

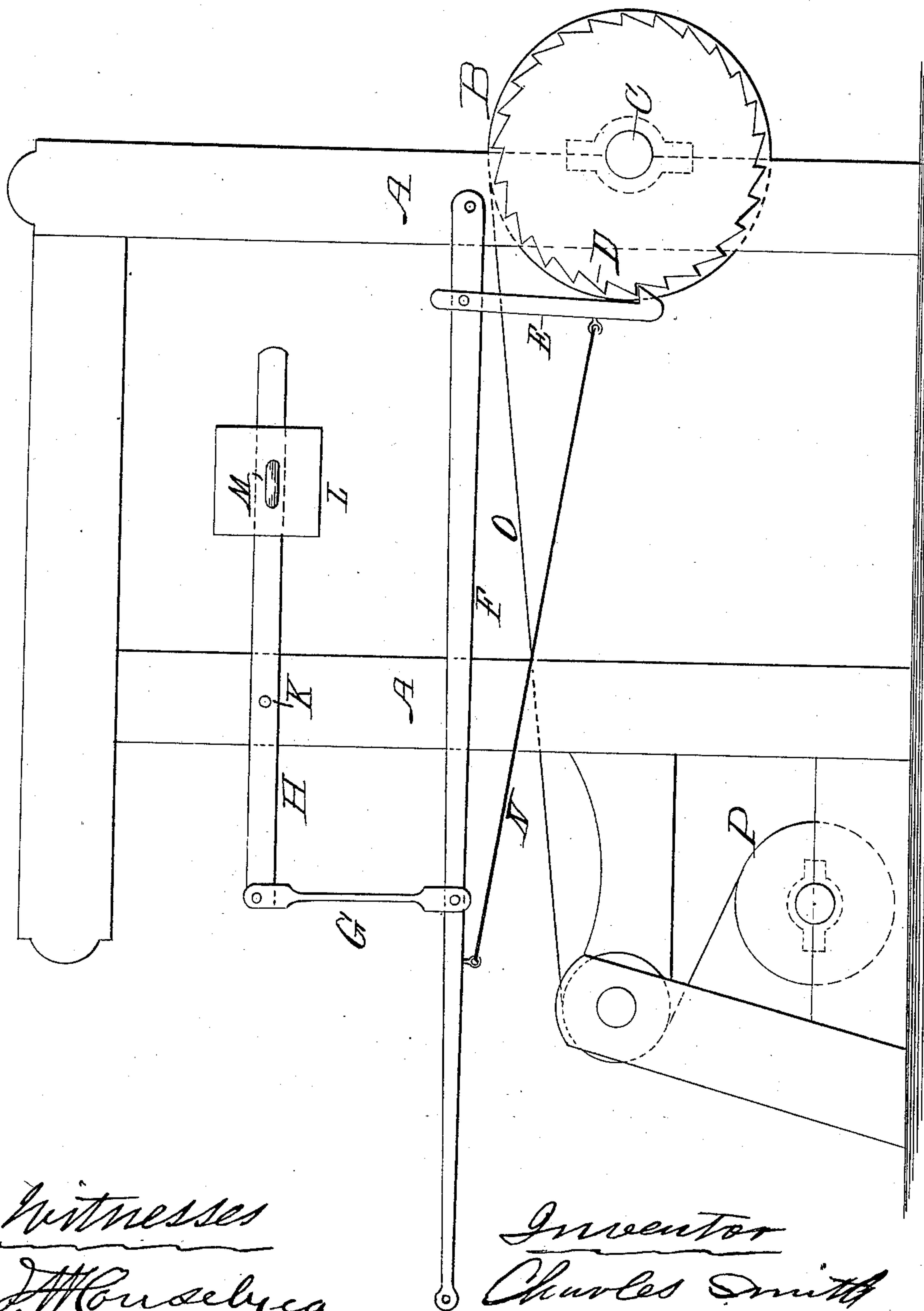
(No Model.)

C. SMITH.

LET-OFF MECHANISM FOR LOOMS FOR WEAVING WIRE.

No. 277,623.

Patented May 15, 1883.



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES SMITH, OF BELLEVILLE, NEW JERSEY, ASSIGNOR TO HIMSELF  
AND EASTWOOD WIRE MANUFACTURING COMPANY.

## LET-OFF MECHANISM FOR LOOMS FOR WEAVING WIRE.

SPECIFICATION forming part of Letters Patent No. 277,623, dated May 15, 1883.

Application filed August 23, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES SMITH, of Belleville, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Let-Off Mechanism for Looms for Weaving Wire, of which the following is a specification.

My invention relates to wire-weaving looms adapted to be operated by hand, the object being to produce a more uniform tension on the warp-wires while in the process of weaving, whereby a more perfect cloth is produced.

The invention consists in an improved let-off mechanism for a wire-weaving loom, constructed and arranged substantially as will be hereinafter set forth, and finally embodied in the claim.

The accompanying drawing is a side elevation of a portion of a wire-weaving loom having my improvements arranged therein.

In carrying out my invention I arrange the parts substantially as shown, A being the frame of the loom; B, the warp-beam secured to the shaft C; D, a ratchet also secured to said shaft; E, a catch or pawl that engages with said ratchet and is pivoted to the lever F, which latter is fulcrumed upon a section of the frame.

The lever H is fulcrumed at K, and carries the adjustable sliding weight L, which is secured to the said lever by the set-screw M. The levers H and F are connected by a connecting rod or link, G, whereby the two cooperate without any lost motion or power and a positive action is attained.

N is a rope or chain attached to the lever F and to the catch E, by means of which, when

the said lever F is pushed down by the weaver to relieve the catch E from pressure against the teeth of the ratchet, the said catch may be pulled by hand away from the said ratchet, so as to release the warp-beam and allow the woven cloth to be drawn forward and wound upon the cloth-roller P.

When the lever F is relieved from the pressure of the weaver's hand said lever will be raised by the action of the weighted lever H to engage the catch with the ratchet to keep the warp-beam from unwinding and hold the warp under tension. When the warp-wires are opened to receive the filling, and when said filling is being driven up by the lay, the lever H vibrates vertically to compensate for the strain in opening said warp, and allows the filling to be driven up without any extra strain on the cloth, producing a uniform tension on the warp, and thereby making the cloth, when woven, much more uniform and serviceable.

The lever H may be hung below the lever F, and the result be the same.

Having thus described my invention, what I claim as new, and wish to have secured by Letters Patent, is—

An improved let-off mechanism for looms for weaving wire, the same combining therein the warp-beam B, the ratchet D, the lever F, the catch E, the rope N, the weighted lever H, and the rod G, all arranged and operating substantially as set forth.

CHARLES SMITH.

Witnesses:

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