Sept. 26, 1944. R. G. LE TOURNEAU 2,358,863

SHEEP'S FOOT ROLLER

Filed May 1, 1942

Fig. 1

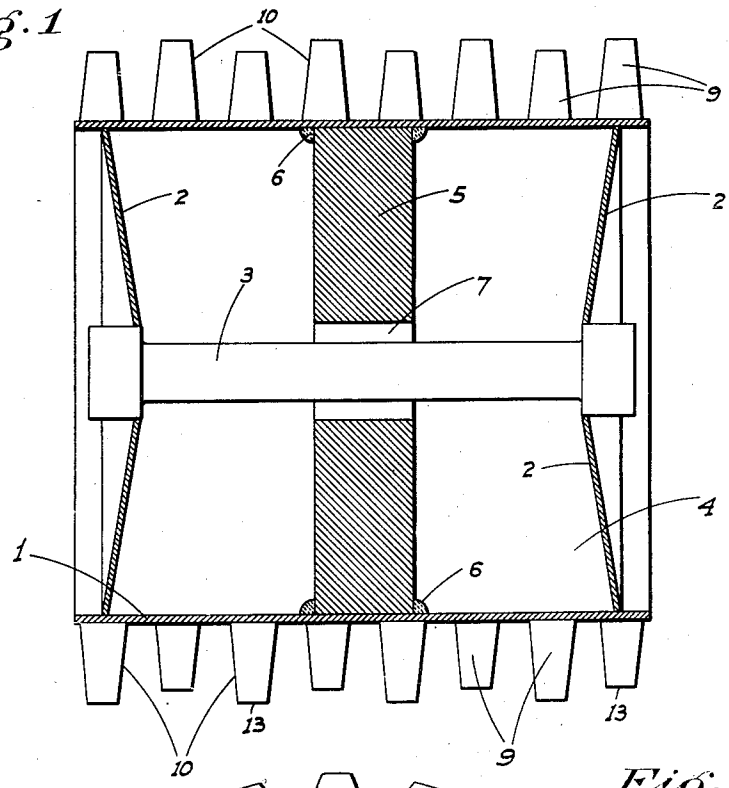
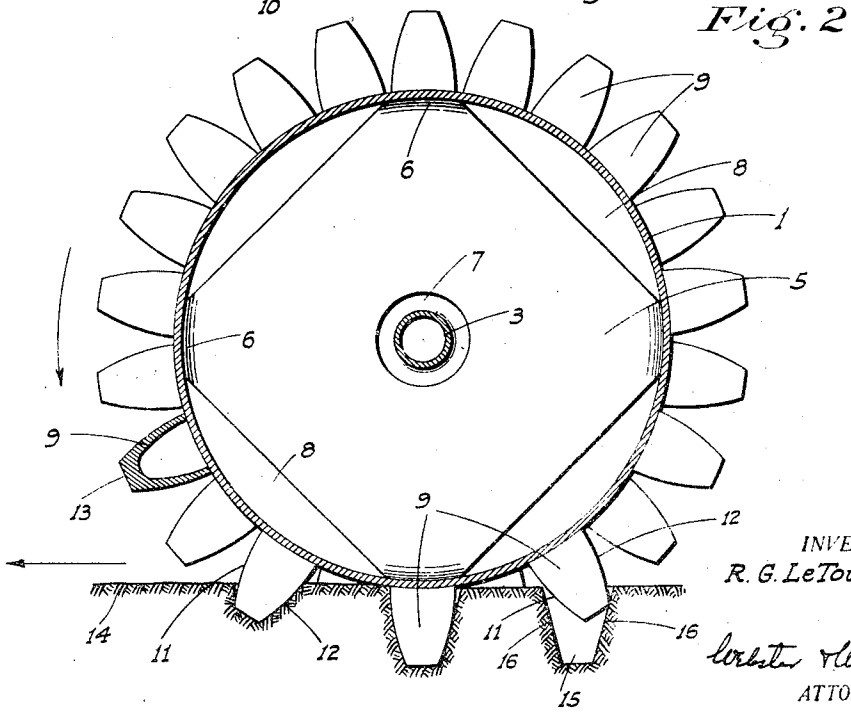


Fig. 2



INVENTOR
R. G. LeTourneau

Lorlon & Lorlon
ATTORNEYS

Patented Sept. 26, 1944 2,358,863

UNITED STATES PATENT OFFICE

2,358,863

SHEEP'S-FOOT ROLLER

Robert G. Le Tourneau, Peoria, Ill., assignor to R. G. Le Tourneau, Inc., Stockton, Calif., a corporation

Application May 1, 1942, Serial No. 441,292

2 Claims. (Cl. 94—50)

This invention relates generally to earth compacting rollers, and particularly represents improvements in that type of implement known as a sheep's foot roller.

An object of the present invention is to provide novel means of adding permanent weight to the roller, and which means is effective to prevent end-to-end surging of water in the roller when water is used also as a weight-increasing medium.

A further object of the invention is to produce a simple and inexpensive device, and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a longitudinal sectional elevation of the improved sheep's foot roller.

Figure 2 is a transverse sectional elevation of such implement.

Referring now more particularly to the characters of reference on the drawing, the roller comprises a roller drum 1 closed at its ends by heads 2 which are connected by an axial and tubular member 3 through which the usual roller mounting shaft (not shown) projects, and thus forming a watertight chamber 4 in the drum between the end heads.

A square billet or one-piece block 5 of metal of substantial thickness is fitted into the roller drum 1 centrally between its ends and extending at right angles to the axis thereof, such block being substantially squared off at its corners and welded to the interior of the roller drum 1, as at 6. The block 5 includes a central opening 7 through which the member 3 extends in clearance relation. By employing a square block, as above, passages 8 are formed between the sides of said block and the adjacent portion of the drum.

The block 5 is embodied in the structure for the purpose of increasing the weight of the roller to an extent greater than can be accomplished by the use of water or sand solely as the filler, and further when water is used in the roller drum as a weight-increasing medium in addition to the block 5, the block 5 not only serves as a baffle to prevent surging of the water from end to end of chamber 4, but the passages 8 permit the water to seek a common level in the roller during use of the implement. Another advantage of the block 5 is that it reinforces the entire structure and prevents caving of the roller drum intermediate its ends.

The roller, as usual in implements of this type, includes a multiplicity of radially projecting teeth 9 arranged on the roller drum in closely disposed relation. These teeth are of cast steel and of hollow construction; the inner ends of said teeth being symmetrical to the outer surface of the roller drum 1 and being welded thereto about their entire base end.

The teeth 9 taper from their inner to outer end both circumferentially and transversely of the roller. The sides 10 of the teeth are straight, while the leading face 11 and the trailing face 12 are of a generally involute curve or contour. The outer ends 13 of the teeth are of course blunt or square. The feet have the same general configuration as spur gear teeth, such as are employed to mesh with a rack.

From the foregoing description it will be readily seen that I have produce such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. An earth roller comprising a roller drum, a heavy-weight block disposed in the drum intermediate its ends and at right angles to its axis, said block engaging the drum only at circumferentially spaced points whereby to form intermediate passages extending longitudinally between the interior of the drum on opposite sides of the block, and means securing the block to the drum at said points whereby to increase the weight of the roller and strengthen said drum.

2. A roller as in claim 1 in which said block is substantially square, being secured at the corners to the drum whereby the block is clear of the drum intermediate of said corners.

ROBERT G. LE TOURNEAU.