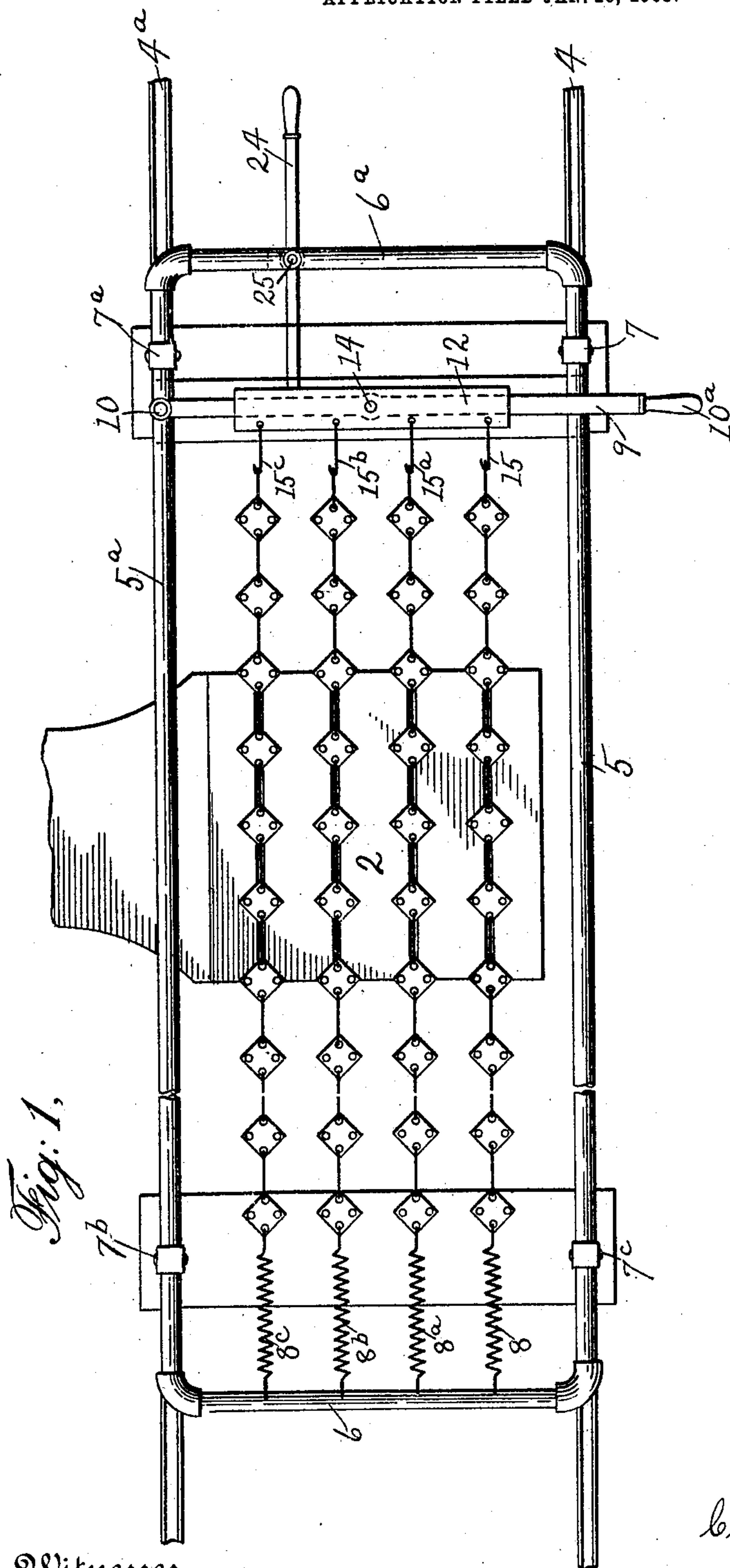


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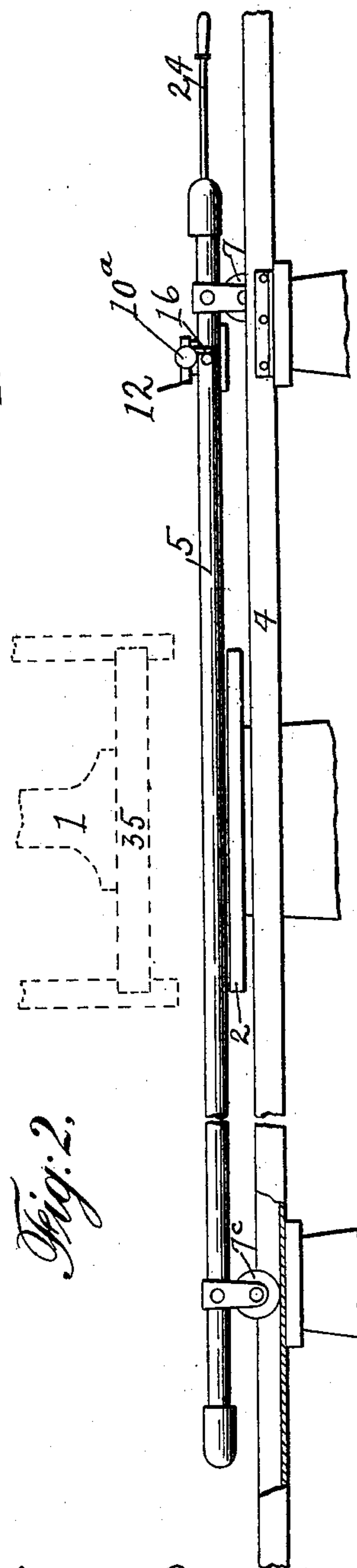
PATENTED MAY 1, 1906.

C. J. PERKS.
LINK CLOSING PRESS.
APPLICATION FILED JAN. 10, 1906.

2 SHEETS—SHEET 1.



Witnesses
Max B. A. Doring.
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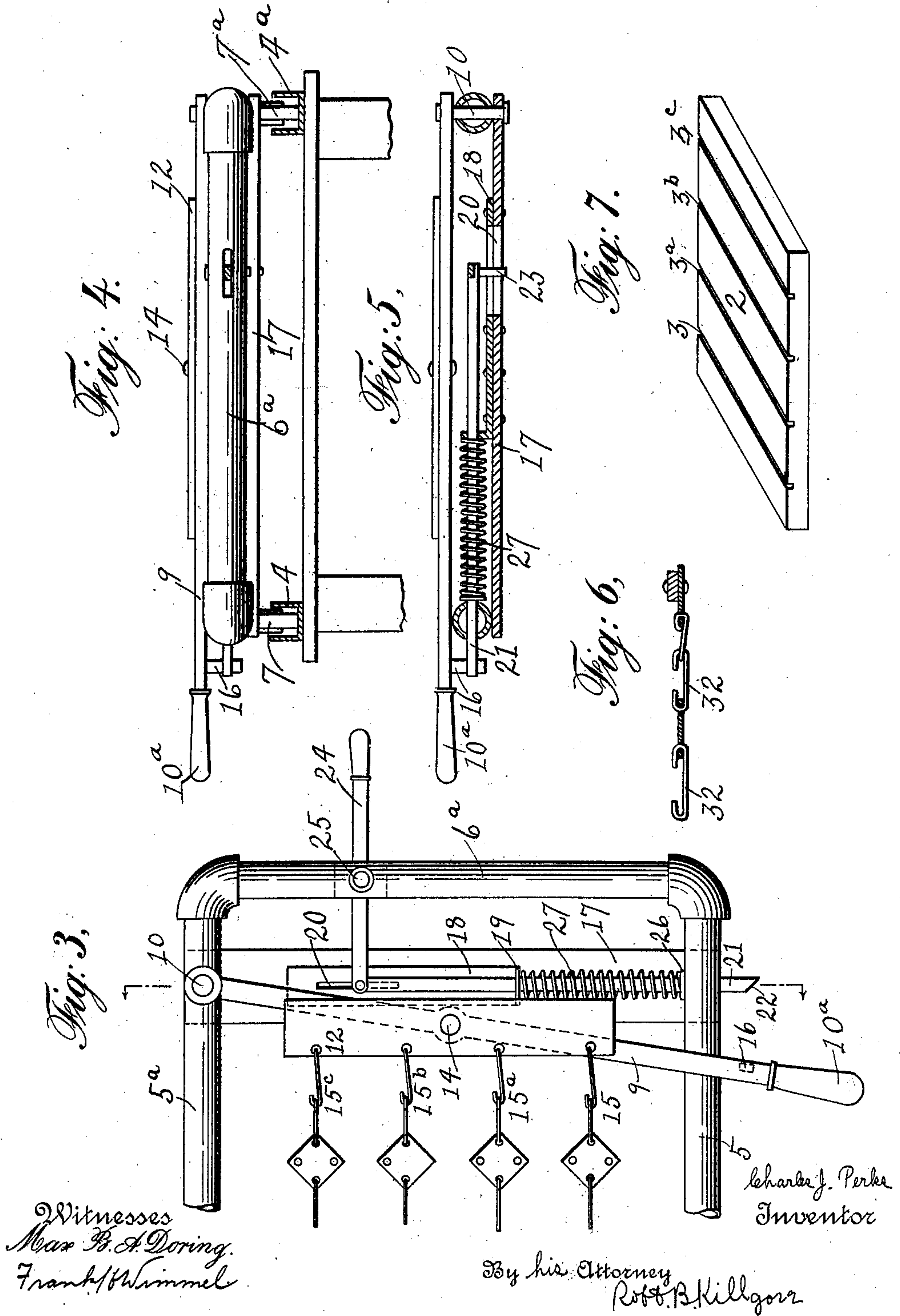
By his Attorney
Robt B. Killgore

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

CHARLES J. PERKS, OF NEW YORK, N. Y., ASSIGNOR TO DAVID C. STORR,
OF NEW PALTZ, NEW YORK.

LINK-CLOSING PRESS.

No. 819,451.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed January 10, 1905. Serial No. 240,487.

To all whom it may concern:

Be it known that I, CHARLES J. PERKS, a citizen of the United States, residing at Greenpoint, borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented a new and useful Improvement in Link-Closing Presses, of which the following is a specification.

My invention relates more particularly to the frames used for stretching and holding the links composing wire or chain fabrics, such as are usually employed in mattress-supports or bed-springs; and the objects are to provide mechanism whereby the links may be closed uniformly and quickly in comparatively large quantities. I attain these results by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my stretcher-frame. Fig. 2 is a side view of the structure of Fig. 1. Fig. 3 is a detail view of the stretching-lever and locking-bolt. Fig. 4 is a side view of the stretching-lever and locking-bolt. Fig. 5 is a view, partly in section, of the locking-bolt. Fig. 6 is an edge view of the links and plates of a mattress-support before the links are closed. Fig. 7 is a view of the bed-plate preferably used in the lower part of the press.

The press 1 (of any suitable type) is provided with a bed-plate 2, preferably having a series of grooves 3 3^a 3^b 3^c in its upper face. Tracks 4 4^a extend across the press-bed plate 2 on either side thereof and slightly below the plane of the upper face. A frame comprising the side pieces 5 5^a and end pieces 6 6^a is provided with rollers 7 7^a 7^b 7^c, which engage the tracks 4 4^a, permitting the longitudinal movement of the frame. To the end bar 6 of the frame a series of helical springs 8 8^a 8^b 8^c are secured at a distance apart equal to the distance between the grooves in the bed-plate and alining therewith. These helicals are provided with hooks on their free ends. Near the other end of the frame the lever 9 is pivoted to the upper face of the side piece 5^a at 10. This lever terminates in the handle 10^a outside the other side piece 5. An equalizing draft-bar 12 is pivoted to the lever 9 at 14 and is provided with hooks 15 15^a 15^b 15^c, so spaced that they aline with the helicals at the opposite end of the frame and the grooves in the bed-plate 2. On the under side of the lever 9 near the handle 10^a a depending pin

or stop 16 is secured. A bridge-piece 17 is secured to the under side of the frame beneath the lever 9. A piece 18 with an upturned end 19 is secured to the bridge. A hole is made in the end 19, through which and also a hole in the side piece 5 a bolt extends. This bolt 21 has a beveled face 22 at its outer end. The position of this beveled face is maintained by a pin 23 at its inner end which extends through the slot 20 in the bridge 17 and piece 18. This permits lateral movement of the bolt, but prevents its rotation. A lever 24, provided with a handle, is pivoted at 25 in a slot in the frame end piece 6^a and connected with the end of the bolt 21. A stop 26 is secured on the bolt 21 and limits its forward movement, while a helical spring 27 working between the upturned end of the piece 18 and the stop 26 normally holds the bolt in its extended position.

Having explained the mechanical features, I will now proceed to describe the mode of operation. The links and plates of a mattress-support, for example, are connected up by hand, as shown in Fig. 6. The lever 9 and draft-bar 12 are in the position shown in Fig. 3. One end of a chain of these plates and links is then hooked on the helical 8 and the other to the hook 15 on the equalizing-bar 12, the links being laid in the groove 3 of the bed-plate 2. The other hooks and helicals are similarly strung with link and plate chains. The handle 10^a of the lever 9 is then pulled to the right, the pin 16 striking the beveled face 22 of the bolt 21, pushing it in against the force of the helical spring 27. When the pin 16 has cleared the end of the bolt 21 the latter will be forced back to its initial position, holding the lever 9 in the position shown in Fig. 1 and putting the chains of links and plates under tension, the equalizing draft-bar 12 and helicals 8 8^a 8^b 8^c compensating for slight variations in the lengths of the chain. The bar part 32 of the links will engage the grooves 3 3^a 3^b 3^c of the bed-plate 2 and the hooks will be presented to the upper face-plate of the press. The press is now operated and the plunger 1, carrying the upper face-plate 35, comes down on the hooks and closes them. After the links on the bed-plate 2 have been closed and the upper face-plate has resumed its initial position the entire frame is moved forward on the track and another section of the fabric-

links is closed. This is repeated until all the hooks on the links have been closed. The handle on the lever 24 is then pulled and acts on the locking-bolt 21, retracting it against the force of the spring 27. As soon as the beveled end 22 clears the pin 16 on the lever 9 the lever and equalizing-bar 12 move to the left under the weight of the chains and tension of the helicals and the chains can be readily unhooked and removed.

Heretofore in making mattress-supporting fabrics every individual hook has been closed by hand with a mallet, and there was no uniformity in the product. By the use of my invention large numbers of hooks are closed at a single stroke of the press, and the fabric is presented to the press in successive sections in the most expeditious manner. The fabric is absolutely uniform, as the same pressure is applied to each hook in closing it, and each one occupies exactly the same position in respect to the bed and face plate of the press.

While the helicals 8 8^a 8^b 8^c are not absolutely essential, I prefer to use them, for I have found in practice that the closing of the hooks shortens the total length of a chain and that the interposition of the helicals eases the strain on the frame.

Any suitable locking device may be used to lock the lever 9 in position, and I do not limit myself to the specific form shown.

The frame may be used for closing the links of a variety of chain-like structures, and in some cases a smooth bed-plate may be advantageously employed.

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

1. A stretcher-frame for link-closing presses having means at each end for de-

tachably securing the ends of the chain to be closed, a tension device for stretching said chain, and locking means for holding said tension device in operative position.

2. A stretcher-frame for link-closing presses, having at one end thereof helical springs for attaching one end of the chains to be closed and a lever pivoted to the other end of the frame carrying an equalizing-bar provided with means for securing the other ends of the chains, and means for locking the lever and bar in closed position when the chains are under tension.

3. A stretcher-frame for link-closing presses, having at one end thereof helical springs for attaching the chains to be closed, a lever pivoted to the other end of the frame carrying an equalizing draft-bar with means for attaching the other ends of the chains, a bolt with a beveled end normally held in the path of and adapted to engage a projection on the lever, and means for retracting said bolt to release said lever and draft-bar.

4. A stretcher-frame for link-closing presses comprising a grooved plate, a stretcher-frame movable over said plate and having means at each end for detachably securing the ends of the chain to be closed, said means alining with the groove on the plate, means for placing the chain under tension, and means for locking and unlocking said tension device.

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

CHAS. J. PERKS.

Witnesses:

JOHN B. PERRY,
ROBT. B. KILLGORE.