

No. 776,300.

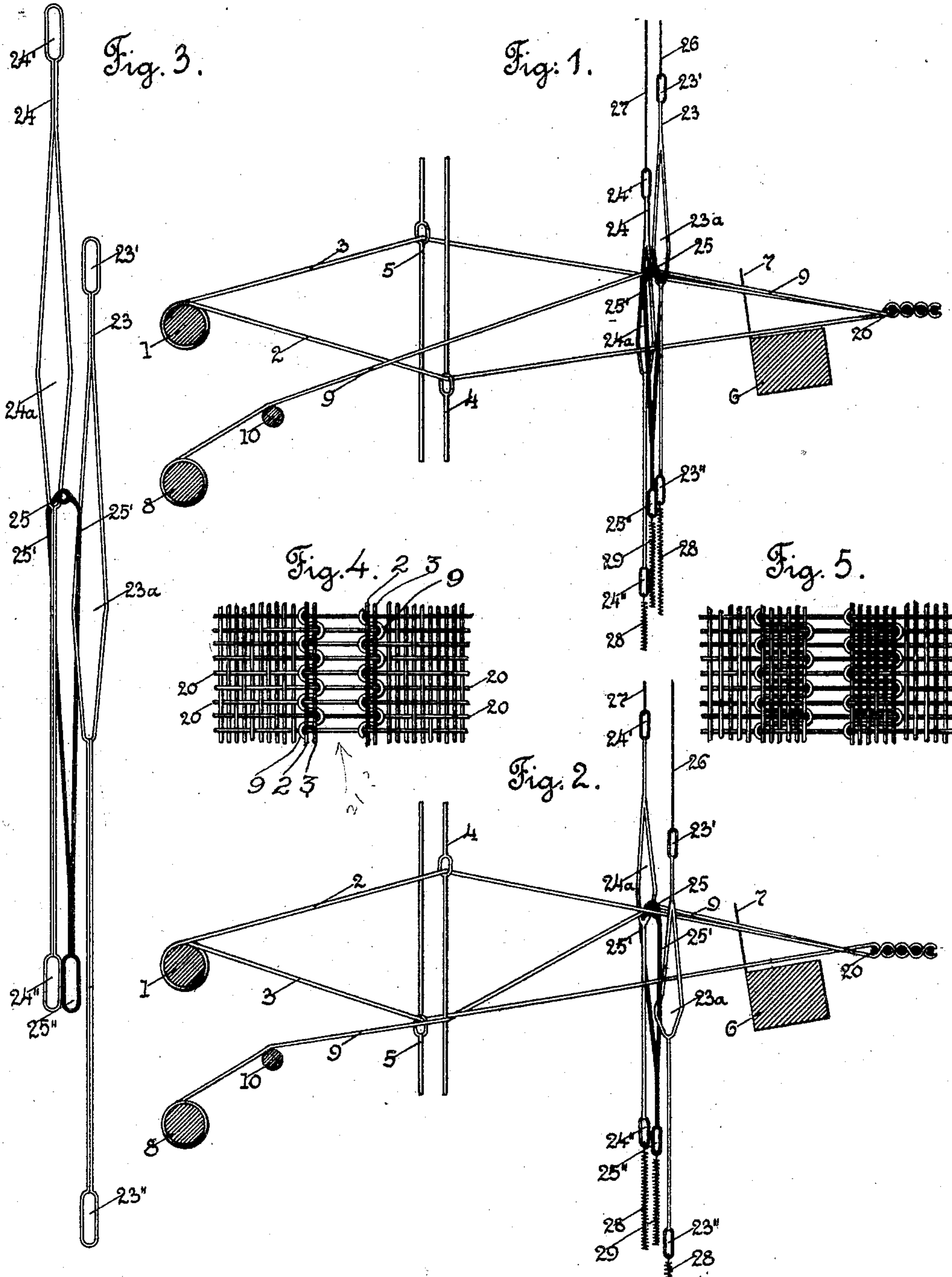
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A. S. COWAN.

CENTER SELVAGE FORMING ATTACHMENT FOR LOOMS.

APPLICATION FILED JULY 9, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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CENTER-SELVAGE-FORMING ATTACHMENT FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 776,300, dated November 29, 1904.

Application filed July 9, 1904. Serial No. 215,876. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR S. COWAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Center-Selvage-Forming Attachments for Looms, of which the following is a specification.

My invention relates to a center-selvage-forming attachment for looms; and the object of my invention is to improve upon the construction of center-selvage-forming attachments as now ordinarily made.

My invention consists in certain novel features of construction of my center-selvage-forming attachment, as will be hereinafter fully described.

In my improvements in center-selvage-forming attachments I provide means for supporting and for lifting the crossing selvage warp-thread and means for guiding two or more selvage warp-threads first on one side and then on the other of the crossing selvage warp-thread to form with the weft or filling threads a selvage having two or more selvage warp-threads crossed by the crossing selvage warp-thread. The selvage warp-threads which are crossed by the crossing selvage warp-thread are supported in heddles which have communicated to them a vertical motion in any well-known manner to form sheds for the filling-threads and also in connection with the center-selvage attachment to cause said selvage warp-threads to pass first on one side and then on the other of the crossing selvage-thread.

I have only shown in the drawings one center-selvage-forming attachment embodying my improvements and one crossing selvage warp-thread and two selvage warp-threads.

Referring to the drawings, Figure 1 is a sectional view of the selvage warp-thread spool and crossing selvage warp-thread spool and guide and the lay and two heddles, two selvage warp-threads, and the crossing selvage warp-thread, and my improvements in center-selvage-forming attachment combined therewith. Fig. 2 corresponds to Fig. 1, but shows

the opposite position of the heddles and the two selvage warp-threads and the crossing selvage warp-thread and the center-selvage-forming attachment. Fig. 3 shows, on an enlarged scale, a detached view of the center-selvage-forming attachment shown in Figs. 1 and 2. Fig. 4 shows a detached section of a woven fabric having a center selvage which may be made by my center-selvage-forming attachment. Fig. 5 corresponds to Fig. 4, but shows six selvage warp-threads in the selvage crossed by the selvage crossing warp-thread instead of two shown in Fig. 4.

In the accompanying drawings, 1 is a spool over which the two selvage warp-threads 2 and 3 lead. 4 is a heddle for the thread 2, and 5 is a heddle for the thread 3. The heddles 4 and 5 have a vertical motion communicated thereto in any well-known manner to alternately raise and lower the selvage warp-threads 2 and 3 and cause them to take the positions shown in Figs. 1 and 2 in the operation of the loom.

6 is the lay, and 7 the reed carried thereon in the usual way.

8 is a spool over which the crossing selvage warp-thread 9 leads, and 10 is a guide-roll for said thread 9.

The crossing selvage warp-thread 9 on its way to the reed 7 passes through an eye 25, forming one part of my center-selvage-forming attachment. The eye 25 forms means for supporting the crossing selvage warp-thread in its raised or lowered position.

Two wires 23 and 24 support the eye 25 of the crossing selvage warp-thread 9. Each of said wires 23 and 24 is preferably made in the form shown of two strands of wire having loops 23' and 24' at their upper ends for the cords or wires 26 and 27 and also two loops 23'' and 24'' at their lower ends for the spiral springs 28, which act to pull down the wires 23 and 24. At the upper part of the wires 23 and 24 the two strands of wire are open or spread apart to form eyes 23^a and 24^a to receive and support the extensions 25' on the eye 25, which extensions are in this instance connected together at their lower ends.

have a loop 25'' thereon, to which is attached the spring 29, which acts to pull down the eye 25 and extensions 25' and keep them in their proper position.

5 The cords or wires 26 and 27 have a vertical motion communicated to them in any well-known manner to alternately raise and lower said cords and the wires 23 and 24 thereon and cause them to take the positions shown in
10 Figs. 1 and 2 in the operation of the loom.

It will be understood that a filling or weft-thread 20 is inserted in the usual manner at each formation of the shed, (shown in Figs. 1 and 2,) to be beaten up by the reed to the fell
15 of the fabric being woven.

The operation of my improvements in center-selvage-motion attachment will be readily understood from the above description in connection with the drawings and briefly is as
20 follows: Supposing the loom on which my attachment is used to be in operation and the selvage warp-threads 2 and 3, the crossing selvage warp-thread 9, and the parts of my attachment to be in the position shown in Fig.
25 1, with the selvage warp-thread 3 between the extensions 25' on the eye 25 and the cord 27, the lowering of the heddle 5 carries down the selvage warp-thread 3, and the simultaneous raising of the heddle 4 raises the selvage warp-
30 thread 2. The simultaneous lowering of the cord 26 and wire 23 allows the eye 25 and the extensions 25' thereon and the crossing selvage warp-thread 9 to be lowered until the simultaneous raising of the cord 27 and the
35 wire 24 thereon causes the loop 24^a to engage the eye 25 and check any further downward movement of said eye 25 and thread 9. This will happen when the selvage warp-threads 2 and 3 and the crossing selvage warp-thread 9
40 are about in the middle of the shed or in the same horizontal plane. The continued movement of the heddles 4 and 5 to their extreme positions carries up the selvage warp-thread 2 and carries down the selvage warp-thread 3,
45 and the continued movement of the cords or

wires 26 and 27 carries up the wire 24, and with it the eye 25 and thread 9, and carries down the wire 23. In the upward movement of the cord 27 and wire 24 the selvage warp-thread 2 is guided by the loop 24^a, as is also 50 warp-thread 3, in its descent and carried over the top of the eye 25 and to the other side of the crossing selvage-thread 9, as shown in Fig. 2. A filling thread or weft 20 is now inserted and beaten up. 55

The several parts above referred to are again operated to change them from the position shown in Fig. 2 to the position shown in Fig. 1, with the warp-threads 2 and 3 on the other side of the eye 25 and also the crossing 60 selvage warp-thread 9, guided by the loop 23^a, on the cord 26. A filling or weft 20 is now inserted and the operation repeated and a center selvage, as shown at 21 in Fig. 4, formed in the fabric. A second similar attachment 65 forms the other selvage, (shown at 22, Fig. 4.)

In case six selvage warp-threads are used in connection with the crossing selvage warp-thread, as shown in Fig. 5, there will be six heddles for said selvage warp-threads, and 70 three heddles will be raised and three lowered simultaneously.

It will be understood that the details of construction of my improvements may be varied, if desired. 75

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

A center-selvage-forming attachment, comprising an eye for the crossing selvage warp-thread, and two extensions from said eye, each extension passing through an eye or opening in a wire or cord, and said wires or cords adapted to have an alternate vertical motion, substantially as shown and described. 80

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