

No. 889,330

PATENTED JUNE 2, 1908.

A. PEARSON.  
WIRE DRAWING MACHINE.  
APPLICATION FILED DEC. 14, 1907.

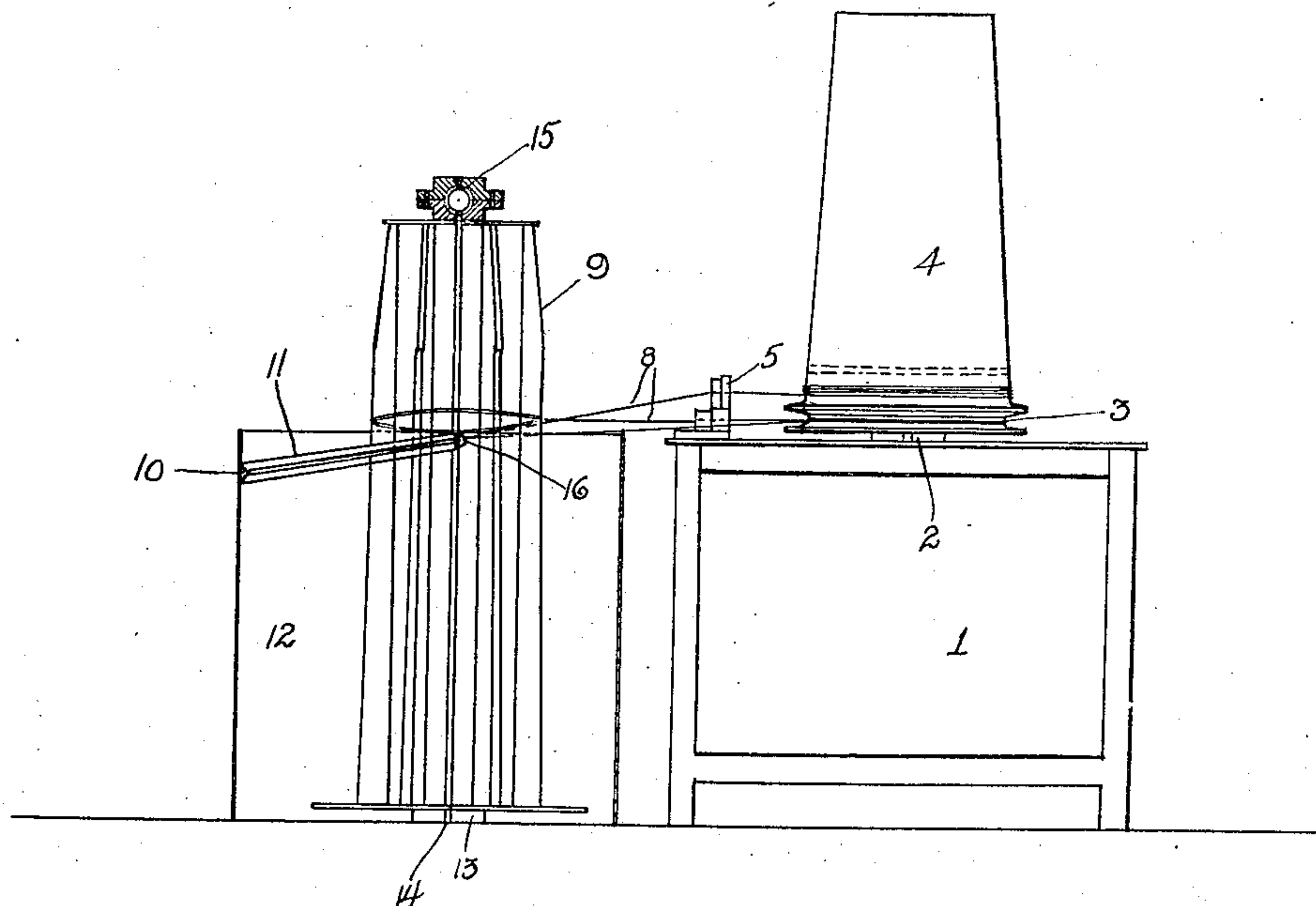


FIG. I.

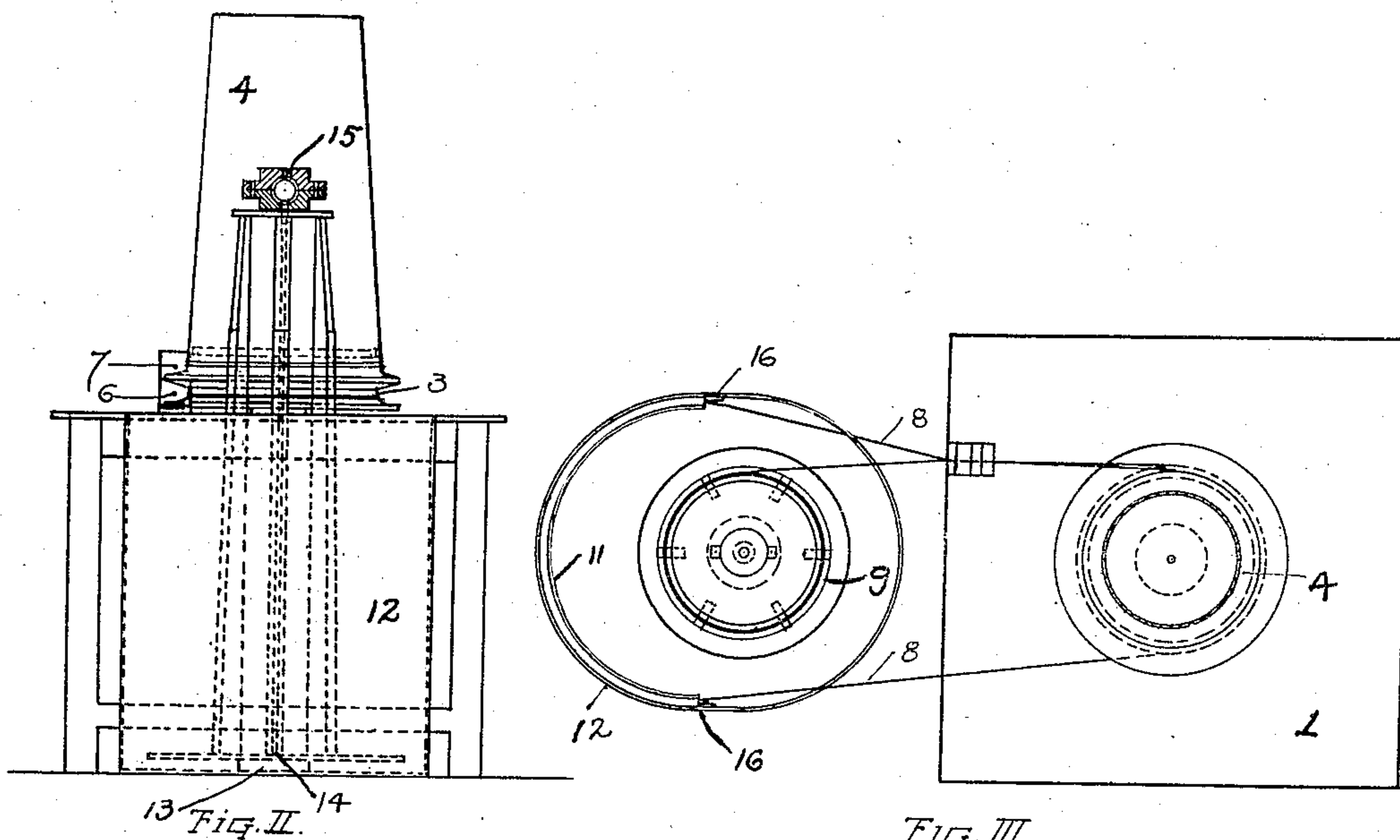


FIG. II.

FIG. III.

WITNESSES,

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# UNITED STATES PATENT OFFICE.

ANTON PEARSON, OF PALMER, MASSACHUSETTS.

## WIRE-DRAWING MACHINE.

No. 889,330.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed December 14, 1907. Serial No. 406,584.

To all whom it may concern:

Be it known that I, ANTON PEARSON, a citizen of the United States, residing at Palmer, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Wire-Drawing Machines, of which the following is a specification, reference being had to the accompanying drawing, forming a part of the same, and representing a wire-drawing machine embodying my invention, in which—

Figures 1 and 2 respectively are side and end views respectively of my invention, and Fig. 3 a top view thereof. Part of Fig. 1 is shown in vertical section.

Similar numerals refer to similar parts in the different figures.

My invention relates to certain improvements in that class of wire drawing apparatus in which the wire is drawn through more than one die in a continuous operation, and it consists of the features hereinafter described and specifically pointed out in the annexed claims.

Referring to the drawing, 1 is the supporting frame for the driving shaft 2 which carries a conical cooling pulley 3 and attached to the said pulley is a conical wire drawing drum 4. Attached to the frame 1 is the die box 5 containing the dies 6 and 7. The wire 8 is drawn from the reel 9 through the die 6 around the pulley 3, then by the groove 10 in the guide 11 through the die 7 and around the drum 4. The reel 9 is placed in an elliptical vat 12 containing a cooling and lubricating liquid, the said reel resting on casting 13 therein, the shaft 14 extending through the center of said reel and having at its upper end a ball bearing 15. The guide 11 is attached to the vat 12 by means of the bolts 16 forming hinges so that said guide may be raised to place the wire in the groove 10, and thereupon lowered into the liquid where it remains while the machine is in operation. The vat 12 is made elliptical in shape in order that it may not take up more room laterally than vats commonly in use and yet have room enough for the guide 11.

In the operation of the machine the wire being on the reel 9, the upper end of the wire is drawn through the die 6 and wound around the pulley 3 one or more times according to the heaviness of the wire; then the guide 11 is raised and the wire placed in the groove 10 and then forced through the die 7, after which it is fastened to the drum 4. The drum 4 and the pulley 3 are shaped conically

in the same proportion in order that the wire may work upward and become loose. The operating mechanism is the same as that commonly used to operate ordinary wire drawing blocks and requires no description.

The important features in my construction are its simplicity and compactness, reducing the cost of construction, the arrangement of the pulley being attached to the drum and operated by the same mechanism as the drum, and the collar being placed in the same vat as the reel. The important result achieved by means of this construction is that the wire is properly cooled and lubricated and will therefore not become brittle as has heretofore been the case in drawing wire by continuous wire drawing machines.

While I describe my machine as being adapted to drawing the wire through only two reducing dies by the same continuous operation, I do not limit myself to such construction, but this construction may be readily changed by adding other pulleys and corresponding dies and grooves in the collar, without changing the principle.

What I claim as my invention is:—

1. In a wire drawing machine, the combination of a conical wire drawing drum having attached thereto at its base a conical cooling pulley, an elliptical vat adapted to contain a liquid, a reel therein, a guide attached to said vat by means of hinges so that the said guide may be immersed in said liquid, a die box placed between the said drum and pulley and the said reel and guide, dies placed therein at different horizontal planes through which dies the wire passes successively from the said reel to the said pulley and from the said guide to the said drum, substantially as described.

2. In a wire drawing machine, the combination with a vertical wire drawing drum of pulleys attached thereto at its base, a vat adapted to contain a liquid, a reel in said vat, a guide attached to said vat, a die box placed between the said drum and pulleys and the said reel and guide, dies placed therein at different horizontal planes, substantially as shown, for the purpose specified.

In witness whereof I have signed this specification in the presence of two subscribing witnesses.

ANTON PEARSON.

Witnesses:

VICTOR E. RUNO,  
JOHN L. PERSON.