

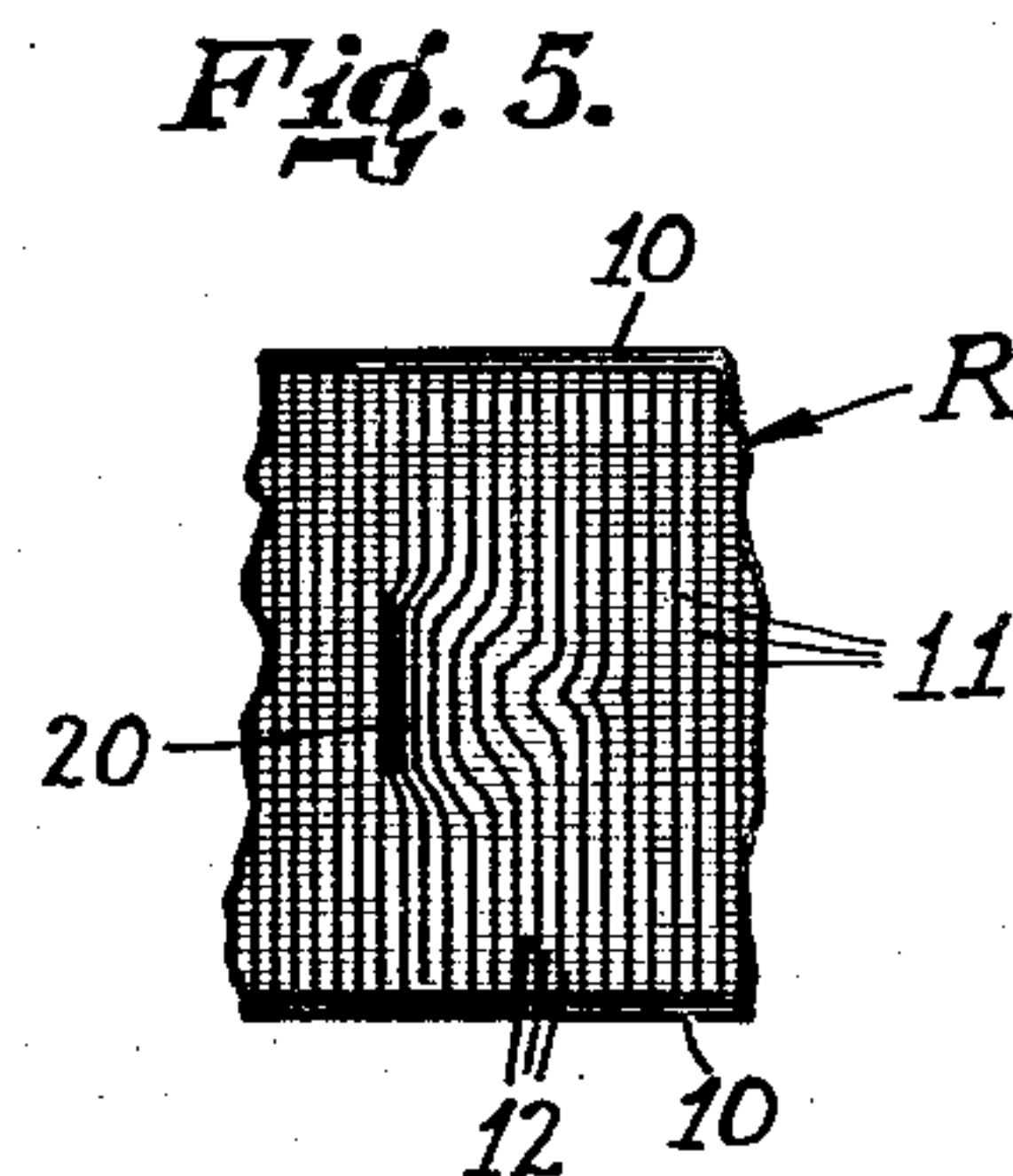
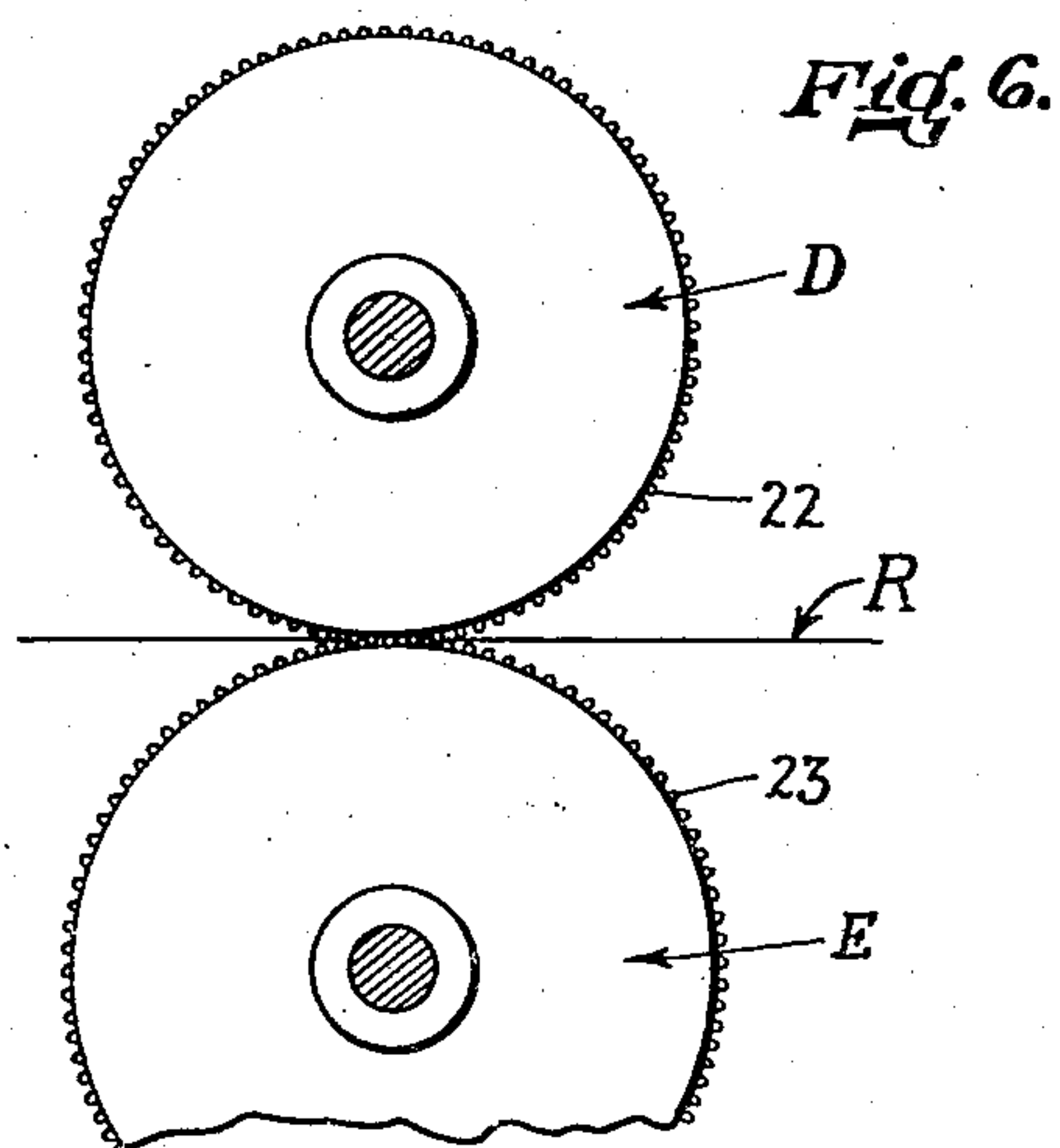
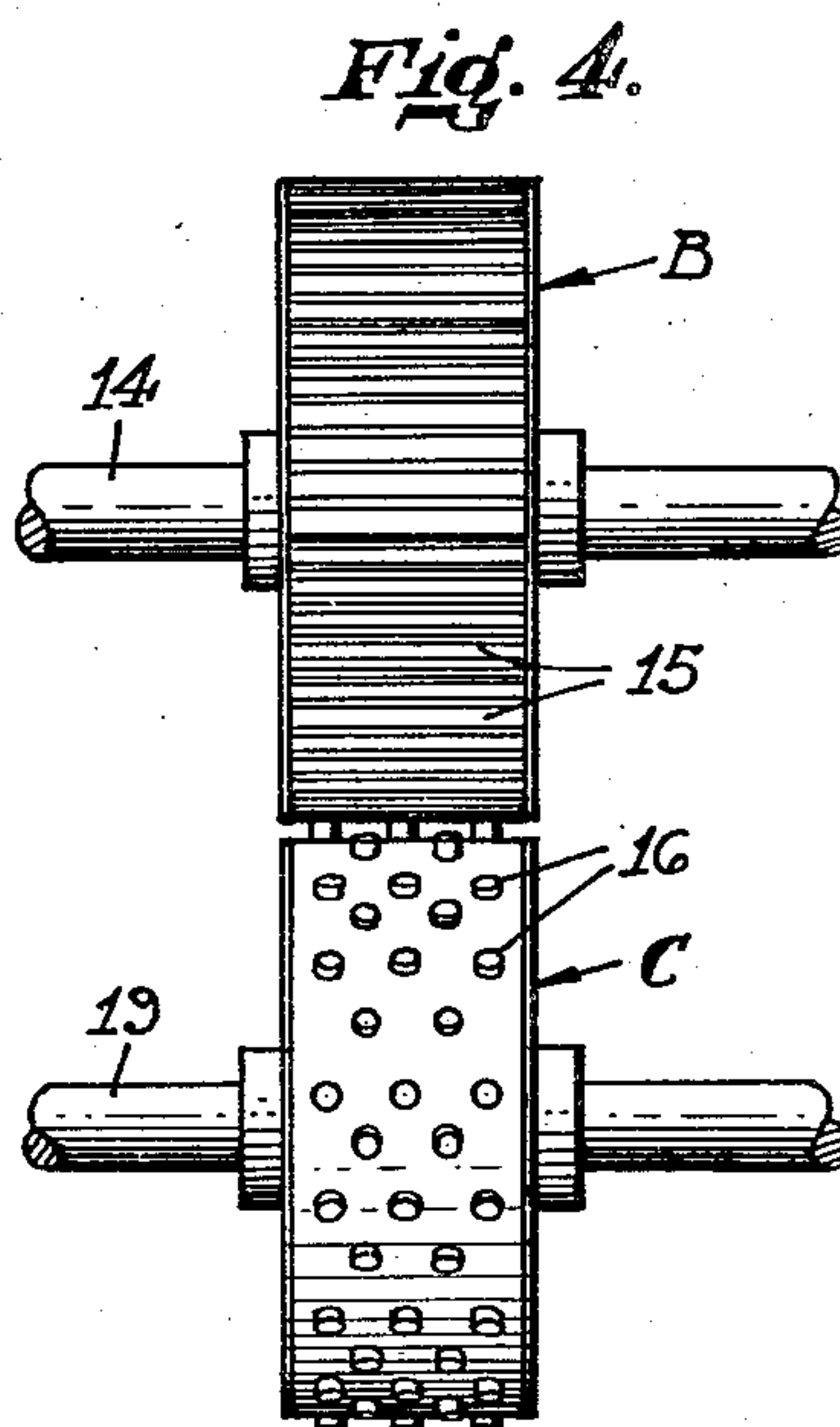
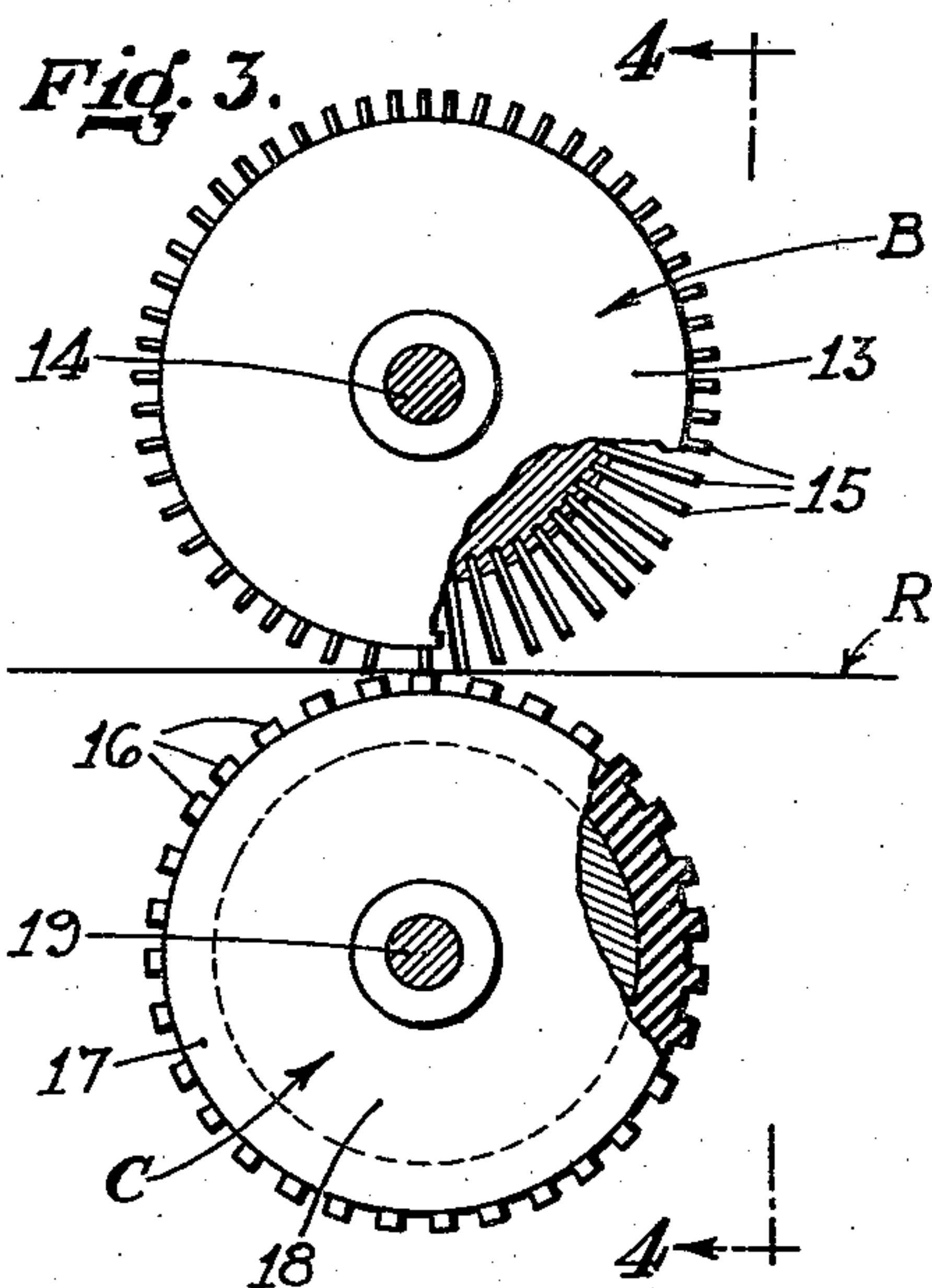
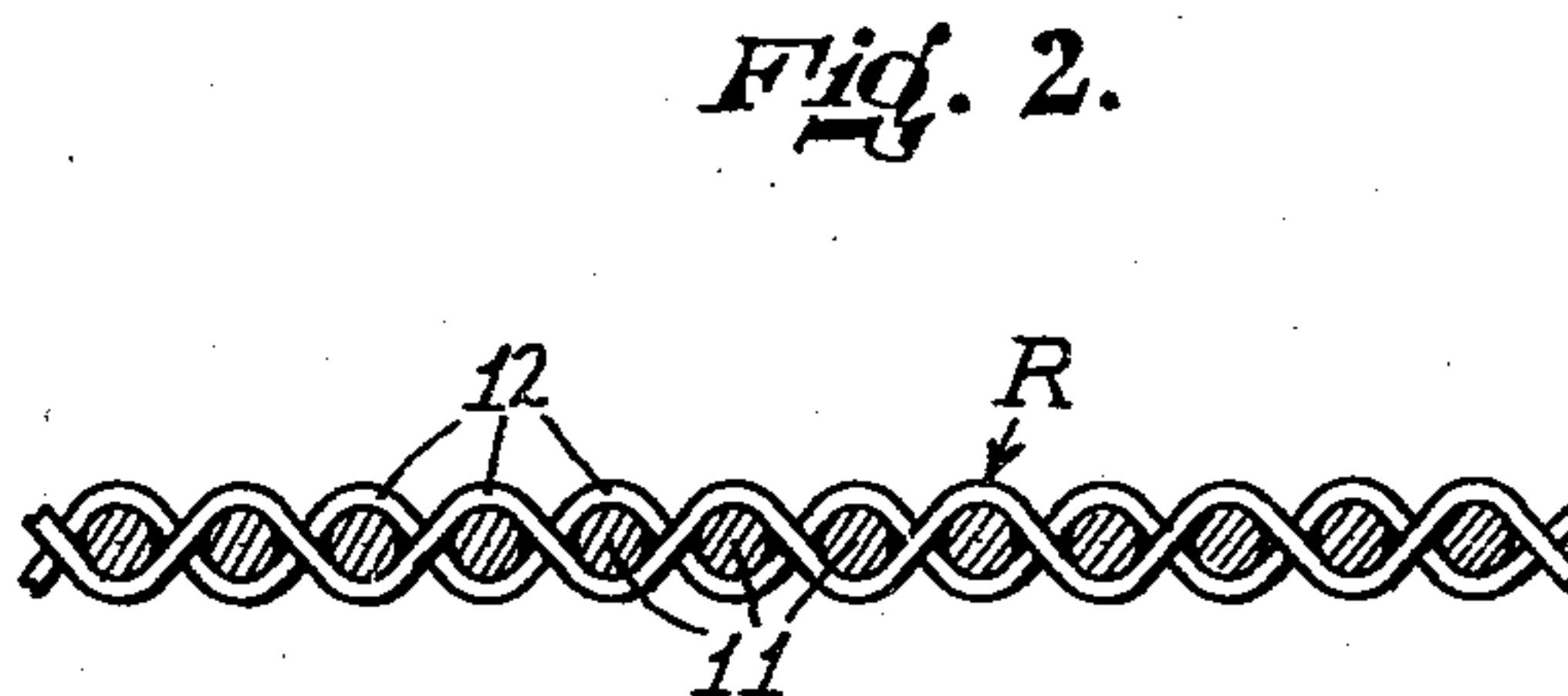
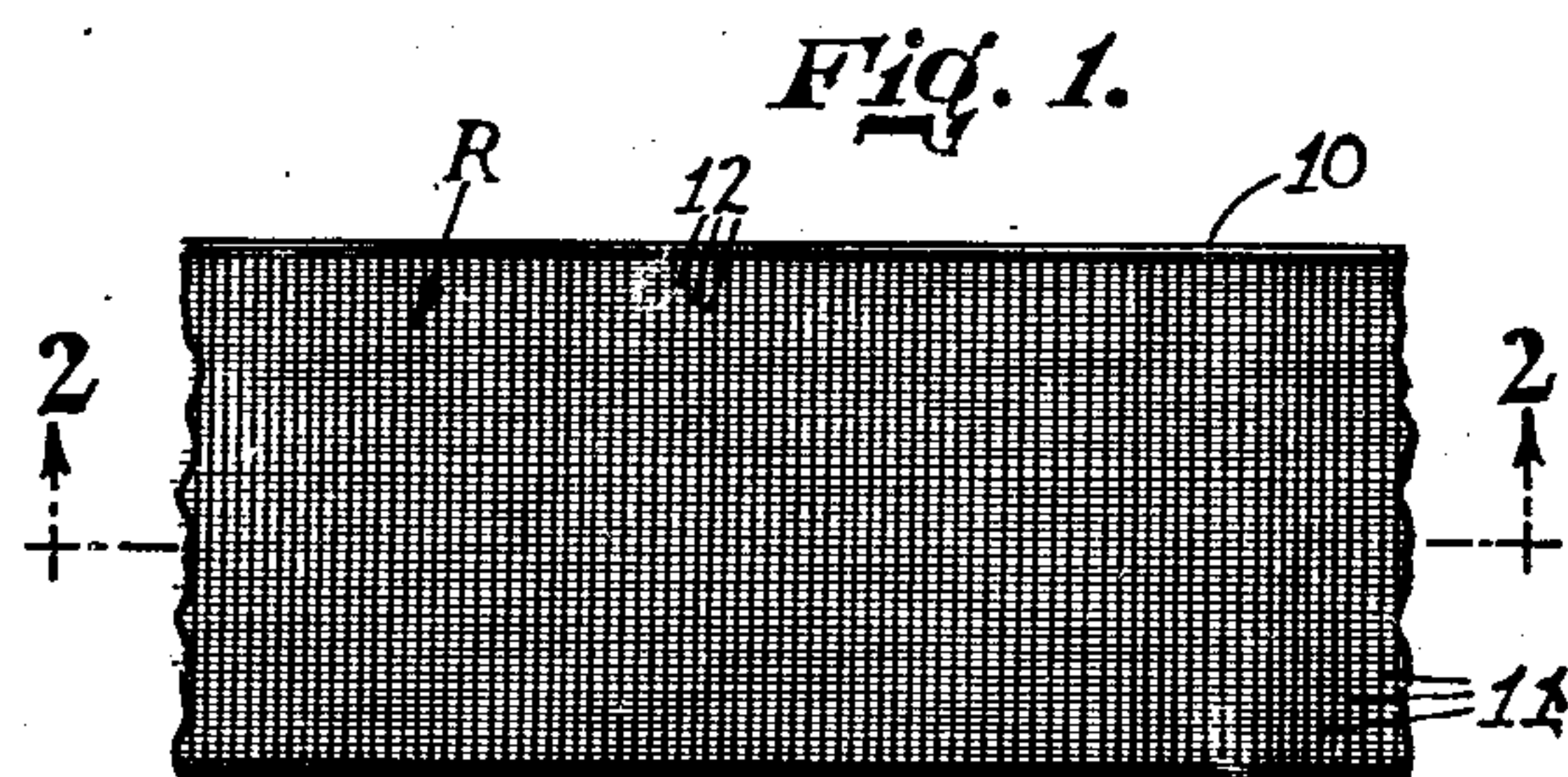
Nov. 21, 1939.

A. MILHOMME

2,180,745

METHOD OF DECORATING NARROW FABRICS

Filed Feb. 17, 1939



INVENTOR
ALEXANDER MILHOMME
BY *Richards & Seier*
ATTORNEYS

Patented Nov. 21, 1939

2,180,745

UNITED STATES PATENT OFFICE

2,180,745

METHOD OF DECORATING NARROW FABRICS

Alexander Milhomme, Ridgefield Park, N. J., assignor to Progressive Silk Finishing Co., Hoboken, N. J., a corporation of New Jersey

Application February 17, 1939, Serial No. 256,937

2 Claims. (Cl. 26—69)

The present invention relates to a method of decorating narrow fabrics and particularly relates to a method of decorating and producing fancy designs upon ribbons.

5 It is among the objects of the present invention to provide an improved method of decorating ribbons and similar narrow fabrics so that the fancy design applied thereto will be uniformly applied on both sides and may be applied in many varieties without the necessity of embossing the ribbons and at low expense.

10 Another object is to provide an improved decorated narrow fabric construction or ribbon construction in which the decoration will be permanently applied without detracting from the desirable characteristics of the ribbon and without in any way preventing such ribbon from being used in the desired manner and for the desired purposes.

20 Other objects will be obvious or will appear during the course of the following specification.

In accomplishing the above objects, it has been found most suitable to provide a fabric having a taffeta or similar weave, the weft and warp of which is so shaped in respect to one another that the fabric will have lateral or weftwise ribs which are held in position by the selvage edges.

30 The ribbon or other narrow fabric is then processed on one side so as to displace the weft according to a predetermined design which it is desired to obtain or from one side of the fabric.

This displacement may preferably range so that the weft threads and desired portions of the fabric are displaced as much as one pick.

35 Although many different methods of displacing the weft may be employed, it has been most suitable according to one embodiment of the present invention to use a brass, copper or bronze blade and scrape said blade over the face of the fabric as said fabric is being pressed or pulled down against a relatively medium hard rubber backing which rubber backing has been cut out to form flat plateaus or protuberances corresponding to the design to be produced.

45 Subsequent to the first major displacement operation on one side, according to a predetermined design, the entire narrow fabric is then subjected to a minor weft displacement on both sides or to a marking of the obliquely displaced weft ends which marking appears uniformly on both sides of the fabric.

50 Although this displacement and marking may be accomplished in various manners, it has been found most desirable slightly to separate the ad-

jacent wefts or groups of wefts by much less than the distance of the pick.

Although this may be accomplished in many different ways, it has been found most suitable to apply two ridged rolls, one of metal and the other of paper, the ridges of which mesh with each other.

10 It has been found that most satisfactory results are obtained when the spacing of the ridges is substantially the same as the spacing of the picks, although satisfactory results are also obtained when the spacing of the ridges of the rolls is varied between 5% more or less than the spacing of the picks.

15 Although the present invention may be widely applied to decorate ribbons varying in width from $\frac{1}{2}$ to 10 or more inches, it has been found particularly satisfactory to apply it to ribbons varying in width from 1 to 5 inches.

20 Although many pick densities may be utilized, it has been found particularly satisfactory to use a pick density varying from 30 to 60 picks per inch, although this too may be widely varied.

25 In the drawing, there is diagrammatically illustrated a manner of producing the decorative ribbon of the present application, to which the present application is by no means restricted.

In the drawing:

30 Figure 1 is a plan view of the section of the ribbon fabric to which the present invention may be applied;

Figure 2 is an enlarged sectional view upon the line 2—2 of Figure 1;

35 Figure 3 is a diagrammatic side view illustrating how the ribbon fabric may be subjected to the first operation;

Figure 4 is an end view upon the line 4—4 of Figure 3;

40 Figure 5 diagrammatically illustrates the displacement of the ribbons or weft in the ribbon subsequent to the operation of Figures 3 and 4;

Figure 6 diagrammatically illustrates in side view the apparatus for causing the second decorative step;

45 In Figure 1 is shown a narrow fabric such as a ribbon having the selvages 10 with a heavy weft forming ridges covered by a fine warp 12.

50 The average diameter of the ribs should be at least two times that of the warp and desirably the weft forming the ribs may have a diameter of 5 to 10 times the diameter of the warp threads.

As shown in Figure 2, a taffeta weave may be employed but this is not necessary and other weaves may be utilized.

In Figure 3 are shown the rollers for causing a major displacement on one side of the ribbon.

The upper roller 13 is provided, turning on the shaft 14 having the metal fins or plates 15.

5 These fins or plates press against the plateaus or protuberances 16 which are cut out of the rubber material 17. The rubber material 17 is carried on the cylinder 18 which in turn is carried on the shaft 19.

10 The ribbon fabric R, in passing through the rollers 13 and 18, is subjected to a displacement action where it comes over the protuberances or plateau members 16 with the result that the weft will be displaced in portions, as indicated at 15 20 in Figure 5.

This displacement may be caused to take place in predetermined positions throughout the ribbon so as to give a design.

20 The width of the rollers B and C is preferably the same as that of the narrow fabric R and desirably a number of pairs of rollers B and C may be placed side by side upon the same shafts 14 and 19.

25 In Figure 6, two rollers are provided, an upper roller D preferably having a paper or other hard plastic face 21 carrying a ridging or grooving 22 of about the same spacing as the spacing of the ribs 11 in the ribbon R. These rollers D and E may be heated.

30 The lower roller E may be of steel and also have a ridging or grooving 23 to cooperate with or mesh with the upper roller D of Figure 6.

35 As indicated diagrammatically in Figure 7, the intermeshing of the teeth on the rollers 22 and 23 will have the effect of displaying the weft ends 11 and/or marking the obliquely disposed weft ends and this surprisingly results in an application of the design to both sides of the

ribbon as though the initial decoration by the rollers of Figures 3 and 4 had been applied to both sides.

In this manner fancy and irregular designs may be applied. The decoration which is obtained is a permanent one and does not affect the quality or decorative characteristics of the ribbon as a whole and may be readily applied to many different types of ribbons.

10 It is most satisfactorily applied to rayon or regenerated cellulose materials having a pick density of about 40 to 60 with a low twist or substantially zero twist in the filling and warp.

15 It is apparent that the specific illustrations shown above have been given by way of illustration and not by way of limitation and that the structure above described are subject to wide variation and modification without departing from the scope or intent of the invention, all of which variations and modifications are to be included 20 within the scope of the present invention.

What is claimed is:

1. A process of decorating ribbons and similar narrow fabrics having a relatively heavy weft and a relatively fine warp which comprises passing 25 said fabric between a pair of scratch rollers to effect a displacement of said weft and then running said fabric through intermeshing rib rollers, the spacing of said ribs being about the same as the spacing of said weft and said ribs 30 running parallel and extending the full width of said weft whereby a design is applied uniformly to both sides of said narrow fabric.

2. Decorated ribbons and similar fabrics having a uniform design applied to both sides thereof, said fabrics having been decorated according to the process of claim 1. 35

ALEXANDER MILHOMME.