

No. 630,668.

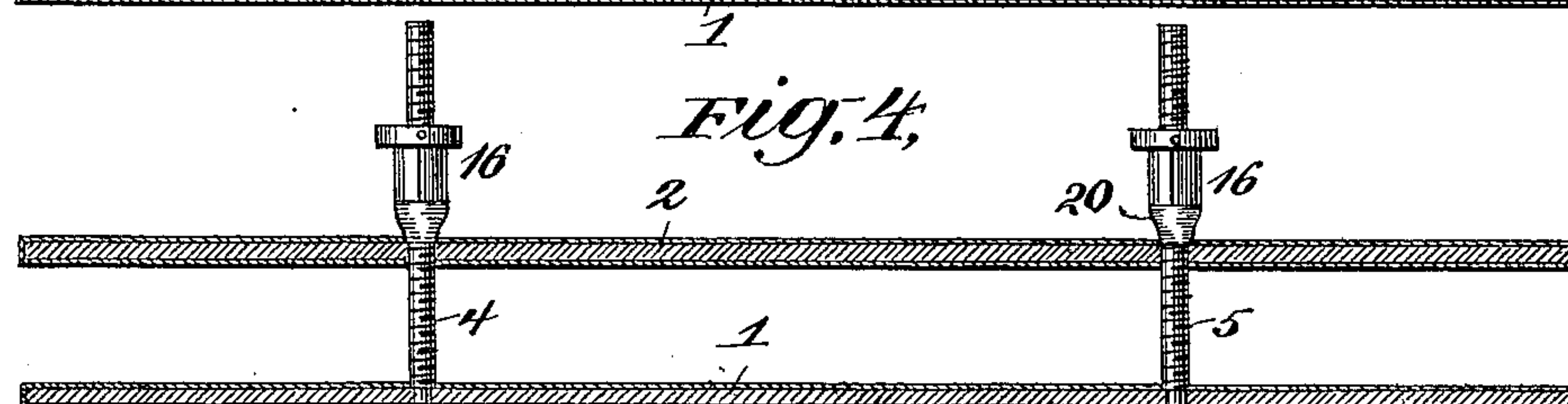
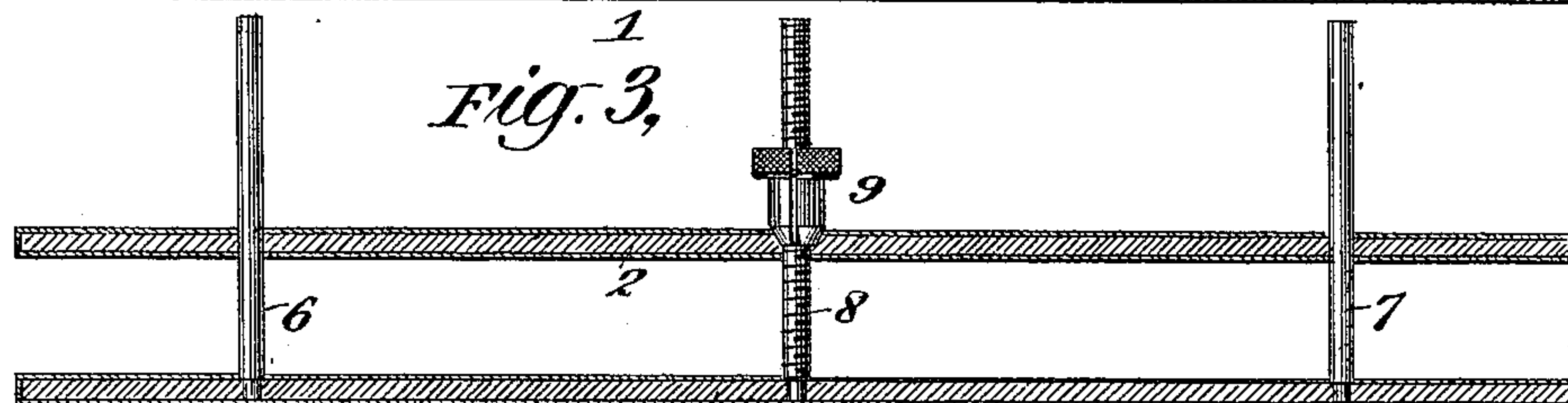
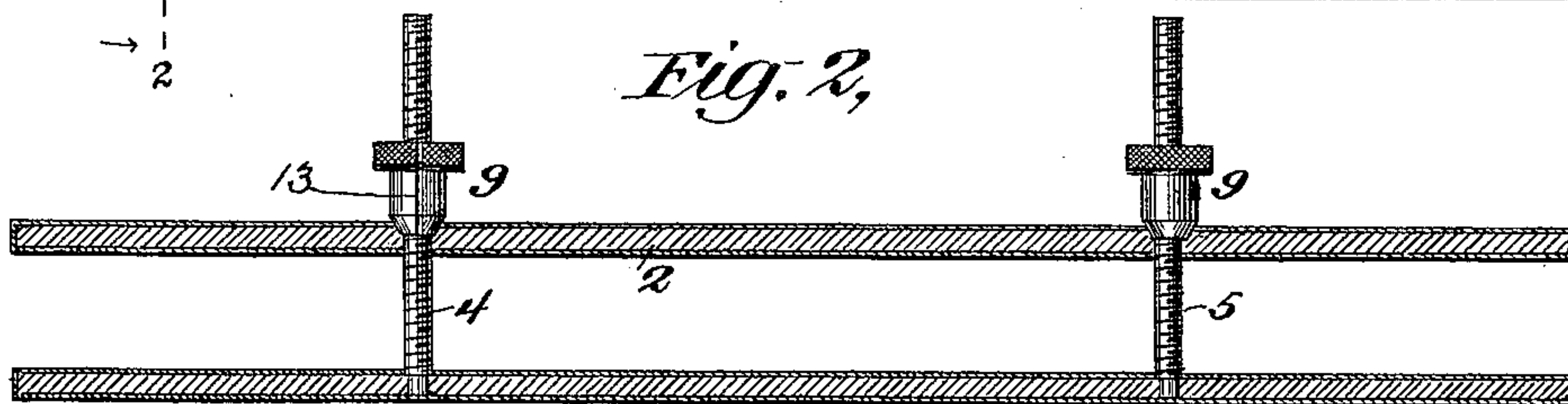
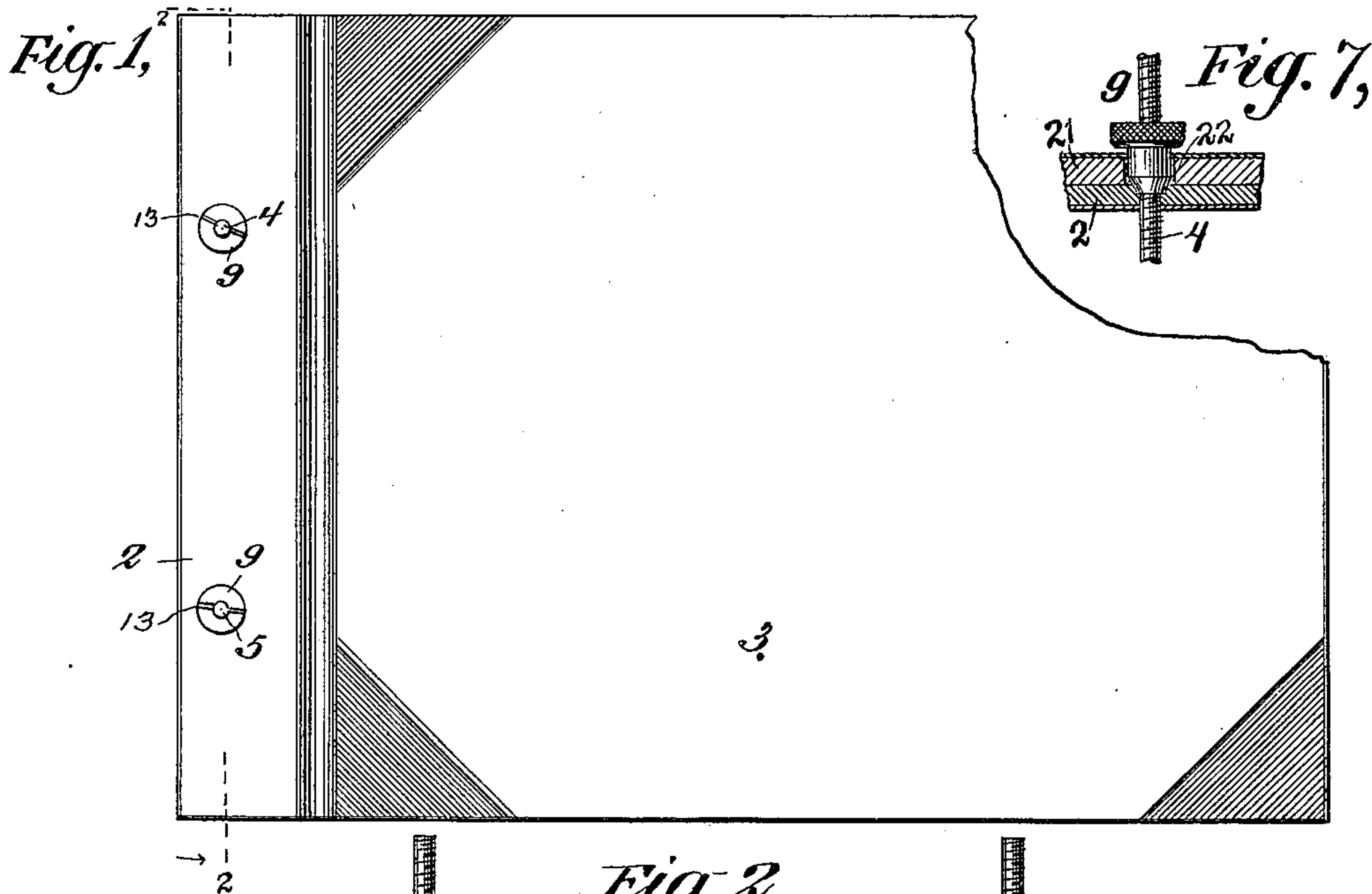
Patented Aug. 8, 1899.

H. E. DADE.

BINDER.

(Application filed Mar. 27, 1899.)

(No Model.)



WITNESSES:

D. N. Hayworth
John O. Temple

Fig. 5,

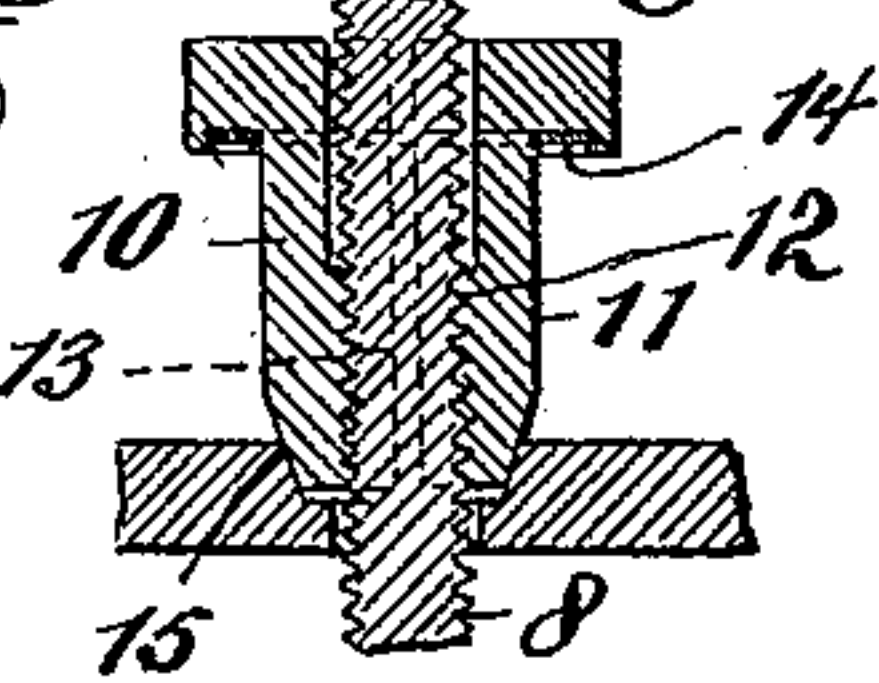
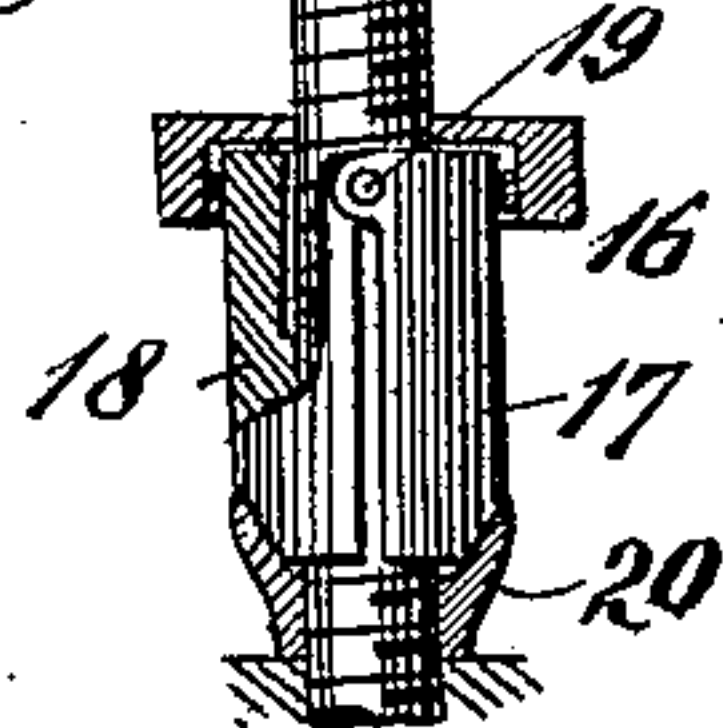


Fig. 6,



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HARRY E. DADE, OF MOUNT VERNON, NEW YORK.

BINDER.

SPECIFICATION forming part of Letters Patent No. 630,668, dated August 8, 1899.

Application filed March 27, 1899; Serial No. 710,572. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. DADE, a citizen of the United States, and a resident of Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Binders, of which the following is a specification.

This invention relates to binders, and has for its object to provide an inexpensive, convenient, and reliable binder in which the sheets may be separately inserted and removed.

The invention consists of the combination of features hereinafter set forth.

In the drawings forming part of this specification and in which like numerals of reference designate corresponding parts in the several figures I have shown several of the various embodiments of which my invention is susceptible.

Figure 1 is a plan view of a binder embodying the invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Figs. 3 and 4 are similar sections showing modifications. Figs. 5 and 6 are vertical sections showing two different forms of a sleeve forming a feature of the invention. Fig. 7 is a fragmental sectional view of a detail.

1 and 2 are binding-strips generally in practice, hinged in the usual way to the covers 3 and 3', the cover 3' not being shown, so as to hold sheets of paper or other fabric between the strips. The strip 1 is provided with one or more posts fixed thereto adapted to engage the sheets, as by entering holes or recesses in the sheets. One at least of these posts is screw-threaded, so that if only one post is used it will be threaded. In their preferred form the threaded post is made of solid metal with exterior threads; but of course this particular form is not always essential. In Figs. 1, 2, and 4 only two posts 4 and 5 are shown, both being sheet-engaging posts and both threaded. In Fig. 3 are shown two smooth sheet-engaging posts 6 and 7 and a threaded post 8, which may or may not engage sheets, as desired. Each of the threaded posts in all the figures is provided with a sleeve capable of sliding back and forth thereon and having expanding and contracting faces adapted to mesh and unmesh with the threads on its post. The sleeves are preferably made in the

form shown, having interior threads to mesh with the exterior threads of the posts. Thus when the sleeve has its faces disengaged from the threads of the post it may slide freely on the post, and when it has its faces engaged with the threads on the post it cannot slide on the post, but may be screwed up or down thereon until arrested. The sheets to be held on the binder lie between the strips 1 and 2, the sleeve being above the strip 2 on its post.

In Figs. 1, 2, 3, and 5 is shown one of the various forms of sleeves that may be employed. In these figures, 9 is the sleeve, made in two halves 10 and 11, which in this instance provide the expanding and contracting faces, which are adapted by the interior threads 12, formed thereon, to engage and disengage with the threads of the post, as the post 8. The halves of the piece 9 are separated by slits 13 and are connected together near their top by the fixed circular spring 14, so that the said faces may be expanded and contracted on the post, the springs bending as the halves move to and from each other.

In Figs. 2, 3, 5, and 7 the strip 2 is shown as provided with a tapered cupped seat to receive the lower tapered end of the sleeve 9. In Fig. 5 the cupped seat is numbered 15. This cupped seat 15 and the tapered end of the piece 9 constitute means for holding the expanding and contracting threaded faces in mesh with the threads on the post. The cupped seat 15 slides freely along the post, and inasmuch as it is formed in the strip 2 it moves therewith.

In Fig. 6 is shown another form of the threaded sleeve. In this case the sleeve 16 is constructed substantially like the sleeve 9, except that the two parts 17 and 18 are pivotally connected together by the pivot-pin 19. In this case, moreover, the cupped seat 20 is not formed on the strip, but is a separate piece and of such dimensions as to be capable of sliding freely on the post. While there are important advantages in using the strip 2, yet its use is not always essential, and it may be dispensed with without departing from the scope of my invention. If this strip 2 were not used, the sheets could be held down by a sleeve and its cupped seat either alone or in conjunction with any additional means suitable for the purpose.

In the operation of the forms of the invention shown in the drawings when it is desired to remove a sheet from the binder the sleeve is rotated until its threaded faces have
 5 advanced sufficiently far along the post and outward from the cupped seat which holds these faces in mesh with the threads of the post to permit the faces to become disengaged from such threads of the post, when the sleeve
 10 may be slipped freely along the post without further rotation. If two threaded posts are employed, the sleeve of this second post will also be operated in the same way as the one just described. The sheets in the binder will
 15 then be unlocked and may be removed. If the sheets have closed holes, they will be slipped off the post or posts, the sleeve or sleeves having been first entirely removed from the post or posts. If also the strip 2 is
 20 employed, of course it must be also slipped off the posts before such sheets can be removed. If the sheets have recesses or open holes, the sheets may be pulled off the posts transverse thereto without entirely removing
 25 the sleeve or sleeves or the strip 2. In locking the binder the operation is reversed, as will be readily understood.

It will be noted that when the threads of a sleeve have become engaged with the threads
 30 of its post, as when the sleeve has entered its cupped seat, the sleeve may be screwed down, so as to squeeze the sheets in the binder together with great force.

In Fig. 7 is shown a filling-strip 21, which
 35 may be used, if desired, adapted to be placed over the strip 2 and having apertures 22, designed to receive the sleeves 9, so that the sleeves are almost covered by the strip 21. If preferred, the advantage of the strip 21
 40 may be secured by making the strip 2 about as thick as the two strips 2 and 21 together and forming recesses above the cupped seats 15 in the strip 2 to correspond with the apertures 22 of the strip 21, as will be readily un-
 45 derstood.

The cupped seats 15 and 20, it will be seen, are arranged to slide freely along the posts on which the sleeves work, so that the sleeves may be quickly locked on their posts at any
 50 point thereof by means of the cupped seats. In this way the cupped seats and sleeves work efficiently together whatever may be the number of sheets in the binder. The operation of the cupped seat is effectively accomplished
 55 whether the cupped seat is inseparable from the strip 2, as in Figs. 2 and 5, or is separable therefrom, as in Figs. 4 and 6. In both cases the freely-moving cupped seat operates to hold the threaded faces of the sleeve con-
 60 tracted on the post. The sleeves and their cupped seats are shown as having their meeting faces tapered. This is the preferred, but not essential, form.

It is to be understood that my invention is
 65 not confined to the embodiments herein shown

and specifically described, as the invention is susceptible of various other embodiments, such as will occur to one skilled in the art.

Having thus described my invention, what I claim as new, and desire to secure by Letters
 70 Patent, is—

1. The combination, for a binder, of a binding-strip provided with a fixed threaded post, an internally-threaded sleeve movable on
 75 said post and split so as to be capable of expanding and contracting so as to unmesh and mesh with the threads on the post, whereby when the sleeve is contracted its threads mesh with the threads on the post and when ex-
 80 panded it may be slipped freely along said post, and a cupped seat sliding freely on said post for holding the sleeve contracted on the post.

2. The combination, for a binder, of a binding-strip provided with a fixed threaded post,
 85 an internally-threaded sleeve movable on said post and split so as to be capable of expanding and contracting so as to unmesh and mesh with the threads on the post, whereby when the sleeve is contracted its threads mesh
 90 with the threads on the post and when expanded it may be slipped freely along said post, and a binding-strip apertured to receive the post and having a cupped seat for holding the sleeve contracted on the post. 95

3. The combination, for a binder, of a binding-strip provided with two or more fixed
 100 posts at least one of which is threaded, an internally-threaded sleeve movable on a threaded post and split so as to be capable of ex-
 105 panding and contracting so as to unmesh and mesh with the threads on the post, whereby when the sleeve is contracted its threads mesh with the threads on the threaded post and when expanded it may be slipped freely
 110 along said threaded post, and a cupped seat sliding freely on said post for holding the sleeve contracted on the post.

4. The combination, for a binder, of a binding-strip provided with two or more fixed
 110 posts at least one of which is threaded, an internally-threaded sleeve movable on a threaded post and split so as to be capable of ex-
 115 panding and contracting so as to unmesh and mesh with the threads on the post, whereby when the sleeve is contracted its threads mesh with the threads on the threaded posts and when expanded it may be slipped freely
 120 along said threaded posts, and a binding-strip apertured to receive the posts and having a cupped seat for holding the sleeve contracted on the posts.

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

HARRY E. DADE.

Witnesses:

EDWIN SEGER,

NICHOLAS M. GOODLETT, Jr.