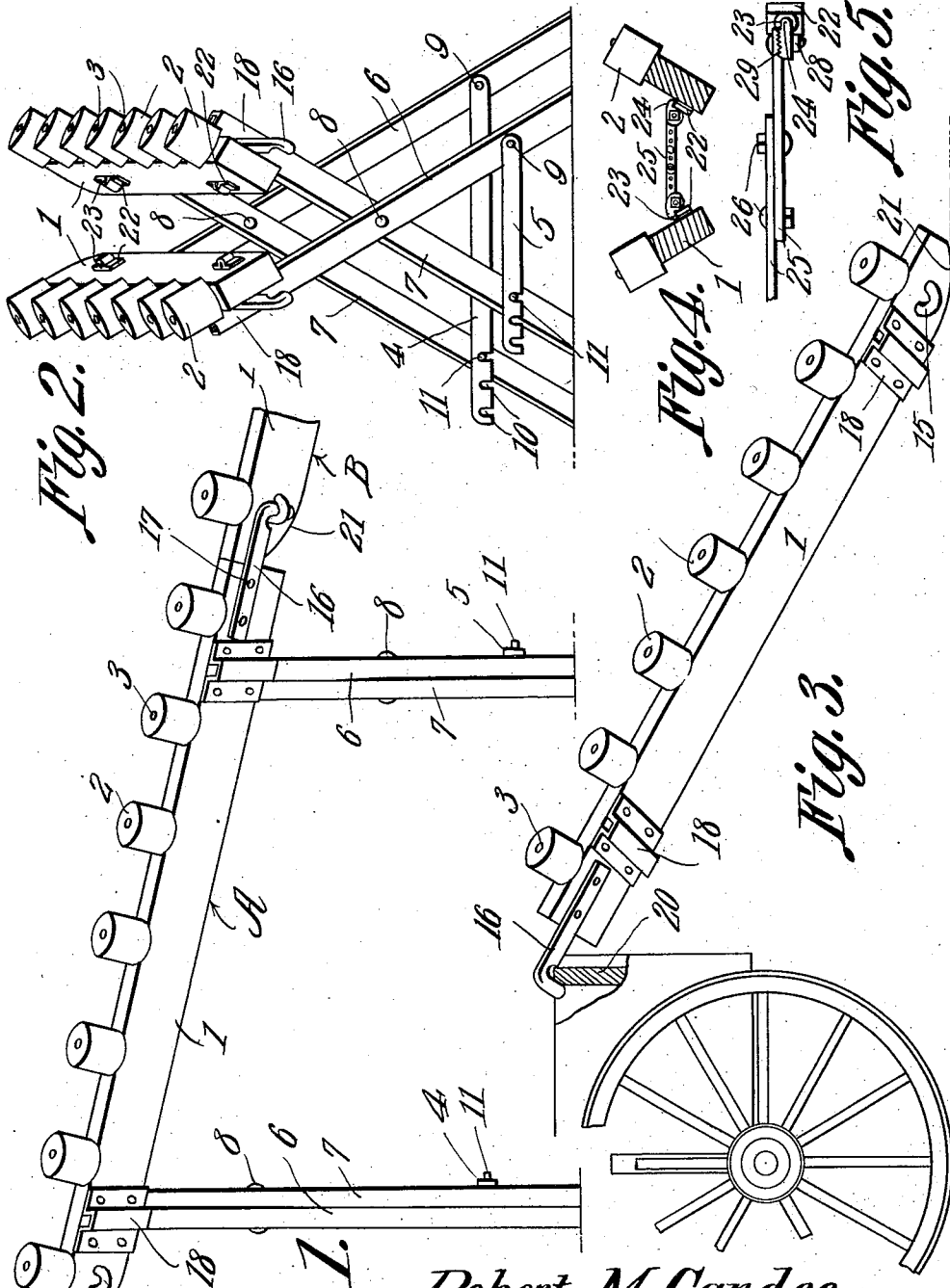


R. M. CANDEE.
 TILE UNLOADING MACHINE.
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1,024,828.

Patented Apr. 30, 1912.



Witnesses
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Fig. 1.

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TILE-UNLOADING MACHINE.

1,024,828.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT M. CANDEE, a citizen of the United States, residing at Fort Dodge, in the county of Webster and State of Iowa, have invented a new and useful Tile-Unloading Machine, of which the following is a specification.

This invention relates to a tile unloading machine.

The object of the invention is to provide a strong simple, durable, practical, efficient and inexpensive device which can be used in a variety of ways for unloading tiles and the like from railroad cars or from a wagon or ditching machine and which can be adjusted to fit different sizes of tiles and which can also be extended or shortened to meet different conditions in the unloading operation.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawings forming part of this specification:—Figure 1 is a side elevation of one section, and a portion of another section, of a tile unloader constructed in accordance with the invention. Fig. 2 is an end elevation of one of the sections of the device, the legs being shown in position to support the same during the operation of unloading tiles from a railroad car or the like. Fig. 3 is a side elevation, partly in section, showing one of the sections of the device with the legs thereof removed and the hook members engaged with the tail gate of a wagon, the curved portion at the opposite end of the device being shown in position upon the ground. Fig. 4 is a transverse section through the construction shown in Fig. 1, showing a convenient form of adjustable connecting means for use in holding the parallel beams when the legs thereof are removed. Fig. 5 is an enlarged detail view showing in plan the construction illustrated in Fig. 4.

Like reference numerals indicate corre-

sponding parts in the different figures of the drawing.

Briefly outlined, the machine of the present invention preferably includes a plurality of pairs of supporting members having anti-friction devices thereon to receive the tile, said supporting devices being provided with legs adapted to hold them at a suitable incline and one section of the device being suitably bolted to the next section so as to provide an elongated inclined trackway, one end of which may be arranged in proximity to the car which is to be unloaded and the other end of which is arranged adjacent to the point to which the tiles are to be conveyed.

When it is desired to use the device for unloading tiles from a wagon or to connect it with a ditching machine, the sections are disconnected from each other and the legs of one of the sections are removed. The hooks on said section which are normally employed for locking the different sections together are utilized for securing the section to the tail gate of the wagon or to the ditching machine and said section is formed at the other end with beveled or cut away portions to rest on the ground. Suitable adjustable means are provided for securing the two parts of the section together when the legs are removed.

Referring to Fig. 1 of the drawing, the reference letter A indicates generally one of the sections of the tile unloader, and the reference letter B indicates generally a portion of another section which is arranged so as to form a continuation of the section A and is disposed on the same incline as said section. Each section of the device preferably includes a pair of parallel supports or beams 1—1, said beams being preferably tipped at an angle with respect to each other. Each of the supports 1 preferably is provided with a series of anti-friction devices 2, said devices in the embodiment of invention herein disclosed preferably consisting of iron cylinders or rollers which are journaled upon pins or nails 3 driven into the upper portions of the supports 1. The anti-friction devices 2 are arranged in such proximity to each other that the tile will constantly be engaged by a plurality of said devices. The peripheries of the rollers 2 of the two sets

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of rollers are arranged at an angle to each other so as to produce in effect a trough shaped anti-friction guideway along which the tile moves without danger of breaking.

3 The rollers are of a diameter greater than the thickness of the supports or beams 1 whereby the tile in contacting with the peripheries of the rollers is kept out of contact with the supports at any adjustment of the

10 supports. Upon larger tiles or other large objects, such as barrels and boxes, being unloaded, the same are adapted to ride on the upper edges of the rollers. In this manner it will be seen that the rollers in being

15 journaled on the upper edges of the beams provide a novel feature, permitting the unloader to be used for practically all sizes and shapes of tiles and other objects. The two sets of anti-friction devices 2 are intended

20 to be adjusted toward or away from each other for the purpose of accommodating different sizes of tiles. In the construction illustrated in Fig. 2, the means for accomplishing this result preferably comprises a pair of notched bars 4 and 5 mounted upon

25 the legs or supports for the section. Two pairs of legs 6—7 are preferably employed, each set being pivotally connected with each other as indicated at 8 at points equidistant from the upper end of the legs. One of the sets of legs is shorter than the other as shown in Fig. 1 so as to cause the tile un-

30 loading beams to be supported at a suitable incline, whereby the tile will travel therealong by gravity. The notched bars 4 and 5 preferably are pivotally connected at 9 with the legs 6, the notches of said bars being indicated by the reference numeral 10 and being adapted to engage pins 11 mounted

35 upon the legs 7. By adjusting the legs toward or from each other on the pivots points 8 and by locking them in adjusted position by means of the notched bars 4 and 5, the device can be arranged to receive tiles

45 of any desired size.

For the purpose of locking the different sections of the tile unloader together during the operation of unloading a railroad car or the like, each of the supports 1 of each section preferably is provided at one end thereof with a staple or other suitable receiving member 15 and at the opposite end with a hook or other suitable engaging member 16 bolted thereto as indicated at 17. The

50 hooks 16 of the members 1 of one section are engaged with the staples 15 of the members 1 of the next adjacent section. In this way the different sections are rigidly secured together and form in effect a continuous inclined guideway along which the tiles can be passed without friction or breakage.

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For the purpose of permitting one or more of the sections of the device to be used singly as a means for unloading tiles from

65 a wagon or ditching machine, the two sets

of legs of each section of the device are detachable. While the detachable connection between the legs and supports 1 may be of any suitable form and construction, a convenient embodiment thereof is indicated at

70 18. This form consists of an ordinary bracket or socket member into which the upper end of the adjoining leg is detachably fitted. In using the device to unload tiles from a wagon, ditching machine or the like,

75 the legs are detached from the supports 1 and said supports are reversed so that the hooks 16 thereof engage the tail gate 20 of the wagon or any suitable part of the ditching machine. At their opposite ends, the

80 supports 1 are cut away or beveled as indicated at 21 so as to present a suitably shaped surface to the ground.

Any suitable form of connecting means may be employed for holding the supports

85 1 in proper relation to each other when used in the manner illustrated in Fig. 3. One convenient means of accomplishing this result is illustrated in Figs. 4 and 5 of the drawing, although it is to be understood

90 that other means can be employed. The reference numerals 22—22 indicate bracket members which are mounted upon the supports 1. The bracket members 22 are provided with socket members 23 adapted to receive

95 hook members 24 which are rotatably connected with arms 25. The two arms 25 are longitudinally adjustable with relation to each other by means of the bolts 26 adapted to fit through different registering

100 pairs of perforations in the bars 25. Each hook member 24 is rotatably connected with its arm 25 by means such as the bolts 28 and the contacting portions of the hooks 24 and arm 25 are toothed as indicated at 29 so that

105 when the hook 24 is rotated to the proper angle to engage the socket member 23 of the bracket or plate 22 and the bolt 28 is tightened, the teeth 29 will prevent any accidental rotation of the hook. By reason of

110 the capabilities of adjustment of the hooks 24 and the rods 25 with relation to each other, it will be obvious that the supports 1 can be arranged at any desired distance apart to accommodate different sizes of tiles

115 and that the connecting members will hold them in any position to which they have been adjusted.

The tile machine of the present invention is strong, simple, durable, and inexpensive in construction as well as thoroughly practical and efficient in use.

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What is claimed as new is:—

1. In a tile unloader, a pair of beams, sockets secured to the beams, rollers journaled on the upper edges of the beams, and a pair of crossed and pivoted legs having their upper ends engageable in the said sockets.

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2. In a tile unloader, a pair of beams,

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rollers journaled on the upper edges thereof
and of diameter greater than the thickness
of the beams, and a pair of crossed and piv-
oted legs adapted to support the said beams
5 to permit them to be swung on a lower piv-
otal point.

In testimony that I claim the foregoing

as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

ROBERT M. CANDEE.

Witnesses:

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Washington, D. C."
