

(No Model.)

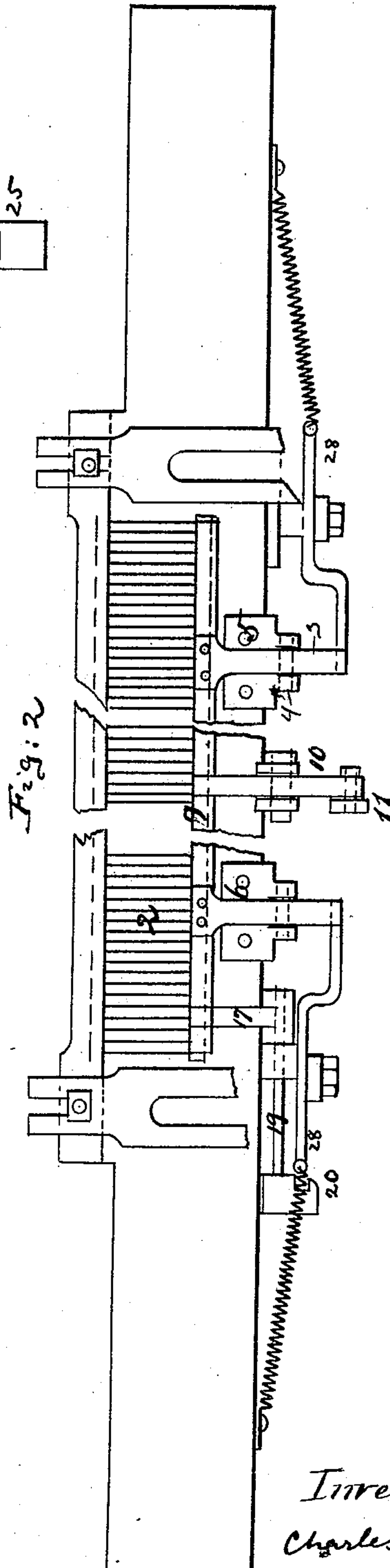
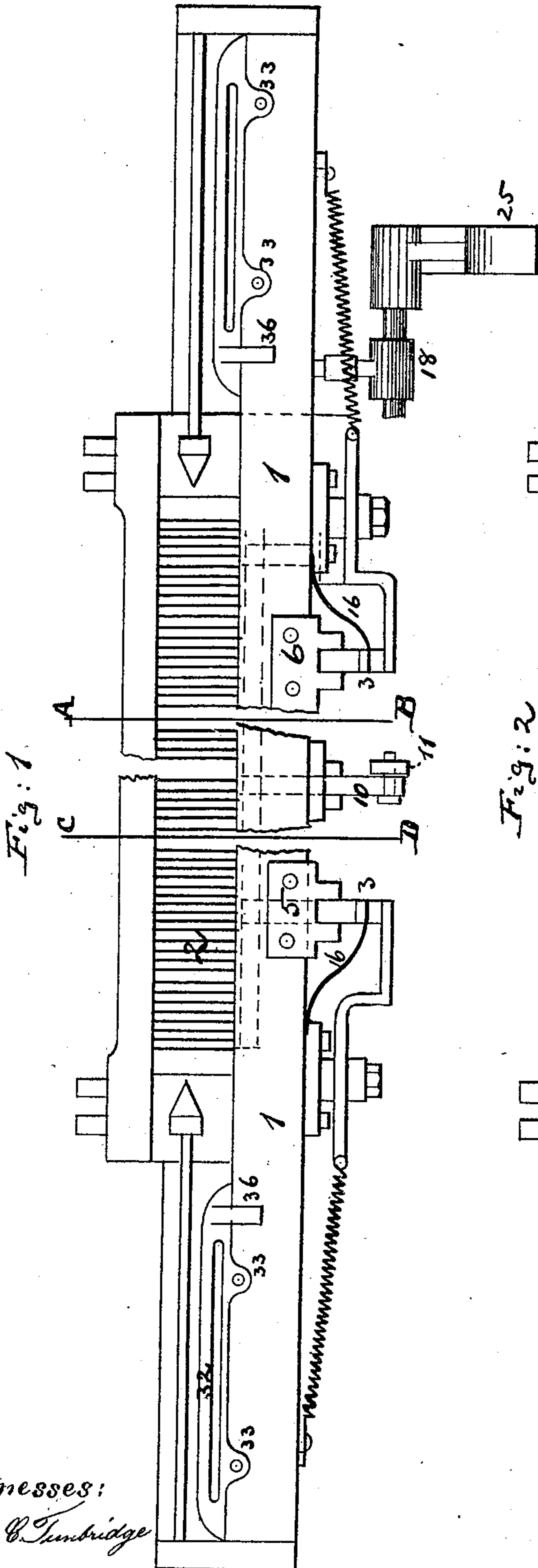
2 Sheets—Sheet 1.

C. THOMPSON.

LOOM.

No. 343,284.

Patented June 8, 1886.



Witnesses:

John B. Timbridge

John M. Speer.

Inventor:

Charles Thompson

by his attorney

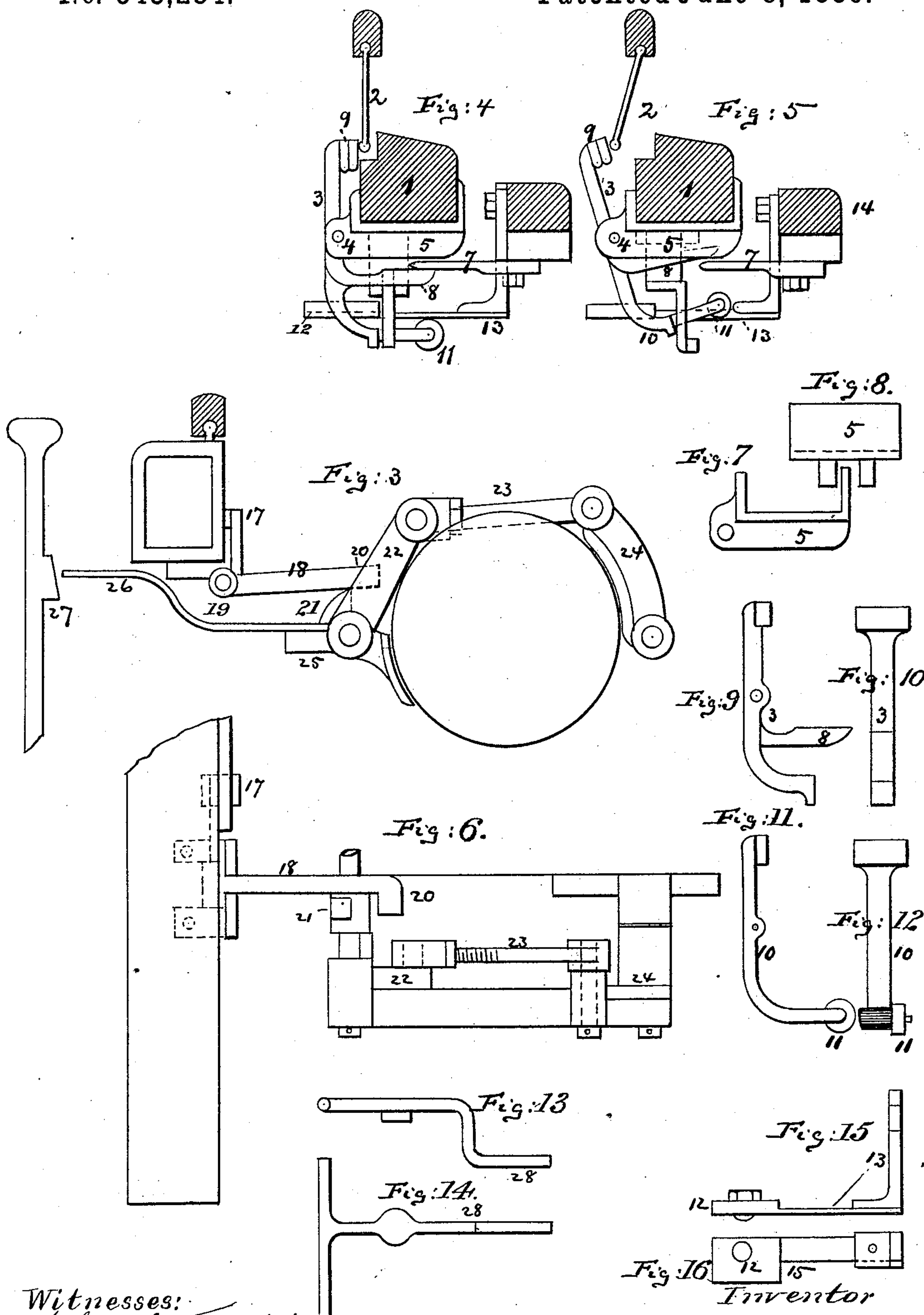
Briesen & Steele

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UNITED STATES PATENT OFFICE.

CHARLES THOMPSON, OF HALIFAX, COUNTY OF YORK, ENGLAND.

LOOM.

SPECIFICATION forming part of Letters Patent No. 343,284, dated June 8, 1886.

Application filed July 21, 1884. Serial No. 138,300. (No model.) Patented in England July 8, 1882, No. 3,249.

To all whom it may concern:

Be it known that I, CHARLES THOMPSON, a subject of her Britannic Majesty Queen Victoria, residing at Halifax, in the county of York, England, have invented new and useful Improvements in Looms, for which I have obtained a patent in Great Britain, No. 3,249, dated July 8, 1882, of which the following is a specification.

My invention consists of mechanism whereby the reed may be held securely for the "beat-up" of the weft so long as the shuttle continues to box properly, but whereby the same will be set free during the forward movement of the slay and allowed to yield, and the brake will be applied should the shuttle be trapped or not box properly.

In the accompanying drawings, Figure 1 is a front elevation of the upper portion of the slay and a portion of the braking devices. Fig. 2 is an elevation of the back of the upper portion of the slay, the latter having part of the improved devices applied thereto. Fig. 3 is an end elevation of the braking devices and slay, the latter being shown partially in section. Fig. 4 is a sectional elevation through line A B, Fig. 1, showing the reed held in position. Fig. 5 is a sectional elevation through line A B, Fig. 1, showing the reed released. Fig. 6 is a plan of the parts shown in Fig. 3, excepting the parts 26 and 27. Figs. 7 to 16, inclusive, are details or parts illustrated separately.

At 1 is the slay-beam.

2 is the reed.

3 3 are finger-catches hinged on pins 4, carried by brackets 5 6. Each of the elbow-fingers 3 3, when the reed beats up and is free from obstruction, engages with the holding-pieces 7 7, that hold the reed securely by contact with the parts 8 of the fingers 3, said fingers carrying the bar 9 at the back of the reed.

10 is a lever or finger having friction-bowl 11 on its lower end and adapted to bear with its upper end against the bar 9. The bowl 11 at each beat-up runs on the under surface, 12, of spring-plate 13, which is fixed to the breast-beam 14, and keeps the reed in position until the bowl 11 gets to the space 15 of the spring-plate 13. The reed is then free for an instant,

but immediately afterward locked again in position by means of the holding-pieces 7 7 engaging with the fingers 3 3, as shown at Fig. 4. Should a shuttle be trapped, the reed, during the forward movement of the slay, will come in contact therewith and be held back, as shown in Fig. 5, so that before the holding-pieces come in contact with the fingers 3 the latter will be raised and will pass on the top of the said holding-pieces 7, as shown in Fig. 5, the reed 2 thereby being left loose. The blade-spring 16 16 will yield to permit the lifting of the forward ends of the fingers 3 3. As the reed assumes the position shown in Fig. 5 the bar 9 will move the arm 17, Figs. 2 and 3, backward, turning the fulcrum-shaft 19 and lowering the catch arm or lever 18, so as to cause the catch-lever 20 to engage with the catch-piece 21, which pulls by the lever 22, connecting-rod 23 and applies simultaneously the brakes 24 25. The spring 16 has one end secured to the under side of the beam 1. Its other end connects with the horizontal arm of the elbow-finger 3. When the parts are in their normal condition, the springs 16 hold the fingers 3 and the reed, as in Fig. 4. When the catch-lever 18 falls by reason of the backward movement of the reed 2 and bar 9 when the shuttle is trapped or caught, the catch 20 will engage with the catch-piece 21, mounted on a stud free to move in the end frame of the loom, on which stud is also the brake 25. When the slay or "going part" moves forward to beat up, should the shuttle be trapped, the brake 25, by the catch-piece 20 engaging with the catch-piece 21 and by arm 22 and connecting-rod 23, applies the other brake, 24, simultaneously with the brake 25.

The parts 28, consisting of spiral spring and levers, Figs. 14 and 15, are for keeping the reed in position, the lower part of the lever 28 being against the lower part of the finger 3, as shown at Figs. 1, 2. When a trap occurs, the spiral spring is extended by the finger 3 forcing itself clear of the holding part of lever 28, as shown at Fig. 5. The parts 28 are to be used on broad and heavy looms.

I am aware that prior to my invention self-acting mechanism for releasing and securing the reed of a loom has been made; that the

automatic application of the brake when the shuttle does not box is not new, and to such I lay no claim, broadly; but

What I do claim as my invention, and desire
5 to secure by Letters Patent, is—

The combination of the breast-beam 14, sley-beam 1, reed 2, finger-catches 3 3, holding-pieces 7 7, bar 9, lever 10, having friction-

bowl 11, spring-plate 13, spring 16, lever 17, catch-lever 18, catch-piece 21, arm 22, connecting-rod 23, and brakes 24 25, all substantially as described.

CHARLES THOMPSON.

Witnesses:

WALTER BRIERLEY,
EBER WHITWORTH.