

J. & J. Hartshorn,

Curtain Fixture,

N^o 12,792.

Patented May 1, 1855.

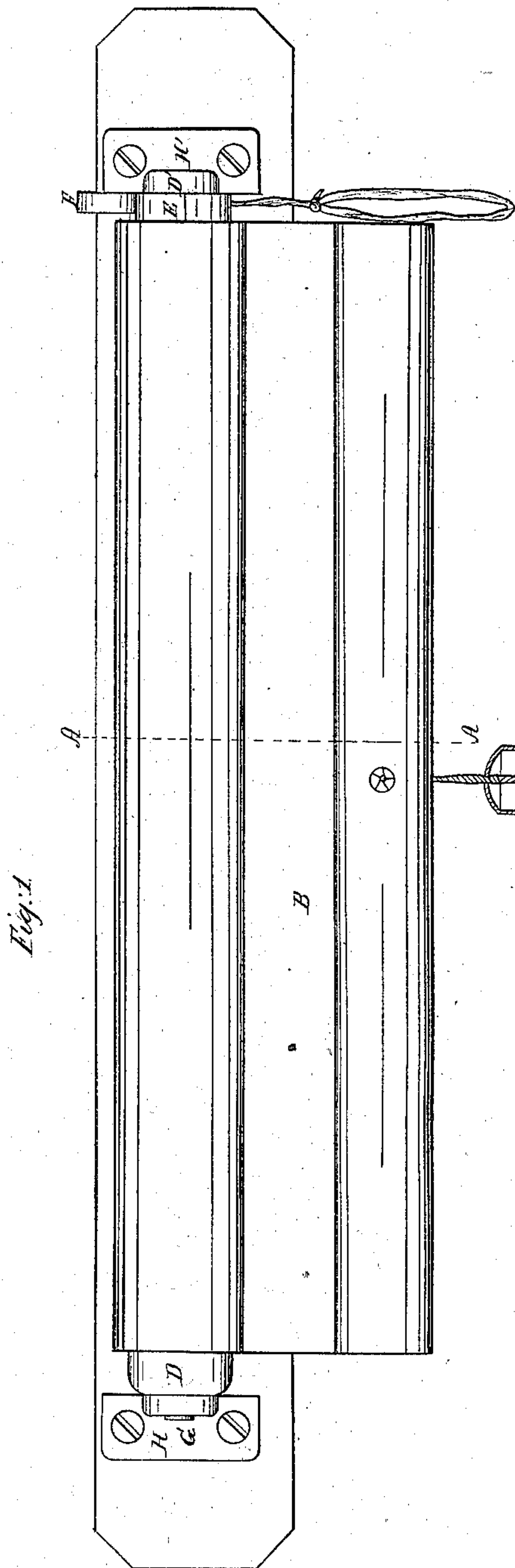


Fig. 4.

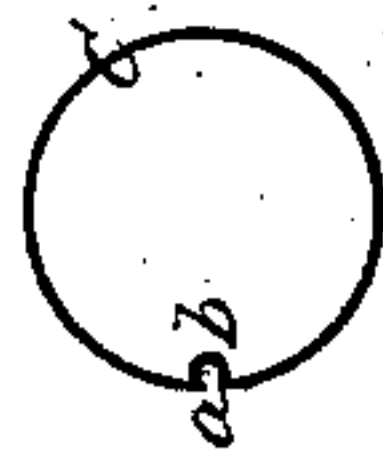
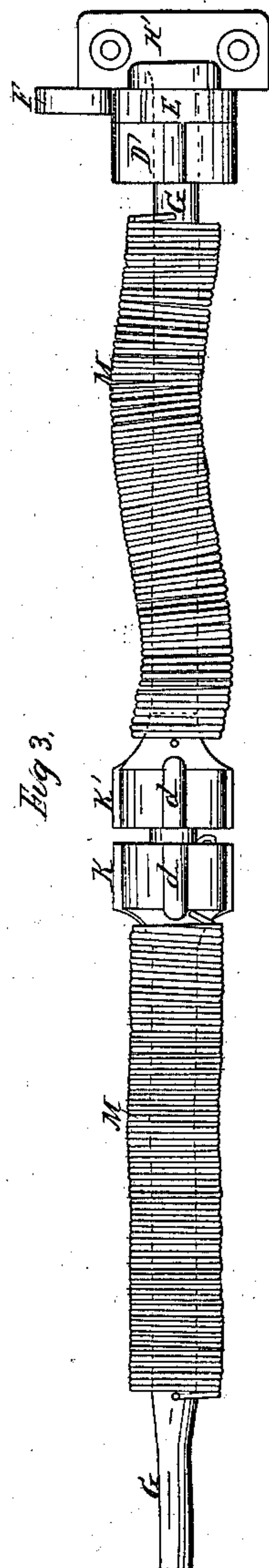
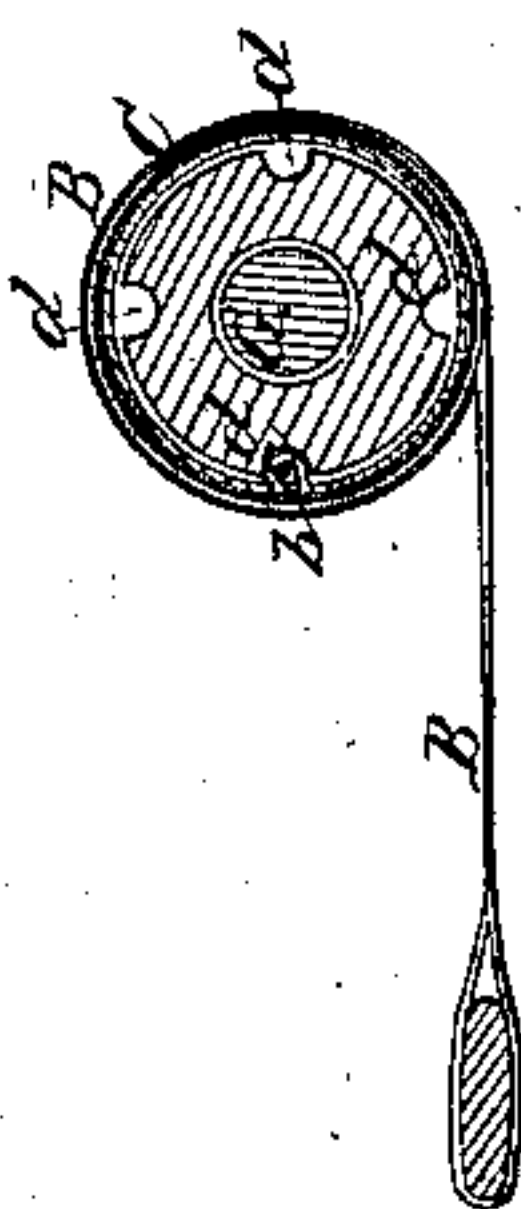


Fig. 2.



UNITED STATES PATENT OFFICE.

JOHN HARTSHORN AND JACOB HARTSHORN, OF BOSTON, MASSACHUSETTS.

SPRING-ROLLER FOR CURTAINS.

Specification of Letters Patent No. 12,792, dated May 1, 1855.

To all whom it may concern:

Be it known that we, JOHN HARTSHORN and JACOB HARTSHORN, both of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Curtain-Fixtures, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, in which—

10 Figure 1 is a front view of a curtain with our improvements attached. Fig. 2 a section on the line A A of Fig. 1. Fig. 3 a view of the rod which carries the spring that sustains the curtain. Fig. 4 will be referred to
15 hereafter.

Window curtains have been suspended and balanced by spiral springs contained within the curtain rod; the range of such springs has however been limited by the
20 fact that the ends of the springs were attached the one to the stationary the other to the revolving part of the curtain rod, in such a manner as always to remain at a fixed and unvarying distance from each
25 other; another consequence of this method of securing the spring is that it is apt to buckle and twist out of shape, as seen in Fig. 3, by which the spring is soon destroyed. To remedy these inconveniences
30 and to produce a spring of great range for the length of wire and coil employed is the object of our present invention, which consists in securing one end of the spring to a stationary rod which sustains it, the other
35 being made fast to a block, which at the same time that it is caused to revolve with the cylinder, is permitted to slide longitudinally to allow the spring to lengthen or shorten as it is more or less wound up.

40 To enable others skilled in the art to understand our invention we will proceed to describe the manner in which we have carried it out.

In the accompanying drawings, B is the
45 curtain which is attached to the tin cylinder C by the wire *c* secured to its upper end. This cylinder has a longitudinal slot *a* along its whole length of sufficient size only to admit the curtain. Immediately beneath this
50 slot is an enlarged channel or trough *b*, into which the wire *c* is slipped, the curtain be-

ing permitted to project through the slot *a* as seen in Fig. 2. This slot not being sufficiently large to admit the passage of the wire, the curtain is held secured to its cylinder. D D' are plugs secured to each end of the cylinder.

E is a ratchet wheel secured to the plug D' having a pawl F, by means of which the revolution of the cylinder is regulated. 60

G is a stationary rod which fits tightly into the brackets H, H' and upon which the cylinder C revolves, the plugs D, D' revolving freely upon the rod.

K K' are blocks which fit loosely upon 65 the rod G, and are allowed to slide longitudinally thereon. *d* are grooves in the circumference of these blocks into which enters the projecting trough *b*, and thus these blocks are caused to revolve with the cylinder. 70

M, M', are right and left hand spiral springs, the interior ends of which are secured to the blocks K, K' the exterior ends being fastened to rod G. When the springs 75 are allowed to run down the blocks K, K', approach the ends of the rod and the springs expand without interruption whereby a greater range of expansion is attained. When the springs are wound up the length 80 of the coil increases, to accommodate which the blocks K, K' approach each other and thus the buckling or twisting of the coil (seen at the right hand in Fig. 3) is avoided; this twisting soon destroys the operation of 85 the spring, and will invariably take place whenever its normal condition is changed either by winding it up or expanding it, if no provision be made for a change of its effective length. 90

What we claim as our invention and desire to secure by Letters Patent is—

Attaching one end of the springs to the sliding block K, K' for the purpose of enabling them to increase and diminish in 95 length as they are wound up or expanded, in the manner and for the purpose set forth.

JOHN HARTSHORN.
JACOB HARTSHORN.

Witnesses:

SAM. COOPER,
JOHN S. CLOW.