

(No Model.)

2 Sheets—Sheet 1.

A. INSINGER.
BATTEN FOR NARROW WARE LOOMS.

No. 542,386.

Patented July 9, 1895.

Fig. 1.

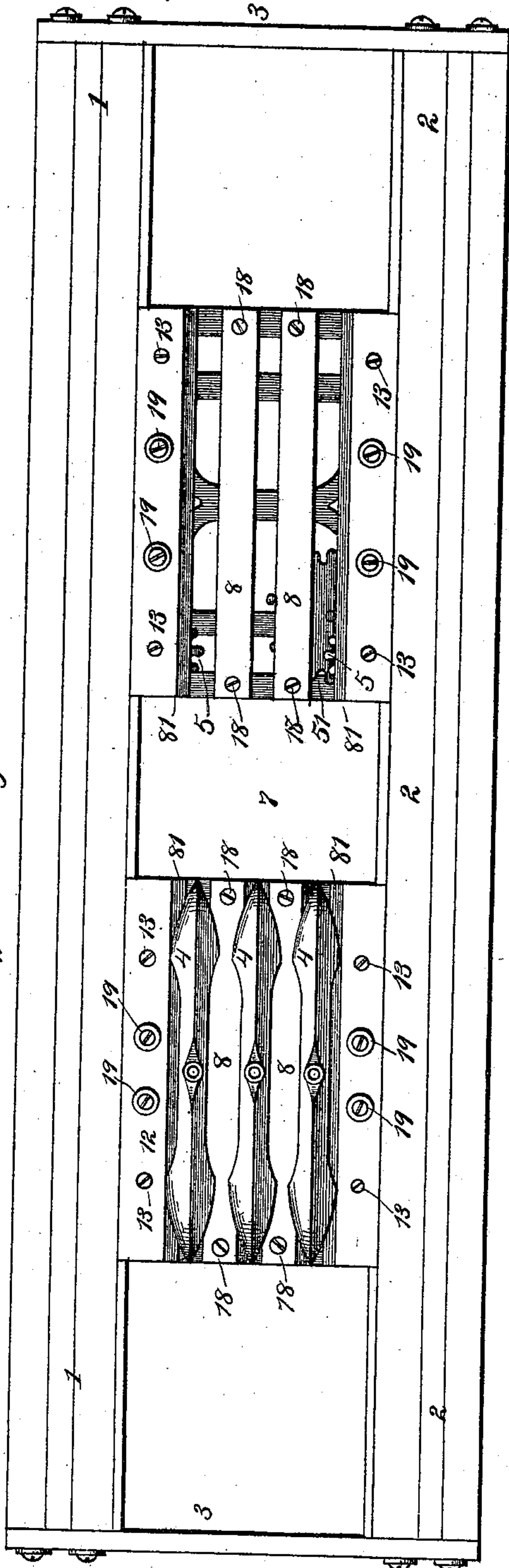
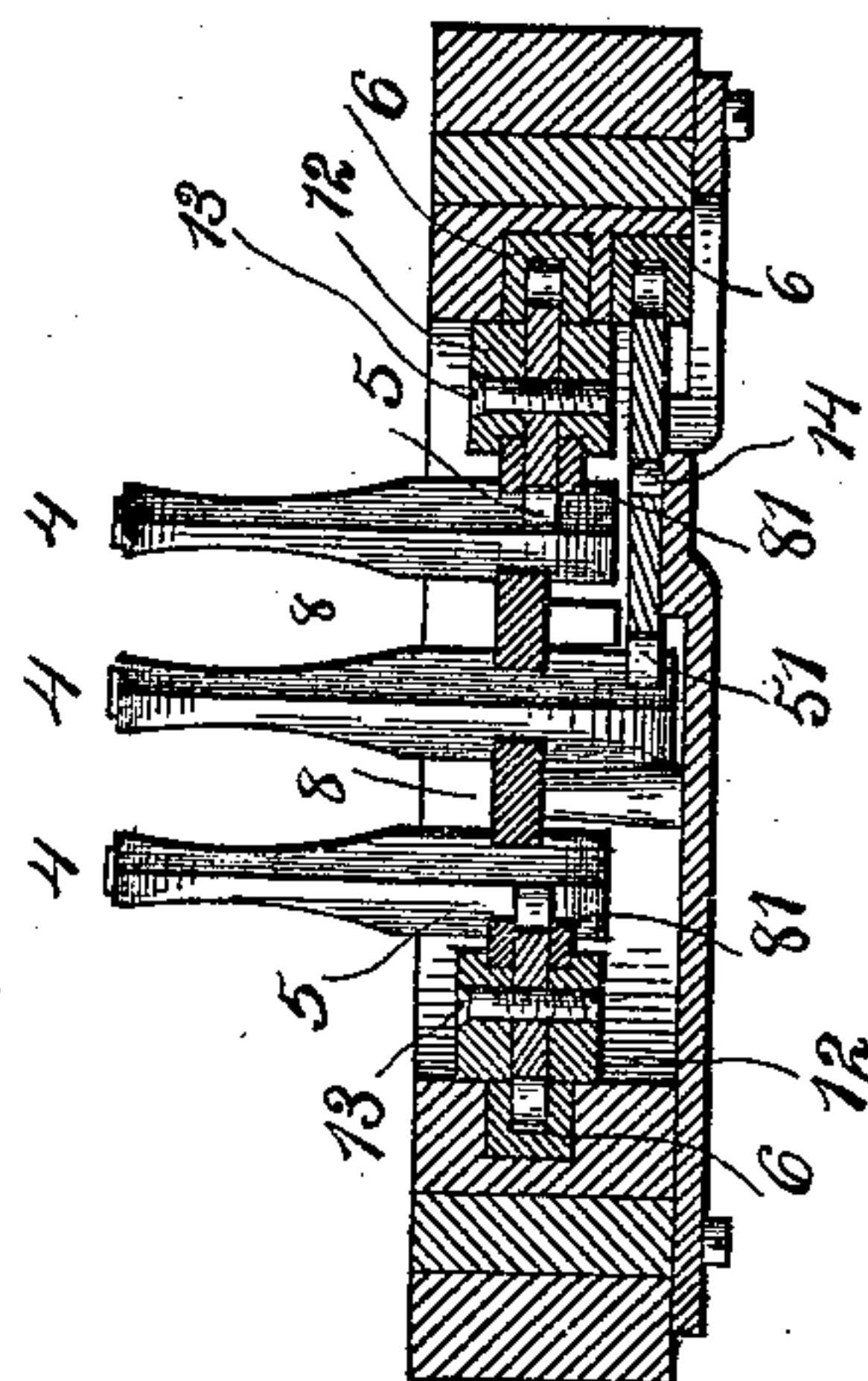


Fig. 2.



Witnesses.

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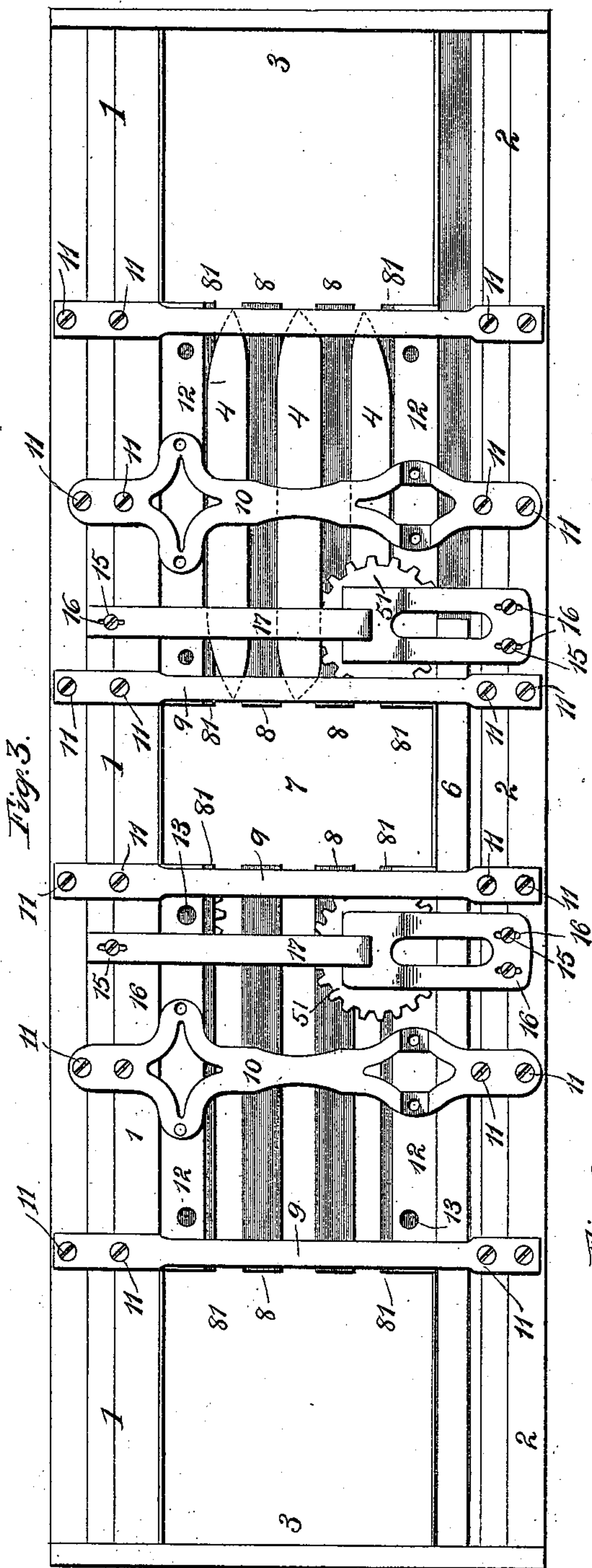
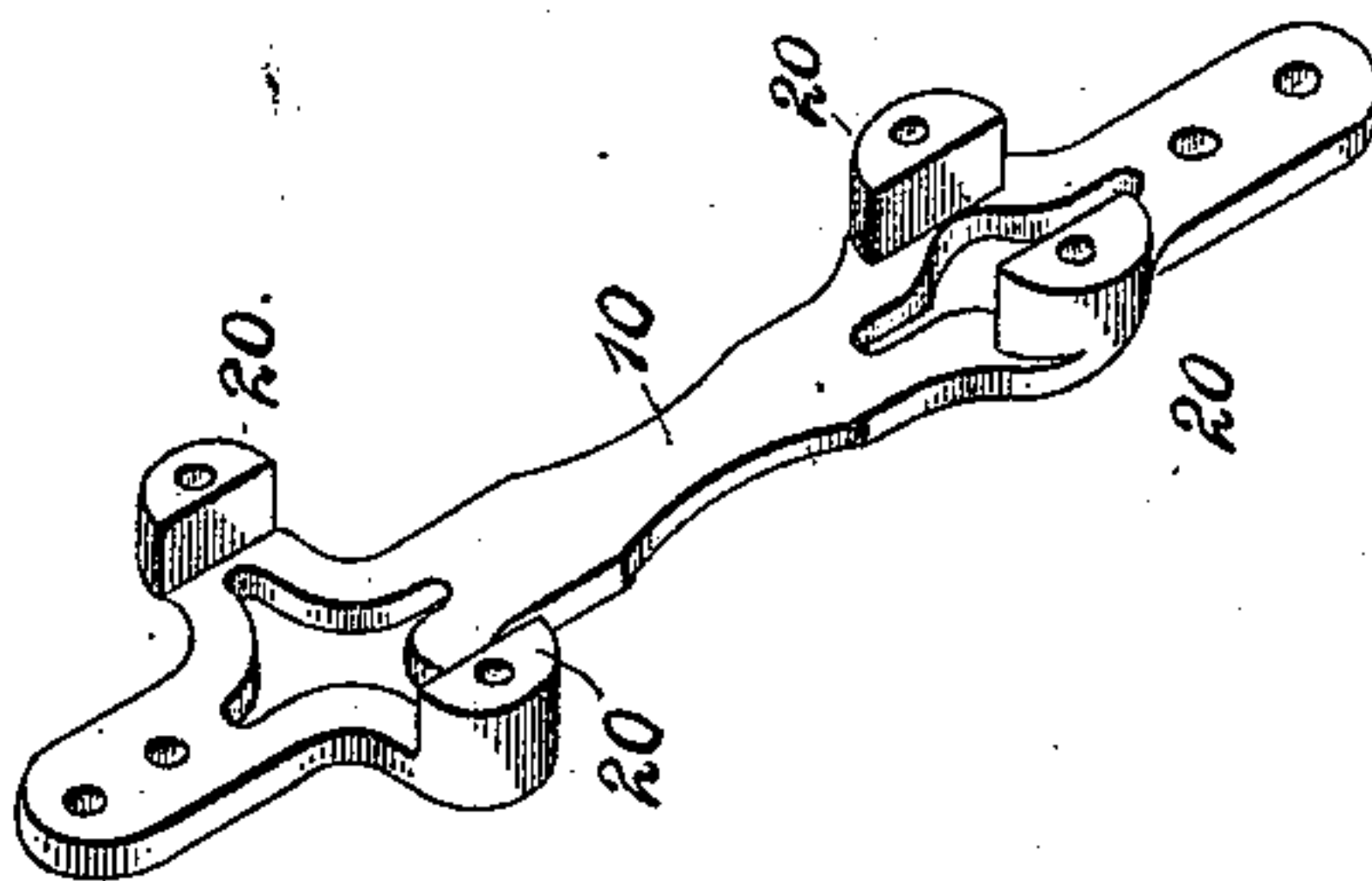
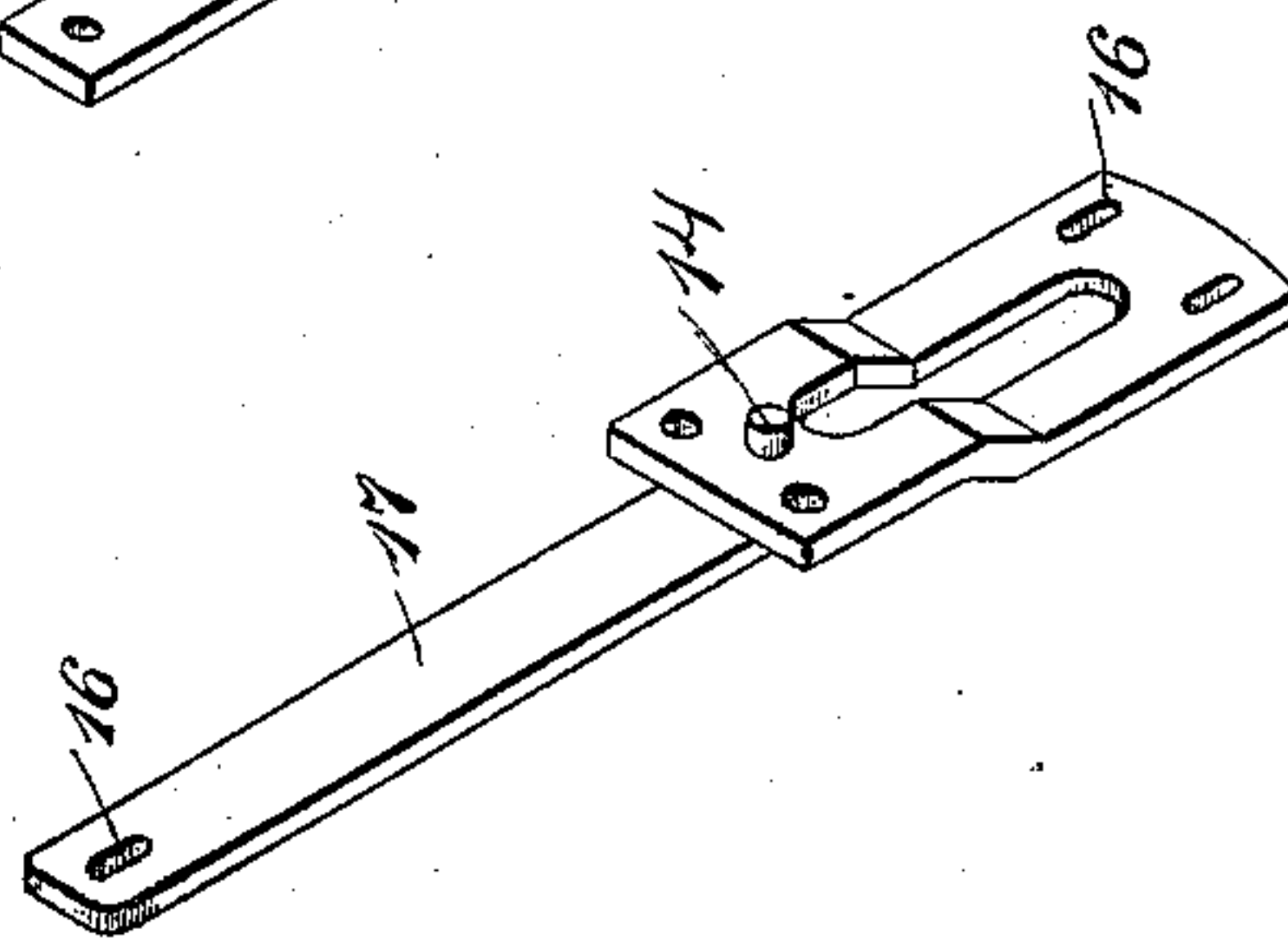
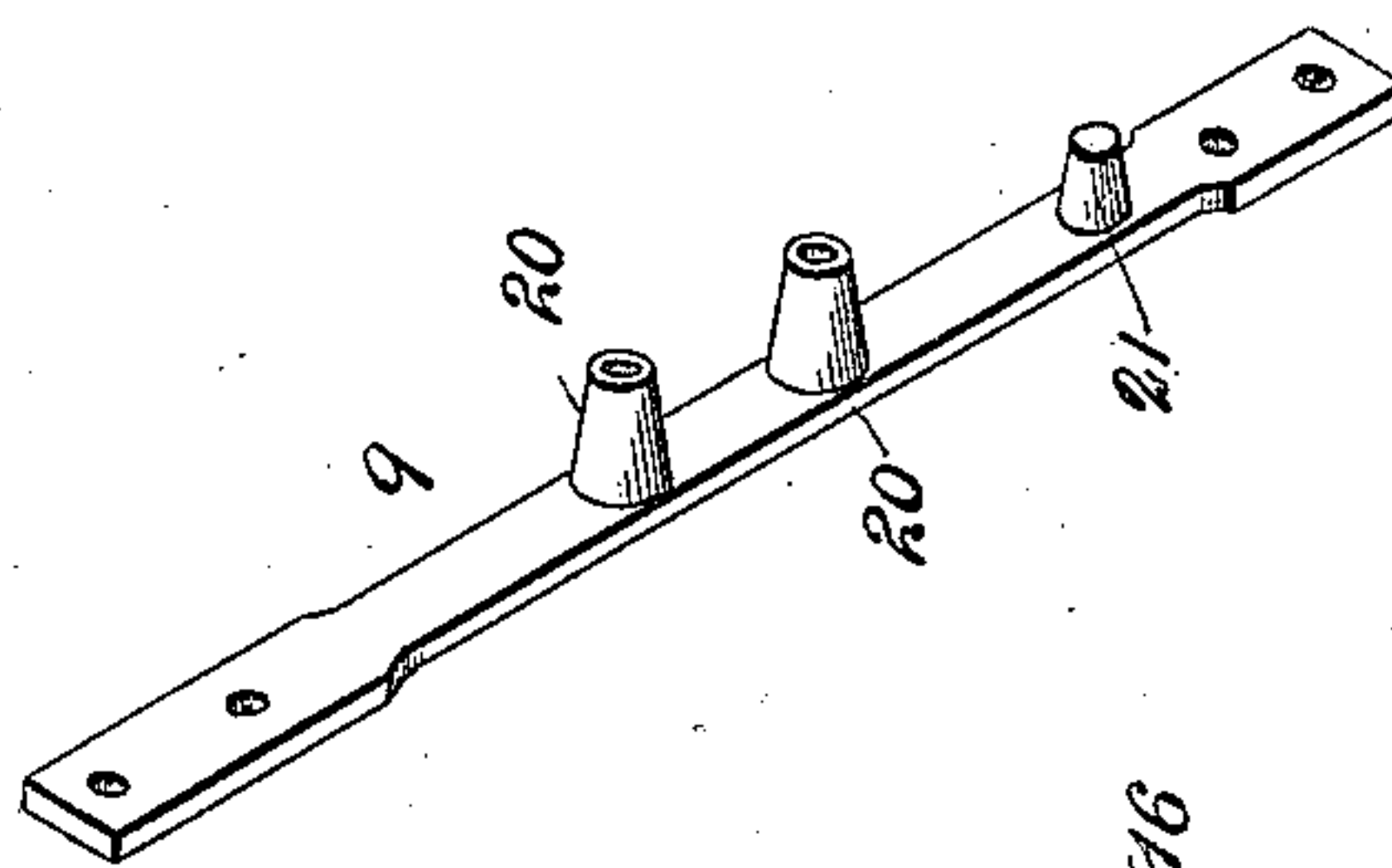


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALFRED INSINGER, OF PHILADELPHIA, PENNSYLVANIA.

BATTEN FOR NARROW-WARE LOOMS.

SPECIFICATION forming part of Letters Patent No. 542,386, dated July 9, 1895.

Application filed September 22, 1892. Serial No. 446,619. (No model.)

To all whom it may concern:

Be it known that I, ALFRED INSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Battens for Narrow-Ware Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to narrow-ware looms, and in particular to the battens which are employed in such looms.

My invention consists in certain features of improvement in the shuttle races or guides and the supports for the said races or guides, and first will be fully described with reference to the accompanying drawings, and then will be particularly pointed out and distinctly defined in the claims at the close of this specification.

In the drawings, Figure 1 is a view in front elevation showing one section of the batten of a narrow-ware loom and the shuttles pertaining thereto with my invention applied. Fig. 2 is a view in vertical section on approximately the line 2 2 of Fig. 1, the said view being taken looking toward the right-hand side in Fig. 1 and with the shuttles all moved to that side. Fig. 3 is a view in rear elevation, corresponding otherwise with Fig. 1. Figs. 4, 5, and 6 are isometrics representing the plates, strips, or castings which I employ for the support of the races or guides for the shuttles and of certain of the gears for actuating the shuttles.

I have selected for illustration a section of a three-bank batten—that is to say, a batten having three series of shuttles, one placed above another—inasmuch as it serves conveniently to illustrate the various features of improvement which I have devised. However, as will become obvious after the invention has been explained, the invention may be employed in connection with battens of a greater or less number of banks.

In the drawings, 1 is the upper beam of the batten, 2 is the lower beam thereof, and 3 3 may represent the vertical strips by which the said beams are connected at their ends.

At 4 4 4 are shown the shuttles; at 5 5 5',

the actuating-pinions therefor, the said pinions engaging with racks formed on or applied to the shuttle-bodies as usual, and at 6 6 6 are shown the racks, which are reciprocated in grooves in the beams 1 2 by the usual actuating mechanism (not shown) and thereby caused to rotate the pinions first in one direction and then in the other for the purpose of moving the shuttles endwise, as usual.

At 7 is represented one of the reed-spaces, and at 8 8 8' 8' are the races or guides for the shuttles, the same being located on opposite sides of the reed-space 7.

At 9 9 and 10 are the strips, plates, or castings, by which are supported the races 8 8 and the strips 12 12, to which the races 8' 8' are applied, and which are secured to the beams 1 and 2 by the screws 11 11. The pinions 5 5 for the top shuttle and the bottom shuttle are mounted in slots in the strips 12 12, upon pins or screws 13 13 passing through the said strips 12 12, said pinions 5 5 extending through slots formed in the races 8' 8', and the pinions 5' 5' are mounted upon studs 14 projecting from the plates, strips, or castings 17 17, these last being held to the beams 1 2 by screws 15 passing through slots 16 16, which are made in the ends of the plates, strips, or castings for the purpose of enabling the latter and the pinions 5' 5' to be given the position of vertical adjustment which is necessary in order to bring the said pinions into proper relations with the other parts. I form the races 8 8 8' 8' by preference entirely of vulcanized fiber or equivalent material not susceptible to atmospheric changes, thereby obviating the swelling and shrinking of the parts, which cause unreliable and uncertain action. The intermediate races 8 8, when such are employed, which will be the case when more than one bank of shuttles is provided for in the batten, and the upper race when a single shuttle only is used, are made each of a strip of the vulcanized fiber or equivalent material, which is held by screws 18 18 to the castings 9 9, as indicated in Fig. 1. The top and bottom races 8' 8' are in practice usually applied to the bottom and top surfaces, respectively, of the top and bottom strips 12 12, respectively, and are slotted vertically, as shown in Fig. 2, for the passage

through them of the pinions 5 5. The strips 12 12 are held by screws 19 19 to the castings 10 10.

The ends of the castings 9 9, 10, and 17 are applied to the rear sides of the beams 1 and 2, and are secured thereto by the screws 11 11 and 15 15, as described. The castings 9 9 are by preference located at the ends of the races 8 8, while the castings 10 10 are located between the adjacent castings 9 9.

For the purpose of enabling the races all to be held in the proper vertical plane at the right points for engaging with the shuttles, the castings 9 9 and 10 are formed with or have applied thereto bosses or posts 20 20, as shown clearly in Figs. 4 and 6, in which bosses or posts are made threaded holes for the ends of the screws 11 11 and 15, these bosses or posts projecting from the main webs of the castings a distance sufficient to enable them to answer the desired purpose.

A short post 21 is cast at one end of the strips or plates 9 to support the ends of the lower or bottom strips 12. Likewise the portions of the castings 17 17, whereon are applied or formed the studs 14 14 for the support of pinions 5' 5', are offset somewhat from the plane or planes of the end portions thereof sufficiently to locate the said pinions 5' 5' in the same vertical plane with the teeth on the middle shuttle and the operating-rack therefor, as is clearly shown in Figs. 2, 3, and 5.

The castings being of metal are not affected by changes in the weather like wood, and consequently by their use the defects and disadvantages of the wooden supports which heretofore have been employed in the same place are obviated. One trouble with the latter, which may be mentioned specially, is the practical impossibility of maintaining a good permanent joint between the wooden supports and the wooden races for the shuttles. I con-

template using the said castings in connection with wooden races sometimes, but the best results will be secured by using them in combination with races made of vulcanized fiber, as described herein.

The pinions 5 5 and 5' 5' are formed of vulcanized fiber by preference.

I claim as my invention—

1. The combination with the frame-work of a batten, the shuttles, and the races or guides for the shuttles, of castings secured to the said frame-work and formed with forwardly projecting bosses to which the said races are held, substantially as described.

2. The combination with the frame work of a batten, the shuttles, and the races or guides for the shuttles, of the castings 9, 9, located adjacent to the ends of the races, and the intermediate castings 10, the said castings being secured to the said frame-work and formed with bosses to which the said races are held, substantially as described.

3. The combination with the frame-work of a batten, the shuttles, and races or guides for the shuttles formed of strips of vulcanized fiber, of the castings 9, 9, and 10, secured to said frame-work at their ends and formed with bosses to which the said races are secured, substantially as described.

4. The combination with the frame-work of a batten, the shuttles, the races or guides for the shuttles, and pinions for operating the shuttles, of the castings 9 and 10 for supporting the races or guides, and the adjustable casting 17 for the pinion 5', substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED INSINGER.

Witnesses:

H. C. HOPKINS,

J. W. KENWORTHY, Jr.