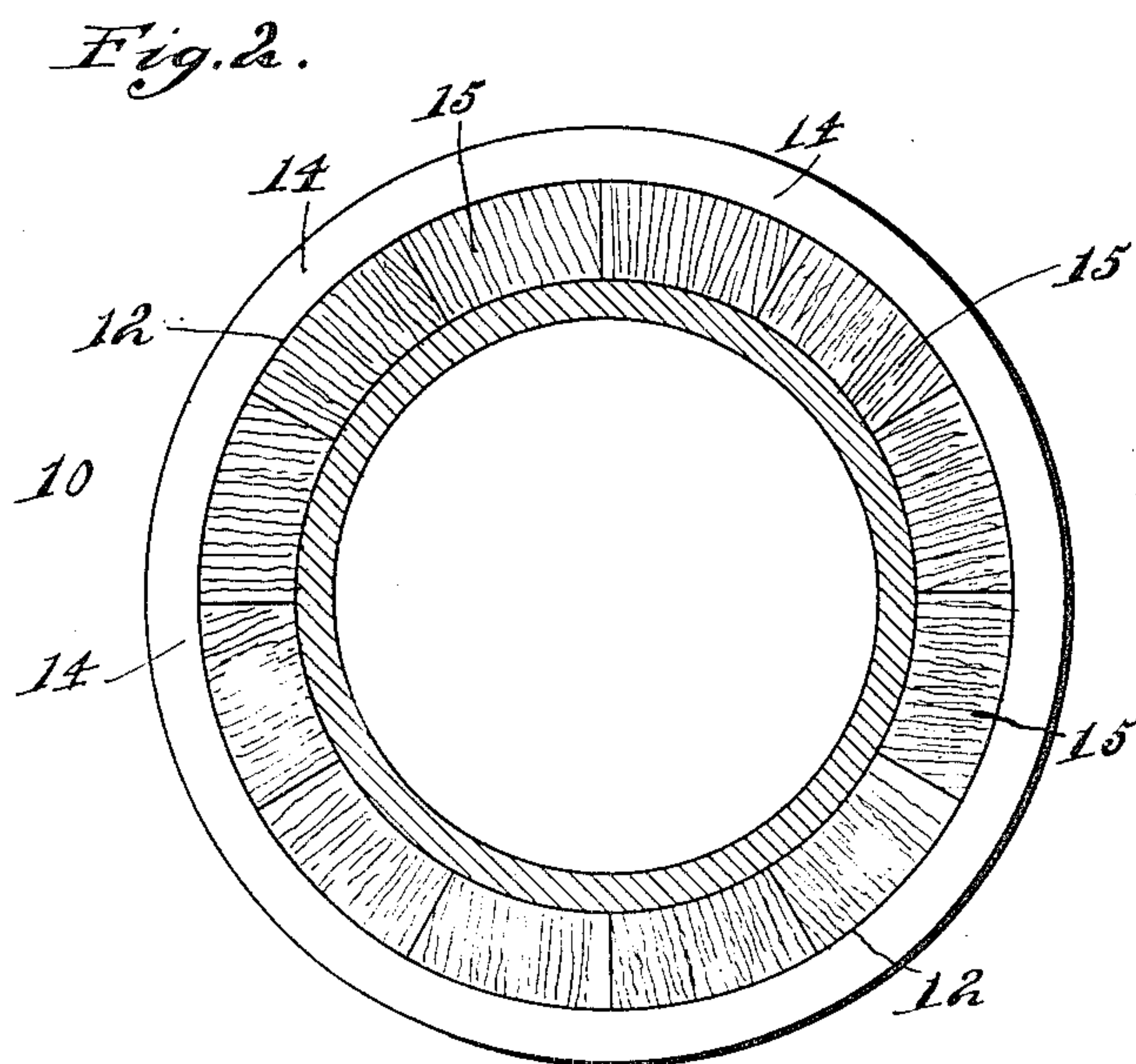
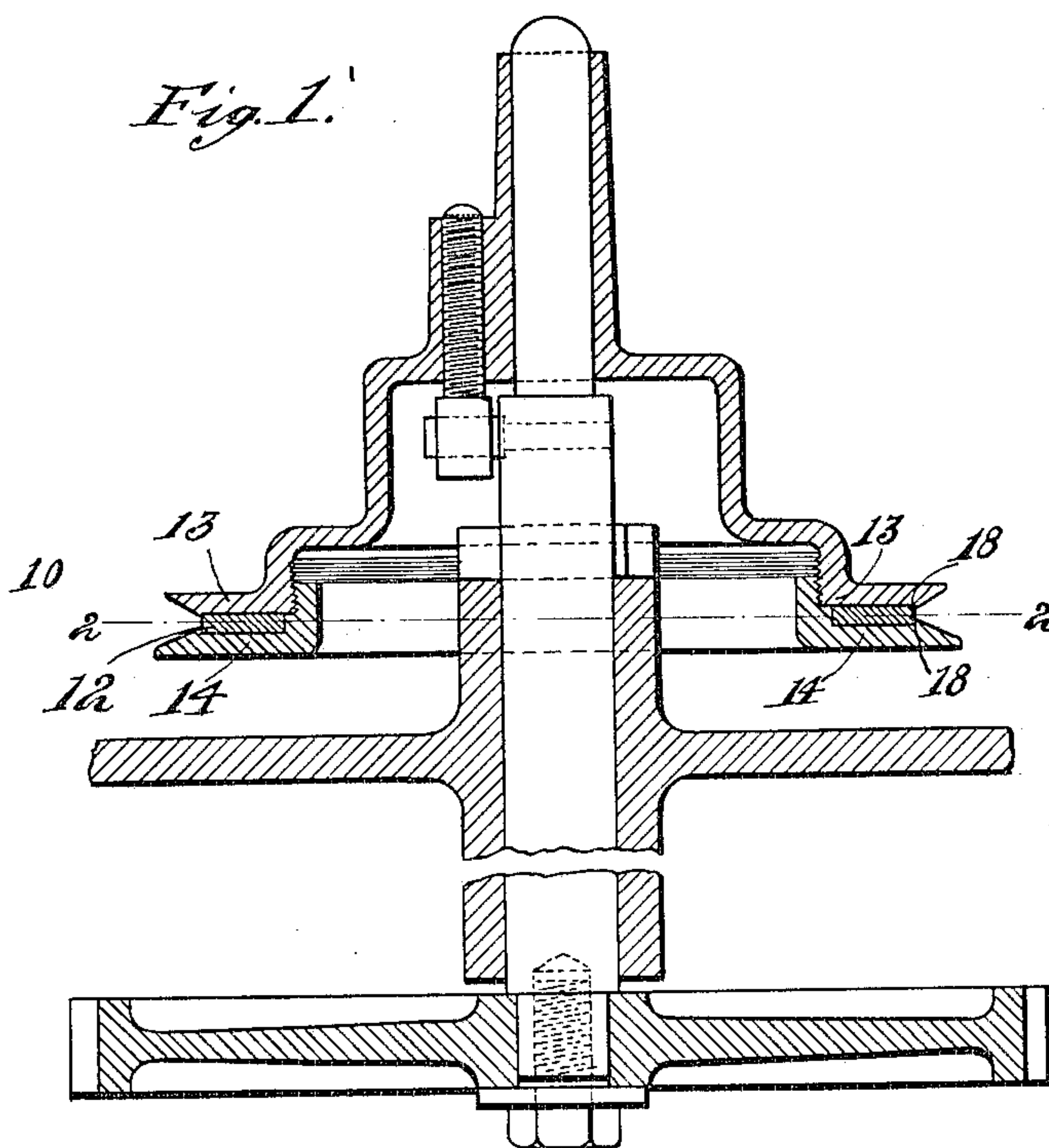


No. 831,869.

PATENTED SEPT. 25, 1906.

J. A. HORTON.  
WIRE DRAWING DRUM.  
APPLICATION FILED APR. 14, 1906.



Witnesses

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# UNITED STATES PATENT OFFICE

JAMES A. HORTON, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO  
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## WIRE-DRAWING DRUM.

No. 831,869.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed April 14, 1906. Serial No. 311,787.

*To all whom it may concern:*

Be it known that I, JAMES A. HORTON, of Providence, in the county of Providence and State of Rhode Island, have invented certain  
5 new and useful Improvements in Wire-Drawing Drums, of which the following is a specification.

This invention relates to the drawing of wire composed of steel or material of similar  
10 hardness; and its object is to enable the wire to be subjected to a large number of reductions in a single operation or continuous process without breaking the wire or impairing its uniform quality.

15 The invention has particular reference to the construction of a wire-drawing drum having a wire-forwarding seat adapted to prevent the abrasion of the wire running in contact with the drum, and thus preventing  
20 the removal of the coating which is commonly applied to the wire to prevent direct contact between the material of the wire and the drawing or reducing dies through which it is passed.

25 The invention consists in a wire-drawing drum having a wire-forwarding seat of a material which is softer than steel wire and means for clamping and confining the relatively soft wire-forwarding seat in such man-  
30 ner as to prevent it from being expanded or distorted by the combined action of the wire pressing against it and the lubricating composition supplied to the wire-forwarding seat, the wire, and the dies during the drawing op-  
35 eration.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a sectional view of the wire-drawing drum embodying my invention. Fig. 2 represents  
40 a section on line 2 2 of Fig. 1.

The same numerals of reference indicate the same parts in both figures.

In the drawings, 10 represents a wire-drawing drum, which may be one of a series  
45 of drums arranged in tandem order, as shown in Letters Patent of the United States No. 742,987, dated November 3, 1903, or the drum may be one of a tier, as shown in Letters Patent No. 784,264, dated March 7,  
50 1905. In either case the drum may be mounted to rotate in a trough or tank adapted to hold a body of liquid lubricating com-

position in which the drum or drums are im-  
mersed, as shown in said Letters Patent No. 784,264, or the lubricating composition may  
55 be applied to the drum, the dies, and the wire by any other suitable means.

12 represents a wire-forwarding seat, the periphery of which constitutes the surface of the drum with which the wire is in contact. 60  
The said seat is made of a material which is, softer than iron or steel wire to the end that the coating of the wire will not be rubbed off nor the wire abraded by frictioned contact with the drum. The material commonly 65  
used for coating all sizes of wire below the largest is bronze, composed of copper and tin, which is placed upon the wire in a suitable bath. The larger sizes of wire are usu-  
ally coated with a composition composed of 70  
lime or some analogous material.

The wire-forwarding seat 12 of my present invention is composed of a material which is softer than iron or steel wire. The said material may be of any suitable non-abrasive  
75 character. For example, it may be any of the well-known forms of compressed paper or paper-pulp, rawhide, or other suitable materials, including hard wood. The said seat is of annular form and is closely confined or  
80 clamped between two metallic sections 13 and 14 of the drum, the said sections being connected in such manner that they exert compressive pressure upon opposite sides of the seat 12, the sections also projecting out-  
85 wardly from the periphery of the seat 12, so that they prevent the spreading or widening of the periphery of the seat by the pressure of the wire against it. The sections 13 and 14 are preferably shouldered at 18 to overlap 90  
the edge portions of the periphery of the seat and prevent the corners of the seat from wearing away and forming a crevice into which the wire might enter. Distortion of the seat, due to the softening action of the 95  
lubricating liquid and to the pressure of the wire upon the seat, is thus prevented, and a drum having a durable wire-forwarding seat free from liability to abrade the wire and re-  
move the coating therefrom is provided. 100

A wire-forwarding seat of this character permits the wire to be subjected to a large number of reductions in a single operation or continuous process without impairment of



the wire or its coating, and therefore without liability of breaking the wire or impairing its uniform quality.

If the seat 12 is made of wood, a number of 5 wooden sections 15 may be employed, these being arranged with the grain of the wood extending in a radial direction from the center of the drum to its periphery and tightly clamped between the metallic sections 13 10 and 14. Any suitable hard wood, such as rock-maple, may be employed. The wood may be saturated or treated with oil or paraffin to prevent the absorption of liquid.

I claim —

- 15 1. A wire-drawing drum having a wire-seat composed of material softer than the wire, and means for confining said seat to prevent spreading or distortion of the same.  
2. A wire-drawing drum having a wire-

seat composed of a material softer than the 20 wire, and metallic drum-sections between which the said seat is clamped, the sections projecting outwardly from the periphery of the seat.

3. A wire-drawing drum having a wire- 25 seat composed of a material softer than the wire, and metallic drum-sections between which the said seat is clamped, the sections projecting outwardly from the periphery of the seat, and shouldered to overlap the edge 30 portions of said periphery.

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

JAMES A. HORTON.

Witnesses:

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