

C. H. WILEY.
BINDER.

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990,323.

Patented Apr. 25, 1911.

Fig. 1.

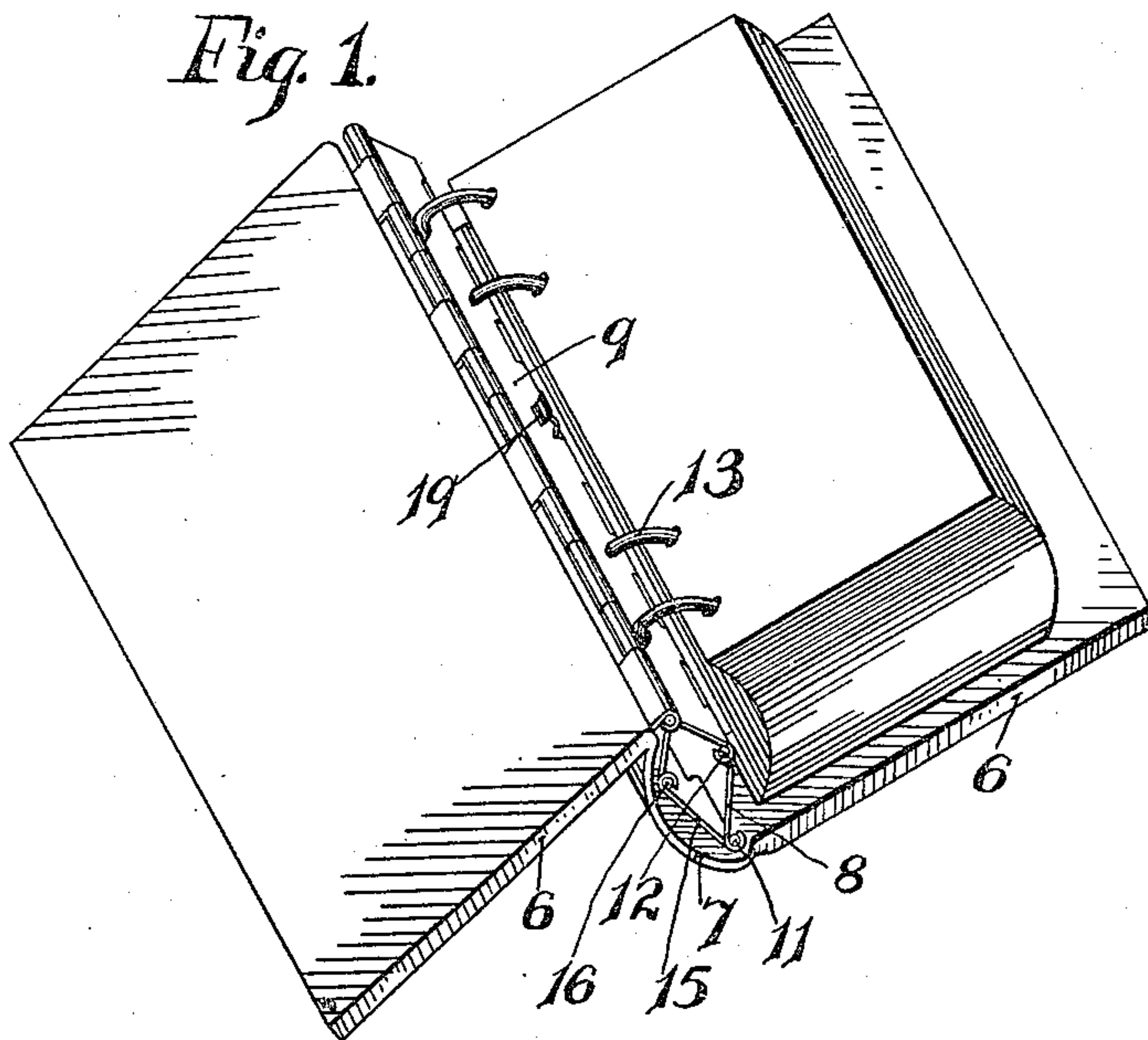


Fig. 2.

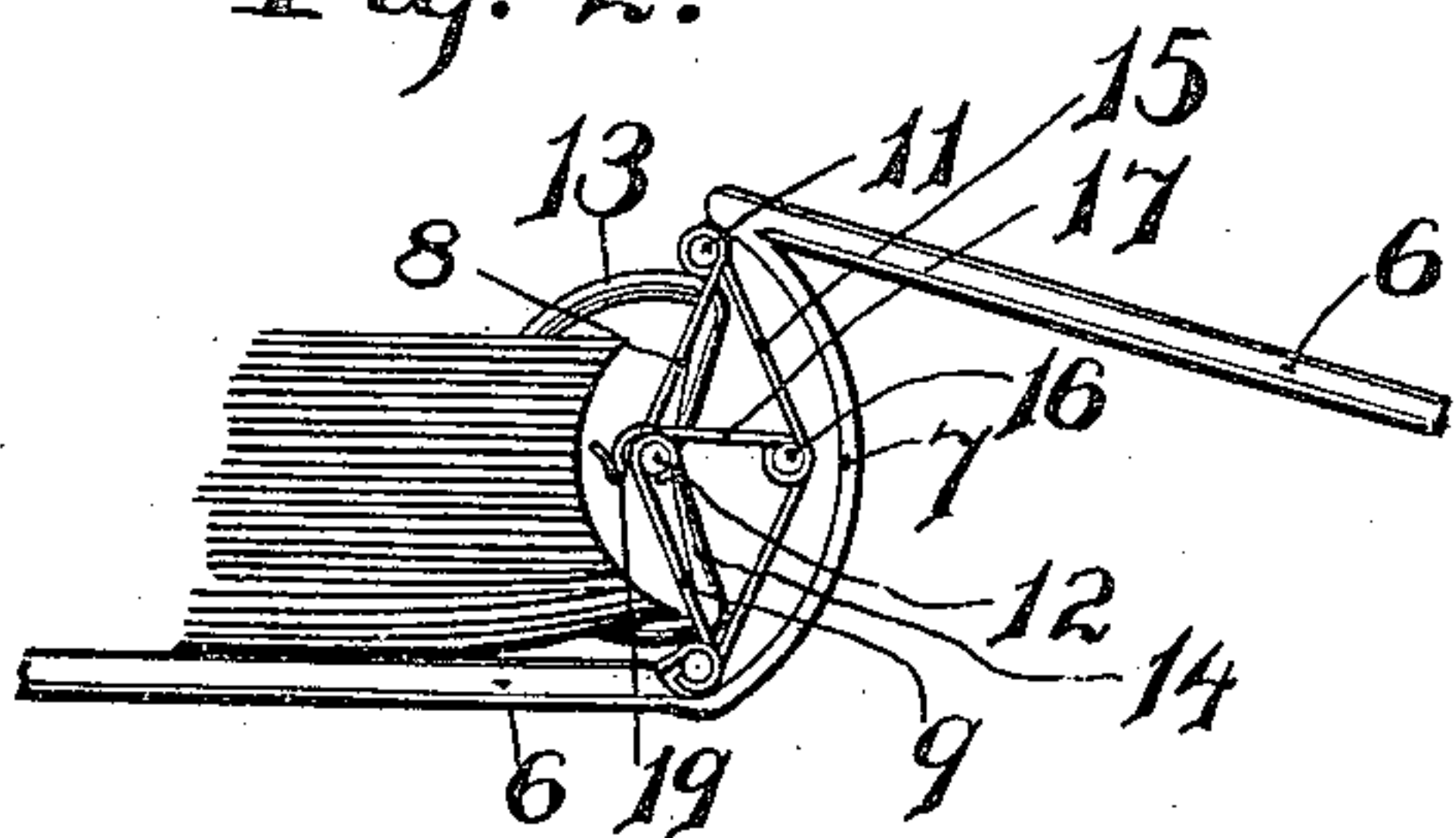


Fig. 4.

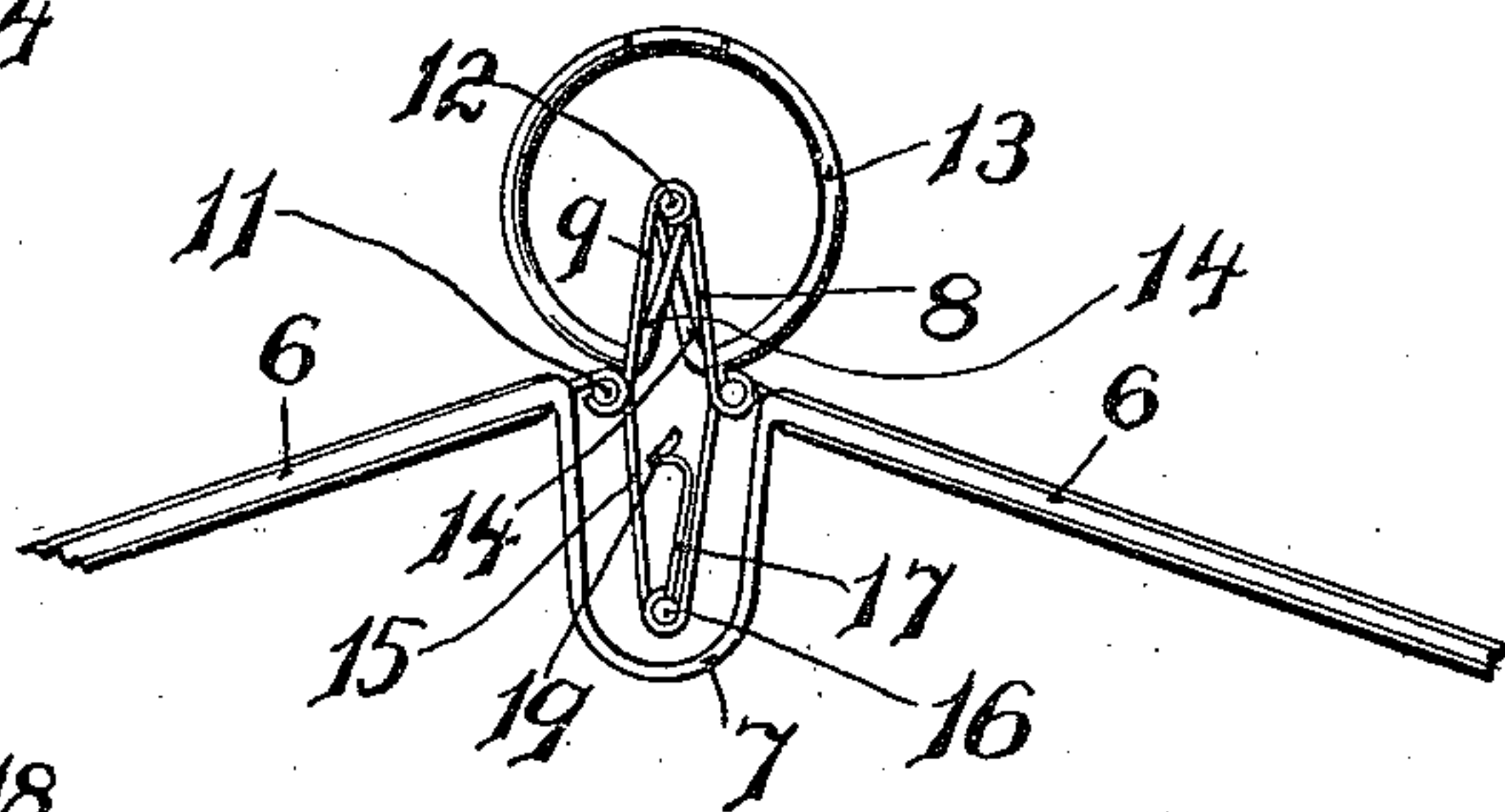
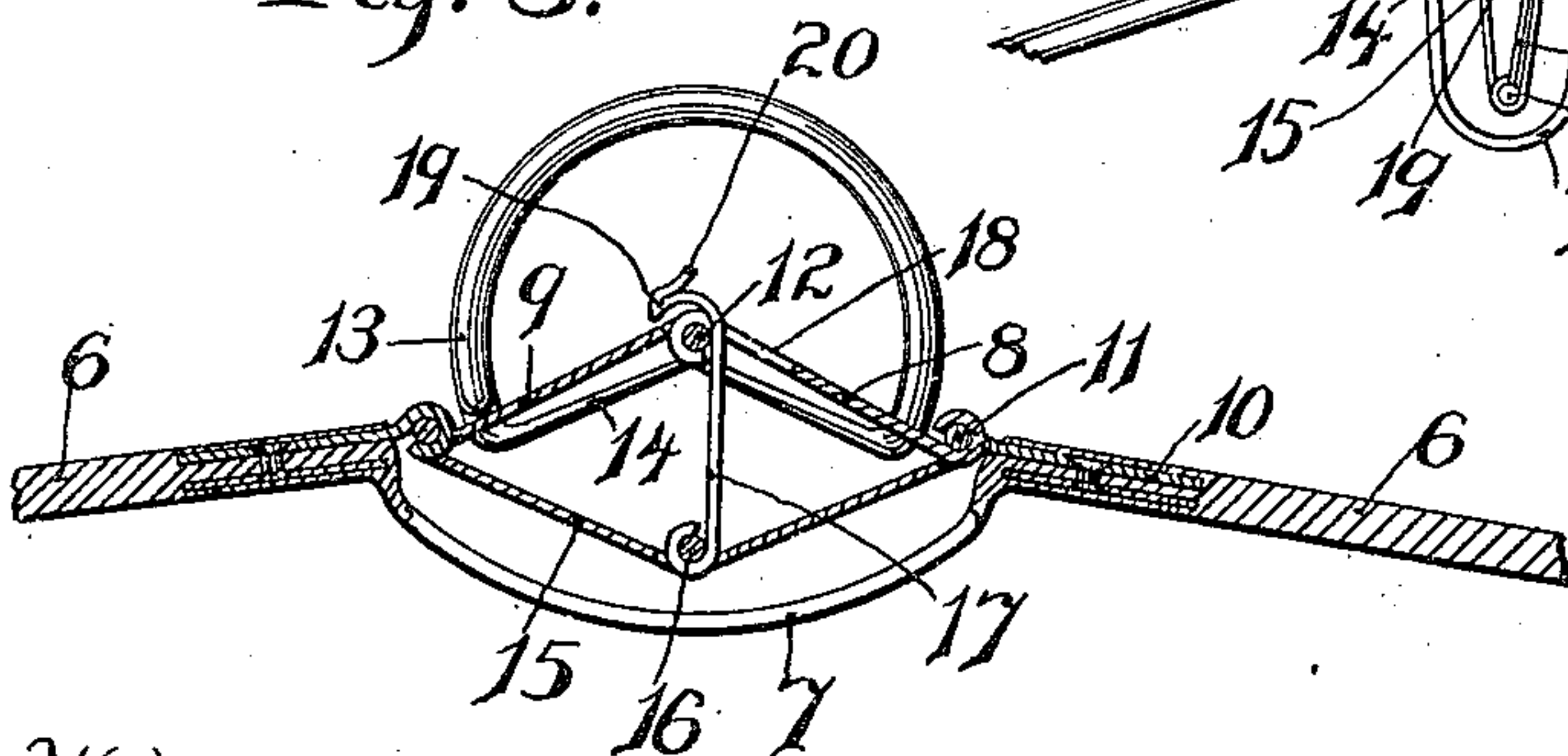


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BINDER.

990,323.

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To all whom it may concern:

Be it known that I, CLARENCE H. WILEY, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new Improvement in Binders, of which the following is a specification.

My invention relates to the class of devices for removably securing a number of leaves together so that they may be conveniently used, and the object of the invention is to provide a device of this class having novel features of advantage and utility.

A device embodying my invention and in the use of which the objects and advantages herein set out may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved binder. Fig 2 is a detail view illustrating the operation of the binder, the leaves being located in the opposite position from that shown in Fig. 1. Fig. 3 is a like view showing the position the parts will assume when the leaves are about equally divided with a half on each side of the binder. Fig. 4 is a detail view showing the parts in position to permit the placing of leaves in or removal from the binder.

A binder of the general class herein illustrated and described should embody a construction which will allow the greatest number of leaves to be held and at the same time allow for free and easy movement of the leaves as they are turned from side to side.

I have found that free and easy movement of the leaves may be obtained in a structure which will roll from side to side as the leaves are turned as in the action of a regularly bound book.

My invention contemplates a structure possessing these advantages, and in the form of construction selected by me for the purpose of disclosure of my invention herein and as shown in the drawings the numeral 6 denotes covers of any suitable construction and material united by a back 7 preferably of flexible material. These covers are of proper size to inclose the leaves to be held by my improved binder, which is secured to the covers for this purpose.

Supporting plates 8—9 are each pivotally secured to the covers 6, in the form of construction herein shown anchor plates 10 being employed and to which the supporting plates are attached as by means of pins 11

extending through knuckles in the supporting and anchor-plates. The supporting plates 8—9 are pivotally connected by a pintle 12 extending through knuckles in the two plates, and binder hooks 13 are also pivotally mounted upon the pintle 12. These hooks each include a supporting arm 14, having one end mounted upon the pivot 12 and the other supporting the binder hooks 13 which are preferably integrally formed with the arm, the latter being located radially of the circle on the arc of which the hook is formed.

The mechanism hereinabove described is of old and well-known construction and except in combination with other elements forms no part of my present invention.

The arms 14 are preferably located underneath the plates 8—9, the connection or hook projecting through the plate to the outer side, as plainly shown in Fig. 3 of the drawings. This construction holds the hooks in place and assists in imparting rigidity thereto.

In order to secure the benefits of rolling action, as hereinbefore set out, I employ a rest connecting the supporting plates 8—9, upon which rest the binder may turn as the leaves are thrown from side to side. This rest should be flexible in order to allow the supporting plates 8—9 to swing so that the hooks 13 may be positioned to receive leaves or allow leaves to be removed therefrom.

In the preferred form of construction and as shown herein this rest includes two plates 15 pivotally connected at their outer edges to the plates 8—9, as by means of pins 11. The meeting edges of the two plates are pivotally secured as by a pin 16 passing through knuckles in the two parts.

While I have shown and described herein a single plate extending from end to end of the structure as forming one member of the rest, such rest need not necessarily be composed of two parts hinged together at the center, and when the rest includes a construction in which the meeting edges are hinged together it need not be limited to two members so pivotally connected, as any structure flexibly connecting the plates 8—9 and forming a rolling rest will be deemed to come within the spirit and intent of the invention.

My improvement contemplates means for firmly holding the rest and the plates 8—9 in the relative position shown in Fig. 3 and

prevent them from assuming the positions shown in Fig. 4. This may be accomplished in several ways, as by forming a pivot or pivots sufficiently stiff to prevent free pivotal action, and permit such pivotal action only when outside force is applied to bring the parts into the position shown in Fig. 4. Such a structure is contemplated by the drawings herein, but in order to insure such retention of the parts a holder 17 may be employed to positively lock the parts. Any form of holder positively locking the parts will be considered as within the spirit and intent of the invention, one form being shown herein consisting of a bar 17 pivotally supported upon the pin 16 and extending through an opening 18 in the plate 8, the end of this bar having a hook 19 to engage the pintle 12, and a thumb piece 20 by means of which the hook may be manipulated.

The invention may be present in a device constructed differently from the preferred form herein specifically illustrated and described, and I do not therefore limit my invention to a device so constructed.

I claim—

1. A pair of plates flexibly connected, arms pivotally connected and located on one side of said plates, and binder hooks rigidly secured to said arms and projecting through said plates and with the ends of the hooks arranged to lap past each other.

2. A pair of plates pivotally connected, arms pivotally mounted upon the axis of the pivot of said plates, and binder hooks rigidly secured to said arms and projecting through the plates and with the inner ends of the hooks lapping past each other.

3. A pair of supporting plates pivotally united, arms pivotally supported upon the pins uniting said plates, and binder hooks rigidly secured to the arms and projecting through said plates, the free ends of the hooks lapping past each other.

4. Supporting plates flexibly connected, a flexible rest connecting said plates and adapted to prevent free flexibility of said plates, and binder hooks pivotally connected with said plates.

5. A pair of supporting plates pivotally connected, a flexible rest connecting said plates and adapted to prevent free pivotal movement of the plates, and binder hooks pivotally connected with said plates.

6. A pair of supporting plates pivotally united, a flexible rest connecting said supporting plates, said rest consisting of members pivotally connected to the supporting plates and together and arranged to prevent

free pivotal action of the parts, and binder hooks pivotally connected with said plates.

7. A pair of supporting plates pivotally connected, a rest formed of a pair of plates pivotally connected together and to the supporting plates, means for preventing free pivotal action of said parts, and binder hooks pivotally connected with said plates.

8. A flexible support, a flexible rest connected to said support and forming a rolling mount therefor, a holder for holding the rest and support in fixed relative position, and binder hooks pivotally connected with said support.

9. A pair of supporting plates pivotally united, a flexible rest connecting said plates, means for holding the plates and rest in fixed position, and binder hooks pivotally connected with said plates.

10. A pair of supporting plates pivotally united, a rest including plates pivotally united and connected to said supporting plates, a lock for holding said parts in fixed position, and binder hooks pivotally connected with said supporting plates.

11. A pair of supporting plates pivotally connected, the pivot connecting said plates, a pair of plates forming a rest and pivotally connected to said supporting plates and together, a swinging hook mounted upon the pivot of the support and with its opposite end projecting through an opening in a plate and engaging said plates to hold them in fixed relation, and binder hooks pivotally connected with said supporting plates.

12. Supporting plates flexibly connected, a flexible rest connecting said plates, and binder hooks pivotally connected to said plates and mounted to swing upon a common axis.

13. Supporting plates flexibly connected, a flexible rest connecting said plates, and binder hooks pivotally connected with said plates and mounted to swing independently of said plates.

14. A pair of plates pivotally connected, a flexible rest connecting said plates, and cooperating binder hooks pivotally mounted on the pivot connecting said plates.

15. Plates flexibly connected, a flexible rest connecting said plates and adapted to prevent free flexibility of said plates, and binder hooks pivotally mounted upon the structure and connected with said plates.

CLARENCE H. WILEY.

Witnesses:

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