

No. 743,847.

PATENTED NOV. 10, 1903.

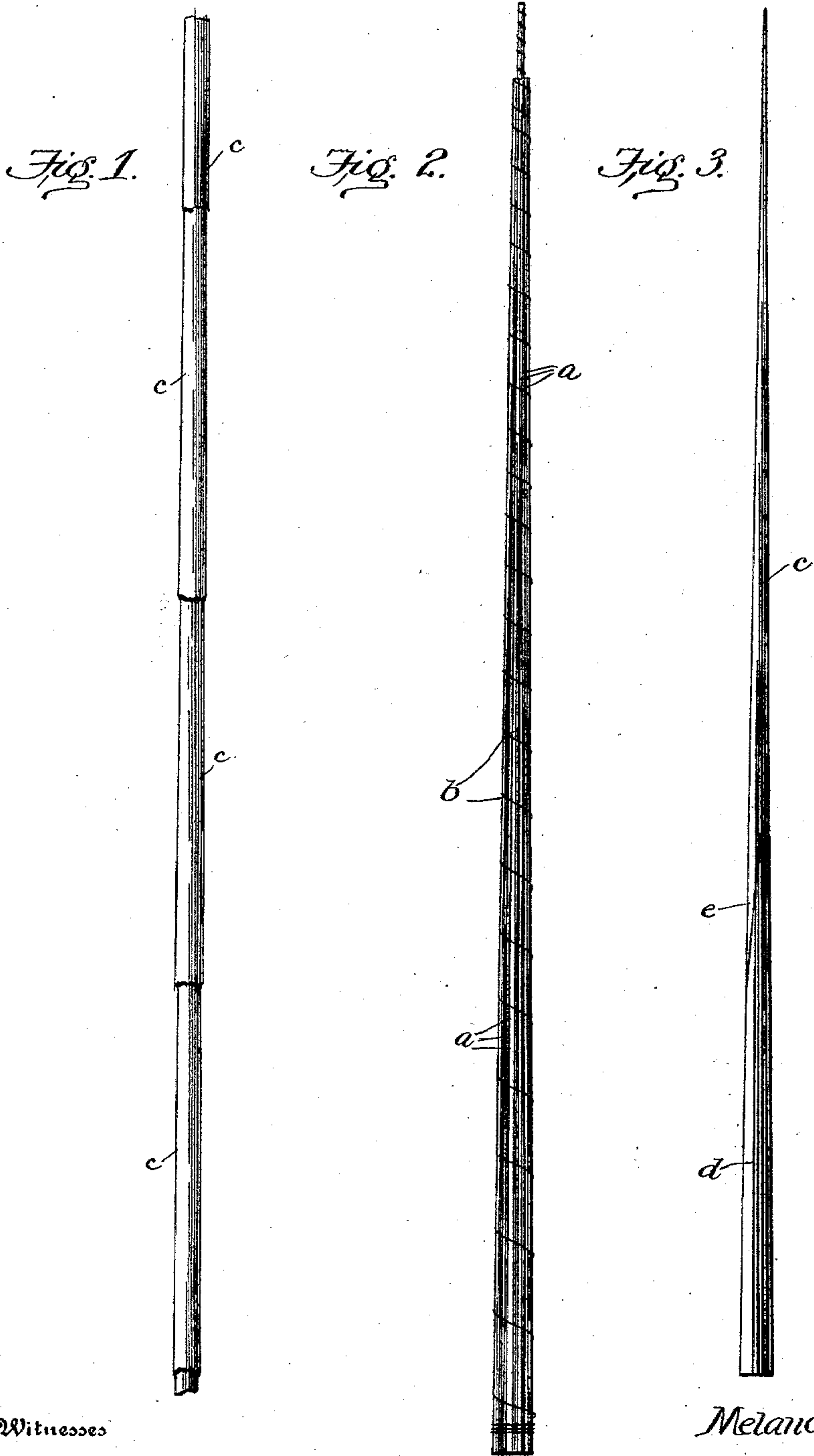
M. O. FELKER.

WHIP.

APPLICATION FILED MAR. 9, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Inventor

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Witnesses

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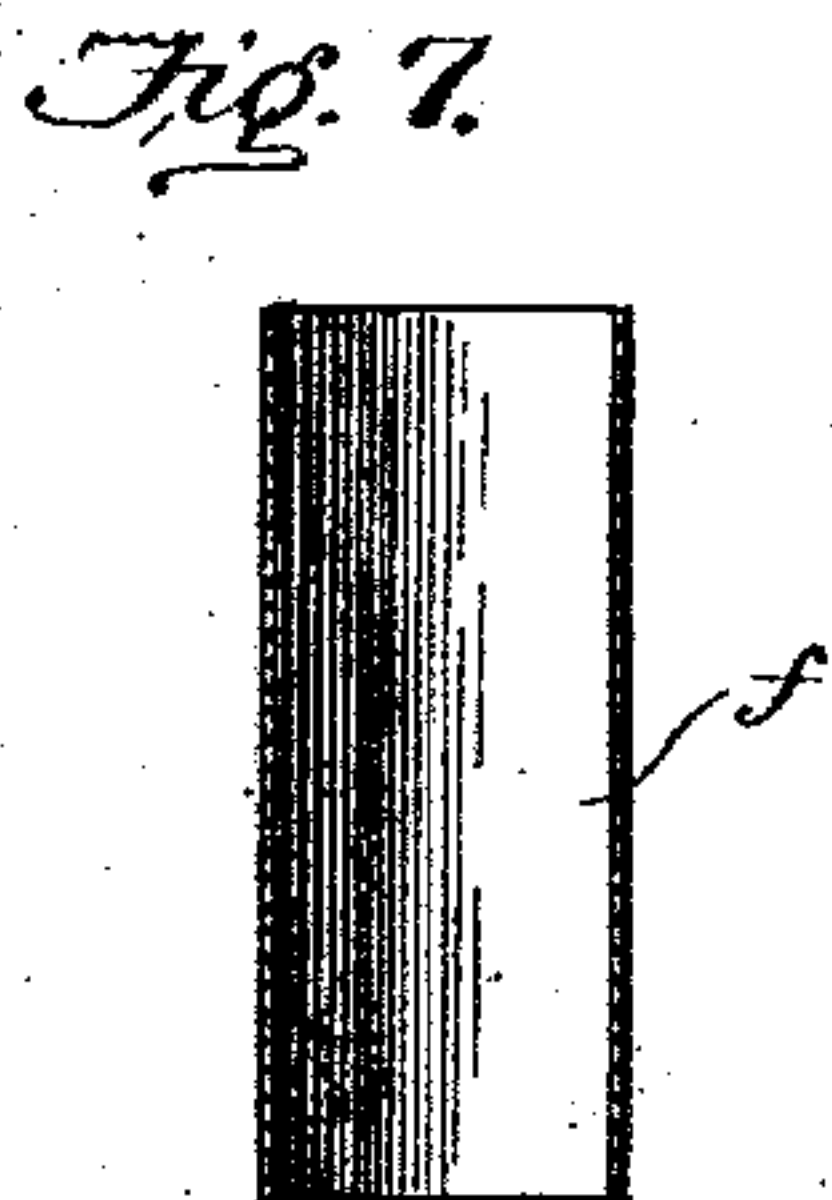
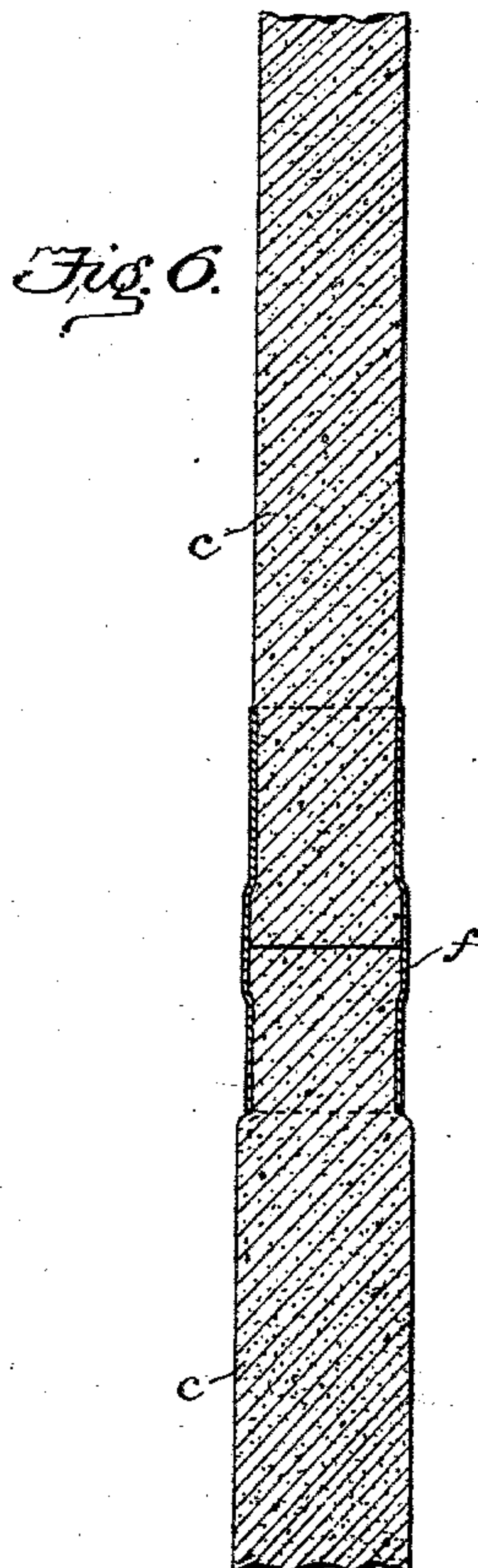
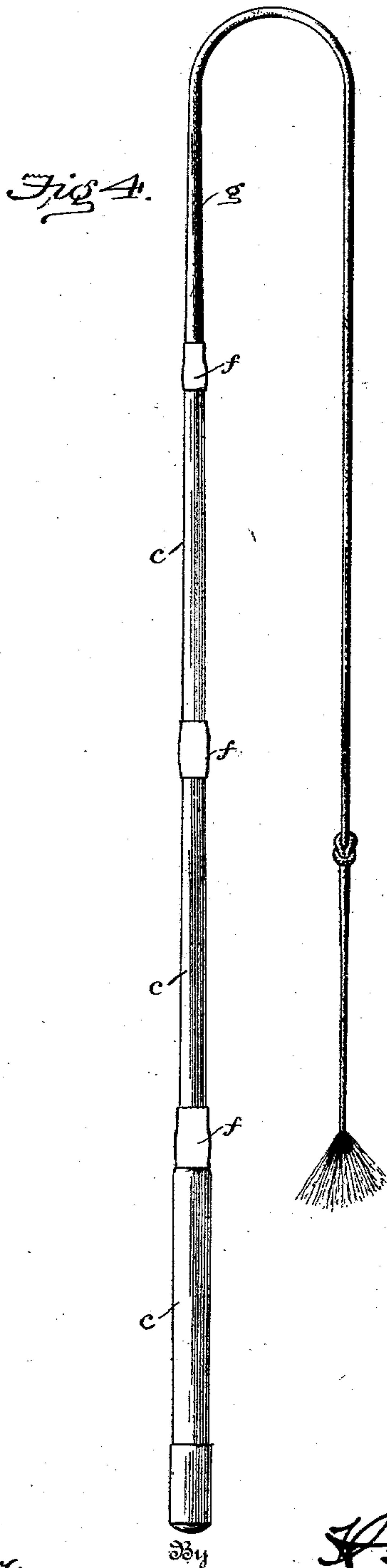
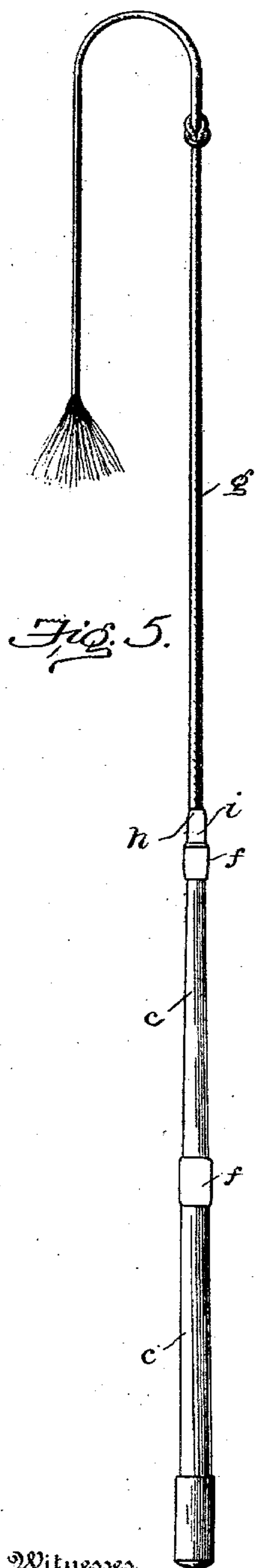
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NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

MELANCTHON O. FELKER, OF CHICORA, PENNSYLVANIA.

## WHIP.

SPECIFICATION forming part of Letters Patent No. 743,847, dated November 10, 1903.

Application filed March 9, 1903. Serial No. 146,809. (No model.)

*To all whom it may concern:*

Be it known that I, MELANCTHON O. FELKER, a citizen of the United States, residing at Chicora, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Whips, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to horsewhips, and comprises a new article of manufacture of peculiar and novel construction.

Essentially my improved article consists of a horsewhip constructed, barring the tip portion, of a succession or plurality of distinct separate sections of stock or material—to wit, malacca or ratan—practically in its natural or unreduced state, the sections being in their natural sizes and taper, but of progressively smaller diameter from the hand end to the other extremity and the adjoining sections being interconnected by means of metallic bands made to strongly or compressively grip the adjoining parts by being swaged or otherwise reduced in diameter after being placed over the sections. I consider myself the first to invent and make a whip so constructed and wish, therefore, to be understood as having produced a generic invention resulting in the new article of manufacture just set forth and the general objects of which are threefold: first, the utilization of the stock material in its natural and unreduced state, which gives the great advantage of nature's coating or enamel-like surface of the material used—namely, ratan or malacca—which coating will withstand the action of moisture and even nitric acid, so hard is this natural surface; secondly, the utilization of the short sections of this stock material, which under present methods becomes waste material that goes to the scrap-  
pile and the furnace, and, thirdly, the elimination of something like fifty per cent. of the cost of production and manufacture in respect to the items of labor and material, which will be hereinafter more fully explained in distinguishing my improved whip from and its attendant advantages over the old and existing whips and methods attending their production.

In the accompanying drawings, forming a part of this specification, and on which like reference-letters indicate corresponding parts, Figure 1 represents a piece of ratan or malacca in its natural state as it comes into the market; Fig. 2, a whip-stock built up, according to the old methods, of various strips of reed (which is the pith of ratan) or malacca; Fig. 3, a cheaper form of whip-stock, being composed in part of a reduced reed and of a piece of wood in the ordinary sense; Fig. 4, a view of a complete whip of one type made according to my invention; Fig. 5, a view of another, but different type, of whip, also made according to my invention; Fig. 6, a detail longitudinal sectional view of the abutting ends of two whip-sections united according to my invention, and Fig. 7 a detail sectional view of the coupling before application.

In order to more properly distinguish my new whip from the prior art and to make plain the advantages attending it, I will first refer to this prior art far enough to indicate what it contains and the disadvantages attending the manufacture of whips in accordance with such art.

Viewing Figs. 2 and 3, it will be seen that the stock represented in Fig. 1 has been cut into long tapering small strips *a*, which are united by glue and the wrapping *b*, these strips being tapered, so as to give the tapering form to the resulting whip, or has been reduced into a single tapering body *c*, as shown in Fig. 3. In either case much waste of material has taken place. Reliable data show that about two-thirds of the original quantity of the ratan or reed are cut off and lost in shavings, besides the excessive loss in short lengths sawed from the original stock, as shown in Fig. 1. Reliable data also show that ratan and reed cost fully one-half of the sum of the bills for all of the materials used in the construction of whips according to the present and old methods. Thus this stock or foundation material, the cost of which constitutes fully fifty per cent. of the total cost of the materials consumed, is largely wasted by the construction of existing whips and the method of making them. In Fig. 3 the reed *c* forms only about two-thirds of the length of the whip, the remainder being constructed



of ordinary wood, as shown at *d*. This construction is employed in the cheaper grade of whips and involves a lap-joint *e* between the reed-body and the butt or portion *d*, which is  
 5 always a weak place in this class of whips and is where they usually break before they are worn out. Now in my improved whip all this loss in shavings in splitting up and cutting down the strips of ratan and reed is  
 10 wholly avoided, and from odd lengths the loss is practically avoided, since in my construction the ratan is sawed off in lengths corresponding, essentially, with the natural lengths of the reed between joints. Original reed  
 15 stock is thus treated, while the waste lengths that result from the old methods of construction and manufacture are equally available for purposes of building my improved whip. The next great item of material cost in the  
 20 construction of whips according to old and known methods is that relating to the thread used in making the plaited covering. In my improved whip the average amount of thread required is about one-half that required in  
 25 the old and existing style of whips in the same number of whips made according to the two methods. For instance, in the old-style thread-covered whip the thread plaiting covers the whip from end to end. In my whip  
 30 the thread plaiting will not average more than half the length of the whip. It will vary in different styles, as suggested by comparing Figs. 4 and 5; but the average plaiting will amount to about one-half of the total length  
 35 of the whip. Here again a large saving is effected in the construction and finish in my improved whip as compared with the old style of whip. Coming now to the third, but large, item in the cost of whip production—  
 40 namely, that of labor—I would still further observe that under my invention this item is reduced by about fifty per cent. To illustrate, under the old methods of construction and manufacture there is the labor of split-  
 45 ting and turning down the stock and of plaiting the thread on the lower or hand portion of the whip, in rolling, in sizing, and in filling the lower portion. All of these items of labor are saved or avoided altogether in mak-  
 50 ing my whip by reason of its construction. Moreover, a whip-factory operating according to the present methods of production and making whips of the present construction can make but about one-half as many whips per  
 55 day as the same operating expense will make if the whips are constructed according to my improved article.

Having previously referred to what may be regarded as the unwritten art or the art as  
 60 practiced, I will now refer to the prior art, as the same is illustrated in a sufficient number of prior patents to show its state. Accordingly I am aware it has been proposed to employ a single stick of ratan for a whip-  
 65 stock, the same being not built up of sections and being thread-covered, thus adding

to the cost of the whip. Again, I have myself in a previous patent proposed to connect whip-sections in making new whips or join together broken parts of old whips by  
 70 means of a coupling; but that alone does not extend to the present invention, as is obvious, the separate sections in their natural state being unknown in that construction. There are also one or more other prior ex-  
 75 amples of the mere use of couplings to join together sections of a whip—that is, of course, the old-style whip, with its built-up stock or body and its thread covering—it being proposed in one such instance to construct a  
 80 coupling so that one section would practically screw into it. It has also been proposed in a combination cane and whip to combine a cylindrical casing with a whip-section of the thread-covered variety by screwing the  
 85 whip-section into the casing, the whip-section in such case also having fixed sleeves hinged together and adapted to be held in line by an outer sleeve to slide over and lap across the joint in the pivoted sections. It  
 90 has also been proposed to make a whip-stock with a hollow body formed of several strands of braided elastic wire, the whole to be thread-covered or otherwise trimmed and covered. I am further aware that it has been  
 95 proposed to make fishing-rods of sections of wood, with a tube permanently secured to one section and removably or loosely to the adjoining section, there being in some cases a metallic ferrule on the removable section  
 100 adapted to be removed from or fitted into the tube on the other section, so as to bring metal to metal instead of wood to metal; but in this latter case and in all cases of fishing-poles the connection is not a permanent one, but  
 105 designedly and necessarily a detachable one; nor is the swaging of the coupling possible upon both sections for this reason.

Referring now to the remaining features of construction of my whip, it will be seen that  
 110 I employ means to interconnect or unite together in a strong and durable manner the sections of ratan or malacca that constitute my whip-body, as also to unite to the whip-body the end or tip section. This means  
 115 consists of a coupling *f*, made of metal or alloy, preferably of brass, though steel may be used. This coupling, it will be seen from Fig. 6, is slightly larger in diameter near the center than toward the ends. In its original  
 120 form the coupling *f* is cylindrical, as seen in Fig. 7. In this form one of the whip-sections is inserted into the coupling, when the coupling is mechanically manipulated by pressure or blows, preferably by a swaging method,  
 125 to reduce the diameter at the end in which the section has been inserted for the purpose of making the coupling partially embed itself into the section. The effect of this swaging or reducing of the ferrule is to make it more  
 130 nearly flush with the section of the whip and at the same time to make it so firmly clamp



the section as to preclude any movement end-  
wise, as well as otherwise, between the parts.  
The next section is then inserted into the  
coupling and the coupling is likewise treated.  
5 The presence of the natural covering enters  
also mechanically into the combination of the  
sections with the couplings described, for the  
reason that the said covering prevents the  
couplings from unduly embedding themselves  
10 into the sections when undergoing the swag-  
ing operation, and also prevents the sections  
from becoming weak or from breaking at and  
around the ends of the couplings. In other  
words, this new combination of couplings and  
15 natural covering gives a new and improved  
result. Thus the whip-body is built up of  
these sections of ratan or malacca in their  
natural state, the sections being selected with  
respect to their size, so as to get not only the  
20 taper of the sections, but the general taper  
necessary in the whip. The couplings also  
afford ornament as a mere incident. To the  
last or outer section is likewise secured the  
tip or lash section of the whip. In the outer  
25 coupling in the type of whip shown in Fig 5  
it will be seen that the portion *h* of the coup-  
ling is reduced more than the portion *i*. This  
is because the outer or tip section is that  
much smaller than the next or inner section  
30 at the meeting ends—a relative size often em-  
ployed for appearance. These joints are  
stronger than the old joint shown in Fig. 3,  
where the reed *c* and the ordinary wood sec-  
tion *d* are united by a lap-joint. My improved  
35 joints also permit the natural bending or  
springing of the whip, as is shown in numer-  
ous specimens that have been manufactured.  
The "feel," the spring, and the general tone  
and response of the whip when manipulated  
40 in the hand are also obtained by the construc-  
tion described. The couplings do not inter-  
fere with these actions, while the preserva-  
tion of the natural coating or covering of the  
ratan or malacca aids materially in these re-  
45 sults, because of the fact that under this con-  
struction there is preserved and utilized the  
most resilient and the toughest and strongest  
portion of the material—namely, such outer  
coating. The pith or reed, which is the part  
50 left after the coating is cut away, is often  
rotten, or partially so, and weak, though this  
is not always discoverable or apparent.

It is obvious that suitable colors could be  
applied to the surfaces of the sections to give  
them a fancy appearance.

55

Having thus fully described my invention,  
what I claim as new, and desire to secure by  
Letters Patent, is—

1. As a new article of manufacture, the  
herein-described whip, consisting of separate 60  
sections of malacca or ratan, each section be-  
ing in the natural state as to its exterior and  
each section from the hand end outward of  
natural smaller diameter, and the adjoining  
sections interconnected by a coupling in com- 65  
pressed contact with the sections.

2. As a new article of manufacture, the  
herein-described whip, consisting of separate  
sections of malacca or ratan, each section 70  
having its natural coating intact and its nat-  
ural taper maintained, and each section from  
the hand end outward being of smaller di-  
ameter, and a coupling for interconnecting  
the adjoining sections, the coupling being in  
compressed contact with said covering of the 75  
ends of the sections.

3. As a new article of manufacture, the  
herein-described whip, consisting of separate  
sections of ratan or malacca with the natural  
state of surface and taper intact, each section 80  
from the hand end outward being smaller in  
diameter than the preceding section, and a  
thread-covered outer or lash section, and coup-  
lings composed of tubes for connecting the  
sections together and the tip or lash section 85  
with the body-section, said couplings being  
in compressed contact with the adjoining sec-  
tions.

4. In a whip, the combination, with two  
separate sections, each tapering and one 90  
smaller than the other and having the natu-  
ral covering intact, of a coupling having its  
end portions compressed against said sections  
to confine the same therein, the coupling be-  
ing more severely compressed near its ends 95  
than about the middle, to more securely hold  
the sections from endwise separation.

In testimony whereof I affix my signature  
in presence of two witnesses.

MELANCTHON O. FELKER.

Witnesses:

A. FLEEGER,  
H. J. MYERS.