No. 869,819. PATENTED OCT. 29, 1907.

J. B. WHITNEY & F. ECAUBERT.

FALLER FOR STOP MOTION MECHANISMS FOR LOOMS.

APPLICATION FILED FEB. 14, 1906.

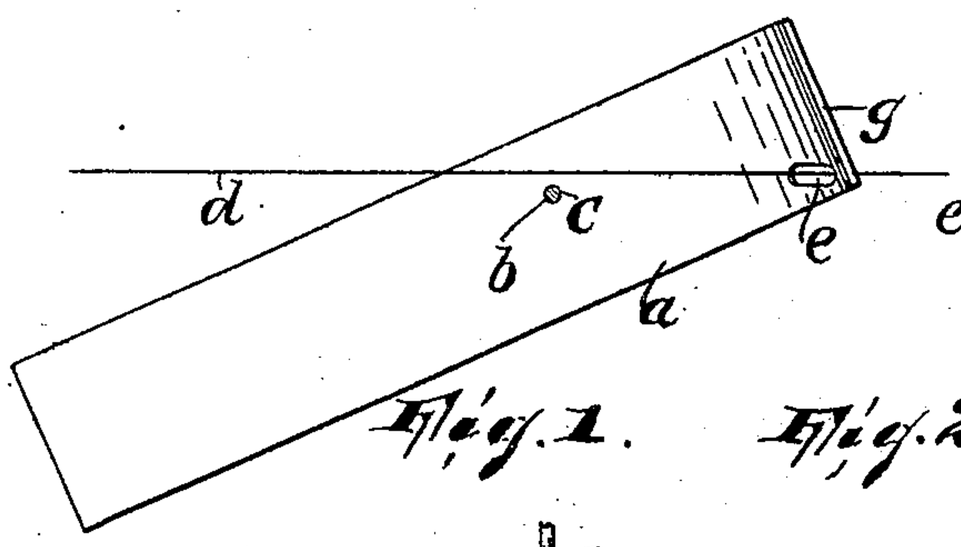

Fig. 1.

Fig. 2.

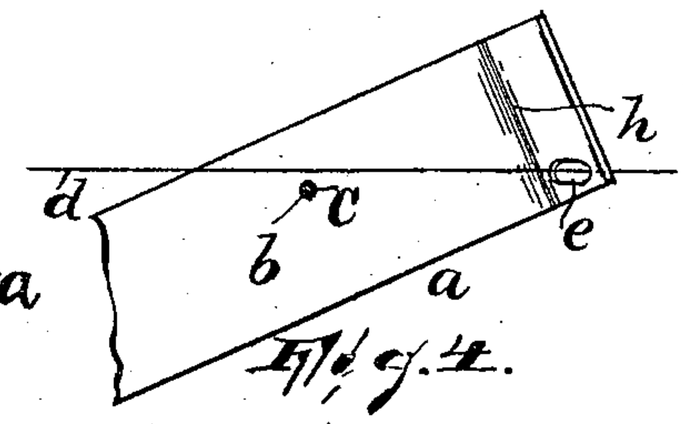

Fig. 4.

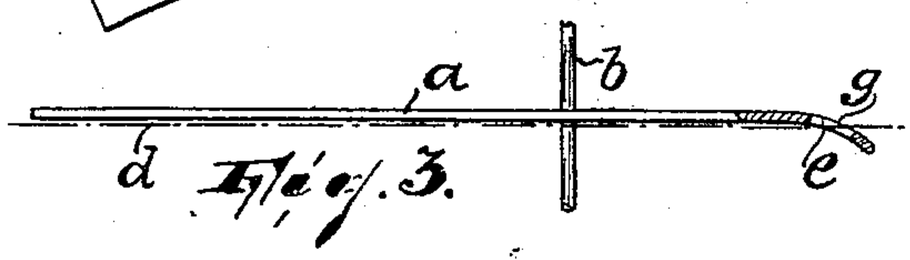

Fig. 3.

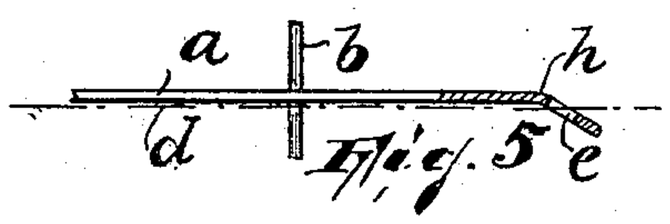

Fig. 5.

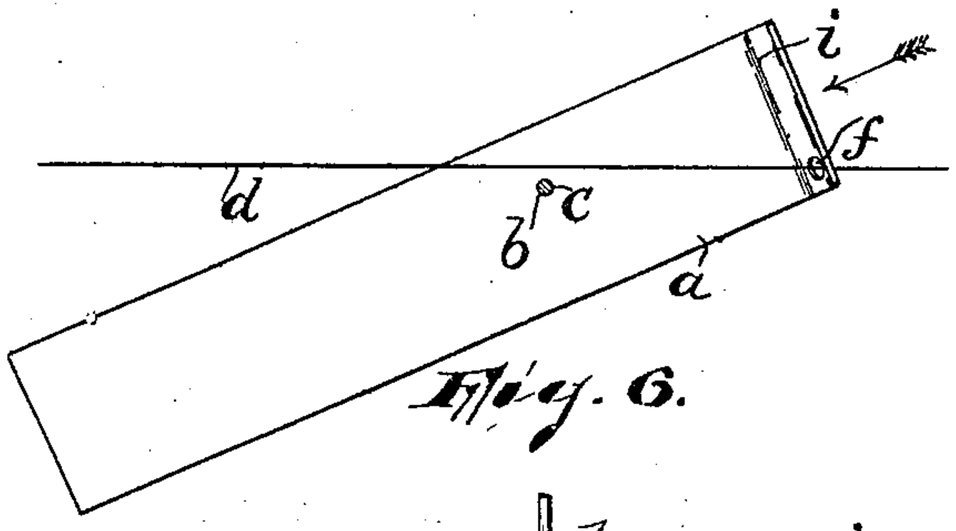

Fig. 6.

Fig. 7.

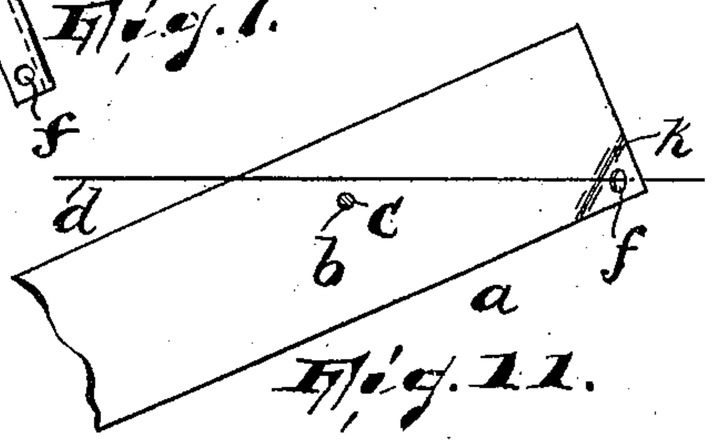

Fig. 11.

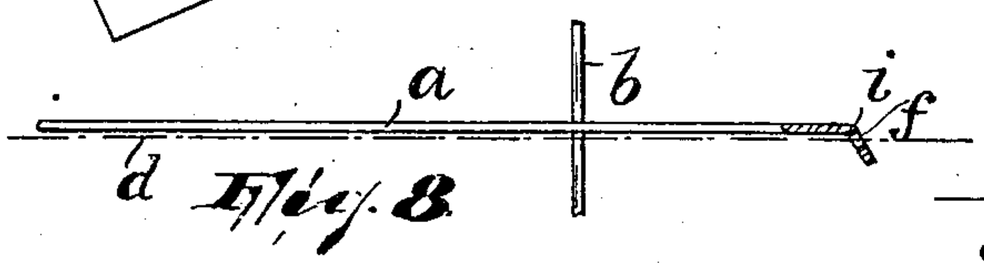

Fig. 8.

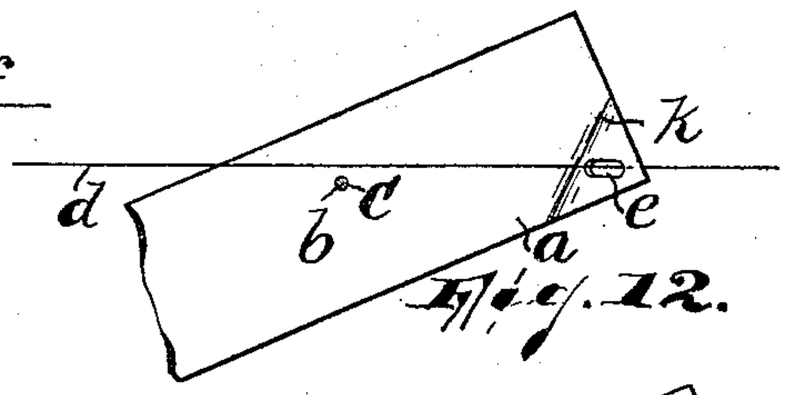

Fig. 12.

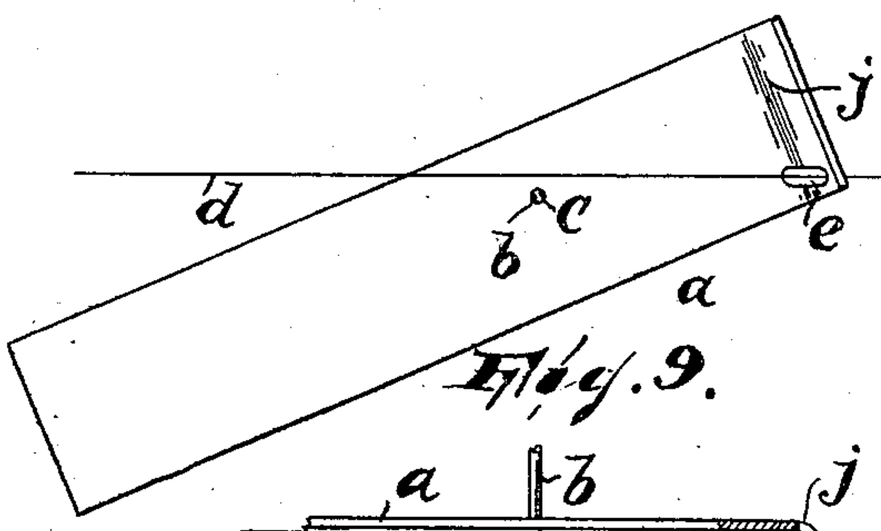

Fig. 9.

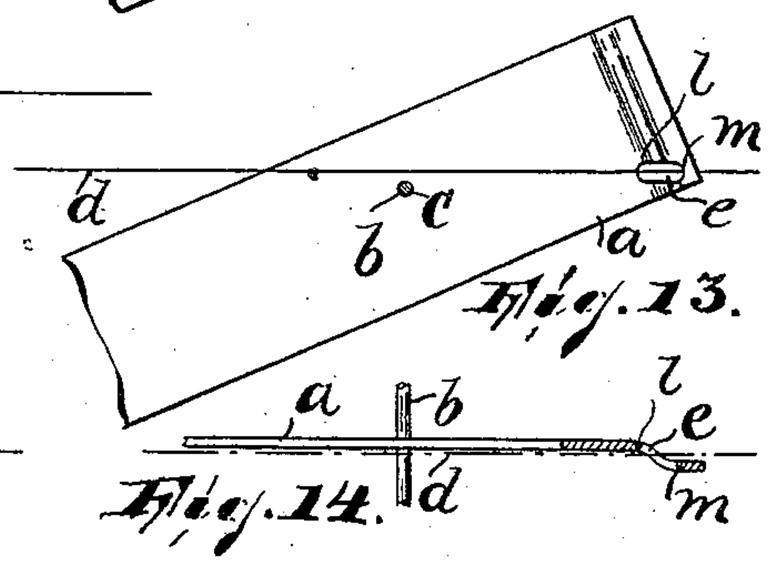

Fig. 13.

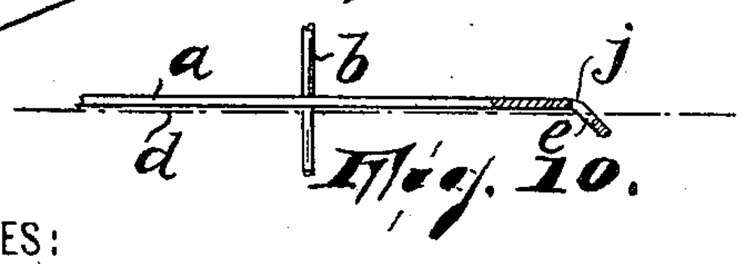

Fig. 10.

Fig. 14.

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Frederic Ecaubert,

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH B. WHITNEY AND FREDERIC ECAUBERT, OF NEW YORK, N. Y., ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO TEXTILE APPLIANCE CO., OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FALLER FOR STOP-MOTION MECHANISM FOR LOOMS.

No. 869,819. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed February 14, 1906. Serial No. 300,958.

To all whom it may concern:

Be it known that we, JOSEPH B. WHITNEY and FREDERIC ECAUBERT, both citizens of the United States, residing in Brooklyn, New York city, New York, have invented certain new and useful Improvements in Fallers for Stop-Motion Mechanisms for Looms; and we do hereby 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 letters of reference marked thereon, which form a part of this specification.

Our invention is an improvement in fallers for stop-motion mechanisms for looms. Such devices are ordinarily made of sheet-metal formed quite thin, having an aperture for the thread, and, where they are of the pivoted type, another for the pivot. If the faller is perfectly flat throughout its length, although it may be very thin, there is yet some wearing of the thread and of the faller immediately at the thread aperture, owing to the deflection which is imparted to the thread in changing from the plane of one side of the faller to that of the other.

Our invention has for its object to provide a faller in which this wearing of the thread and faller is practically eliminated, without the formation of obstructions on the faller which will be the cause of the fallers interfering with each other against perfectly free up and down individual movement, although they may be assembled ever so closely together.

Another object is to provide for the fallers assuming true parallelism with the threads.

In the accompanying drawings we have shown for the purpose of illustration several forms of a pivoted faller constructed in accordance with our invention. Figures 1 and 2 being side and front views of one form of the faller; Fig. 3 being a plan view, showing the thread aperture end of the faller partly in section on a line coincident with the thread line; Figs. 4 and 5 being side and plan views of another form of the faller, the latter showing the thread aperture end of the faller partly in section on a line coincident with the thread line. Figs. 6 and 7 being side and front views of still another form; Fig. 8 being a plan view of the faller shown in Fig. 6, showing the thread aperture end of the faller partly in section on a line coincident with the thread line; Figs. 9 and 10 being side and plan views of still another form of the faller, the latter showing the thread aperture end of the faller partly in section on a line coincident with the thread line; Figs. 11 and 12 being side views of two still other different forms of fallers; and, Figs. 13 and 14 being side and plan views of another form of the faller, the latter showing the thread aperture end of the faller partly in section on a line coincident with the thread line.

The fallers are shown as of the pivoted type, but it will be understood that this is not essential under all conditions.

In all the figures, *a* designates the faller and *b* its pivot, which is shown as penetrating the pivot aperture *c*; *d* is the thread.

The thread eyelet may be either of the elongated type, as at *e* in Figs. 1, 4, 9, 12 and 13, or of the plain round type, as at *f* in Figs. 6 and 11; it should be understood, however, that we are not limited to any forms of apertures in the broad aspect of our invention.

Referring, first, to Figs. 1, 2 and 3, the deflection of the metal is a gradual curve or bend, as at *g*, involving or including practically the whole of the thread aperture and extending transversely of the thread line across the faller. The result is that the thread, as best shown in Fig. 3, can pass through the eyelet *e* in a straight, or practically straight, course.

In Figs. 4 and 5, the deflection is a sharp bend *h* disposed between the thread eyelet *e* and the pivot *b* and extending, transversely of the thread line, across the faller.

In Figs. 6, 7 and 8, the bend *i* is disposed substantially the same as the bend *h* in Figs. 4 and 5, and only differs therefrom in being more of an approach to a right angle. In all these forms, the thread may pass through the eyelet in a straight, or practically straight, course. (See Figs. 5 and 8.)

In Figs. 9 and 10 the bend *j* is again a sharp one, representing about the same angle as the bend *h*. The bend is in this instance extended across the eyelet, instead of being between it and the pivot. But, since the eyelet is elongated, there is enough thereof deflected so that the thread may pass through the faller in a straight, or practically straight, line (see Fig. 10).

In Figs. 11 and 12, substantially the same effect is produced as in Figs. 1 to 8, inclusive, but in these figures only a corner (instead of two corners) of the faller is involved in the deflection. The bend here is indicated by the reference character *k*.

In Figs. 13 and 14, there are two reverse bends, *l* and *m*, the former causing the metal to stand at a slight obtuse-angle to the body of the faller and the latter bringing the metal involved into parallelism with the body of the faller. These two bends stand both preferably within the ends of the eyelet, and each extends across the faller. Here, again, the thread may pass through the faller, as shown in Fig. 14, substantially without deflection.

One important advantage of the bend being arranged as in Figs. 1, 4, 6, 9 and 10, where it is shown as inclin-

ing rearwardly and upwardly relatively to the thread line, is that no obstructoin is formed, by the abutting of bends in adjacent fallers against each other, to the free individual pivotal movement of any one faller, as might be more or less the case, under some circumstances, with the fallers shown in Figs. 11 and 12, where the bends are inclined forwardly relatively to the thread line.

In the forms of my invention shown, where the thread aperture is located nearer one edge of the faller than the other, in the thread line, an important advantage is secured in that a broad bearing surface for the thread, at one side of the aperture and on each face of the faller, is presented; this, taken with the use of the bend at the thread aperture whereby the tendency of the thread to turn the faller out of true parallelism with the thread is negatived, leaves the fallers free to be positively acted upon (as they naturally will be) by the threads to assume such parallelism.

Referring to Figs. 10 and 14 it will be observed that by making the bend extend through or across the thread aperture instead of to one side or the other thereof, as in the other figures, we avoid presenting the edge of the aperture to the thread and consequently such wear as would result therefrom; the construction in Fig. 10 avoids this effect (and presents only the flat face of the faller to the thread) on one side, while the reverse bending of Fig. 14 avoids it at both sides of the aperture.

In all the figures the thread passes through the faller without deviation at the thread aperture; this because in each form shown one side, at least, of the eyelet in the thread line is included in the bent-off portion of the faller and so stands in a different plane from the remainder thereof.

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

1. A pivoted faller for stop motion mechanisms for textile machinery having a thread aperture and having the portion of the material thereof at and including one side of the aperture bent to stand in a different plane from the plane of the remainder of the faller, the line of bend extending transversely of the thread line and being relatively greater in length than the coinciding dimension of the aperture, substantially as described.

2. A pivoted faller for stop motion mechanisms for textile machinery having a thread aperture and having the portion of the material thereof at and including one side of the aperture bent to stand in a different plane from the plane of the remainder of the faller, the line of bend extending transversely of the thread line and substantially entirely across the faller, substantially as described.

3. A pivoted faller for stop motion mechanisms for textile machinery having the portion of the material thereof at and including one side of the aperture bent to stand in a different plane from the plane of the remainder of the faller, the line of bend extending at a rearward upward incline to the thread line, substantially as described.

4. A pivoted faller for stop motion mechanisms for textile machinery having its thread eyelet located in its relatively upper end portion and having the portion of the material at and including one side of said aperture bent to stand in a different plane from the plane of the remainder of the faller, the line of bend extending transversely of the thread line and being relatively greater in length than the coinciding dimension of the aperture, substantially as described.

5. A faller for stop motion mechanisms for textile machinery having its thread aperture located near the junction of the thread line and one edge of the faller, whereby to present a broad thread bearing surface on each face of the faller at one side of the aperture, said faller having the material thereof at and including one side of the aperture bent to stand in a different plane from the plane of the remainder of the faller and the line of bend extending transversely of the thread line and being relatively greater in length than the coinciding dimension of said aperture, substantially as described.

In testimony, that we claim the foregoing, we have hereunto set our hand this 31st day of January, 1906.

JOSEPH B. WHITNEY.
FREDERIC ECAUBERT.

Witnesses:
GEO. T. PINCKNEY,
ATRHUR H. SERRELL.