Nov. 24, 1931. I. T. CURD 1,833,154

METHOD OF EROSION CONTROL

Filed June 24, 1931

Fig 1

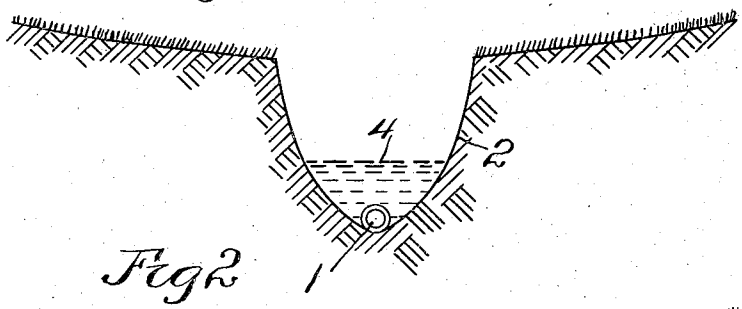


Fig 2

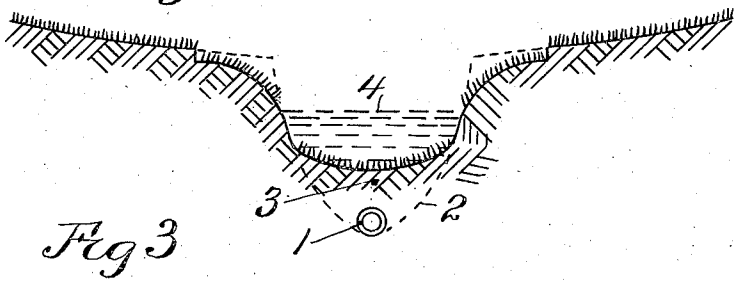


Fig 3

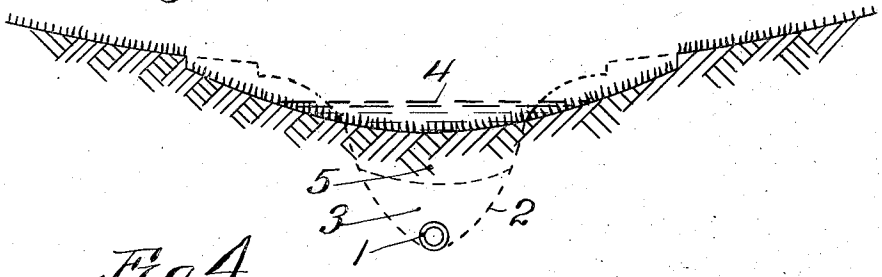
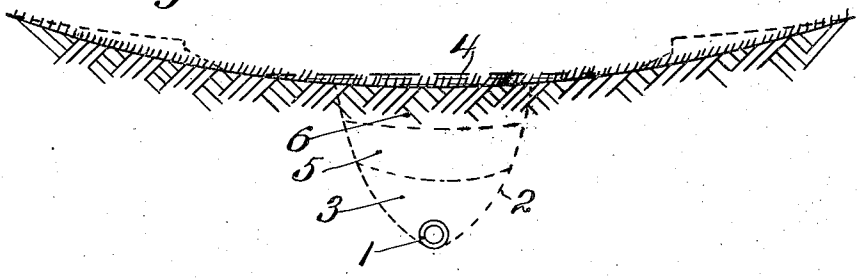


Fig 4



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UNITED STATES PATENT OFFICE

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METHOD OF EROSION CONTROL

Application filed June 24, 1931. Serial No. 546,442.

My invention relates to improvements in methods of erosion control.

The object of my invention is to provide a novel, cheap and efficient method of working ground to effect the gradual elimination of steep deep gullies while at the same time reducing injurious erosion in the area treated.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings, which illustrate the treatment of a gully by my improved method,

Fig. 1 is a cross section through a gully that it is designed to eliminate, after the laying along the bottom thereof of farm draining tiling, and prior to the removal of edge and surface portion at opposite sides of the gully.

Fig. 2 is a view similar to Fig. 1 as the gully appears after the first cycle of operations

Fig. 3 is a view similar to Fig. 2 showing the conditions following the second cycle of operations.

Fig. 4 is a view similar to Fig. 3 showing the gully filled following the third cycle of operations.

Similar characters of reference designate similar parts in the different views.

In carrying my improved method into effect, a line of farm draining tiling 1 is laid along the bottom of a gully 2 which is to be filled. Such line of tiling, of the type named, is laid in the usual manner such as will permit drainage into the tiling between its joints.

In the first cycle of operations, as begun after the laying of the tiling, edge and surface earth portions are removed for a predetermined distance at opposite sides of the gully 2.

Said removed portions are taken from the spaces between the dotted and solid lines at opposite sides of the gully 2, Fig. 2. the portions so removed are deposited in the gully upon the tiling 1, and are designated by 3.

The upper surface of said deposit 3 is then grassed by depositing thereon the sod removed with the portions removed, by sowing grass seed thereon, or with the natural growth that will spring from the surface of the deposit.

The deposit 3 is permitted to stand without further operations until the ground becomes settled and compact and the grassed surface has become set and the grass well rooted and extending above the surface. This may be for a term of several months.

The grassed surface will catch and hold some of the earth brought into the gully by storm water. Such storm water, designated by 4, as does not run out of the gully will seep through the deposit 3 and will enter and be carried away by the tiling 1. Such seepage will assist in compacting the deposit 3 in the gully 1.

In the second cycle of operations, which is begun after the 1st deposit 3 has become compact and well grassed, the edge and surface earth portions are removed at opposite sides of the gully for a wider distance than in the first earth removal, the earth being taken from the spaces between the dotted and solid lines at opposite sides of the gully in Fig. 3. The earth last removed is deposited in the gully upon the deposit 3 forming the deposit 5.

The surface of the deposit 5 is then grassed after the manner described with reference to the grassing of deposit 3, and permitted to stand for a time sufficient for the compacting of the last deposit and for the grassed surface to set and the grass rooted and extending above the surface.

The cycles above described are consecutively repeated, the removal of earth at each cycle being extended to a wider extent than was the earth removal in the next preceding cycle.

These cycles of operations are continued until the gully has become filled and the surface of the ground at opposite sides of the gully is even, as shown in solid lines in Fig. 4. In Fig. 4 the conditions are illustrated as they exist following the third cycle of operations, in which the earth removed from the spaces between the dotted and solid lines at opposite sides of the gully, and distant therefrom, was deposited in the gulley on top of the deposit

5, the last deposit being designated by 6, in Fig. 4.

By means of the cycles of operations hereinbefore described, a gully may be cheaply filled, while at the same time controlling the injurious erosion caused by storm water following the gully.

By reason of the time permitted to elapse between the different cycles of operations, the earth deposited in the gully is much more solid and compact and not so subjective to erosive action of storm water than would earth deposited at one time in quantities sufficient to fill the ditch or gully, and which would not contain the succeeding layers of sodded surfaces, as are present in the earth deposited in the gully and treated in the manner employed in carrying my improved method into effect.

Such layers of sodded surfaces tend to bind and hold the earth deposited in the gully after the same has become filled, as well as serving to prevent injurious erosive action on the deposits between the different cycles of operations.

I do not limit my invention to the precise steps described, as modifications thereof, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:—

1. The method of erosion control consisting in removing edge and surface earth portions for a predetermined distance at opposite sides of a gully, depositing such removed portions in the bottom of said gully, grassing the surface of such deposit, then, after said grassed surface has become set and rooted, removing further edge and surface earth portions for a wider distance at opposite sides of said gully than in the first instance of earth removal, depositing the last removed earth portions on the first deposit, grassing the surface of the last deposit, then, after the last grassed surface has become set and the grass thereon rooted, continuing consecutively in cycles and in the order above named the removal of edge and surface portions, the depositing in the gully on the previous deposit of such removed earth portions, grassing the surface of the deposits, and permitting such grassed surfaces to become set and rooted, at each cycle extending the width of surface earth removals beyond that of the next preceding earth removal until the gully has become filled.

2. The method of erosion control consisting in laying along the bottom of a gully a line of farm draining tiling, removing edge and surface earth portions for a predetermined distance at opposite sides of a gully, depositing such removed portions on said tiling, grassing the surface of such deposit, then, after said grassed surface has become set and the grass rooted, removing further edge and surface portions for a wider distance at opposite sides of said gully than in the first instance of earth removal, depositing the last removed earth portions on the first named deposit, grassing the surface of the last deposit, then, after the last grassed surface has become set and the grass rooted, continuing in consecutive cycles in the order above named edge and surface earth removals for a wider distance at each succeeding cycle, depositing such removed earth on the next preceding deposit, grassing the surface of each deposit, and permitting the grassed surfaces to become set and the grass rooted, until the gully has become filled.

In testimony whereof I affix my signature.

ISAAC T. CURD.