

(No Model.)

2 Sheets—Sheet 1.

C. C. BOWEN.
MANUSCRIPT HOLDER FOR SPEAKERS.

No. 471,067.

Patented Mar. 15, 1892.

Fig. 1.

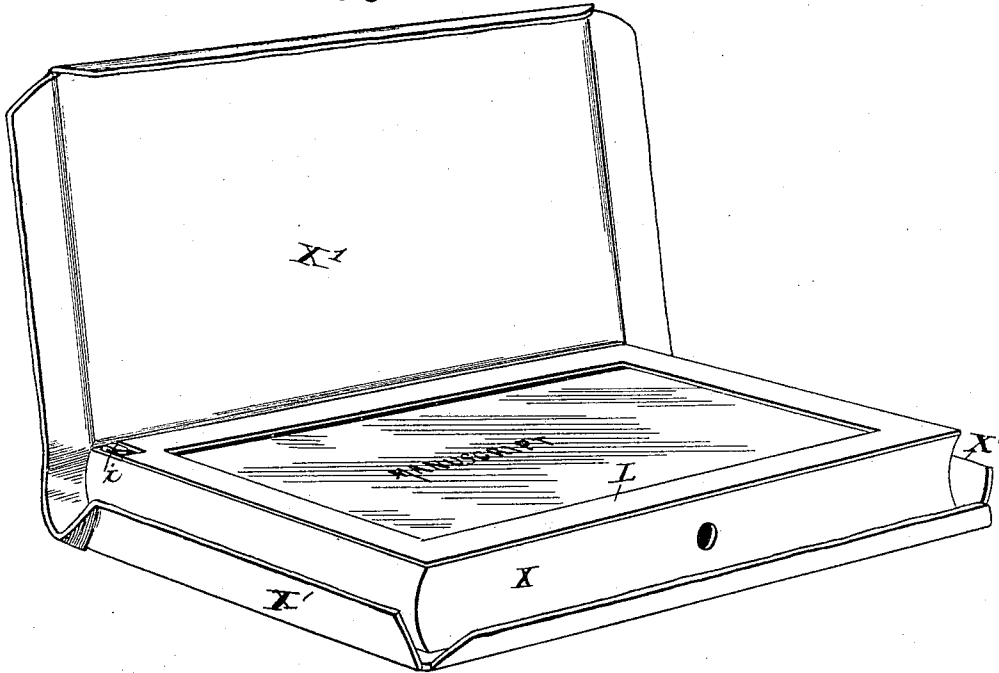
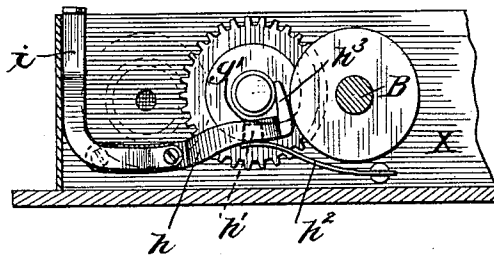


Fig. 3.



WITNESSES:

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CALVIN CASE BOWEN, OF SAN FRANCISCO, ASSIGNOR OF ONE-HALF TO
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MANUSCRIPT-HOLDER FOR SPEAKERS.

SPECIFICATION forming part of Letters Patent No. 471,067, dated March 15, 1892.

Application filed April 11, 1891. Serial No. 388,591. (No model.)

To all whom it may concern:

Be it known that I, CALVIN CASE BOWEN, residing at San Francisco, in the county of San Francisco and State of California, have
5 invented a new and useful Improvement in Manuscript-Holders, of which the following is a specification.

The object of my invention is to provide a manuscript-holder for the use of public
10 speakers which shall preserve the proper sequence of the subject-matter, avoid confusion of the sheets or pages, and conceal from the audience all appearance of manuscript.

It consists in a frame or case made in the
15 form of a book and provided with a spring-actuated drawing-roller and also guide and tension rollers, upon one of which the manuscript is rolled in a continuous strip and from which it is drawn by the drawing-roller, trip-
20 ping devices being arranged to allow the adjusting devices to act intermittently as the speaker passes from section to section of the strip, as hereinafter fully described.

Figure 1 is a perspective view of the device
25 in its opened position with manuscript in place. Fig. 2 is a plan view with the upper hinged cover and manuscript removed and the hinged frame L thrown back. Fig. 3 is a sectional detail of the tripping devices, and
30 Fig. 4 is a detail of one of the manuscript-rollers.

In the drawings, X represents the box or casing, which is made of wood, metal, hard rubber, or any other desired material, and is
35 preferably upholstered or bound in leather to represent a book. Over this case is placed any suitable cover X', the edges of which extend beyond the case, so as to give it an appearance somewhat resembling the Oxford bound or other Bible. In the side walls of
40 the case are journal-seats *a a* near one end and *b b* near the other, which receive, respectively, the journals of the two rollers A and B. One of these rollers A is the actuating or
45 drawing roller and the other one B is the stock or receiving roller upon which the manuscript is wound. Both these have a flange at one end and have sawed out longitudinally from the roller a split tongue *a'*, under which
50 the end of the manuscript is caught and which, when the manuscript is wound about

the roller, tightly clamps and binds the end of the manuscript. The upper one of these rollers, which is the actuating or drawing roller, has at its end a pinion *b*, engaging with
55 a larger gear-wheel *b'*, and on the same hub with the wheel *b'* there is a pinion *b²*, engaged by a gear-wheel *b³*, and on the same hub with this is a pinion *b⁴*, that is engaged and driven by a gear-wheel *b⁵* on a transverse winding-
60 shaft C. At one end of the shaft C there is a grooved cone *d*, opposite to a grooved cone *d'* on a parallel shaft D, and from one to the other of these grooved cones, whose inclination is reversed, there extends a flexible cord
65 or chain *d²*, constituting a differential pulley or fusee. On the shaft D is wound a long spiral spring E, one end of which is anchored to the case and the other end to the shaft, so that its tension serves to turn the shaft and
70 transmit a rotary motion through the fusee and the train of gear-wheels to the drawing-roller A. The object of the differential cone-pulleys or fusee is to equalize the tension of the driving-spring on the working gears and
75 rollers, diminishing the leverage when the spring first commences to unwind and increasing the leverage when the spring has nearly expended its tension, so as to preserve a uniform tension on the manuscript and
80 thus avoid tearing it at the beginning of the action, when the spring-tension is strong and insuring the positive working and perfect taking up of slack when the spring is nearly unwound.

The stock or receiving holder B is prevented from unwinding with slack by means of a flat bearing-spring *e*, which presses continually upon the surface of the roll of manuscript and preserves a light friction thereon. From
90 this roller the manuscript passes to a tension-roller B', just below B, and then passes along the face of the device up to and around a corresponding loose roller or idler A', and thence goes to the drawing-roller A. The lower tension-roller B' has its surface sanded, rough-
95 ened, or covered with soft rubber to give it a frictional hold upon the paper of the manuscript to hold it taut and smooth against the strain of the drawing-roller above.

At the end of the roller B' there is a small gear-wheel *f*, engaging with a larger gear-
100

wheel *g*, which latter has a hub with a notch *g'*, Fig. 3, cut in its periphery. Into this notch a lug *h'* on a spring-arm *h* is forced by a spring *h²* to hold it locked. On the end of this arm is a brake-shoe *h³*. Pivoted to the arm *h* is a depressible slide *i*, that appears through a hole in the margin of the frame. By depressing this slide the lug *h'* is removed from the notch *g'*, and the drawing mechanism is allowed to draw up the manuscript to a new position as the speaker reads down the same. When the pressure on the slide *i* is removed, the spring *h²* lifts the locking-lug into engagement with the notch again; but before engaging the same the brake-shoe *h³* strikes against a flange on the stock-roller shaft and arrests its motion. In this way both a frictional and a positive lock is secured and both are operated by one and the same movement.

For winding up the spring when it has run down the end of the winding-shaft *C* is squared and adapted to receive a key and be wound up like a clock.

On the outer edge of the marginal frame *L* of the case there are rigidly attached arms or brackets *l*, which when the frame is closed press upon the journals of the several rollers and hold them down to place.

To hold the gears while winding up the spring a detent or pawl may be arranged in the train. After the manuscript is adjusted to place the detent is to be released so as to let the tension come on the manuscript.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A manuscript-holder composed of an inclosing casing having internally an actuating

and a receiving roller and at one end a tension-roller and at the other a loose roller, and suitable mechanism connected therewith, acted on by a tripping-key to automatically cause the movement of the manuscript a distance equal to the open face of the case, substantially as described.

2. The combination, with the box or casing having journal-seats *a* and *b*, of the removable drawing and stock rollers *A B*, located therein, the driving devices, and the hinged frame *L*, having brackets *l l*, adapted to shut against the journals and retain the rollers, substantially as shown and described.

3. The combination, with the drawing-roller *A*, of the two shafts *D* and *C*, the one having a spiral spring and grooved cone and the other having a reversely-inclined grooved cone, a gear-wheel, and squared end, a cord or chain connecting the two cones, and toothed gears transmitting the power to the drawing-roller, substantially as shown and described.

4. The combination, with the receiving-roller *B*, having disk or flange at its end, of the frictional tension-roller *B'*, the gear-wheels *f* and *g*, the depressible slide *i*, and the spring-arm with locking devices, substantially as shown and described.

5. The combination, with the receiving-roller *B* and the frictional tension-roller *B'*, of a locking device arranged to lock the roller *B'* positively and the roller *B* by a frictional contact, substantially as shown and described.

CALVIN CASE BOWEN.

Witnesses:

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