

Nov. 25, 1941.

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2,263,871

DEVICE FOR RAISING MANHOLE COVERS

Filed June 14, 1940

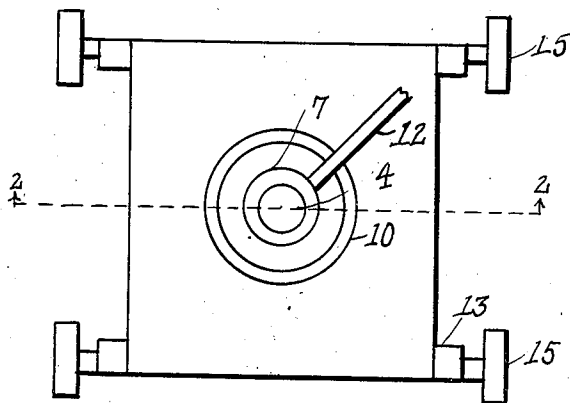


Fig. 1

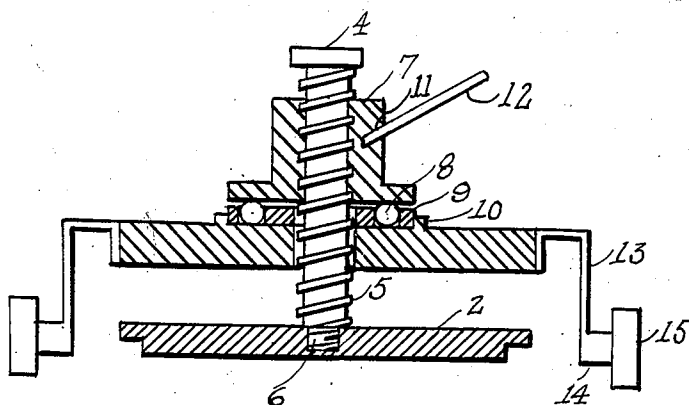


Fig. 2

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2,263,871

DEVICE FOR RAISING MANHOLE COVERS

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Application June 14, 1940, Serial No. 340,444

1 Claim. (Cl. 254—100)

This invention relates to improvements in devices for raising and removing manhole covers.

Manhole covers as generally used on city streets are appreciably heavy, weighing in the neighborhood of 325 pounds, and heretofore, have been raised and removed manually with considerable difficulty.

It is, therefore, an object of this invention to provide a portable device to facilitate the raising of manhole covers and to convey the cover to an out of the way place with an inappreciable amount of effort.

A further object is the provision of a manhole cover raiser comprising a carriage mounted on wheels or the like, the carriage being provided with means for engaging and lifting a manhole cover.

These and other objects are obtained by the novel construction, combination and arrangement of parts hereinafter described and shown in the accompanying drawing, constituting a material part of this disclosure, and in which—

Fig. 1 is a plan view of the manhole raising device.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1.

Referring to the drawing, in Fig. 2, there is shown a manhole cover 2, having a central recess provided with machine threads. The manhole cover raising device is shown to comprise a plate 3 having a central aperture through which passes a threaded bar 4, the lower end of which is provided with a machine threaded portion 6 extended into the threaded recess in the manhole cover 2.

The bar 4 is provided with heavy jack threads 5, and extends up through plate 3 into a capstan 7, which is internally provided with heavy jack threads corresponding with the threads on bar 4. The capstan 7 rests upon ball bearings 8, positioned in a ring 9, which is held in place by an annular projection 10 on plate 3. The capstan 7 is provided with a recess 11 which is adapted to receive an actuating bar 12.

Attached to plate 3 are brackets 13 having bearings 14, which support wheels 15.

In operation, the machine threaded portion 6 of bar 4 is screwed tightly into the recess in the manhole cover 2. The bar 12 is then inserted into the recess 11 and the capstan is rotated to cause the bar 4 to rise through the capstan, lifting the manhole cover with it. After the cover

has been raised sufficiently above the level of the street, the device is rolled on the wheels 15 to an out of the way position.

From the above description it will be seen that there has been provided a simple and practical device for conveniently and rapidly raising and moving manhole covers with a minimum of effort.

The device can also be used to set manhole heads, which weigh in the neighborhood of 500 pounds. In this case the excavation into which the manhole head is to be lowered is straddled by the carriage of the manhole cover raising device, the wheels of which ride upon a pair of parallel metal beams. The manhole head, which is carried by the device is then lowered into the excavation by manipulating the capstan 7. In order to attach the manhole head to the bar 4, a removable metal bar having a central threaded aperture to receive the threaded portion 6 of bar 4 is inserted underneath the upper lip present in the usual manhole head construction.

While the device has been described in connection with manhole covers, it should be noted that it can be effectively used to lift heavy plates of all types which must be removed from time to time.

The foregoing disclosure is to be regarded as descriptive and illustrative only, and not as restrictive of the invention, of which embodiments may be constructed without departing from the general scope herein indicated and denoted in the appended claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

A device for raising manhole covers, comprising a plate having an aperture, a bar freely passing through the aperture, said bar having the greater and upper portion thereof provided with heavy jack threads and the lower end thereof with machine threads adapted to engage similar machine threads in a manhole cover, a capstan rotatably mounted on said plate and threadedly engaging the jack threads of said bar, bearings on said plate upon which the capstan rests, said capstan having a recess in the periphery thereof, a bar adapted to be inserted in said recess to rotate the capstan, brackets attached to said plate, and wheels rotatably supported by said brackets.

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