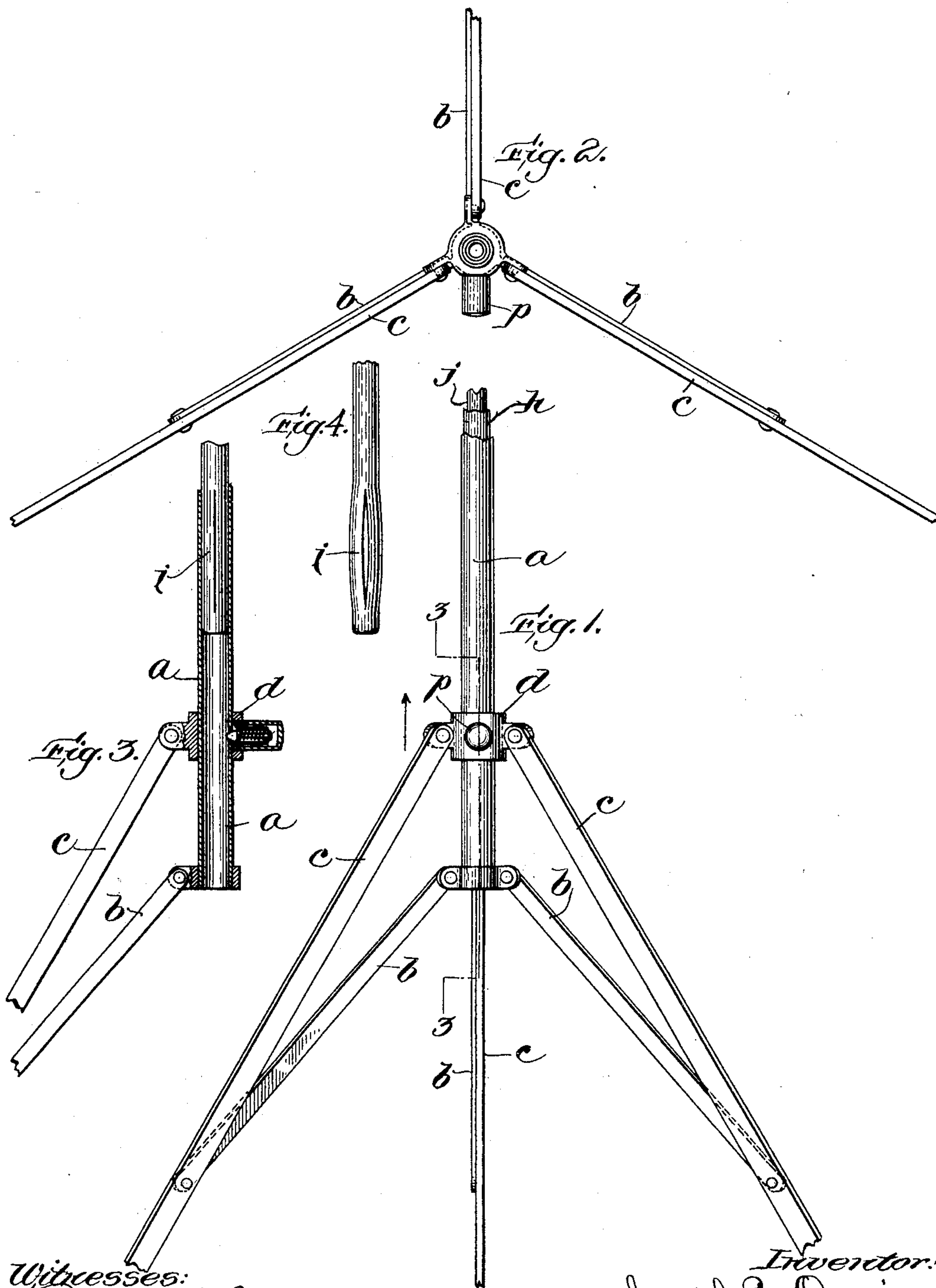


No. 664,678.

Patented Dec. 25, 1900.

J. B. QUINN.
SELF LOCKING STAND.
(Application filed Apr. 5, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH B. QUINN, OF SOMERVILLE, MASSACHUSETTS.

SELF-LOCKING STAND.

SPECIFICATION forming part of Letters Patent No. 664,678, dated December 25, 1900.

Application filed April 5, 1900. Serial No. 11,714. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. QUINN, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Self-Locking Stands, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of my new stand locked in position. Fig. 2 is an inverted plan view of the same. Fig. 3 is a sectional view on line 3 3 of Fig. 1. Fig. 4 is a detail view showing the yielding bulb-shaped end of the inner tube.

My invention relates particularly to folding stands for music, and has for its object to provide a simple means for holding in position the tubes which telescope one within the other.

The feature of my invention is the bulb-shaped end of the inner tube, springy and yielding of itself. By this construction I am enabled to obtain frictional resistance between the inner tube and the one within which it slides sufficient to support the inner tube and the weight carried by it and at the same time do away with the rubber plugs often used in this class of stands. A great gain in cost of manufacture, in simplicity of construction, and in durability in use results.

In the drawings illustrating the principle of my invention and the best mode now known to me of applying that principle, *a* is the base-tube, to which is pivotally secured one end of the braces *b*. The other ends of the braces *b* are pivotally secured to the supporting-legs *c*, and these legs *c* are pivotally secured to a runner *d*. Screwed into the runner *d* is an outer cap *p*, inclosed in which is a small tube *e*. Within the tube *e* is a locking-pin *f*, controlled by the spring *g*, one end of which bears against the partially-closed end of the tube *e* and the other end of which bears against the shoulder near the head of the locking-pin *f*. Sufficient space is left between the outer end of the tube *e* and the outer end of the cap *p* to permit the free movement of the pin *f*. The outer end of the pin *f* is upset, so as to prevent its being forced in too far by the spring *g*. A hole *o* receives the head of the pin *f*, and the runner *d* is locked in place by

the engagement therein of the pin *f*. Within the outer tube *a* slides telescopically the tube *h*, the lower end *i* of which is bulb-shaped and springy or yielding of itself. (See Fig. 4.) This springiness causes the movement of the tube *h* within the tube *a* to be accompanied by frictional resistance. This frictional resistance is sufficient to support the tube *h* and the weight carried by it. The larger diameter of the bulb is greater than the inner diameter of the tube *a*; but when the bulb is forced into the tube *a* it is compressed to the same diameter, so that there is no lost motion between the two tubes. The bulb is slotted to permit this compression. The lower end of the bulb portion is curved inwardly, so that there will be no danger of guillotining the pin-head in the operation of unlocking. Within the tube *h* slides the innermost tube *j*, the lower end of which is provided with the slotted-bulb construction shown in Fig. 4. The innermost tube *j* supports the usual music-rack; but it is evident that this tube may be dispensed with and the rack supported by tube *h*. To unlock the stand preparatory to folding it up, the tube *h* is pushed down until its lower end engages and forces outwardly the pin *f*, thereby unlocking the stand.

The slotted bulb-shaped end is springy and yielding of and in itself, and so permits me to obtain the necessary frictional resistance without resort to rubber plugs and the like; and it is also adapted to coact with the locking-pin. The locking mechanism is entirely inclosed, and so prevents any accidental unlocking of the stand.

What I claim is—

In a frictional sliding support, the combination of a base-tube, and an inner tube, slidable within said base-tube, said inner tube being slitted longitudinally at intervals near its lower end and expanded internally at the slitted portion to form a resilient enlargement closely contacting with the base-tube, thereby constituting an improved frictional resistance therein, substantially as specified.

JOSEPH B. QUINN.

Witnesses:

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