

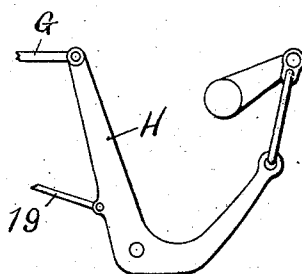
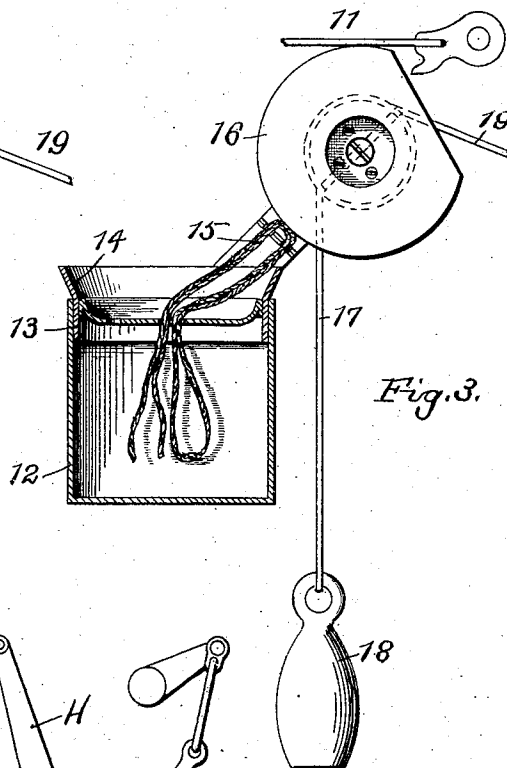
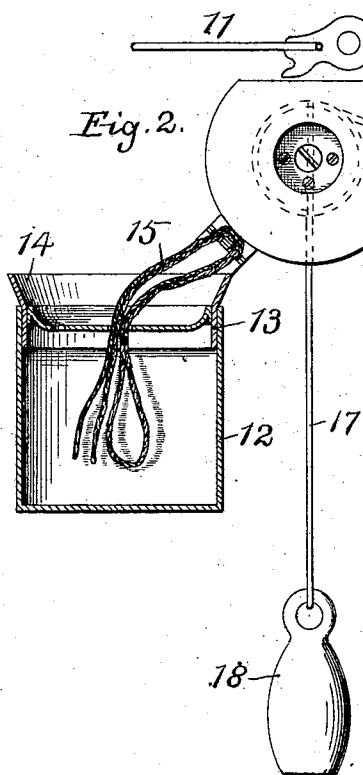
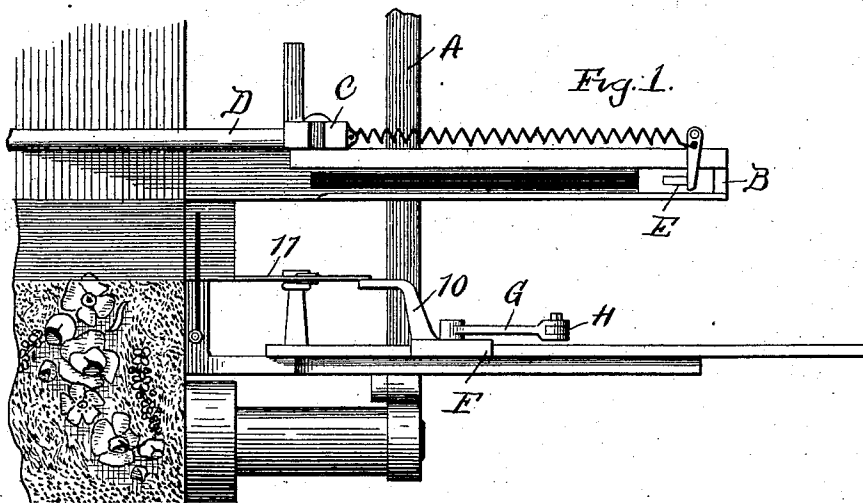
No. 849,784.

PATENTED APR. 9, 1907.

J. S. GILES.

PILE WIRE OILING DEVICE FOR LOOMS.

APPLICATION FILED MAY 13, 1899. RENEWED SEPT. 21, 1906.



Witnesses:
Harry M. Rugg.
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Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH S. GILES, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO MATTHEW J. WHITTALL, OF WORCESTER, MASSACHUSETTS.

PILE-WIRE-OILING DEVICE FOR LOOMS.

No. 849,784.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed May 13, 1899. Renewed September 21, 1906. Serial No. 335,649.

To all whom it may concern:

Be it known that I, JOSEPH S. GILES, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Oiling Device for Looms, of which the following is a specification.

The object of my present invention is to provide a simple, efficient, and inexpensive device for oiling pile-wires of looms.

To this end my invention consists of the parts and combinations of parts, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a plan view of sufficient parts of a loom to illustrate the application of my invention thereto. Fig. 2 is an enlarged detail view, partly in section, of an oiling device for looms constructed according to my invention. Fig. 3 is a similar view showing the parts in a different relative position, and Fig. 4 is a detail view illustrating the connections which may be employed for turning the lubricating-wheel.

In weaving pile fabrics the wires on which the piles are formed have to be successively withdrawn from the fabric, and when the fabric is of a close texture or is beaten up comparatively hard a heavy pull is required to withdraw each successive wire. To facilitate this operation, it is now customary to provide an oiling device for lubricating each wire as it is withdrawn, so that when said wire is again automatically woven into the fabric it may have sufficient oil thereon so that it can be readily pulled or drawn out. While these oiling devices are an essential to the successful weaving of pile fabrics, great care has to be exercised in using the same. This is especially true in weaving light or delicately colored carpets. If an oiling device is arranged to deliver too great a quantity of oil to the wires, the surface of the carpet is liable to show grease-spots or stains, and, on the other hand, if the wires are not sufficiently lubricated they will heat or become stuck in the fabric, so as to be broken or cause the loom to be otherwise deranged.

The especial object of my present invention is to insure a more perfect distribution of oil and a more even lubrication of the wires by employing a lubricating-wheel hav-

ing connections for turning the same so as to present fresh wearing-surfaces to the wire and insure an efficient oiling thereof. The lubricating-wheel preferably has a portion of its periphery cut away, and connections are preferably provided for normally holding the lubricating-wheel in position to leave a clear path for the hook which is employed for catching and withdrawing the wires, and connections are employed so that as each wire is withdrawn the wheel will be turned or oscillated so as to bring its periphery into engagement with the wire to oil the same.

A further object of my present invention is to provide an oiling device constructed so that surplus oil will run back into the can and will not be allowed to drip or run down so as to be liable to injure the fabric being woven.

Referring to the drawings and in detail, A designates the loom side; B, the vibrating lathe; C, the sword; D, the reed, and E the picker-stick. The arrangement and operation of these parts is so well understood that it is not thought necessary to describe the same at length in this specification.

F designates a carriage, which may be reciprocated in the usual manner—as, for example, by means of a link G, connected to the upper end of the vibrating lever H. Extending from the carriage F is the hook 10 for catching and withdrawing the wires 11.

The oiling device, as herein illustrated, is supported by any ordinary bracket extending in from the loom side and consists of a can or receptacle 12, having a cover 13 fitting down inside the upper end thereof. The cover 13 is provided with a flaring drip-flange 14, and in practice I have found this to be a desirable arrangement, as the surplus oil collected by the drip-flange 14 is not liable to run out of the joint between the can 12 and its cover 13. Extending from the can up through the cover thereof are one or more strands of wicking 15. Journaled in arms extending up from the can 12 is a lubricating-wheel 16. The lubricating-wheel 16 preferably has its surface formed of felt or other capillary material, and the periphery of the wheel 16 is slabbed or cut away, as shown. To hold the lubricating-wheel 16 in position to leave a free path of movement for the hook 10, which catches and withdraws the wires, I preferably provide a flexible connection or cord, which extends up through the

hub of the lubricating-wheel and is provided at its lower end with a weight 18. Coiled or wound upon the hub of the lubricating-wheel is a flexible cord or connection 19, which is
5 connected to the lever H, as shown most clearly in Fig. 4.

The operation of an oiling device as thus constructed is as follows: When the carriage F is moved to bring the hook 10 into engage-
10 ment with a wire 11 for the purpose of catching and withdrawing the same, the cord or connection 19 will be loosened and the weight 18 will hold the lubricating-wheel 16 in its normal position, (illustrated in Fig. 2,) leaving a clear path of movement for the
15 hook 10 and the end piece of the wire 11, which is being withdrawn. As a wire is being pulled out of the fabric the flexible cord or connection 19 will be tightened and the lubricating-wheel 16 will be turned to bring
20 its periphery into engagement with the body portion of the wire 11, as shown in Fig. 2.

The connections for operating the lubricating-wheel are preferably arranged so that
25 its peripheral speed is somewhat less than the speed of travel of the wire 11 which is being withdrawn, so that although the wheel 16 is turned to present different portions of its surface to the bottom of the wire 11 at the same time the wire 11 will slip to a certain extent on the surface of the lubricating-wheel, insuring an even lubrication thereof.
30 Furthermore, by means of this construction the amount of oil delivered to each of the wires 11 may be regulated or adjusted by
35 tightening or changing the point to which the cord 19 is connected to the lever H, so as to cause the lubricating-wheel to be turned to a greater or less extent, as desired.

40 I am aware that numerous changes may be made in the construction of my oiling device for looms by those skilled in the art, and I do not wish, therefore, to be limited to the construction or proportions which I have
45 herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a loom, the combination of the wires, the hook for catching and withdrawing the same, a lubricating-wheel having its periph-
50 ery cut away to clear the hook, and means for turning the lubricating-wheel to bring its periphery into engagement with the wires, substantially as described.

2. In a loom, the combination of the wires, the hook for catching and withdrawing the same, a lubricating-wheel having its periph-
55 ery cut away to clear the hook, and connections for oscillating said wheel, substantially as described.

3. In a loom, the combination of the wires, the hook for catching and withdrawing the same, a lubricating-wheel having its periph-
60 ery partly cut away, a weight for normally holding the wheel in position to clear the hook, and a flexible connection for turning the wheel to engage the wires, substantially as described.

4. In a loom, the combination of the wires, the hook for catching and withdrawing the same, a lever connected to operate the hook, an oiling device comprising a reservoir or can, a lubricating-wheel having a part of its periphery cut away, wicking for supplying oil from the can to the periphery of the lubricating-wheel, a weight connected to normally hold the lubricating-wheel in position to clear the hook, and a flexible cord or connection extending from the lubricating-wheel to the lever which operates the hook
75 for turning said lubricating-wheel to engage the wires, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH S. GILES.

Witnesses:

JOHN F. CROWELL,
PHILIP W. SOUTHGATE.