Jan. 6, 1959 I. M. EVENSEN 2,866,995

PAINT ROLLER FOR WOVEN WIRE FENCES

Filed Nov. 13, 1952 2 Sheets-Sheet 1

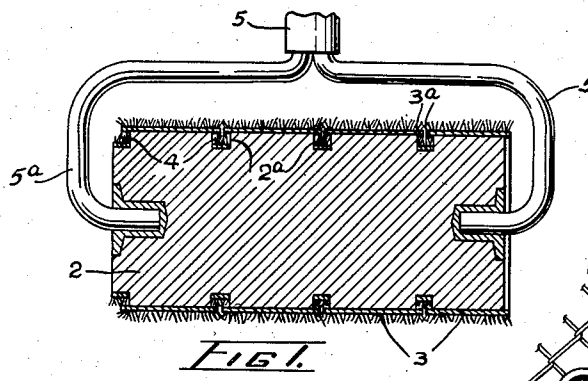


FIG 1.

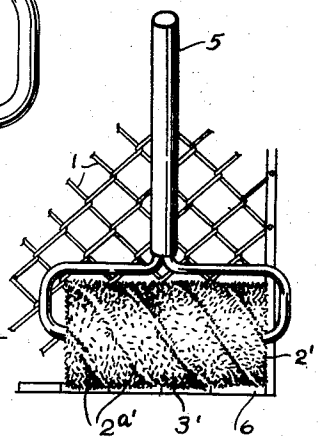


FIG 4.

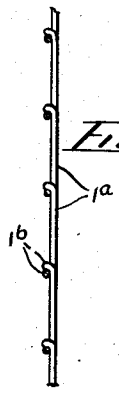


FIG 3.

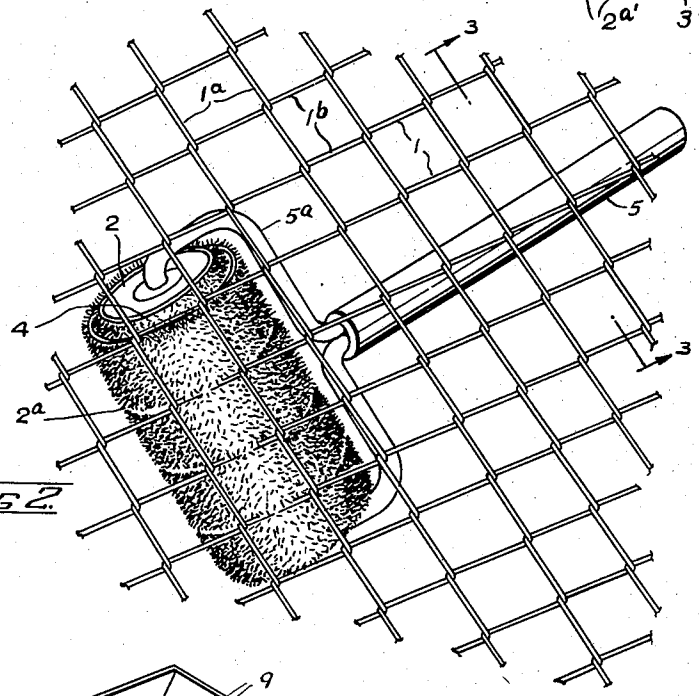


FIG 2.

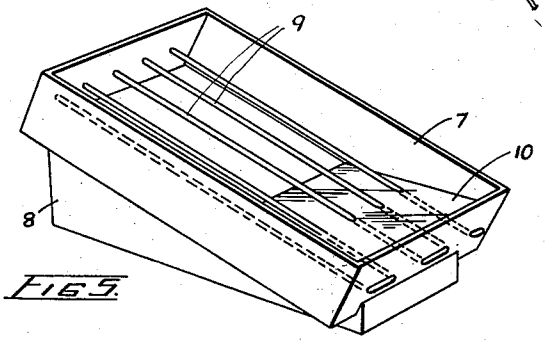


FIG 5.

INVENTOR
INGWALD M. EVENSEN
PER
Gareth C. Hayden
ATTORNEY.

Jan. 6, 1959 I. M. EVENSEN 2,866,995

PAINT ROLLER FOR WOVEN WIRE FENCES

Filed Nov. 13, 1952 2 Sheets-Sheet 2

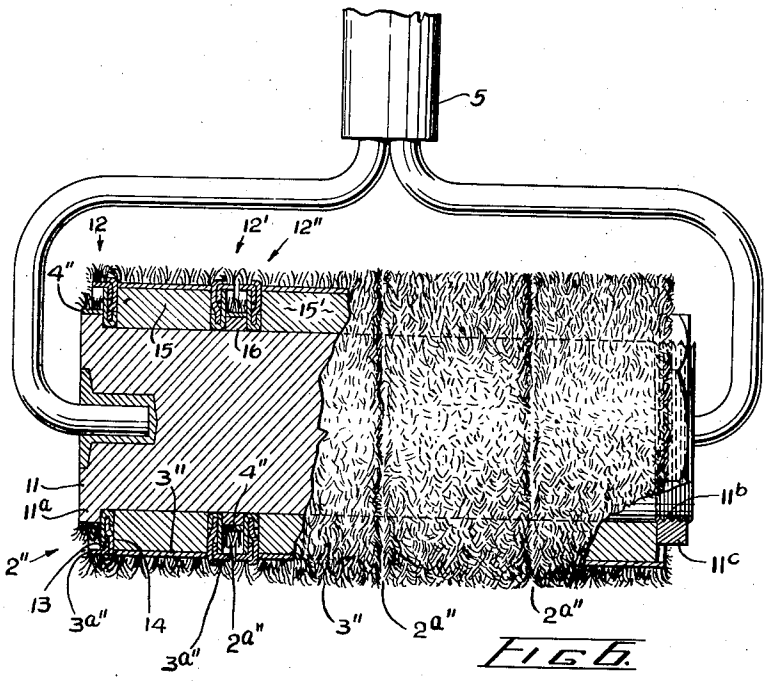


FIG 6.

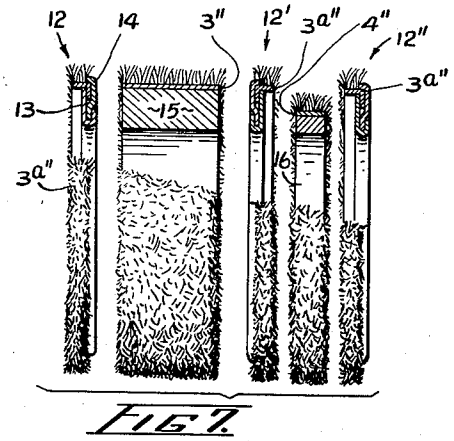


FIG 7.

INVENTOR
INGWALD M. EVENSEN
PER
Everett C. Mayhew
ATTORNEY

United States Patent Office

2,866,995

Patented Jan. 6, 1959

2,866,995

PAINT ROLLER FOR WOVEN WIRE FENCES

Ingwald M. Evensen, Toronto, Ontario, Canada

Application November 13, 1952, Serial No. 320,213

21 Claims. (Cl. 15—230)

This invention relates to a roller for painting wire fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, for example, chain link fencing.

Because of the irregular surfaces of such wire fences it has heretofore been unsatisfactory to use rollers for painting them. Conventional rollers do not roll in contact with the entire exposed surface of the fencing. Because of the relatively large open spaces in the fencing it is impractical to spray paint them. Consequently the fencing is normally painted with ordinary paint brushes, with inevitable disadvantages in speed, in dripping of paint, etc.

It is the object of the invention to provide a paint roller for painting wire fencing of the kind above referred to.

In the drawings which illustrate the invention:

Fig. 1 is a sectional view of a paint roller constructed according to the invention;

Fig. 2 is a perspective view of a wire fence showing the roller in use;

Fig. 3 is a sectional view of the wire fence along the line 3—3 in Fig. 2;

Fig. 4 is a view of alternative form of paint roller being used to paint a wire fence;

Fig. 5 is a perspective view of a suitable receptacle in which paint may be applied to rollers constructed according to the invention;

Fig. 6 is a partly sectional view of another paint roller constructed according to the invention; and

Fig. 7 is an exploded sectional view of parts of the roller shown in Fig. 6.

A conventional wire fence consists of a plurality of wires 1 woven to define a multitude of square apertures, the wires having substantially parallel portions 1*a* running in one direction and similar portions 1*b* running transversely thereto. As best seen in Fig. 3, the portions 1*a* lie in approximately one plane and the portions 1*b* form parallel ridges relative to said plane. Because, generally speaking, the portions 1*a* and 1*b* lie in different planes a conventional paint roller having a simple cylindrical surface cannot distribute paint smoothly over the wires.

The roller shown in Figs. 1 and 2 consists of a rigid cylinder 2 of wood or other material having a plurality of spaced apart peripheral grooves 2*a*, one of the grooves being at one end of the cylinder. The portions of the cylinder 2 between the grooves are covered with strips of sheepskin 3 or other lanuginous or fibrous material. The sheepskin strips extend over the grooves as at 3*a* so that the wool substantially conceals the grooves. Also, the bottoms of the grooves 2*a* are lined with sheepskin strips 4. The cylinder 2 is journalled at its ends on the arms 5*a* of a bifurcated handle 5.

As seen in Fig. 2, for painting one side of the wire fence illustrated the roller is placed with the ridges formed

by the portions 1*b* lying in the grooves 2*a* so that the portions 1*b* contact the sheepskin strips 4 and the portions 1*a* contact the strips 3. Also the portions 3*a* are bent into the grooves 2*a* by the portions 1*b* and contact the sides of the portions 1*b*. Thus when the sheepskin covering has been soaked in paint the entire exposed surface of the side of the fence being painted is uniformly covered. When the opposite side of the fence is to be painted, the portions 1*a* are aligned with the grooves 2*a* and the portions 1*b* are contacted by the strips 3. It has been found, however, that when the wool is reasonably long both sides of the fence can be painted by passing the roller over one side only, the wool in effect wrapping itself around the portions 1*a* and 1*b* and painting their entire surfaces.

An alternative roller construction is shown in Fig. 4, in which a cylinder 2′ has a plurality of peripheral spiral grooves 2*a*′ which are lined with sheepskin strips similar to the strips 4 of Fig. 1. Between the grooves 2*a*′ the cylinder 2′ is covered with sheepskin strips 3′ which overhang the grooves, and the roller has a handle 5. One advantage of this construction is that the roller will reach right into the corner 6 of a fence, as shown, when painting the wires 1.

A convenient receptacle for applying paint to rollers constructed according to the invention is shown in Fig. 5. A rectangular open-topped container 7 is supported in inclined position by a base 8, the container 7 having a plurality of longitudinally extending wires 9 near the bottom and spaced apart at distances equal to the distances between the grooves 2*a* or 2*a*′ of the roller. The container 7 holds paint 10 at its lower end. A roller to be covered with paint is placed in the upper end of the container 7 with its grooves in registration with the wires 9, and the roller is then rolled down the wires 9 and into the paint 10, the wires 9 at their lower ends forcing paint into the grooves 2*a* or 2*a*′.

The roller shown in Fig. 6 has a cylinder generally indicated as 2″, the cylinder having a cylindrical core 11 rotatably supported on a handle 5. At one end the core 11 has a flange 11*a* on the periphery of which is a sheepskin strip 4″; at its other end the core 11 is threaded as at 11*b*. A plurality of annular elements are fitted onto the core, the first being an assembly generally indicated as 12 and consisting of an annular member 13 which fits snugly over the core 11 against the flange 11*a* and a sheepskin strip 3*a*″ fitting around the periphery of the member 13 and held by an annular clip member 14 which is suitably locked or secured to the member 13. The strip 3*a*″ of the assembly 12 overhangs the strip 4″ on the flange 11*a*.

The second element on the core 11 is an annular member 15 adjacent the assembly 12 and of the same diameter as the member 13. The member 15 has on its periphery a sheepskin strip 3″ the wool of which covers the adjacent clip member 14 so that the strips 3″ and 3*a*″ together present a continuous wooly covering on the cylinder 2″.

Next to the member 15 on the core 11 is an assembly 12′ identical with the assembly 12 but disposed on the core 11 in the opposite direction so that its sheepskin strip 3*a*″ presents a continuous wooly covering with the strip 3″ on the member 15.

Next to the assembly 12′ is an annular member 16 of smaller diameter and less width than the member 15 and having around its periphery a sheepskin strip 4″. Adjacent the member 16 is another assembly 12″ identical with the assemblies 12 and 12′ and having a sheepskin strip 3*a*″ which, like the strip 3*a*″ of the assembly 12′, overhangs the strip 4″ on the member 16. It will be seen that the assemblies 12′ and 12″ and the member 16 define in the cylinder 2″ a groove 2*a*″ similar to a groove 2*a* in the cylinder 2 of Fig. 1.

Following the assembly 12″ is another annular mem-

ber **15'** identical with the member **15**, and it will be seen from the drawings that the succeeding elements on the core **11** repeat the structure so far described, there being formed an outer generally cylindrical wooly covering consisting of the sheepskin strips **3''** and **3*a*''** and corresponding to the covering formed by the strips **3** in Fig. 1. The strips **3*a*''** overhang grooves **2*a*''** similar to the grooves **2*a*** of Fig. 1.

The annular elements on the core **11** are held against one another and against the flange **11*a*** by means of a nut **11*c*** on the threaded end **11*b***. The principal advantage of the construction shown in Figs. 6 and 7 over that shown in Fig. 1 is that as any sheepskin strip becomes worn it can readily be replaced by removing from the core **11** the annular element on which the worn strip is mounted and by slipping onto the core **11** another element having an unworn sheepskin strip.

It is thought that the construction and use of the invention will be apparent from the above description of the various parts and their purpose. It is to be understood that the forms of the invention herewith shown and described are to be taken as preferred examples of the same and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention or the scope of the subjoined claims.

What I claim as my invention is:

1. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a core and a plurality of inflexible annular elements removably fitting over the core, at least two of the elements being of greater external diameter than a third element between them whereby a peripheral groove is defined between said two elements, said two elements having outer cylindrical surfaces formed of fibrous material, a further removable element located between said third element and each of said two elements, each said further element having a fibrous portion overhanging the groove, the fibrous portions being sufficiently flexible to be deflectable by wires into the groove whereby when the roller is rolled over the wire fencing the fibrous portions are adapted to spread paint over wires which extend into the groove.

2. A paint roller as claimed in claim 1, in which the third element has an outer surface defining the bottom of the groove and also formed of fibrous material.

3. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a rigid rotatable cylinder having a groove in its outer cylindrical surface, the groove encircling the said cylinder and being of a width sufficient to accommodate wire of the fencing extending in the direction of the groove to locate the roller relatively to the fencing, the cylindrical surface at either side of the groove being of materially greater width measured in a direction transverse to the groove than the width of the groove itself, a covering on the cylindrical surface at either side of the groove, the covering having an outer soft fibrous pile surface and being adapted to spread paint over wires extending in a direction transverse to the groove, and a covering of a material having an outer soft fibrous pile surface within the groove for spreading paint over wire accommodated in the groove.

4. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a plurality of rigid annular elements mounted in axial alignment for rotation about their axis, at least two of the elements being of greater external diameter and of materially greater axial length than a third element positioned between them whereby a narrow peripheral groove is provided, the groove encircling the said cylinder and being of a width sufficient to accommodate wire of the fencing extending in the direction of the groove to locate the roller axially relatively to the fencing, a covering of material on the third element having an outer soft fibrous pile surface for spreading paint over wire accommodated in the groove, and a covering of material on the said two elements having an outer soft fibrous pile surface for spreading paint over wire extending transversely of the groove.

5. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a rigid rotatable cylinder having a groove in its outer cylindrical surface, the groove encircling the said cylinder and being of a width sufficient to accommodate wire of the fencing extending in the direction of the groove to locate the roller relatively to the fencing, the cylindrical surface at either side of the groove being of materially greater width measured in a direction transverse to the groove than the width of the groove itself, a covering on the cylindrical surface at either side of the groove, the covering having an outer soft fibrous pile surface and being adapted to spread paint over wires extending in a direction transversely of the groove, and free edge portions of the covering overhanging the groove from each side of the groove, the free edge portions being sufficiently flexible to be deflectable into the groove by wire extending in the direction of the groove to spread paint over the wire.

6. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a grooved cylinder, a handle from which the cylinder is rotatably mounted, the cylinder, when viewed in cross-section, having a castellated profile the recesses of which are spaced at intervals equal to the spacing of the lines of wires forming the fencing for the wires to extend into the recesses when the roller is in use, a covering having a soft fibrous pile surface on the peripheral surface of the cylinder, the covering being interrupted at each recess and overhanging the edge of each recess for the overhanging portions to be deflected by the wires into the recess when the roller is in use, the covering being adapted to spread paint over the wires lying within the grooves and also over the wires lying in the direction transverse of the grooves when the roller is passed over the fencing.

7. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a shaft, a core rotatably mounted on the shaft, a plurality of rigid annular elements mounted on the core, a covering having a soft fibrous pile surface applied to the periphery of each of said elements, selected ones of the elements being of less diameter than two elements at either side of the said one elements whereby a narrow peripheral groove is defined between each of the said two elements, the grooves being of sufficient width and being so spaced that selected lines of the wires forming the fencing can be received in the grooves for intimate contact with the covering on the said one elements, the engagement of the grooves with the wires guiding the roller as it is passed over the fencing, the covering on the said one elements being adapted to spread paint over the wires engaged in the grooves and the covering on the other elements being adapted to spread paint over wires lying in the direction transverse to the grooves when the roller is passed over the fencing.

8. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, com-

prising a rotatable rigid cylinder having a plurality of narrow axially-spaced peripheral grooves, a covering having a soft fibrous pile surface applied to each of the peripheral portions of the cylinder between the grooves, each of the coverings having a free edge portion overhanging the adjacent groove, the free edge portions being sufficiently flexible to be deflectable into the groove by selected lines of wires when the roller is engaged with the fencing, the grooves being of sufficient width and being so spaced that the lines of wires forming the fencing can extend into the grooves for intimate contact with the free edge portions, the engagement of the grooves with the lines of wires guiding the roller along the lines of wires as it is passed over the fencing, the covering being adapted to spread paint over the wires engaged in the grooves and also over the wires lying in the direction transverse of the grooves when the roller is passed over the fencing.

9. A paint roller as claimed in claim 5, in which the free edge portions when undeflected into the groove substantially conceal the groove.

10. A paint roller as claimed in claim 3, in which the groove encircles the cylindner in a plane substantially normal to the axis of the cylinder.

11. A paint roller as claimed in claim 3, in which the groove extends spirally of the cylinder.

12. A paint roller as claimed in claim 5, in which the covering having an outer soft fibrous pile surface is lanuginous.

13. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a rigid rotatable cylinder, a plurality of grooves of uniform depth in the outer cylindrical surface of the cylinder, each groove being spaced from the adjacent groove by a distance which is substantially equal to the distance between the respective lines of wires running in one direction and being of a width sufficient to accommodate one of the lines of wires, the cylindrical surface at either side of each groove being of a materially greater width measured in a direction transverse to the groove than the width of the groove itself, a covering on the cylindrical surface at either side of each groove, the covering having an outer soft fibrous pile surface and being adapted to spread paint over wire extending in a direction transverse to the groove, and a covering of material having an outer soft fibrous pile surface within each groove for spreading paint over a line of wire accommodated in each groove.

14. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a rigid rotatable cylinder, a plurality of grooves of uniform depth in the outer cylindrical surface of the cylinder, each groove being spaced from the adjacent groove by a distance which is substantially equal to the distance between the respective lines of wires running in one direction and being of a width sufficient to accommodate one of the lines of wires, the cylindrical surface at either side of each of the grooves being of materially greater width measured in a direction transverse to the groove than the width of the groove itself, a covering on the cylindrical surface at either side of each groove, the covering having an outer soft fibrous pile surface and

being adapted to spread paint over wire extending in a direction transversely of the groove, and free edge portions of the covering overhanging each groove from each side of each groove, the free edge portions being sufficiently flexible to be deflectable into each groove by a line of wire extending in the direction of the groove to spread paint over each wire.

15. A paint roller as claimed in claim 14, in which the free edge portions, when undeflected into each groove substantially conceal each groove.

16. A paint roller as claimed in claim 14, in which the bottom of each groove is provided with a covering having an outer soft fibrous pile surface.

17. A paint roller as claimed in claim 13, in which each groove encircles the cylinder in a plane substantially normal to the axis of the cylinder.

18. A paint roller as claimed in claim 13, in which each groove extends spirally of the cylinder.

19. A paint roller as claimed in claim 14, in which each groove extends spirally of the cylinder.

20. A paint roller as claimed in claim 14, in which each covering having an outer soft fibrous pile surface is lanuginous.

21. A paint roller for fencing of the kind formed by a plurality of wires so engaged with each other that they define lines of wires running in one direction and other lines of wires transverse to the first-mentioned lines, comprising a rigid rotatable cylinder having a groove in its outer cylindrical surface, the groove encircling the said cylinder and being of a width sufficient to accommodate wire of the fencing extending in the direction of the groove to locate the roller relatively to the fencing, the cylindrical surface at either side of the groove being of materially greater width measured in a direction transverse to the groove than the width of the groove itself, a covering on the cylindrical surface at either side of the groove, the covering having an outer soft fibrous pile surface and being adapted to spread paint over wires extending in a direction transversely of the groove, the free edge portions of the covering overhanging the groove from each side of the groove, the free edge portions being sufficiently flexible to be deflectable into the groove by wire extending in the direction of the groove to spread paint over the wire, and a covering at the bottom of the groove having an outer soft fibrous pile surface for spreading paint over wire accommodated in the groove.

References Cited in the file of this patent

UNITED STATES PATENTS

91,825	Churchman	June 29, 1869
277,097	Abbe	May 8, 1883
351,306	Audoye	Oct. 9, 1886
483,503	Smith	Sept. 27, 1892
891,564	Pike	June 23, 1908
1,614,708	Bartling	Jan. 18, 1927
2,215,692	Fleming	Sept. 24, 1940
2,371,948	Bergmann	Mar. 20, 1945
2,680,873	Ernst	June 15, 1954
2,735,128	Adams	Feb. 21, 1956
2,761,167	Bridgford	Sept. 4, 1956

FOREIGN PATENTS

354,053	Great Britain	Aug. 6, 1931
39,795	France	Dec. 3, 1931

(1st add. to 685,359)