dog K back into proper position for the next engagement.

I have constructed this trap with more especial reference to its use with a drag-scraper; but it will be seen that it can, with some slight alterations, be used to dump mining-scips, mining-buckets, &c., and I intend to make it useful for all such purposes.

I am aware that dumping-traps in which two trestles are used to support a central bridge and each one end of approaches leading up to the bridge are not, broadly, new, nor do I claim such; but as thus far disclosed such structures are necessarily high and cumbersome, and are not firmly braced. They

are also complex and expensive and do not admit of as strong, simple, light, and cheap construction as does my invention.

By constructing my bridge in two separate parts I am able to accomplish the twofold

50 purpose of lightening the parts to be handled and providing a trap-opening with suitable guides for confining the movements of a scraper and supports for a dumping device.

In my invention I have placed the bridge

55 I as low down as possible without touching the vehicle to be loaded. My bridge parts being light, easily detached and put in place

again, I am able to remove them readily to allow a team to pass between the trestles to place the vehicle to be loaded. It is thus not necessary to place them high enough for a team to pass under.

The parts of my trap being readily disconnected, it is not necessary to use any tools other than a shovel to make a bed for the 65 sills in setting up. It can thus be quickly taken down, removed, and set up again at any point desired. Also, my trestles have the adjustable braces B B to give firmness and rigidity to the completed structure.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A portable dumping-trap device comprising oppositely-inclined platforms, suitable supporting-trestles, and a bridge connecting the inclined platforms having a central opening, floors on each side of the opening, stringer-beams at each side of the bridge, stringer-beams at each side of the opening, 80 strips on the bottoms of the stringer-beams for supporting the floors, and strips extending into the opening in the bridge, the stringer-beams on the sides of the opening and the inwardly-extending strips being adapted to 85 guide and support a scraper when its contents are to be discharged through the opening, substantially as above set forth.

2. A trap-bridge comprising a platform having a central opening, floors on each side of the opening, stringer-beams at each side of the opening, stringer-beams at each side of the opening, strips on the bottoms of the stringer-beams for supporting the floors, and strips extending into the opening in the bridge, the 95 stringer-beams on the sides of the opening and the inwardly-extending strips thereon being adapted to guide and support a scraper when its contents are to be discharged through the opening, all substantially as described 100 above.

3. In a dumping-trap, the combination of a bridge with a dumping device consisting of horizontally-pivoted rollers on which a scraper is adapted to run, supports for the rollers, a 105 shaft located alongside of said rollers, and a spring-pressed dog mounted on said shaft, said dog being adapted to catch the edge of the scraper and hold it until it is overturned, all substantially as above described.

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Witnesses:

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