

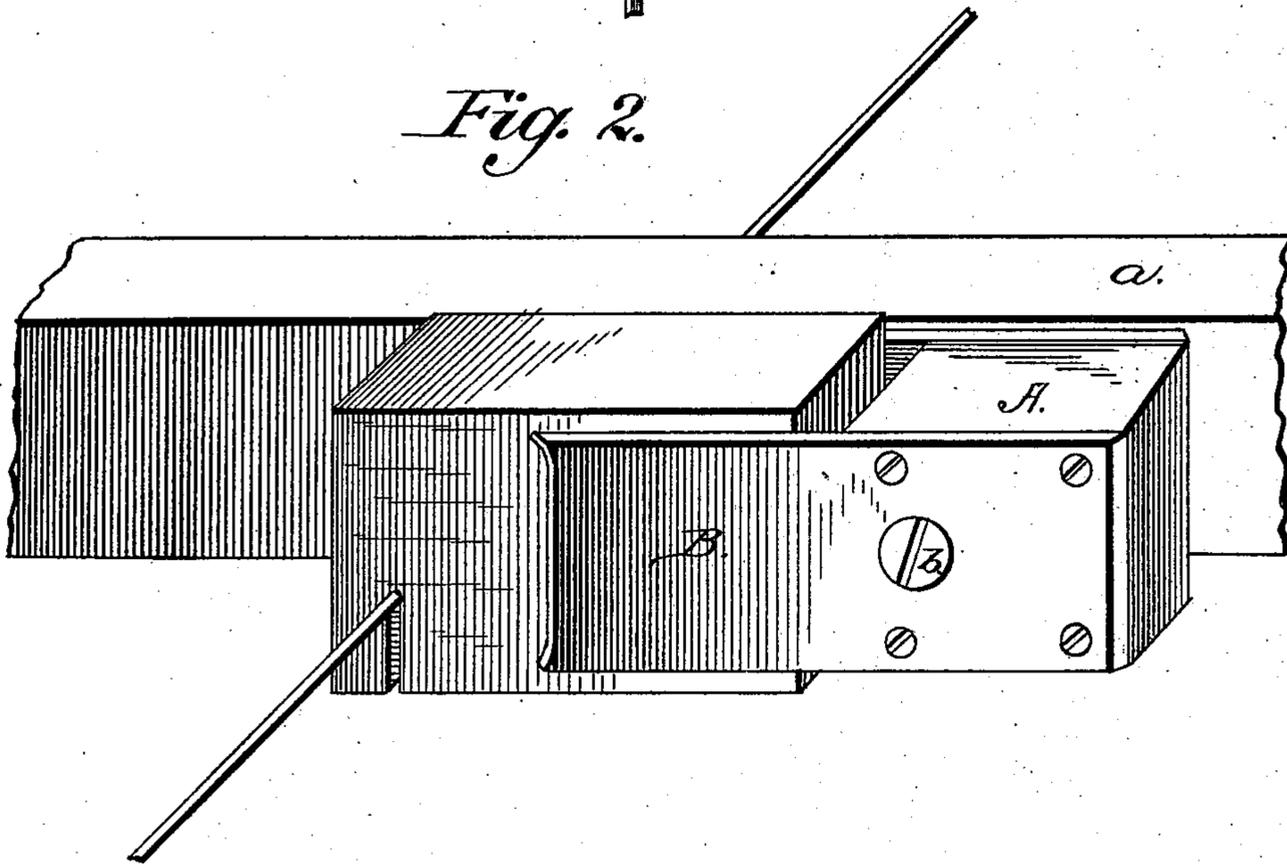
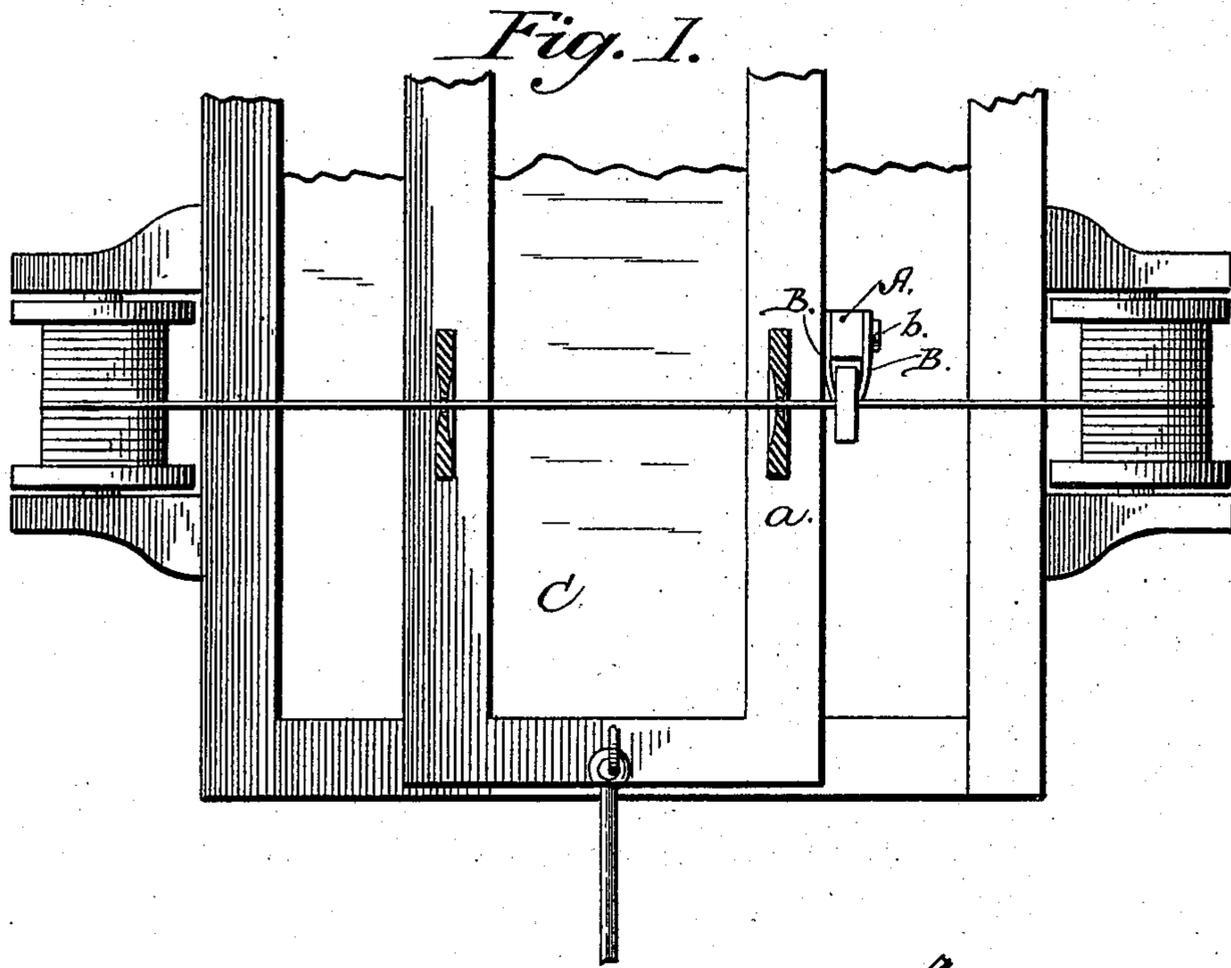
(No Model.)

W. H. SAWYER.

METHOD OF LUBRICATING WIRE.

No. 380,055.

Patented Mar. 27, 1888.



Witnesses:  
*Fred Keller*  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. SAWYER, OF PROVIDENCE, RHODE ISLAND.

## METHOD OF LUBRICATING WIRE.

SPECIFICATION forming part of Letters Patent No. 380,055, dated March 27, 1888.

Application filed October 31, 1887. Serial No. 253,875. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. SAWYER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Lubricating Wires in Wire-Drawing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to an improved method of automatically lubricating wire in wire drawing machines, and to an improved mechanism by which said method may be successfully carried out, the object being to provide a lubricant and means for applying the same that will be convenient and clean to handle, automatic in its action, and which can be furnished at a nominal cost.

To these ends my invention consists, essentially, of a compressed cake or mass of lubricating material which is adapted to be suspended in such relation to the wire to be drawn as to effectually lubricate said wire during its passage from one reel to another.

It further consists of an improved device by which the lubricant is automatically held in contact with the wire to be lubricated, all as will be hereinafter fully described, and specifically designated in the claims.

In the accompanying drawings, Figure 1 represents a top plan view of a portion of a wire-drawing bench with my improvements applied thereto, and Fig. 2 a detail perspective view of my improved device for holding the lubricating material.

Similar letters of reference indicate like parts in both figures of the drawings.

In carrying out my improved method I provide a compressed cake or mass of suitable lubricating material and suspend the same in such relation to the wire that is to be drawn that the lubricant rests upon the wire until a thin slice is cut from the cake by the action of the moving wire. The lubricating-cake is then drawn forward a sufficient distance to allow another portion of the lubricant to rest upon

the moving wire to lubricate the same until it is in turn cut off, and this operation is repeated while the lubricating-cake lasts.

As a convenient means for securing the lubricating-cake in position to lubricate the wire, I employ the device illustrated in the drawings, and which consists of a suitable block or base, A, provided with two projecting arms or springs, B, one on each side, between which the compressed cake or mass of lubricating material is held. The arms or springs B are preferably formed integral with the block or base A, and their outer ends incline toward each other so as to tightly grasp the lubricating-cake between them. This device is pivotally secured to one of the bars *a* of the traversing frame C of a wire-drawing machine by means of a screw or pin, *b*, passing through an opening in the base or block A, as shown.

The wire to be drawn passes from the reel on one side of the machine, thence through reducing-dies arranged in the traversing frame, and then upon the reel at the opposite side of the machine; and the device for holding the lubricant is arranged upon the traversing frame at the point where the wire first enters the reducing-dies, and, being pivotally secured upon the bar of the traversing frame, permits of the outer end of the lubricating cake or mass to rest lightly upon the wire to properly lubricate the same. As the wire moves forward it gradually cuts a thin slice from off the end of the cake or mass, the weight of said cake or mass keeping it in contact with the wire until so cut off. The lubricating-cake is then drawn forward a sufficient distance from between the arms or springs B to allow another portion of the lubricant to be placed upon the moving wire.

It will be readily observed that the lubrication of the wires is performed in an automatic manner, it being only necessary to adjust the cake of lubricant as each successive slice is cut off, and when the cake is exhausted to supply a new one. Furthermore, the slices so cut off may be collected and remelted to form a new cake, thus economizing in the material employed and reducing the cost of lubrication to its minimum.

I do not confine myself to the specific means of suspending the lubricating-cake in contact with the moving wire, as it is obvious that other well-known mechanical equivalents may be

employed without departing from the spirit of my invention.

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

5 1. The hereinbefore-described method of lubricating wire in wire-drawing machines, consisting in suspending a compressed cake or mass of lubricating material in such relation  
10 to the wire as to automatically lubricate the same, substantially as described.

2. The method herein described of automatically lubricating wire in wire-drawing ma-

chines, consisting in applying to the wire being drawn a cake or bar of lubricating material in  
15 such manner that by its own weight an adjustment of said cake or bar upon the wire is effected, substantially as and for the purpose described.

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

WILLIAM H. SAWYER. [L. S.]

Witnesses:

GILMAN E. JOPP,  
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