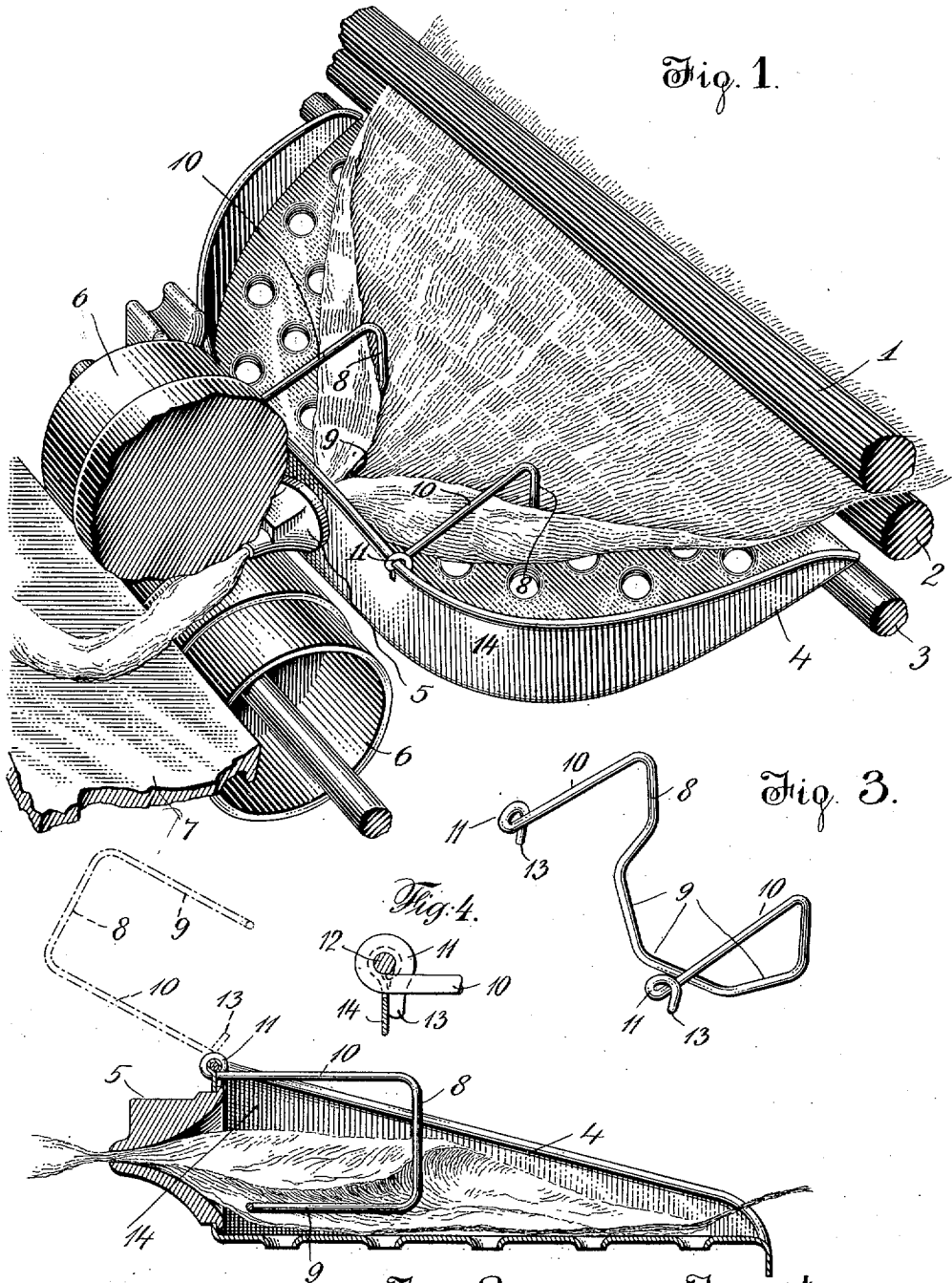


O. L. OWEN.
HEILMAN COMBING MACHINE.
APPLICATION FILED DEC. 11, 1911.

1,019,273.

Patented Mar. 5, 1912.



Witnesses:
Leon H. Horner
Harmon O. Nelson.

Fig. 2.

Inventor:
Oscar L. Owen
By Attorneys
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UNITED STATES PATENT OFFICE.

OSCAR L. OWEN, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE WHITIN MACHINE WORKS, OF WHITINSVILLE, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

HEILMAN COMBING-MACHINE.

1,019,273.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed December 11, 1911. Serial No. 665,124.

To all whom it may concern:

Be it known that I, OSCAR L. OWEN, a citizen of the United States, residing at Whitinsville, county of Worcester, and State of Massachusetts, have invented the following-described new and useful Improvements in Heilman Combing-Machines.

The invention is an improved sliver-lap folding mechanism for use in cotton combing machines of the Heilman type and consists in the novel construction, assemblage, and arrangement of parts hereinafter described, whereby the marginal portions of the sliver-lap are folded over upon the upper surface thereof as it passes into the condensing trumpet and whereby such lap can be properly and quickly threaded over and upon the folder mechanism in the first instance with the least delay and liability of rupture.

The invention will be readily understood by those skilled in the art, by reference to the following drawings, wherein—

Figure 1 is a perspective view of the freshly pieced sliver-lap in process of being folded by means of my invention. Fig. 2 is a vertical cross section, through the axis of the trumpet of Fig. 1. Fig. 3 is a detail in perspective of the folder mechanism, and Fig. 4, a detail in section, of the hinged joint thereof, whereby it is permanently attached to the sliver-pan.

The parts of the ordinary Heilman combing machine illustrated in Figs. 1 and 2, comprise the detaching or piecing rolls 1, 2, the fixed rod 3, on which the rear of the sliver-pan is supported, the sliver-pan itself which is marked 4, the condensing trumpet 5, forming part of the pan, the callender or delivery rolls 6, which draw the condensed sliver from the trumpet, and the sliver apron 7. From a consideration of these parts it will be understood by any one skilled in the art of Heilman combers, that the sliver-lap that emerges from the rolls 1 and 2, is composed of successively superposed detachments or tufts of combed fibers, laid in overlapping arrangement, with the forward ends of the fibers in each tuft overlapping the rear ends of the fibers in the preceding tufts, so that the upper surface of the sliver-lap is formed exclusively of forwardly projecting fibers, while the under surface thereof is formed entirely of rearwardly projecting fibers. In the drawings this arrangement

of the fibers is indicated on an exaggerated scale by the shade lines.

The object of the folding device of this invention is to fold the top surface of such a sliver-lap over upon itself before or as it passes into the trumpet of the sliver-pan, so that the outer surface portion of the round sliver or comber roving that passes out onto the apron 7, will consist solely of rearwardly projecting fibers. In this condition the said round sliver is the least likely to become ruffed by its friction against the apron or other parts over which it subsequently moves, and it therefore constitutes a better product when delivered from the machine. The said device consists of a part or piece which is conveniently made of one piece of wire, appropriately bent or shaped, so as to have the downwardly projecting portions or legs 8, and the horizontal, V-shaped lower portion, 9, which connects the lower ends of the legs and projects forwardly toward the trumpet at a level slightly below the axis of the trumpet. The legs 8, are supported from horizontal shank portions 10, the forward ends of which are curled into the form of eyes 11 as indicated in the drawings.

The sliver-pan which is made of sheet metal is formed with the usual reinforcing bead wire 12, along its side and forward margins, which wire passes through the apertures in the eyes 11, forming therewith the hinge joint of the folder mechanism, the margin of the pan being appropriately cut away to accommodate the eyes 11, in the usual manner and as indicated. The ends of the shank members 10, are extended downwardly beyond the eyes which form the hinge, to serve as stops 13 which abut against the vertical wall 14 of the sliver-pan to hold the folder in a substantially horizontal position.

When the pan has been threaded up and the machine set in motion in the usual way, the lap-guide or folding device is then swung from the open position, shown in dotted lines in Fig. 2, toward the sliver and the lower V-shaped portion 9 thereof, is thus moved through a curved path and gradually brought against or over the top of the middle portion of the sliver-lap, as indicated in Fig. 2. In this position and if gradually introduced, the marginal portions of the lap will eventually of themselves work or fall over the projecting V-shaped portion of the

guide, as indicated in Fig. 1, in which condition the margins of the sliver-lap will be folded over upon the upper surface of the body of the lap as it passes to the trumpet and the resulting comber roving will thus have a surface consisting solely of rearwardly pointing fiber ends. On the occurrence of a rupture of the sliver-lap, the folder guide is thrown back to its dotted line position while the piecing is taking place, and is then lowered again into contact with the lap, and with the effect that the margins can be again folded over as before and without requiring any particular care on the part of the operator or any handling of the very tenuous fleece.

I claim:

In a Heilman type cotton combing ma-

against the vertical wall 14 of the sliver-pan provided with the trumpet 5, and a sliver-folding guide adapted to engage the sliver to fold the top surface thereof over upon itself and having the supporting hinge connection 11 with the said pan whereby it may be turned back for piecing and provided with stop means 13 for holding the said folding guide in its normal operating position substantially as described and set forth.

In testimony whereof, I have signed this specification in the presence of two witnesses.

OSCAR L. OWEN.

Witnesses:

ROBERT L. METCALF,
CHESTER C. LAMB.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Correction in Letters Patent No. 1,019,273.

It is hereby certified that in Letters Patent No. 1,019,273, granted March 5, 1912, upon the application of Oscar L. Owen, of Whitinsville, Massachusetts, for an improvement in "Heilman Combing-Machines," an error appears in the printed specification requiring correction as follows: Page 2, line 19, strike out the words and reference-numeral "against the vertical wall 14 of the sliver-pan" and insert the syllable, words, and reference-numeral *chine, the combination of the sliver-pan 4*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 2nd day of April, A. D., 1912.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.