

No. 708,745.

Patented Sept. 9, 1902.

H. E. TAPLIN.

CONNECTOR FOR SWEEP STICKS AND PICKER STICKS OF LOOMS.

(Application filed Aug. 26, 1901.)

(No Model.)

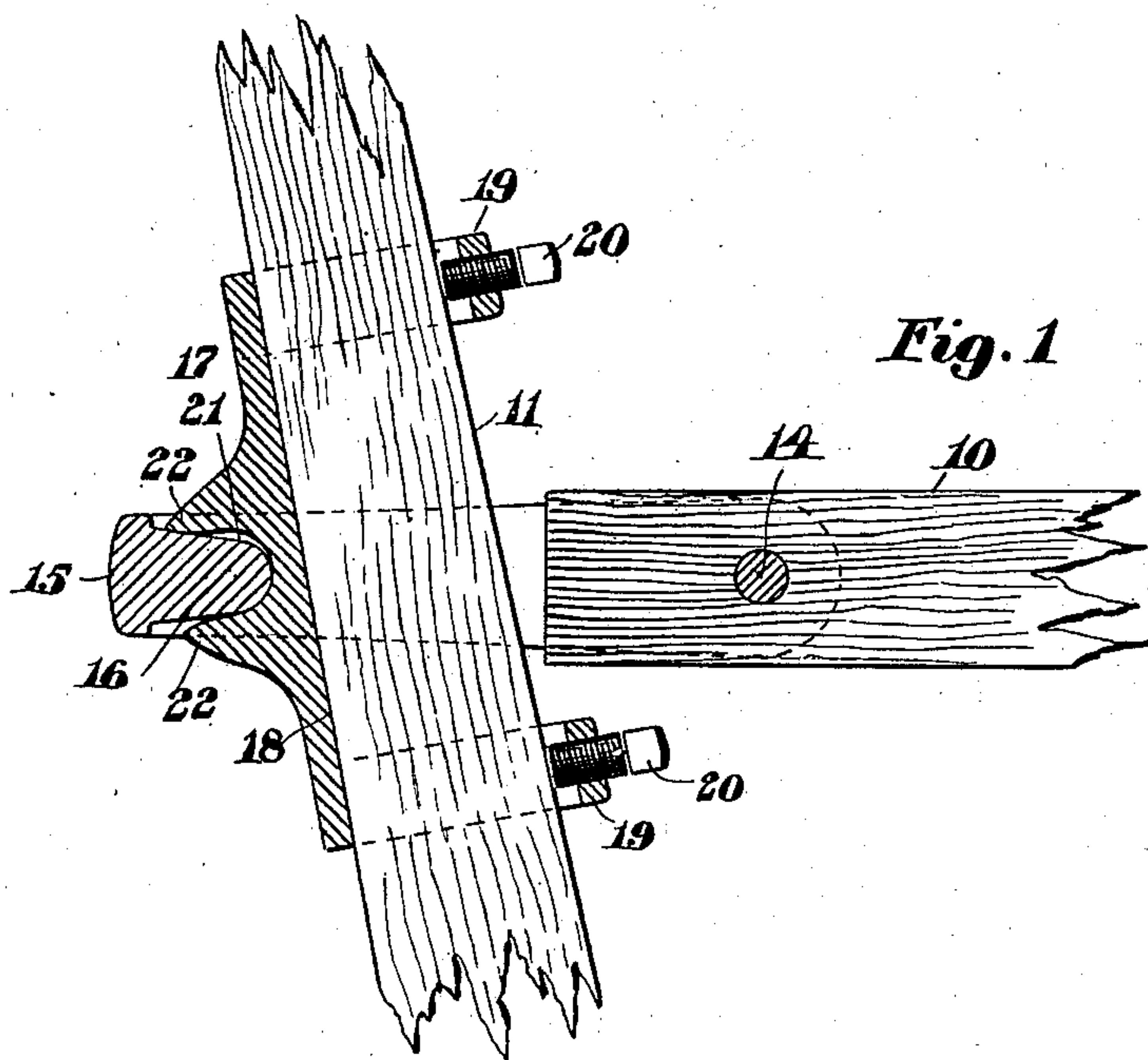


Fig. 1

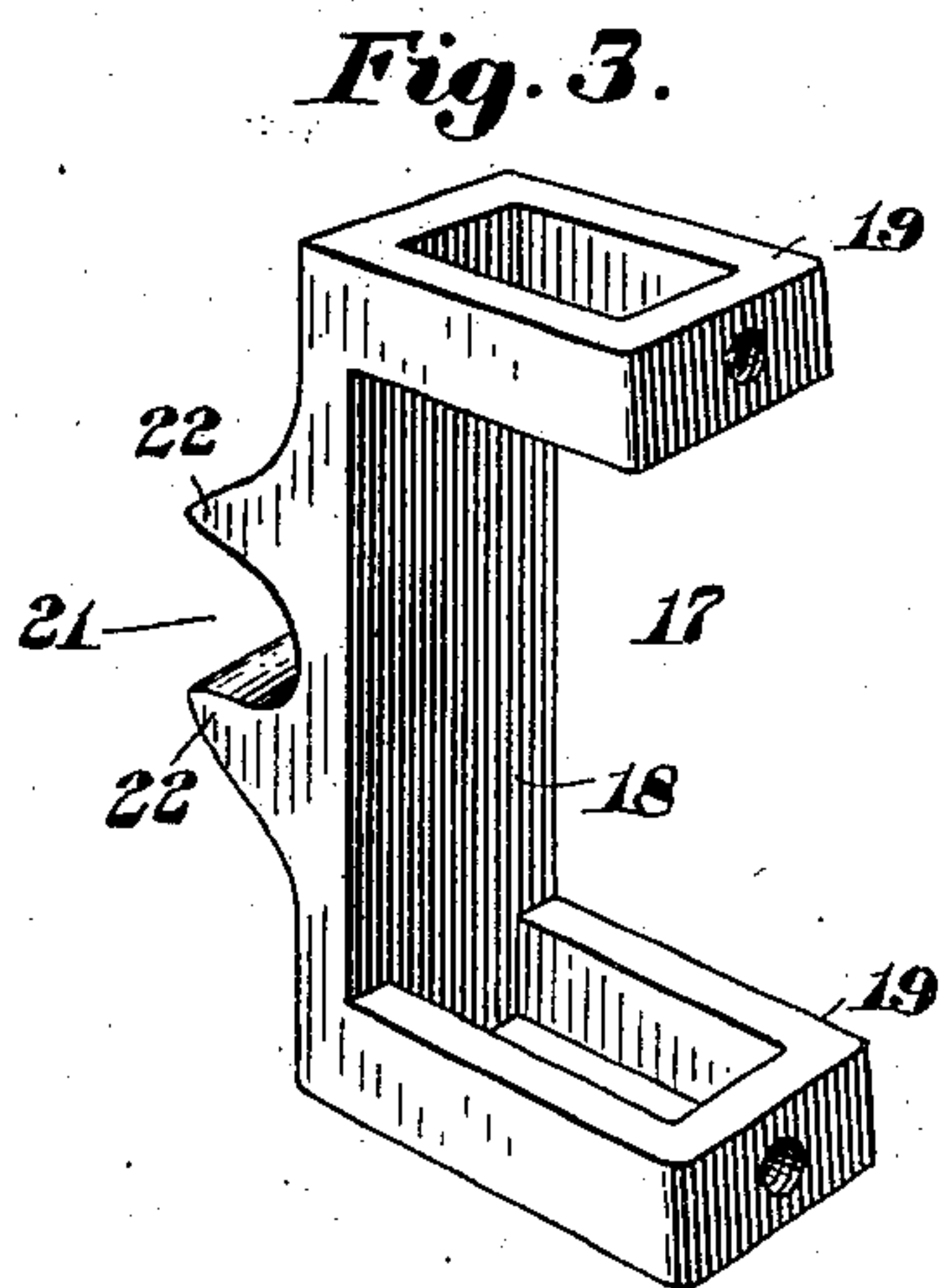


Fig. 3.

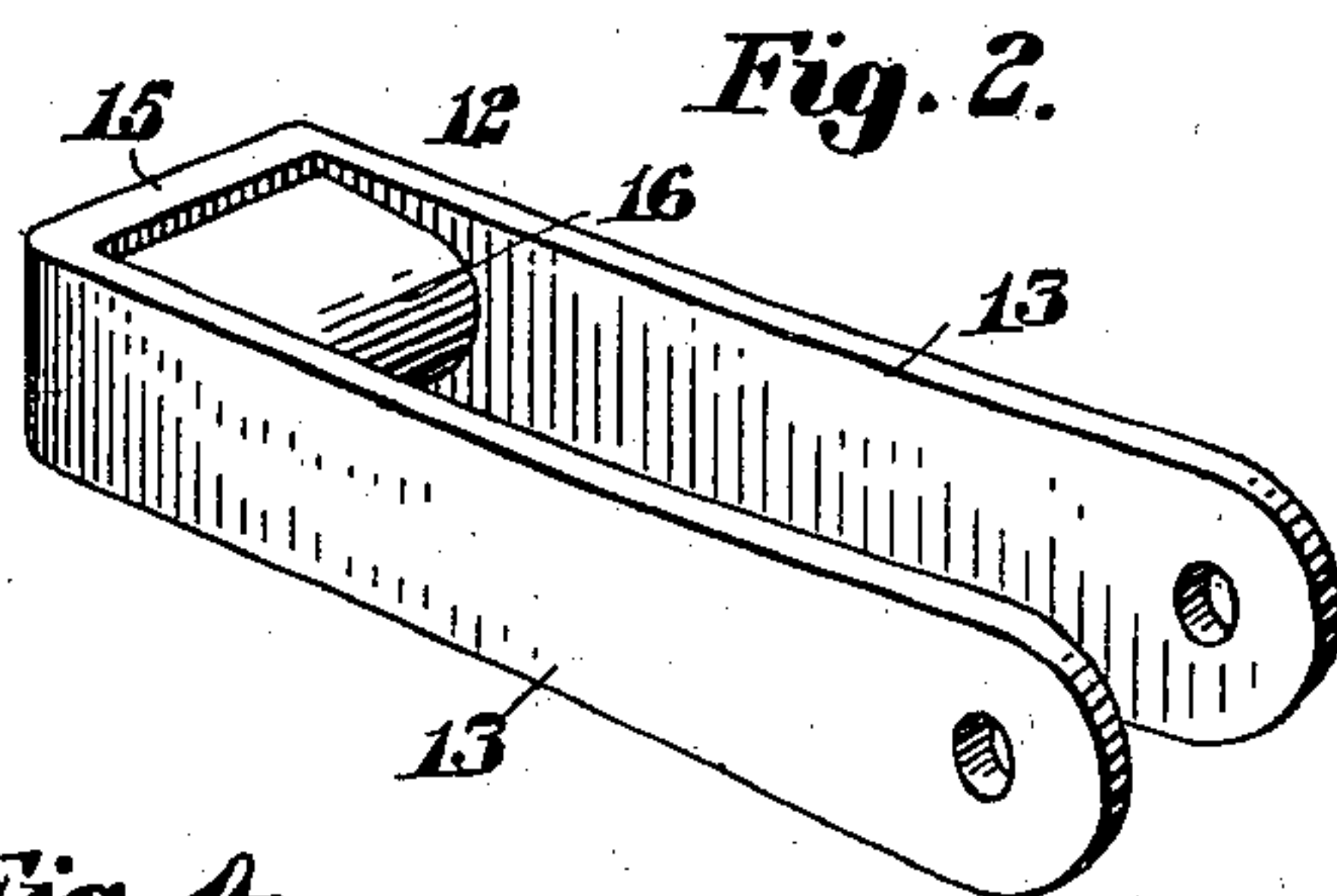
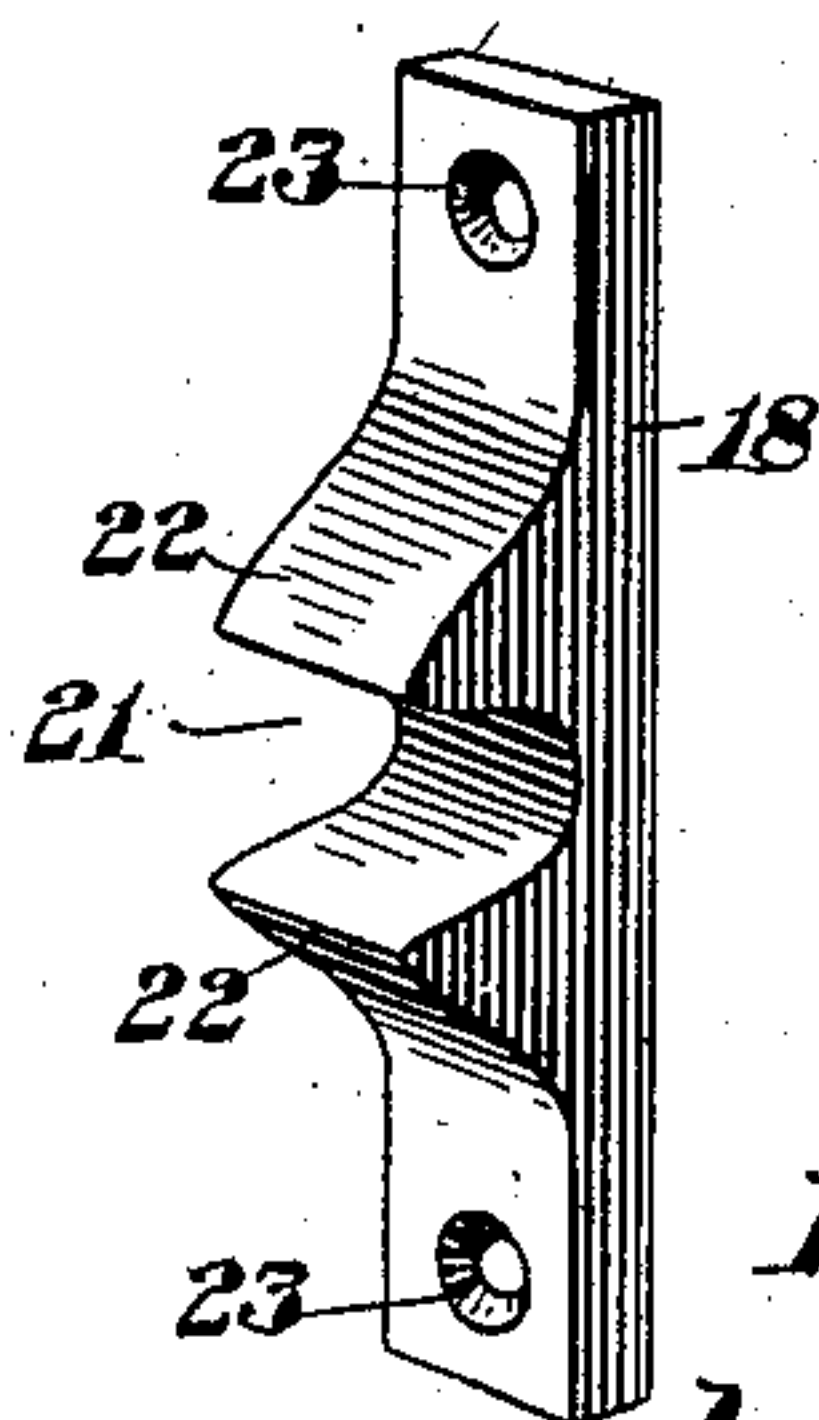


Fig. 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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CONNECTOR FOR SWEEP-STICKS AND PICKER-STICKS OF LOOMS.

SPECIFICATION forming part of Letters Patent No. 708,745, dated September 9, 1902.

Application filed August 26, 1901. Serial No. 73,216. (No model.)

To all whom it may concern:

Be it known that I, HOMER E. TAPLIN, a citizen of the United States of America, and a resident of Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Connectors for Sweep-Sticks and Picker-Sticks of Looms, of which the following is a specification.

My invention relates to a connector between the picker-sticks of looms and their driving-rod or sweep-stick and is designed to take the place of the leather straps ordinarily used for this purpose.

In the present form of connector the sweep-stick carries at its end a heavy loop of leather or sweep-strap which surrounds the picker-stick to drive it under the influence of the reciprocatory sweep-arm, and this sweep-strap is maintained against downward displacement by a second leather loop or power-strap secured to the outer side of the picker-stick and encircling the end of the sweep-strap. These straps give much trouble in operation, for being necessarily of flexible material they frequently break, and since the sweep-strap must move loosely within the power-strap it is liable to catch at different points vertically therein, thus subjecting the picker-stick to varying stress, resulting in a lack of uniformity of operation and frequently causing the breakage of the straps. To overcome these difficulties and furnish a strong and effective connector are the principal objects of my invention.

In the accompanying drawings, Figure 1 is a side elevation of the end of a sweep-stick, together with the adjacent portion of a picker-stick, the two being united by one form of my improved connector, which is shown in section. Fig. 2 is a perspective view of the connecting member or loop designed to be secured to the sweep-stick. Fig. 3 is a similar view of the coacting member or block carried by the picker-stick, and Fig. 4 is a perspective view of another form of block.

Similar characters designate like parts throughout the several figures of the drawings.

The outer end of a sweep-stick of a loom is shown at 10, serving to actuate a picker-stick 11, these elements being supported in any

customary or suitable manner. Upon the outer end of the sweep-stick is secured one member 12 of a connector, consisting of a substantially rigid loop, preferably of metal, formed with side bars 13 13, secured to each side of the sweep-stick by one or more bolts 14 or other suitable fastening and with a connecting end bar 15. Within the loop, preferably extending from the end bar, is a projection 16, shown as formed with a rounded end toward the picker-stick, the latter being surrounded by the loop. The picker-stick carries the companion member 17 of the connector, consisting of a block 18, resting against the outer side of the stick and adjustably secured in place thereon by one or more straps 19, here shown as two in number, which encircle the picker-stick, being held in place thereon at the desired point by set-screws 20, threaded through the inner side of the straps, with their ends contacting with the side of the stick. The block 18 is provided with a transverse groove or recess 21, in the present instance formed between projections 22 22, adapted to receive the projection 16 on the loop, the bottom of said recess being preferably rounded to conform to the end of the projection. The length of the projections 22 and consequent depth of engagement of the projection 16 with the recess is greater than the distance between the end of the sweep-stick and the adjacent side of the picker-stick, as is clearly shown in Fig. 1, and consequently a considerable rebound of the latter is permitted without the possibility of the separation of the elements of the connector, obviating the danger of its breakage at the end of the stroke of the former. The end of the sweep-stick therefore serves in the present instance as a contact-face to prevent abnormal movement of its companion member.

In the operation of the device the projection on one member is received by the recess in the other to effect the oscillation of the picker-stick, this engagement retaining the end of the sweep-stick against longitudinal displacement upon the picker-stick, while the formation of the coacting surfaces permits the free relative movement of the parts without the slightest binding. The members of the connector are, moreover, almost indestructi-

ble, being only subjected to the slow wear of the curved surfaces and being entirely free from danger of breakage.

The form of block illustrated in Fig. 3 might most conveniently be formed of metal, with the straps integral therewith; but it may be desired to employ some other substance from which the straps could not be as effectively formed, in which case the construction illustrated in Fig. 4 may be used. Here the block instead of being provided with straps has openings 23, through which screws may be passed to fix the block at the proper point on the picker-stick. It is to be understood, however, that the employment of any desired securing device with any substance that may be used for the members is within the scope of my invention. I have found a compressed fibrous pulp, such as paper, to be a very effective substance from which to form the block for coaction with the metal loop, it being extremely durable and having sufficient elasticity to cause the connector to work very smoothly and quietly without jar.

Having thus described my invention, I claim—

1. A connector for the sweep-sticks and picker-sticks of looms comprising a block secured to the picker-stick, and a rigid loop secured to the sweep-stick and encircling the picker-stick and block, one of these members being provided with a projection and the other with a recess adapted to receive the projection and to permit its outward movement, and means for finally arresting said outward movement before the projection is withdrawn from the recess whereby the separation of the elements of the connector is prevented.

2. A connector for the sweep-sticks and picker-sticks of looms comprising a block se-

cured to the picker-stick, and a rigid loop secured to the sweep-stick and encircling the picker-stick and block, one of these members being provided with a projection and the other with a recess adapted to receive the projection and to permit its outward movement until arrested by a contact-face carried by the companion member before the projection is withdrawn from the recess.

3. A connector for the sweep-sticks and picker-sticks of looms comprising a block secured to the picker-stick, and a rigid loop secured to the sweep-stick and encircling the picker-stick and block, one of these members being provided with a projection and the other with a recess adapted to receive the projection, the depth of engagement between the members being greater than the distance between the end of the sweep-stick and the adjacent side of the picker-stick.

4. A connector for the sweep-sticks and picker-sticks of looms comprising a member formed with side bars secured at each side of the sweep-stick and a cross-bar connecting said side bars and provided with a projection having a curved end, and a block carried by the picker-stick within the sweep-stick member and provided with a recess adapted to receive the projection, the depth of engagement between the members being greater than the distance between the end of the sweep-stick and the adjacent side of the picker-stick.

Signed by me at Boston, Massachusetts, this 17th day of August, 1901.

HOMER E. TAPLIN.

Witnesses:

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