(No Model.)

M. B. DUNCAN.

HORSE BLOCK OR STEP.

No. 323,646. Patented Aug. 4, 1885.

Fig. 1.

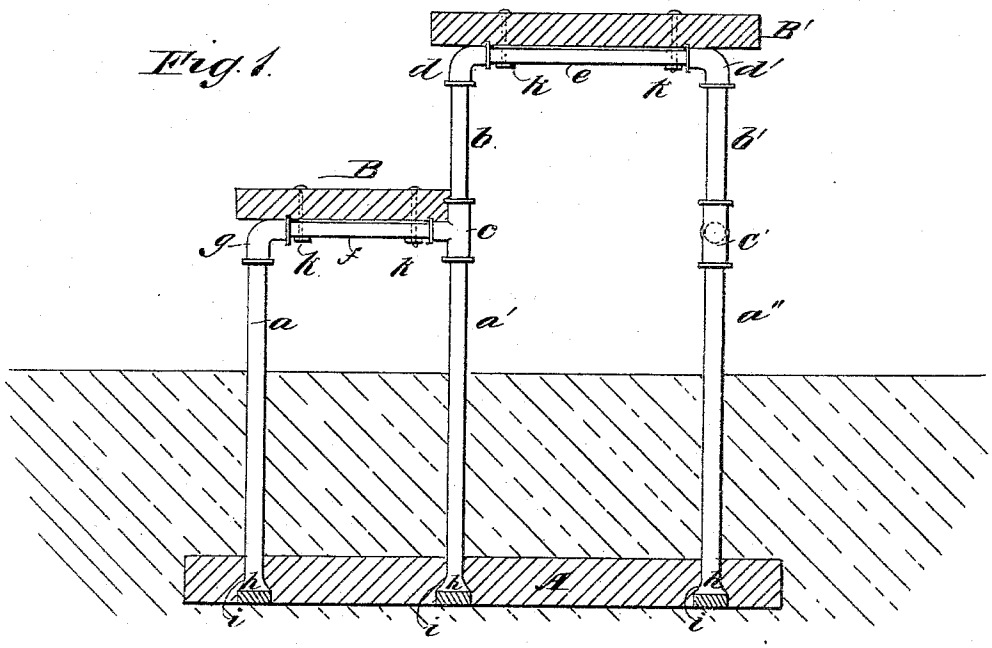
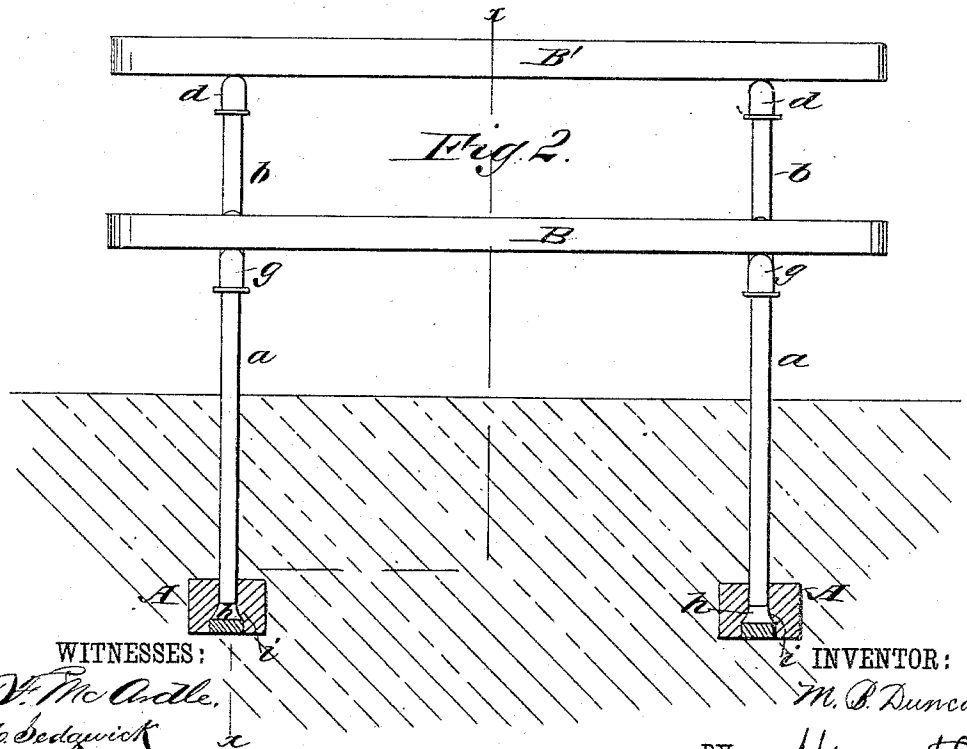


Fig. 2.



WITNESSES:

F. McArdle.

C. Sedgwick

INVENTOR:

M. B. Duncan

BY Munn & Co

ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

MARTIN B. DUNCAN, OF ANGELICA, NEW YORK.

HORSE BLOCK OR STEP.

SPECIFICATION forming part of Letters Patent No. 323,646, dated August 4, 1885.

Application filed June 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, MARTIN B. DUNCAN, of Angelica, in the county of Allegany and State of New York, have invented a new and Improved Horse Block or Step, of which the following is a full, clear, and exact description.

My invention relates to the construction of horse-blocks and other forms of steps; and it consists in certain novel features of construction, hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side view of my improved horse-block, being shown in section, taken on line *x x*, Fig. 2, and Fig. 2 is a front elevation of the same, shown partly in section.

The frame-work upon which the treads of my steps are mounted is formed from hollow cylindrical tubes or pipes that are united by T and elbow couplings, as clearly shown in both figures of the drawings, *a a' a''* being the lower series of uprights, and *b b'* the upper series. The tubes *a' a''* and *b b'* are united end to end, respectively, by means of the T-couplings *c c'*.

To the tops of the tubes *b b'* there are secured the elbow-couplings *d d'* that are united by means of the cross-piece *e*. Another cross-piece, *f*, extends from the horizontal socket of the coupling *c*, and its projecting end is united to the upright *a* by means of the elbow-coupling *g*.

The uprights *a a' a''* are inserted through apertures formed in the anchor-block A, but are prevented from passing entirely through said block by reason of the fact that their lower ends are flared outward at *h*, the apertures in the anchor-block being formed with a shoulder, *i*, which rests upon the flaring portion *h*.

Two frames, such as the one above described, are placed at a proper distance apart to support the treads B B', which are firmly secured to the frames by means of U-bolts *k k*, (shown in full and dotted lines in Fig. 1,) the frames being further braced by a connecting rod or pipe that reaches from the coupling *c'* to the corresponding coupling on the other frame.

In setting up my improved form of step, I dig two trenches of a depth sufficient to bring the tread B at a proper height from the surface of the ground, when the anchor-blocks are placed upon the bottom of the trench, taking care that the blocks A rest upon good solid ground and that the earth is closely packed about them when the trenches are filled up.

Steps constructed in the manner described are cheap, durable, and are not liable to become displaced, and as the parts are readily united, the whole device can be packed in an exceedingly small space when shipped from the factory or otherwise transported.

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

1. The combination, with a riser-frame consisting of upright and horizontal lengths of pipe united by T and elbow couplings, and having flaring portions, as *h*, at the lower extremity of the upright pipes, of an anchor-block, as A, substantially as described.

2. The combination, with an anchor-block, as A, provided with shoulders, as *i i*, of a riser-frame consisting of two series of upright pipes, the lower series being provided with flaring portions, as *h*, the two series being united by T-couplings, as *c c'*, and of horizontal lengths of pipe united to the upright series by means of couplings, as *g*, *c*, *d*, and *d'*, all substantially as described.

3. The combination, with riser-frames, substantially as described, of treads, as B B', united to said frames by means of U-bolts, as *k*, substantially as set forth.

MARTIN B. DUNCAN.

Witnesses:
FRED A. ROBBINS,
CHARLES D. PENNY.