

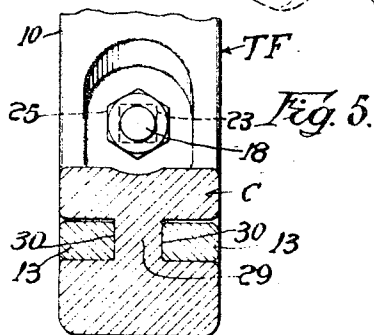
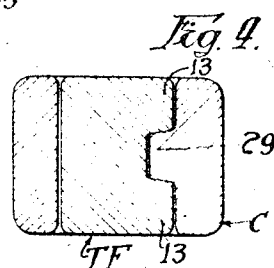
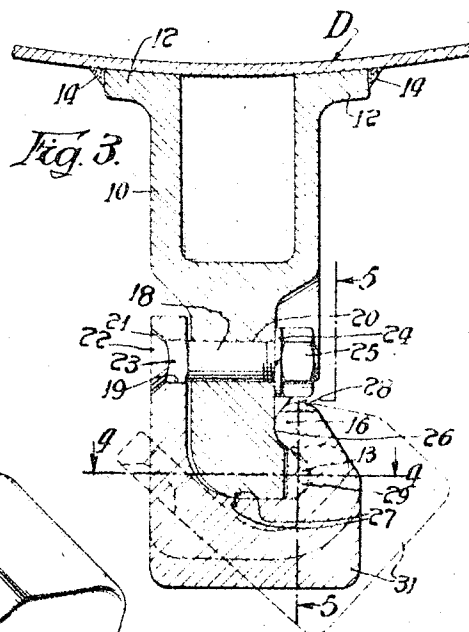
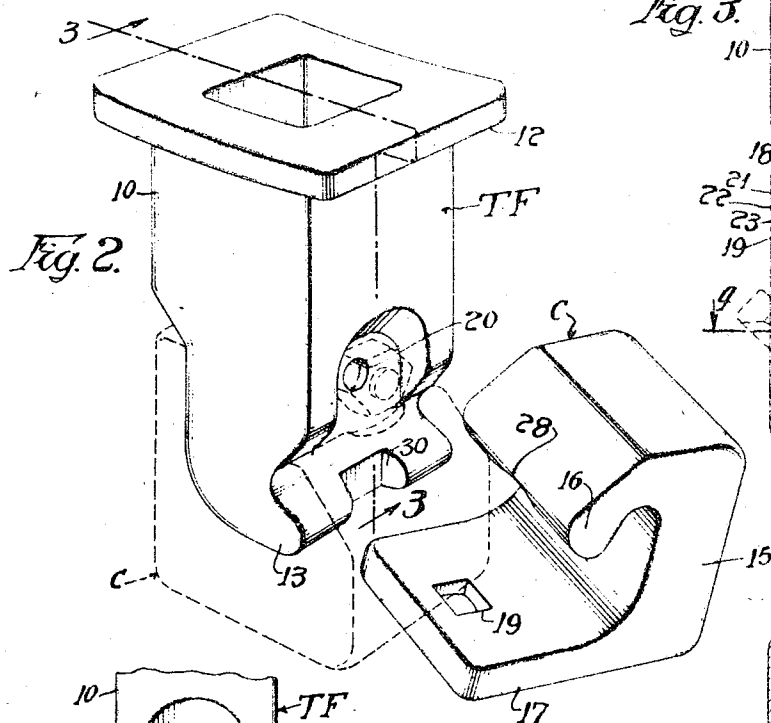
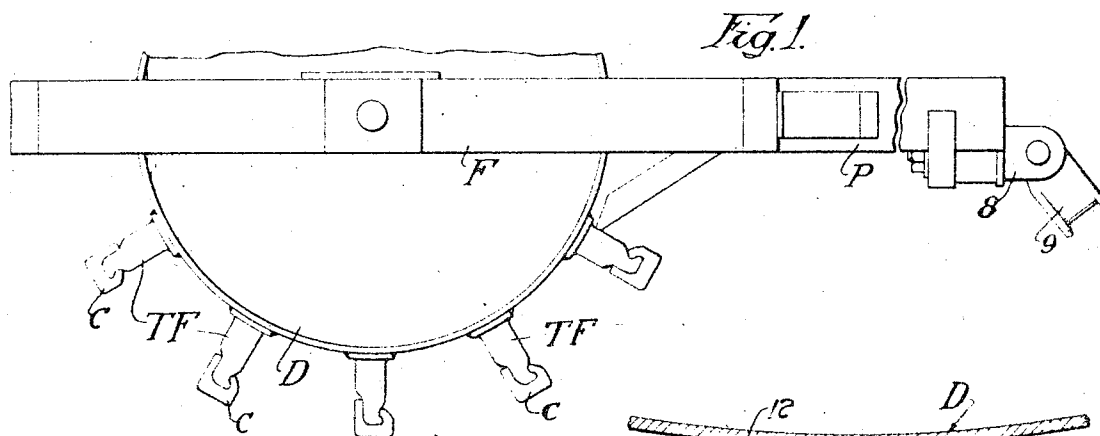
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E. W. AUSTIN

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EARTH TAMPER

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Witness:
E. Camporini

Inventor:
Ellsworth W. Austin,
By: Bair & Freeman
Attorneys

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EARTH TAMPER

Ellsworth W. Austin, Cedar Rapids, Iowa, assignor to LaPlant-Choate Manufacturing Co., Inc., Cedar Rapids, Iowa, a corporation of Delaware

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5 Claims. (Cl. 94—43)

My present invention relates to a tamper foot for earthmovers of the type including drums on which the tamper feet are mounted to project radially therefrom, the drum in turn being journaled on a frame which is drawn behind a tractor or the like.

The prime object of the invention is to provide a tamper foot which has a replaceable tamper foot cap which is effectively retained in position by a single bolt and yet does not become loosened as a result of impact of the tamper foot cap with a hard ground surface, the cap being thereby readily removable so that it can be replaced by a new cap when the old one is worn to such extent that it is no longer fit for use.

A further object is to provide a cap which includes a minimum amount of cast steel or other suitable material, so that the cap is relatively inexpensive to replace and replacement can be effected in a minimum of time due to the necessity of removing only one bolt and thereafter driving the cap out of position with a sledge hammer, driving a new one into position and reinserting the bolt.

Still a further object is to provide a tamper foot and cap combination in which the cap is held in position partially by hooking action and partially by bolting action, the hook lugs of the foot and cap being so shaped and interfitted that the cap must be partially driven into position and may be brought to its final position by tightening the bolt, the cap being thereafter retained rigidly in position by the hook means and the bolt means against even the severest of treatment, as when the tamper is pulled across hard ground or a pavement.

Still a further object is to provide coacting rib and depression means in the hook elements of the tamper foot and its cap which engage with each other when the hook elements are engaged and which thereafter prevent any lateral or side movement of the cap relative to the foot as a result of side thrusts.

Other objects, purposes and characteristic features of the present invention will be in part obvious from the accompanying drawing and in part pointed out as the description of the invention progresses. In describing the invention in detail, reference will be made to the accompanying drawing in which like reference characters designate corresponding parts throughout the several views, and in which

Figure 1 is a side elevation of an earth tamper to which my improved tamper foot construction has been applied;

Figure 2 is a separated perspective view of the tamper foot and the tamper foot cap, showing by dotted lines the final position of the cap;

Figure 3 is a vertical sectional view of the tamper foot and tamper foot cap assembled together, the cap being shown by dotted lines in one of its positions prior to being swung to its final position, and

Figures 4 and 5 are horizontal and vertical sectional views, respectively, on the lines 4—4 and 5—5 of Figure 3.

On the accompanying drawing I have used the reference character F to indicate generally a main frame, P a pull bar therefor and D a drum rotatably mounted on the frame F. The usual pull bar jaw 8 is swivelly mounted at the front of the pull bar and terminates in a toggle 9 for connection with a tractor or the like. Projecting radially from the frame F are a plurality of tamper feet TF provided with tamper foot caps C. Each tamper foot TF comprises attaching flanges 12 and a shank 10 extending therethrough and terminating in a hook lug 13. The flanges 12 are secured as by welding 14 to the surface of the drum D, so that the shanks 10 project radially therefrom. The hook lug 13, it will be noted, projects forwardly with respect to the direction of travel of the drum D, such direction being toward the right when the tamper is viewed as in Figure 1.

The cap C comprises a head 15 having a hook lug 16 along one edge and a bolt flange 17 along its other edge. The hook lugs 13 and 16 are adapted to coact with each other, as shown in Figure 3, by dotted lines, and thereafter the cap is forced to approximately the full line position by the use of a sledge hammer. Finally a bolt 18 is passed through a squared opening 19 of the bolt flange 17 and through a squared opening 19 of the bolt flange 17 and through a perforation 20 of the tamper foot TF. The flange 17 is countersunk as at 21 for the head 22 of the bolt 18, while the squared opening 19 receives the squared portion 23 of the bolt. After the bolt is so positioned, a lock washer 24 is placed on it and a lock nut 25 is then screwed onto the bolt and effects a drawing action of the flange 17 toward the tamper foot TF. This drawing action causes the hook lug 16 of the cap C to pivot in a seat 26 of the tamper foot and effect a tight engagement at points indicated at 27 in Figure 3, thereby putting the parts under a strain which serves to retain them tightly engaged even though the tamper feet and caps are subjected to the severest of uses. The hook lug 16 has a cutaway

part at 28 to facilitate the use of a socket wrench on the lock nut 25.

To prevent lateral movement of the cap C relative to the tamper foot TF, I provide a rib 29 on the cap between the side edges thereof and between the head 15 and the hook lug 16. The rib 29, it will be noted, as shown in Figure 4, has tapered sides and fits into a depression 30 of the hook lug 13 of the tamper foot, which depression also has tapered sides. When cut on the line 5-5 of Figure 3, the appearance of the coacting parts is as illustrated in Figure 5. The tapered fit of the parts 29 and 30 serves to tighten them with relation to each other as the nut 25 is tightened on the bolt 18, thus eliminating any possibility of side movement of the cap relative to the tamper foot.

My tamper foot and replaceable cap combination provide an inexpensive replaceable type of tamper foot, inasmuch as wear from use all occurs on the cap itself. In Figure 3, by dash lines I show a worn cap and when the cap is worn to this extent then a new one of the desired shape, having the forwardly projecting corner at 31 to secure efficient results, may be substituted for the worn cap. The use of a single bolt simplifies the replacement of the cap and reduces the time for replacement to a minimum. I have found, however, that a single bolt when combined with the type of hooking engagement I disclose, results in a structure that eliminates any possibility of looseness developing between the parts.

As many changes could be made in the foregoing construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be considered as falling therebetween.

I claim as my invention:

1. In an earth tamper, a frame, a drum journaled thereon, a plurality of radially arranged tamper feet projecting from the surface of said drum, each of said tamper feet being provided with a hook shaped end portion, and replaceable tamper foot caps on said tamper feet, each of said tamper foot caps having an open sided interfitting recess to cooperate with said hook shaped end portion of the foot, said cap having a bolt flange opposite the hook shaped portion of the

foot, single bolt means through said flange and tamper foot, said hook shaped portion and recess including a projection interfitting with a depression to prevent lateral movement of the cap relative to the foot as a result of side thrusts.

2. In an earth tamper, a frame, a drum journaled thereon, a plurality of tamper feet projecting radially from the surface of said drum and provided with hook shaped end portions, and replaceable tamper foot caps on said tamper feet, said caps having hook shaped recesses interfitting with said hook shaped end portions of said feet, said caps having extensions along the sides of the feet opposite the hooks thereof and bolts through said extensions and feet.

3. An earth tamper comprising a drum, a tamper foot projecting from said drum, and a replaceable tamper foot cap thereon, said tamper foot having a hooked shaped end, said cap having a recess arranged conforming to the shape of said hook shaped end and adapted to interfit therewith, said cap having a portion opposite the hook of said foot, said portion being bolted to said foot, said hook shaped end and said recess being of irregular shape laterally of said foot and cap to prevent movement of the cap relative to the foot as a result of side thrusts.

4. An earth tamper comprising a frame, a drum journaled thereon, a tamper foot projecting from said drum, said tamper foot comprising a shank secured at its inner end to said drum and terminating at its outer end in a hook shaped portion, a replaceable tamper foot cap for said foot comprising a head having a recess to receive the hook shaped end of said tamper foot and a bolt flange adapted to assume a position adjacent said shank and opposite said hook when the cap is placed on said foot, said foot and cap having interfitting rib and depression means to prevent lateral movement of the cap relative to the foot as a result of side thrusts, and a bolt through the foot and flange and effective when tightened to draw said recess into snug cooperation with said hook and said rib and depression means into tight relative engagement.

5. In an earth tamper, a tamper foot comprising a shank terminating at its outer end in a hook shaped portion, a replaceable tamper foot cap for said foot comprising a head having a recess to receive the hook shaped portion of said tamper foot and having a bolt flange adapted to assume a position adjacent said foot and opposite its hook when the cap is placed thereon, and a bolt through the foot and bolt flange and effective when tightened to draw said hook of said foot and said recess of said cap into tight engagement with each other.

ELLSWORTH W. AUSTIN.