

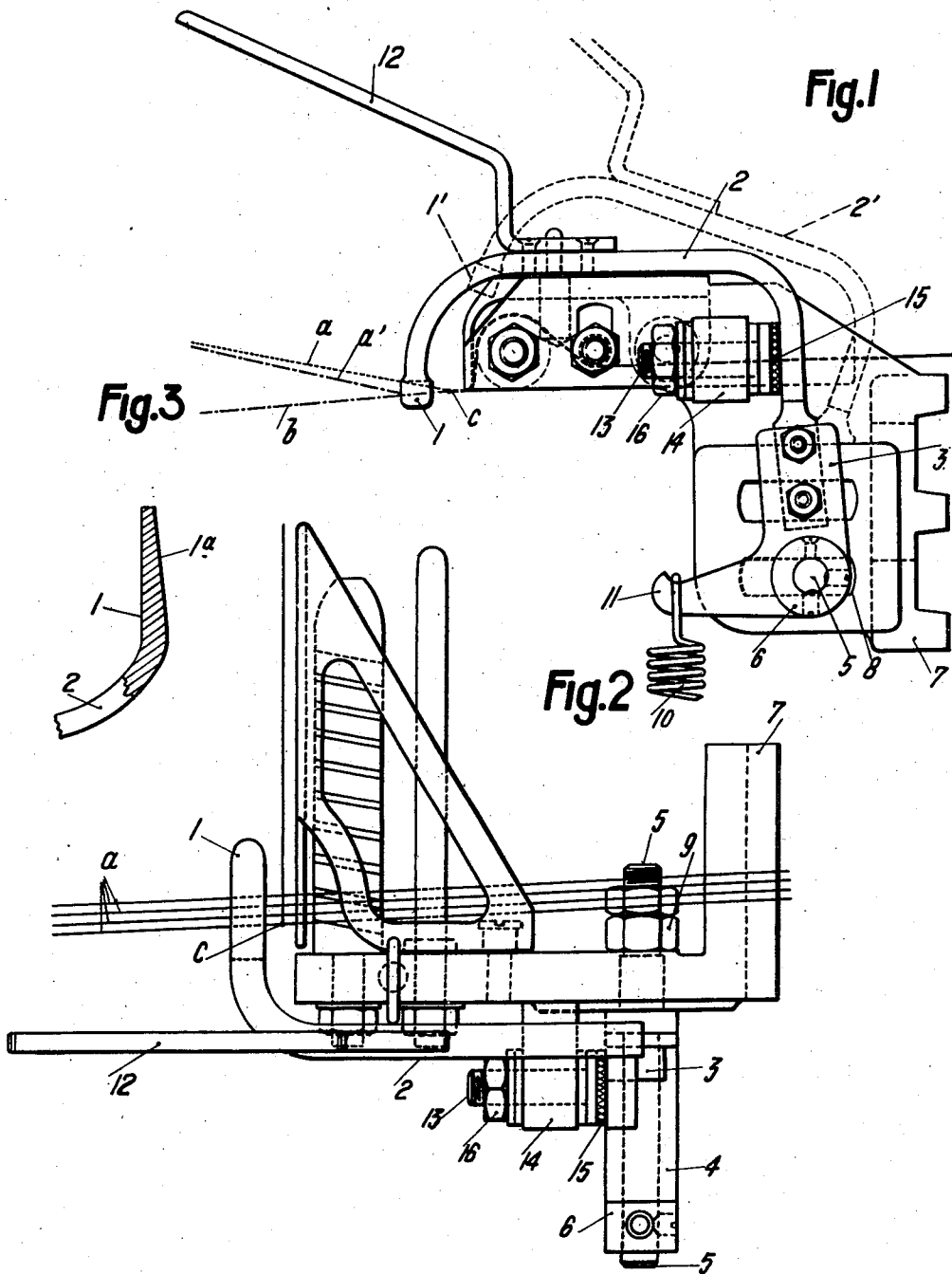
May 18, 1948.

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2,441,802

WEAVING LOOM HAVING A CONTINUOUS WEFT SUPPLY

Filed Oct. 12, 1938



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UNITED STATES PATENT OFFICE

2,441,802

WEAVING LOOM HAVING A CONTINUOUS
WEFT SUPPLY

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Application October 12, 1938, Serial No. 234,548
In France October 30, 1937Section 3, Public Law 690, August 8, 1946
Patent expires October 30, 1957

3 Claims. (Cl. 139—122)

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The invention relates to weaving looms having a continuous weft supply by means of large fixed bobbins and having weft inserting members without a cop, such for example as those of the needles type described in applicant's United States Patent No. 2,072,161.

In these looms, if a satisfactory selvedge is to be obtained, it is in most cases necessary to reduce temporarily, near the fell, the angle of opening formed by the selvedge threads of the divided warp sheets, so as to hold the turned in end of the weft for forming a fast selvedge.

Hitherto this result has been obtained by means of a part provided with a slit through which the selvedge threads of the two divided warp sheets pass. However, this means has various drawbacks which it is the purpose of the invention to overcome.

For this purpose, the invention has for its object a device which may be called "selvedge-presser" owing to its actual function and which not only does not possess the drawbacks of the known means, but further has numerous advantages.

Said device mainly comprises a movable part called "presser" which is intended to bear on the selvedge threads of only one of the two divided warp sheets, in order to reduce the angle of opening, said presser being combined with means adapted to cause under its action, the depression of the various selvedge threads to start successively, beginning from the edge of the selvedge towards the cloth, and the degree of depression of said threads to decrease gradually, likewise beginning from the edge of the selvedge towards the cloth.

The invention has furthermore for its object an embodiment of a selvedge-presser to which it would seem that preference should be given and by means of which a well finished selvedge is obtained in a practical manner.

By way of a constructional example, said preferred embodiment of a selvedge-presser operating according to the above explained features, is described hereinafter and illustrated in the accompanying drawing in which:

Fig. 1 is a side elevational view thereof,

Fig. 2 a top plan view, and

Fig. 3 a partial view of the presser, in vertical longitudinal section.

In the example shown, the presser 1, which is adapted to bear on the selvedge threads of the upper divided warp sheet, is arranged parallel, or nearly parallel, with the fell and acts by downward motion. For this purpose, it is fixed

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to the end of a lever 2 which oscillates in a plane that may be parallel with the selvedge, the other end of said lever being connected in an adjustable manner, by means of bolts or otherwise, to the tongue 3 of a bush 4 passed over a horizontal journal 5 and held by a stop ring 6.

This assembly thus mounted for oscillation on the journal 5, is adjustably fixed to the lower part of the frame or support 7 of the temple, by passing the end of the journal 5 through a slide 8 in which it is locked by nuts 9. The pressing position of the part 1 on the selvedge threads is ensured by a spring 10 attached to a projection 11 which is secured to the bush 4, whereas the lifting by swinging the lever 2 is preferably effected by the forward movement of the slay (the reed of which must not come into contact with the presser bar 1), by means, for example, of a rod 12 which is fixed by one end on the lever 2 and the other end of which is lifted by the reed cap of the slay.

The adjustment of the pressure of the part 1 on the selvedge threads is obtained by limiting at will the downward travel of the lever 2, by means of an adjusting bolt 13 which passes through an ear 14 of the support 7 and the head of which is covered with a thickness 15 of fibre, for example, in order to absorb the slight impact of the lever 2 when it abuts against said bolt head, the position of which is fixed by means of spacing washers, the whole arrangement being locked by the nut 16.

In this device, in order to ensure it a characteristic operation as explained above, that is to say in order that the beginning of the downward movement of the selvedge threads of the upper warp sheet towards those of the lower warp sheet may be effected successively, starting from the first selvedge thread and in gradually decreasing degrees of downward movement, likewise starting from the first selvedge thread, the preferred means which is proposed for this purpose consists in giving the face of the presser 1, which is intended to come into contact with and to bear on the selvedge threads *a*, an appropriate slope 1^a relatively to the plane passing through said selvedge threads of the divided warp sheet, as shown in Fig. 3, it being furthermore possible, under the action of the tension of the weft thread introduced into the inlet of the shed, and owing to this fact, for the first threads of the selvedge to be slightly displaced towards the cloth, thereby also contributing to the obtaining of a perfect selvedge.

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This device operates as follows:

When the slay beats up the weft, it lifts the rod 12, thereby causing the lever 2 and the presser 1 to swing into the raised position 1'-2', shown in dotted lines.

When the slay moves backwards, after having beaten the weft, the weft inserting member without a cop penetrates into the shed and encounters on its path the part of the weft thread which is still connected to the fell and which comes from the supply bobbin, which part of thread it folds over in the inlet of the shed.

At the same time, the presser 1, which is retracted by the spring 10, moves downwards towards the selvage warp threads of the upper sheet *a*. However, the adjustment of the rod 12 is effected in such a manner that the contact between the face 1^a of the presser 1 and said selvage threads *a* only takes place successively after the part of the weft thread which is still connected to the fell *c* is introduced into the inlet of the shed owing to the actual penetration of the weft inserting member without a cop.

Immediately afterwards, the weft thread thus introduced into the inlet of the shed is cut by the cutting member used in this case, and its end, at this instant, can no longer move owing to the fact that it is held stationary by the presser 1 which has reached or nearly reached the end of its travel and has brought the selvage threads *a* to *a'* by pressing them on the selvage threads *b* of the lower divided warp sheet.

When the slay moves forwards, the presser 1 is lifted before the weft is beaten, but the end of the weft thread cannot effect an untimely movement in the selvage, owing to the fact that at this instant, the change of shed is sufficiently advanced.

It is of course understood that without exceeding the spirit of the invention, changes, improvements and additions may be made, and also the use of equivalent means may be considered.

Thus, for example, for lifting the presser 1 by the forward movement of the slay, the rod 12 may be adjustably mounted, or not, on the bush 4 and be lifted by a slope fitted under the slay, the end of said rod 12 being in this case preferably provided with a roller.

Similarly, instead of having an upward and downward motion, the presser could, for example, have a semi-circular alternating motion in a horizontal plane, the pressure on the selvage threads of one of the divided warp sheets being at its beginning, always exerted successively by the slope of the face 1^a of the presser 1 advancing towards the selvage.

Similarly again, the presser 1 may be inclined relatively to the fell instead of being parallel or nearly so.

Finally, the presser 1 or the lever 2 may be used as a support for the cutting blade when the latter is mounted outside the weft inserting device.

I claim:

1. A selvage-pressing device for looms having a continuous weft supply by means of large fixed weft bobbins and a weft inserting member without a cop, said device comprising movable pressing means for bearing on the selvage threads of only one of the two divided warp sheets to reduce the angle of opening thereof, said press-

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ing means including means for depressing said selvage threads successively at the beginning of the downward movement thereof, starting from the edge of the selvage of the cloth, and while the degree of depression on said threads gradually decreases from the edge of the selvage; and means connected with said pressing means for actuating the same, the actuating means moving the pressing means up and down.

2. A selvage-pressing device for looms having a continuous weft supply by means of large fixed weft bobbins and a weft inserting member without a cop, said device comprising a movable presser for bearing on the selvage threads of only one of the two divided warp sheets to reduce the angle of opening thereof, said presser having a face contacting said selvage threads and being longitudinally inclined in the direction of the edge of the selvage towards the cloth, whereby said selvage threads are depressed successively at the beginning of the downward movement thereof, starting from the edge of the selvage of the cloth, and while the degree of depression on said threads gradually decreases from the edge of the selvage; and means connected with said presser for actuating the same, the actuating means moving the presser up and down.

3. A selvage-pressing device for looms having a continuous weft supply by means of large fixed weft bobbins and a weft inserting member without a cop, said looms also having a temple support and a slay having a reed cap; said device comprising a presser movable substantially vertically for bearing on the selvage threads of the upper divided warp sheet, said presser extending substantially perpendicularly to the selvage and above the same, a lever carrying an end of said presser, a journal fixed to the lower part of said temple support and carrying said lever, said lever being swingable about said journal, a retracting spring connected with said lever to cause the downward movement of said presser, and a rod secured to said lever and adapted to be raised by the reed cap of the slay when the slay moves forward to beat up the weft to cause the upward movement of said presser, said presser having a lower contact surface adapted to bear on the selvage threads and inclined in the longitudinal direction, said inclination beginning outside the selvage and terminating at the end of the presser toward the cloth.

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