

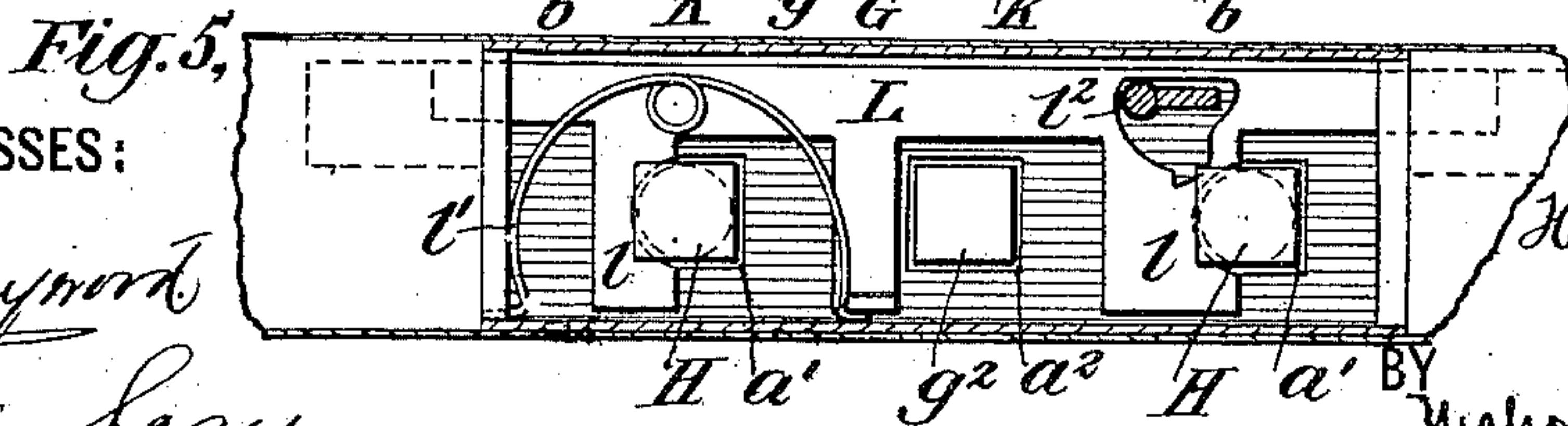
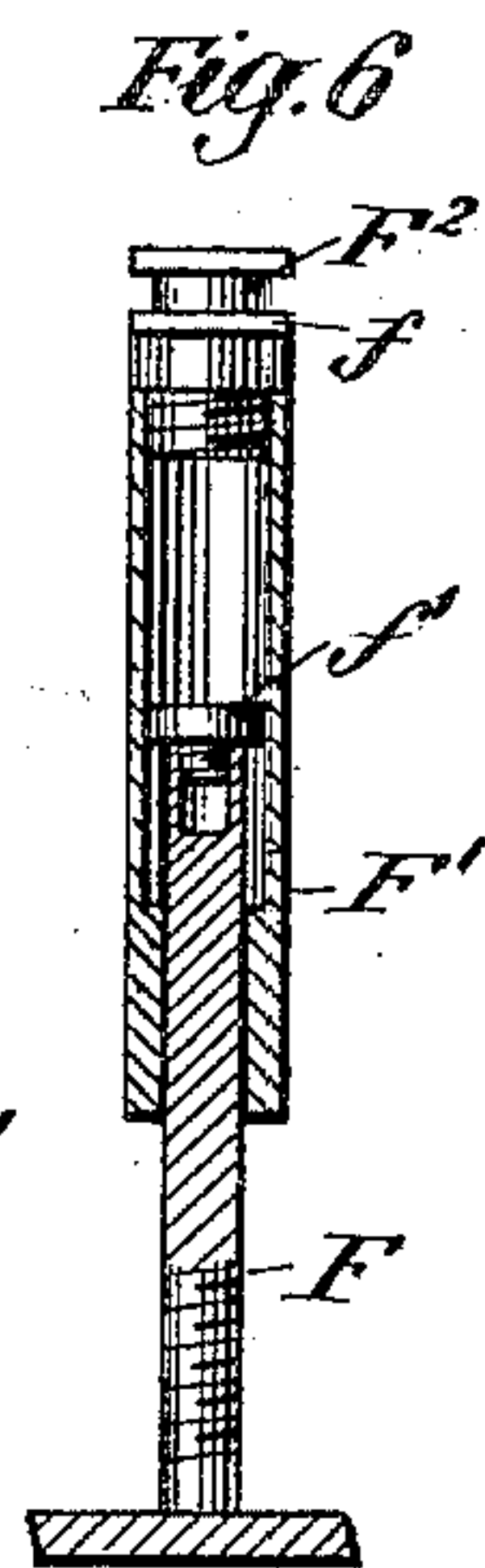
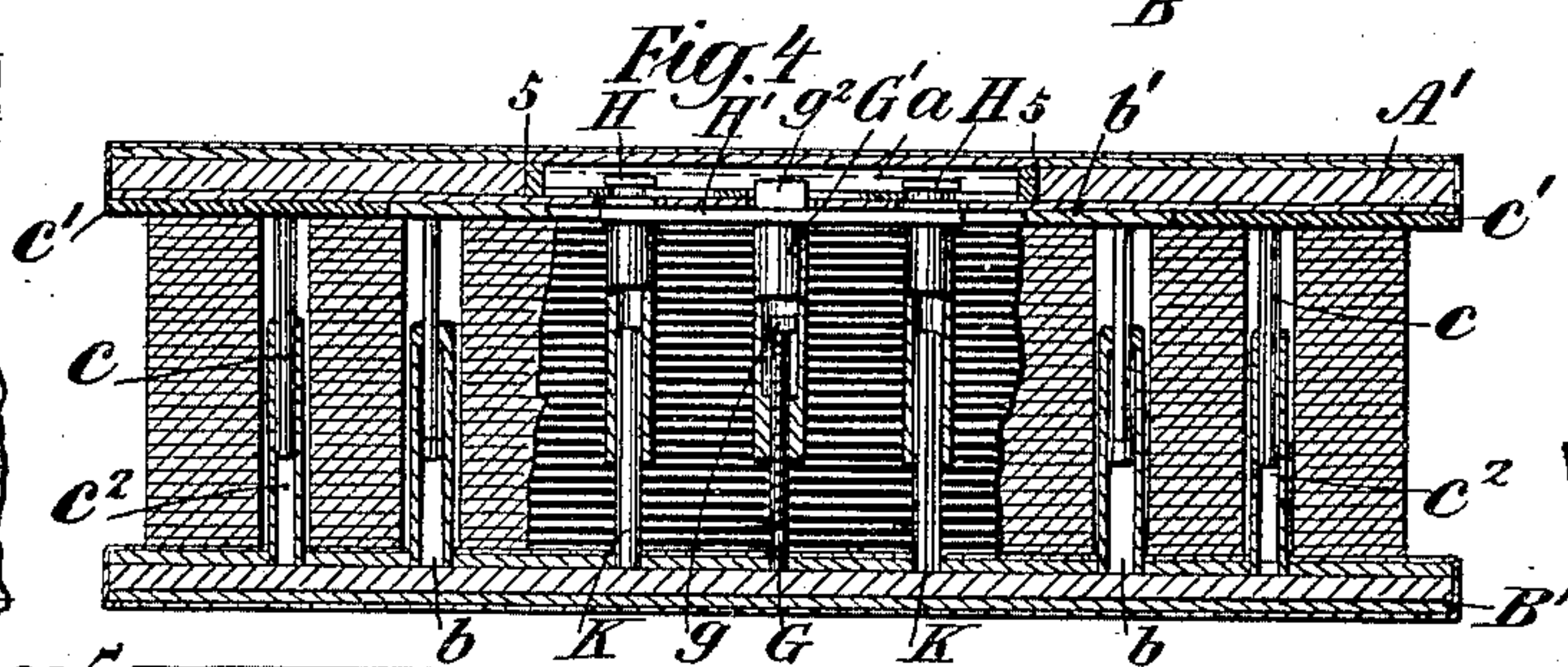
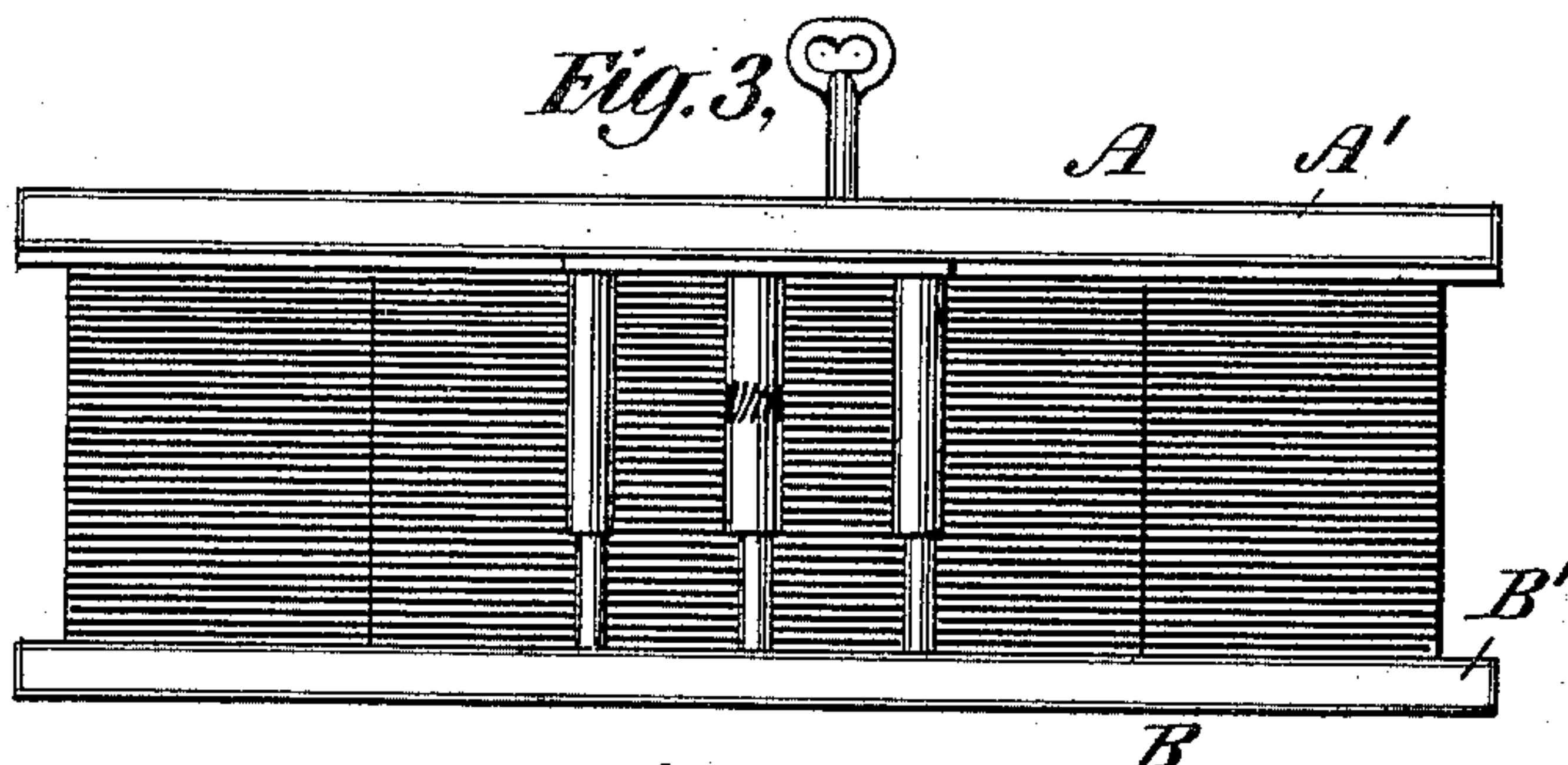
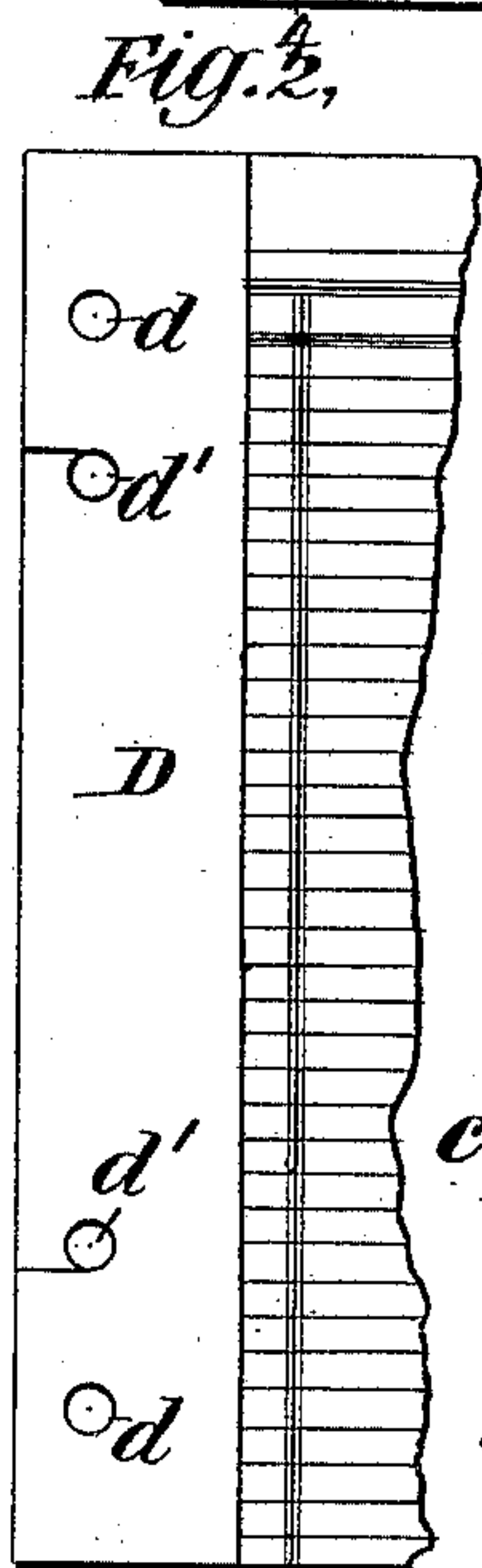
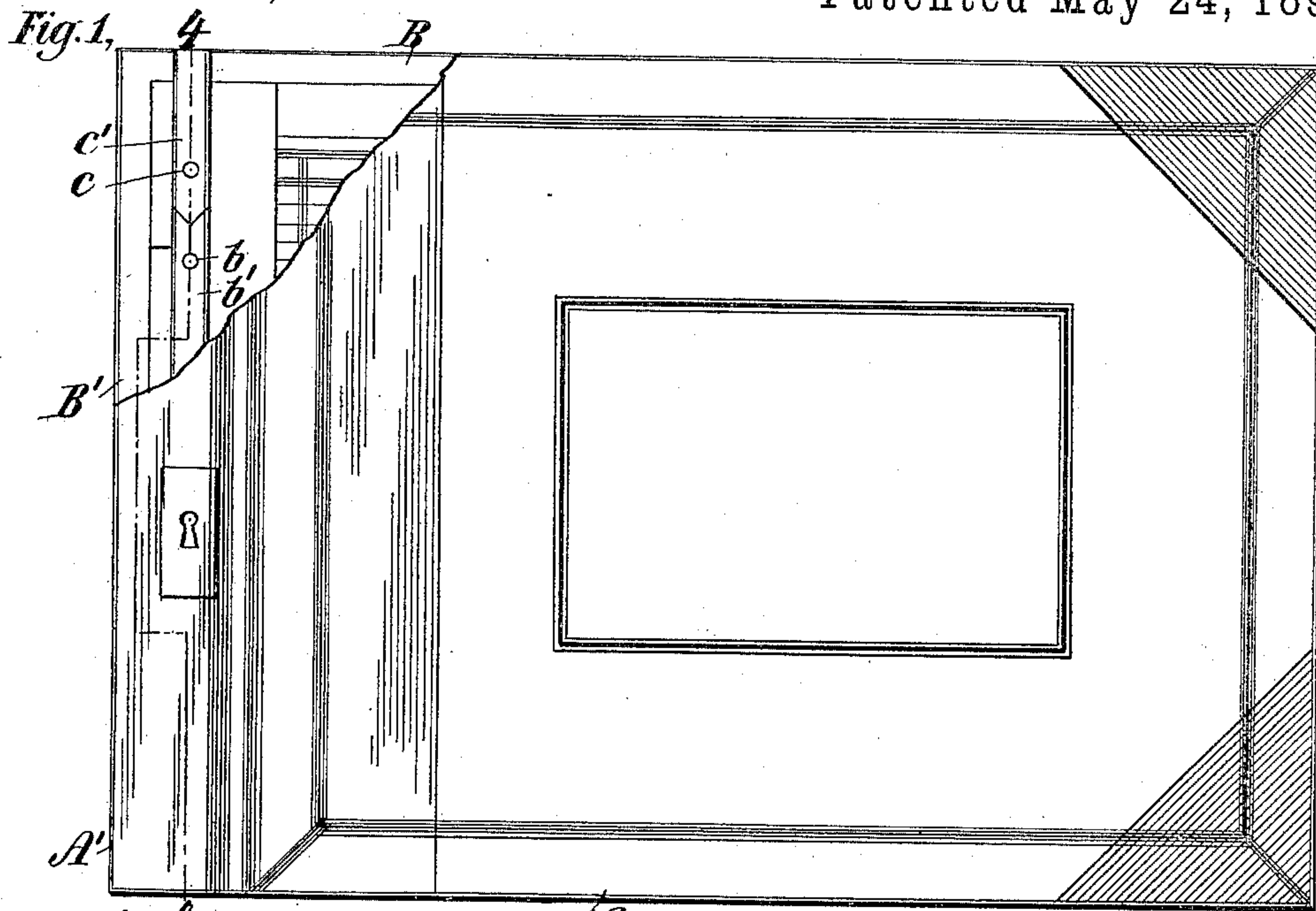
(No Model.)

2 Sheets—Sheet 1.

H. E. DADE.
TEMPORARY BINDER AND LOCK.

No. 604,561.

Patented May 24, 1898.



WITNESSES:

A. H. Haywood
Edwin Segar

INVENTOR

Harry E. Dade

BY *Nicholas M. Goodlett*
his ATTORNEY

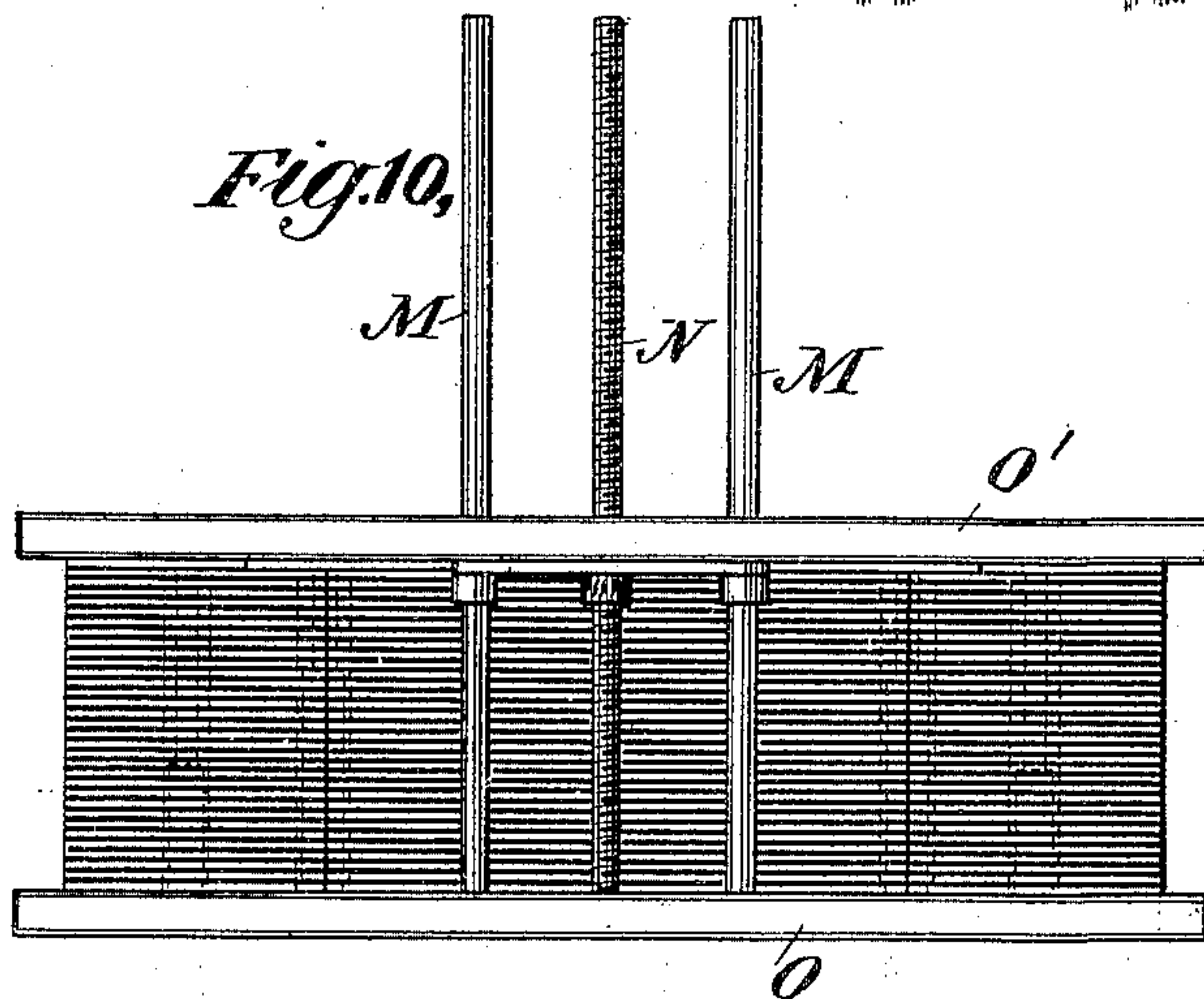
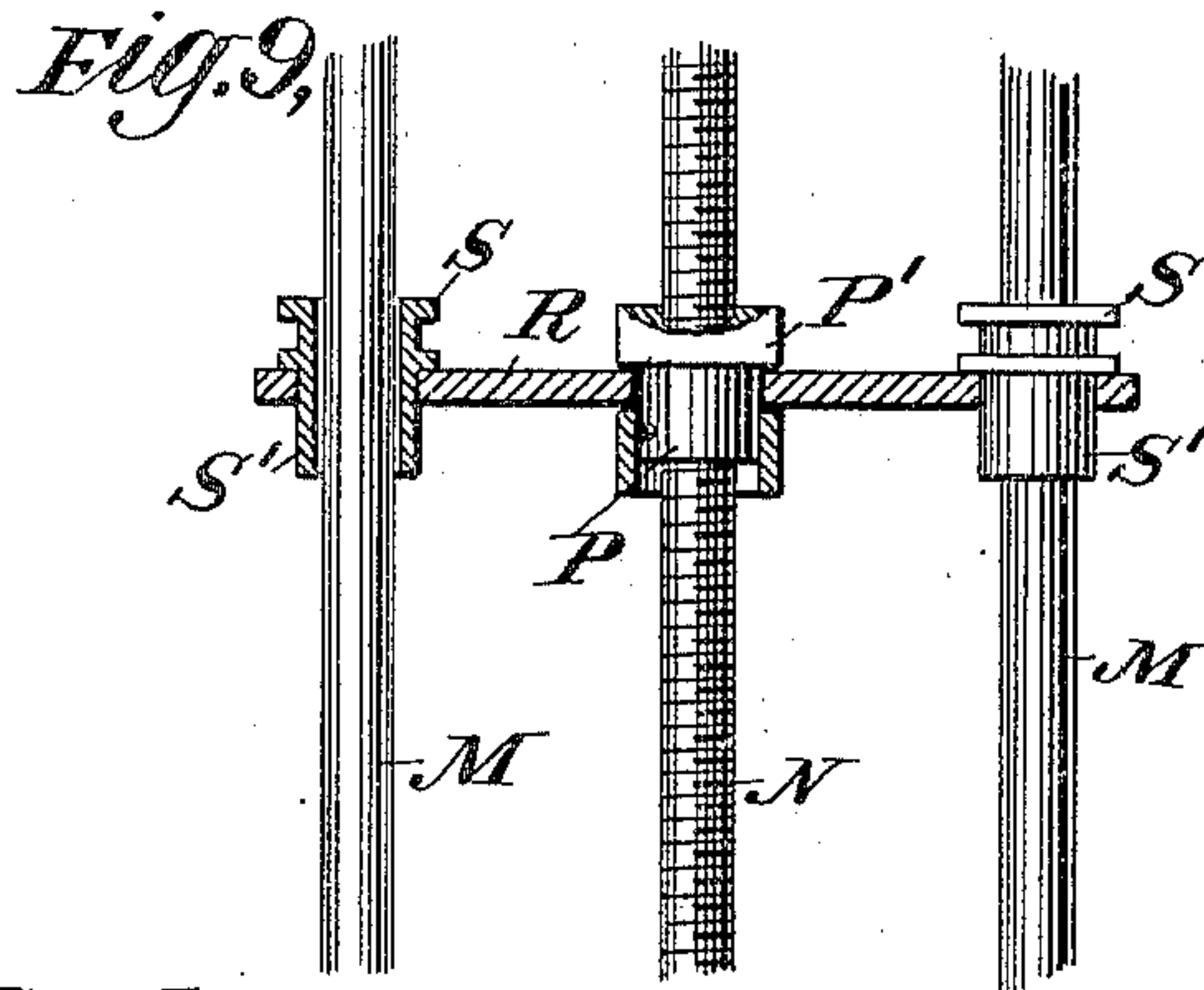
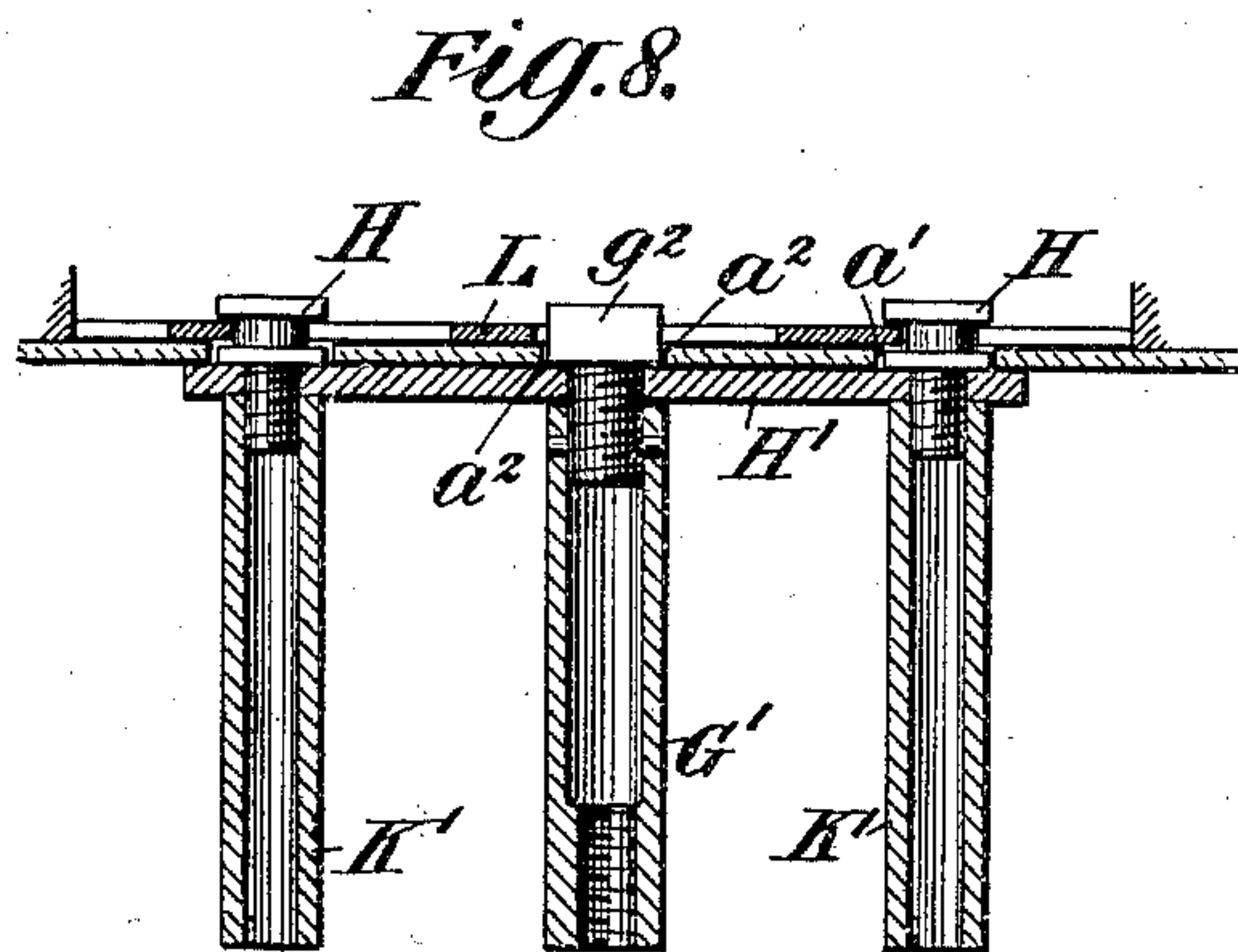
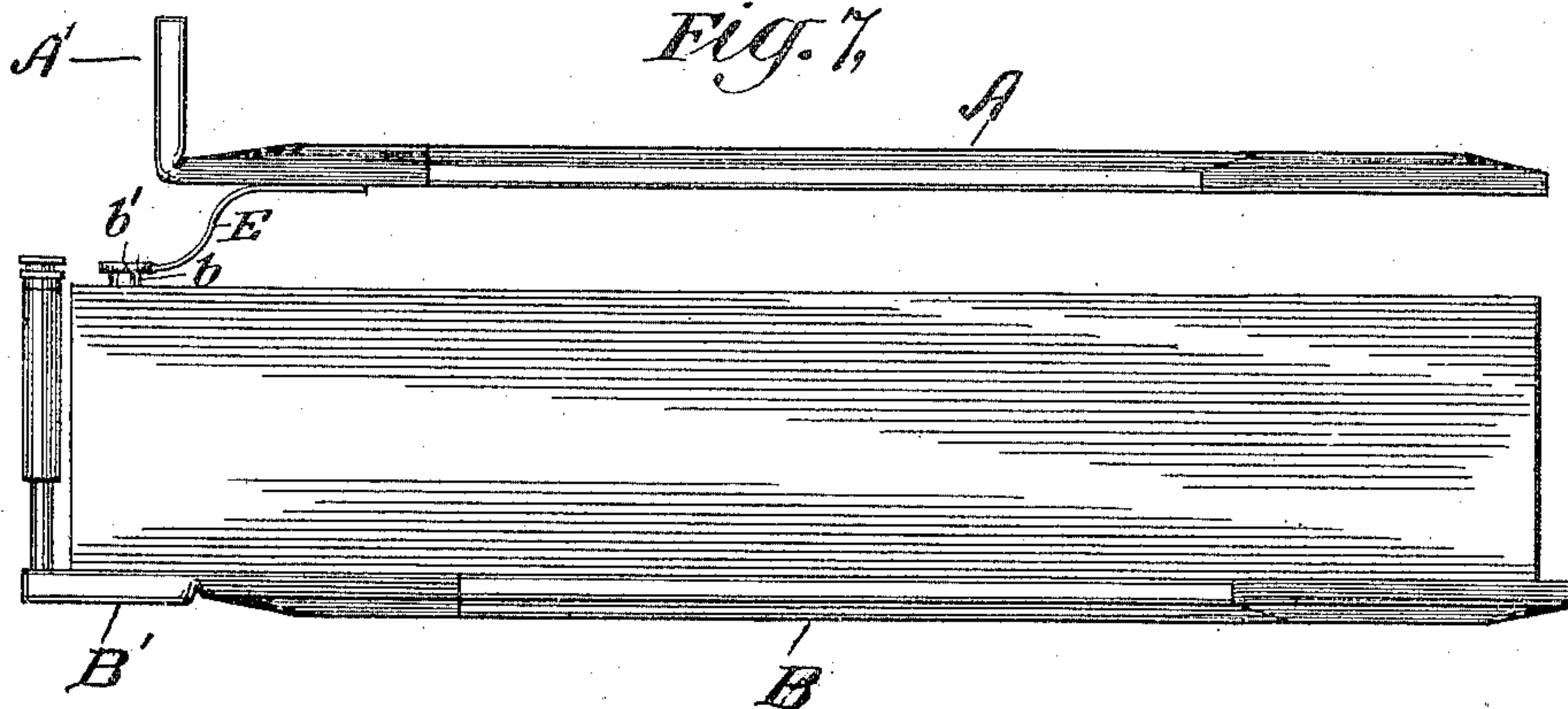
(No Model.)

2 Sheets—Sheet 2.

H. E. DADE.
TEMPORARY BINDER AND LOCK.

No. 604,561.

Patented May 24, 1898.



WITNESSES:

O. A. Maynard
Edwin Segar

INVENTOR

Harry E. Dade

BY

Nicholas M. Goodlett
his ATTORNEY

UNITED STATES PATENT OFFICE.

HARRY E. DADE, OF NEW YORK, N. Y.

TEMPORARY BINDER AND LOCK.

SPECIFICATION forming part of Letters Patent No. 604,561, dated May 24, 1898.

Application filed January 29, 1897. Serial No. 621,199. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. DADE, a citizen of the United States, residing in the city, county, and State of New York, have invented new and useful Improvements in Binders and Locks Therefor, of which the following is a specification.

This invention relates to binders, but for the most part to locks, especially such as may be used to fasten together the binding pieces or covers of a binder. The lock is herein specifically shown as used in connection with a binder, certain of its features being especially advantageous in this connection; but in its broader aspect it is applicable in many other and different relations, and I do not wish to be understood as limiting the lock in its use to a binder.

One object of the invention is to provide a strong, simple, and efficient lock that is capable of extension, so as to fasten two parts or pieces together securely at different distances apart.

Another object is to so arrange the lock that when the two pieces or parts are fastened together the lock cannot be extended, so as to permit the pieces to move apart, until they are unfastened.

Another object of the invention is to provide a lock of the character described especially adapted for use with a binder.

Another object is to improve certain features of binders, and more particularly such as are shown in the patent granted March 10, 1896, to Copeland and myself, No. 555,930.

The invention consists of the various features of construction hereinafter set forth.

In the accompanying drawings, forming part of this specification and illustrating embodiments of my invention as applied to binders, like letters of reference designate similar parts.

Figure 1 is a plan view of a binder, parts being broken away, embodying my invention. Fig. 2 is a plan view of the inner end of a sheet of paper adapted for use in the binder shown in Fig. 1. Fig. 3 is a rear end elevation of the binder. Fig. 4 is a sectional elevation on the line 4 4 of Fig. 1. Fig. 5 is a plan view of the locking devices on the line 5 5, Fig. 4. Fig. 6 is a sectional elevation of a single locking-post embodying my invention.

Fig. 7 is a side elevation of the complete binder, showing the covers unlocked and the upper cover lifted above the sheets. Fig. 8 is a sectional elevation showing part of one embodiment of the lock. Fig. 9 is an elevation, partly in section, showing part of another embodiment of the lock. Fig. 10 is an end elevation of a complete binder having the form of lock shown in Fig. 9.

Referring now to the particular embodiment of the invention shown in the drawings, A and B are the binding-pieces in the form of covers of a binder and having at their rear ends hinged strips A' and B', respectively. The strip B' is provided with two fixed extensible posts *b b*, rigidly connected at their upper ends by the piece *b'*.

c c are two removable posts having heads *c' c'* and arranged to slide in the tubes *c² c²*, respectively fixed to the strip B'.

D is a sheet of paper or other material adapted for use in the binder and having two closed apertures *d* and two open apertures *d'*. The binder and sheets as thus described are fully set forth and claimed in my patent above mentioned.

The upper cover A is movably but permanently attached to the strip *b'* by means of a flap or other flexible connection E, secured to the strip *b'* and to the cover in front of the strip A', whereby the cover A may be lifted a considerable distance away from the sheets, so that sheets may be conveniently removed or put in place in the binder. This binder is made expansible for the purpose of receiving more sheets from time to time, as occasion may require, and the covers or binding-pieces A and B are arranged to be fastened together by means of a lock which is extensible, so as to be capable of fastening the covers or pieces together whatever may be the distance separating them. The lock which I employ for this purpose is an important feature of the present invention and I will now proceed to describe it.

G is a post rigidly or otherwise attached in any suitable way to the strip B' of the piece or cover B and having one or more adjustable locking pieces or heads H. My invention contemplates the adjustment of these locking-heads by any suitable means, but the means shown in the drawings are those preferred,

especially when used in a binder. The post G, as shown, is threaded and carries a threaded member G', adapted to rotate on the post, so as to be adjustable thereon as far up as the head g. The member G' has fixed to it so as to rotate therewith a head g² and carries a yoke H', on which the locking-pieces H are fixed.

K K are two posts, generally plain and provided with adjustable members K' K', sleeved thereon and carried by the yoke H'. These posts are suitably secured to the piece B', preferably one on each side of the post G, and with their adjustable members K' K' serve to strengthen the parts and guide the locking-heads H in their movement. As thus described, it will be seen that the locking pieces or heads H are adjustable lengthwise of the post G by means of the threaded member G' and yoke H' and that the locking heads or pieces H are therefore carried by the post G. The upper cover A has in its strip A' a recess a, in which is carried a suitable locking device L, arranged to engage the locking-heads H. The bottom of the recess a is provided with openings a' a' to receive the locking-heads in order that they may be engaged by the locking device L.

In the best form of the lock it is desirable, and especially in a binder, to provide means to prevent the adjustment of the locking head or heads when they are engaged by the upper cover A or other piece to be fastened. This is provided for in the present embodiment of the invention and as shown in Figs. 4 and 8. As there shown, the bottom of the recess a has an opening a² to receive and fit the head g², so as to prevent its rotation when within the opening, and therefore the rotation of the member G', thus securing the locking-heads against adjustment when locked to the cover A. The head g² is shown as shouldered and square in plan view, and the opening a² is correspondingly shaped; but of course the head g² and opening a² could be variously formed, so as to prevent the rotation of the member G. If the opening a² is of any shape other than circular, it will prevent rotation of the head g² when the head is correspondingly shaped to fit the opening. My invention, however, includes any means to prevent the adjustment of the locking pieces or heads when they are engaged, whether by preventing at this time the rotation of the member G' or otherwise.

Any suitable locking piece or means may be employed with the cover A to engage the locking-heads H; but I have devised and employ in the best form of the invention a sliding piece L, having locking-faces l l, adapted to take under the locking-heads H and securely hold them. The locking piece or bolt L is generally provided with a spring l', tending to throw it into locking position. I prefer to employ a key to unfasten the bolt L from the heads H, so that only the person having possession of the key may control the

bolt. For this purpose the bolt L is provided with an opening l², adapted to receive the head of the key and so shaped that the key, after throwing back the bolt against the spring, is able to retain the bolt in this position. When the key is turned back again for the purpose of withdrawing it, the bolt L is carried forward into locking position and is firmly held there by the spring. This locking arrangement is especially advantageous in a binder because, for one reason, after the bolt L is thrown back both hands are free to lift the cover A from the locking-heads.

In Fig. 6 I have shown my extension-lock in the form of a single post. In this case the post F is threaded and has a threaded member F', similar to the post G and member G' in Figs. 4 and 8. This member F' has rigidly secured to it a locking-head F², so that the locking-head rotates therewith. This head, which is shown as the same in form as the heads H in Figs. 4 and 8, has a squared shoulder f, which is adapted to fit the opening a² in the bottom of the recess a, just as the head g² does. By this means when the head F² is locked its adjustment along the post F is prevented. The member F' is limited in its upward adjustment by the head f' on the post.

In Figs. 9 and 10 is shown another modification of the invention. In this case the two plain posts M M and the threaded post N between them are secured, as before, to the lower cover O of a binder. These posts, however, extend up through apertures in the upper cover O'. The adjustable members on the posts and locking-heads are quite similar to those shown in Figs. 4 and 8, except that in Figs. 9 and 10 the posts pass through the locking-heads and the adjustable members are shorter. In these figures the threaded member P on the post N has fixed to it the shouldered head P' and carries the yoke R, rigidly connecting and supporting the locking-heads S, which are formed integrally with the members S', sliding on the posts M. This form of the lock might also be changed to a single post by employing only the middle post N and changing the head P' into a locking-head, like the head F² in Fig. 6, as will be easily understood. The chief function of the threaded posts in all the figures is to adjust the locking-heads, and while I consider the threaded post the best means for this purpose my invention contemplates the use of any other suitable means for the purpose. The threaded post and threaded member, with its shouldered head, are also made available to secure the locking-heads against adjustment when engaged; but other means for this purpose could be employed without departing from my invention.

Many other changes besides those specified could be made without departing from the purview of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a binder, the combination with two

binding-pieces designed to be fastened together, with sheets of paper or other material between them, of a post attached to one binding-piece, a locking-piece adjustable up and down lengthwise the post and arranged to be locked with the other binding-piece to secure the said pieces together, and means whereby the said locking-piece is at such time secured against upward adjustment lengthwise the post, substantially as described.

2. In a binder, the combination with two binding-pieces designed to be fastened together, with sheets of paper or other material between them, of a threaded post attached to one binding-piece, a member adjustable up and down lengthwise the post and carrying a locking-piece arranged to be locked with the other binding-piece to secure the said pieces together, and means whereby the said locking-piece is at such time secured against upward adjustment lengthwise the post, substantially as set forth.

3. In a binder, the combination with upper and lower binding-pieces designed to be fastened together with sheets of paper or other material between them, a locking device carried by the upper binding-piece, a post attached to the lower binding-piece, a locking-piece adjustable up and down lengthwise the post and arranged to be engaged with the locking device of the upper binding-piece and means whereby at such time the said adjustable locking-piece is secured against upward adjustment lengthwise the post, substantially as set forth.

4. A lock adapted to fasten two pieces together, comprising a post designed to be secured to one of the pieces, a locking-head adjustable up and down lengthwise the post and adapted to be locked to the other of said pieces, and means to secure the adjustable locking-head against upward adjustment lengthwise the post when it is locked to the piece engaged thereby, substantially as set forth.

5. A lock adapted to fasten two pieces together, comprising a post designed to be secured to one of the pieces, a member adjustable up and down lengthwise the post and dependent upon rotation for its adjustment, a locking-head carried by said member and adapted to be locked to the other of said pieces, and means to secure the locking-head against adjustment when it is locked to the piece engaged thereby, substantially as set forth.

6. A lock adapted to fasten together two pieces, comprising two or more posts designed to be secured to one of the pieces and each having a member adjustable up and down along it, said members being connected so as to move together, one or more locking-heads moving with said members and adapted to be locked to the other of said pieces, and means to secure the adjustable members against upward adjustment along the posts when the

locking head or heads are locked to the piece engaged thereby, substantially as set forth.

7. A lock adapted to fasten together two pieces, comprising two or more posts designed to be secured to one of the pieces and each having a member adjustable up and down lengthwise it, said members being connected so as to move together and dependent for their adjustment upon rotation of one of them, one or more locking-heads moving with said members and adapted to be locked to the other of said pieces, and means to secure the rotatable adjustable member against rotation when the locking head or heads are locked to the piece engaged thereby, substantially as set forth.

8. A lock adapted to fasten two pieces together, comprising a post designed to be secured to one of said pieces having a locking-head adjustable up and down lengthwise the post, and a locking-piece designed to be carried by the other of said pieces adapted to engage the said locking-head, and means to prevent the upward adjustment of the locking-head when in engagement, substantially as set forth.

9. A lock adapted to fasten two pieces together, comprising two or more posts designed to be secured to one of said pieces, each of said posts carrying a member adjustable up and down along it, said members being connected so as to move together, one or more locking-heads moving with said members and adapted to be locked to the other of said pieces, substantially as set forth.

10. In a binder, the combination with two binding-pieces designed to be fastened together with sheets of paper or other material between them, of a post attached to one of said pieces, a locking-head adjustable up and down lengthwise the post, the other of said binding-pieces being provided on its under side with a recess adapted to receive the locking-head, said recess being provided with means adapted to engage the locking-head and fasten the binding-pieces together, and means to prevent the upward adjustment of the locking-head when in engagement, substantially as set forth.

11. In a binder, the combination with two binding-pieces designed to be fastened together with sheets of paper or other material between them, of a post attached to one of said pieces, a locking-head adjustable up and down lengthwise the post, the other of said binding-pieces being provided on its under side with a recess adapted to receive the locking-head, said recess being provided with means adapted to engage the locking-head and fasten the binding-pieces together and means to secure the locking-head at such time against upward adjustment, substantially as set forth.

12. In a binder, the combination with two binding-pieces designed to be fastened together with sheets of paper or other material

between them, the upper of said binding-pieces being provided with a recess and a locking-piece therein, of three posts fixed to the lower binding-piece, one of said posts being threaded and provided with a threaded member adjustable thereon by rotation and carrying two or more locking-heads connected so as to move together, the other two of said posts having adjustable members connected with and moving with the locking-heads, said locking-heads adapted to be received in the recess of the upper binding-piece and be locked therein and means to prevent the rotation of the said threaded member when the locking-heads are locked with the upper binding-piece whereby at this time the adjustment of the locking-heads is prevented, substantially as set forth.

13. The combination with two pieces designed to be fastened together, of a lock adapted to fasten the pieces together, comprising a threaded post, a threaded member adjustable up and down along said post and carrying a head, two posts in proximity to the threaded post, a yoke carried by the threaded member and adjustably connected with said two posts, locking-heads carried with the yoke, all of said posts being secured to one of the said two pieces to be fastened together, the other of said pieces being provided with an opening to receive the head of the threaded adjustable member and prevent its rotation and having means to engage the locking-heads, substantially as set forth.

14. The combination with two pieces designed to be fastened together, of a lock adapted to fasten the pieces together, comprising a threaded post and two plain posts secured to one of said pieces, the threaded post being disposed between the plain posts, a threaded member adjustable on the threaded post, a yoke carried by the threaded member and sleeved at its ends on the plain posts, two locking-heads carried by the yoke, one at each end thereof, the other of said two pieces to be fastened together being provided with means adapted to engage the locking-heads and also adapted to engage the threaded member so as to prevent its rotation and thereby secure the locking-heads against adjustment, substantially as set forth.

15. The combination with two pieces designed to be fastened together, of a lock adapted to fasten the pieces together comprising a threaded post secured to one of said pieces, an adjustable threaded member sleeved on the post and carrying a locking-head, the post having a stop to limit the upward adjustment of the threaded member, the other of said two pieces to be fastened together being provided with means for engaging the locking-head and at such time prevent the adjustment of the threaded adjustable member, substantially as set forth.

16. A lock adapted to fasten two pieces together, comprising a threaded post secured to one of said pieces, a threaded member adjust-

able on the post and having a shouldered head, a locking-head carried by the threaded member, the post having a stop to limit the upward adjustment of the threaded member, the other of said two pieces to be fastened together having an opening to receive the shouldered head and prevent its rotation, and also provided with means for engaging the locking-head, substantially as set forth.

17. A lock adapted to fasten together two pieces, comprising two or more posts designed to be secured to one of the pieces and each having a member adjustable up and down lengthwise it, said members being connected so as to move together, one or more locking-heads moving with said members and adapted to be locked to the other of said pieces, one or more of the posts having a stop or stops to limit the upward adjustment of the locking-head or locking-heads, and means to secure the adjustable members against upward adjustment lengthwise the posts when the locking head or heads are locked to the piece engaged thereby, substantially as set forth.

18. The combination with two pieces designed to be fastened together, of a lock adapted to fasten the pieces together, comprising a threaded post and two plain posts secured to one of said pieces, the threaded post being disposed between the plain posts, a threaded member adjustable on the threaded post, a yoke carried by the threaded member and sleeved at its ends on the plain posts, two locking-heads carried by the yoke, one at each end thereof, one or more of the posts having a stop or stops to limit the upward adjustment of the locking-head or locking-heads, the other of said two pieces to be fastened together being provided with means adapted to engage the locking-heads and also adapted to engage the threaded member so as to prevent its rotation and thereby secure the locking-heads against adjustment, substantially as set forth.

19. In combination with two pieces designed to be fastened together, a lock comprising a post secured to one of said pieces and having an adjustable locking-head, the other of said pieces having an opening to receive the locking-head, and a sliding bolt adapted to engage the locking-head, and means to prevent the upward adjustment of the locking-head at such time, substantially as set forth.

20. In combination with two pieces designed to be fastened together, a lock comprising a post secured to one of said pieces, a member adjustable on the post and dependent upon rotation for its adjustment, a locking-head carried by said member, the other of said two pieces having a sliding bolt to engage the locking-head, and provided with means to prevent the rotation of the said adjustable member when the locking-head is engaged by the bolt, substantially as set forth.

21. In a binder, the combination with two binding-pieces designed to be fastened together with sheets of paper or other material

between them, of a post secured to one of said binding-pieces, a member adjustable up and down along the post and dependent upon rotation for its adjustment, a locking-head 5 carried by said member, means carried by the other binding-piece to engage the locking-head and including means arranged to prevent the rotation of the adjustable member when the locking-head is so engaged, substantially as set forth. 10

22. In a binder, the combination with two binding-pieces designed to be fastened together with sheets of paper or other material between them, of two posts secured to one of 15 the binding-pieces, locking-heads adjustable on the posts and connected so as to move together, means for adjusting the locking-heads, and locking means carried by the other binding-piece arranged to engage the locking-heads and at such time secure them 20 against upward adjustment, substantially as set forth.

23. In a binder, the combination with two binding-pieces designed to be fastened together, of a locking-piece carried by one of the 25 binding-pieces and adjustable to and from the same, a locking device carried by the other binding-piece and arranged to engage the adjustable locking-piece and means to secure the adjustable locking-piece at such time 30 against upward adjustment, substantially as set forth.

24. In a binder, the combination with two binding-pieces permanently connected together but movable to and from each other, 35 one or more extensible fixed posts and one or more removable posts to receive and secure sheets in the binder, a locking-piece carried by one of the binding-pieces and adjustable to and from the same, and locking means 40 carried by the other binding-piece arranged to engage the adjustable locking-piece and at such time secure it against upward adjustment, substantially as set forth.

25. In a binder, the combination with two 45 covers, having hinged strips at their rear ends, extensible posts and removable posts to receive and secure sheets in the binder, the extensible posts being fixed to the hinged strip of the lower cover and connected together by 50 a rigid strip at their tops, a flexible piece or flap connecting the said rigid strip with the upper cover at its rear end in front of its hinged strip, and means for locking the covers together, substantially as set forth. 55

26. In a binder, the combination with a lower cover provided with a post having an adjustable locking-head, of an upper cover provided with an opening as a^2 in one end adapted to receive the locking-head, a sliding 60 bolt in a recess in the end of said cover to engage the locking-head and having a key-receiving opening as l^2 whereby the bolt may be operated, the upper cover having a key-hole to give access to a key to the said opening l^2 , and means for preventing adjustment 65 of the locking-head when in engagement with the sliding bolt, substantially as set forth.

27. In a binder, the combination with a lower cover provided with a post having an 70 adjustable locking-head, of an upper cover provided with an opening as a^2 in one end adapted to receive the locking-head, a sliding spring-bolt in a recess in the end of said cover to engage the locking-head and having a key- 75 receiving opening as l^2 whereby the bolt may be operated, the upper cover having a key-hole to give access to a key to the said opening l^2 , and means for preventing adjustment 80 of the locking-head when in engagement with the sliding bolt, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY E. DADE.

Witnesses:

NICHOLAS M. GOODLETT, Jr.,
HELEN L. BLONDEL.