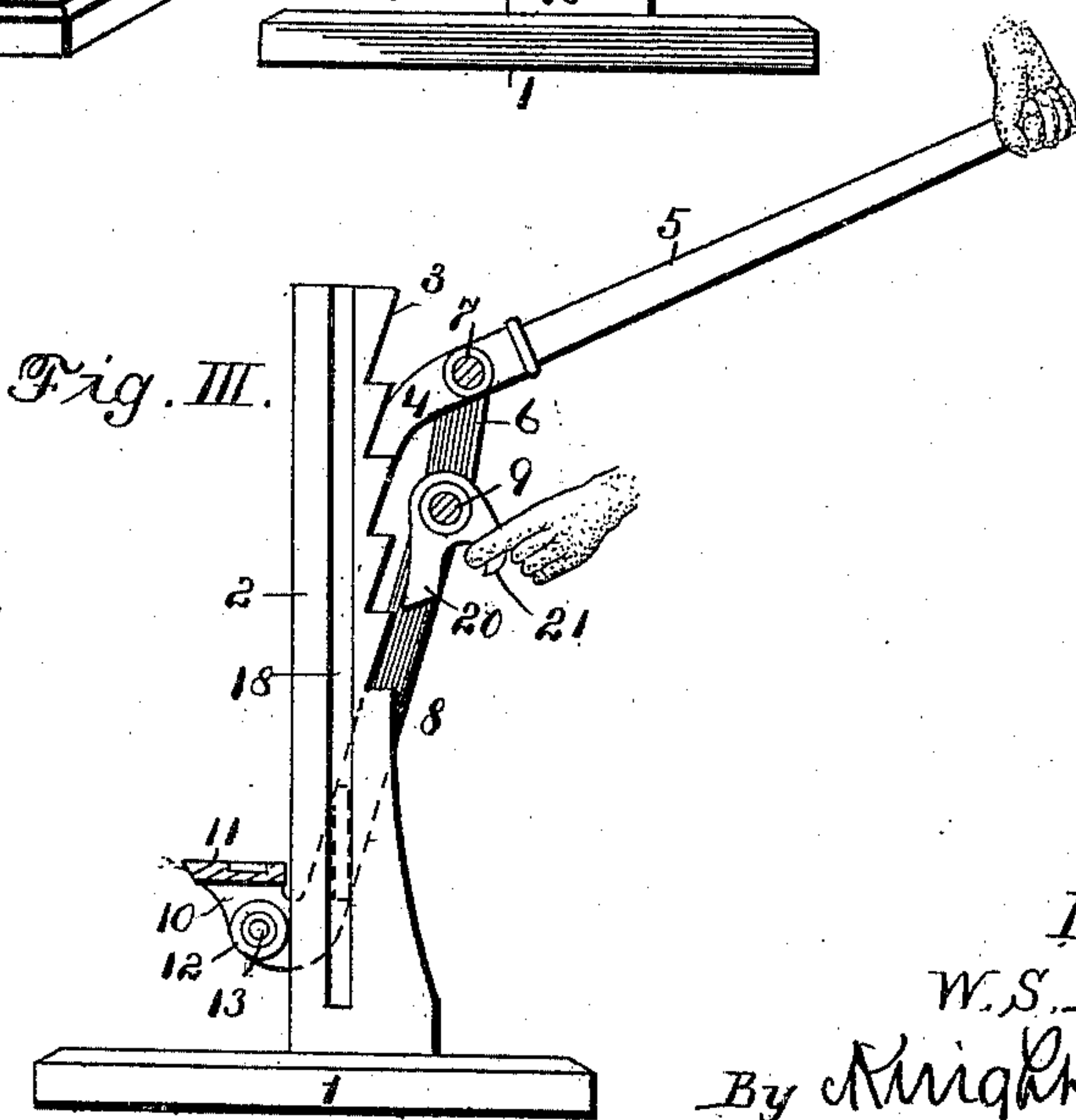
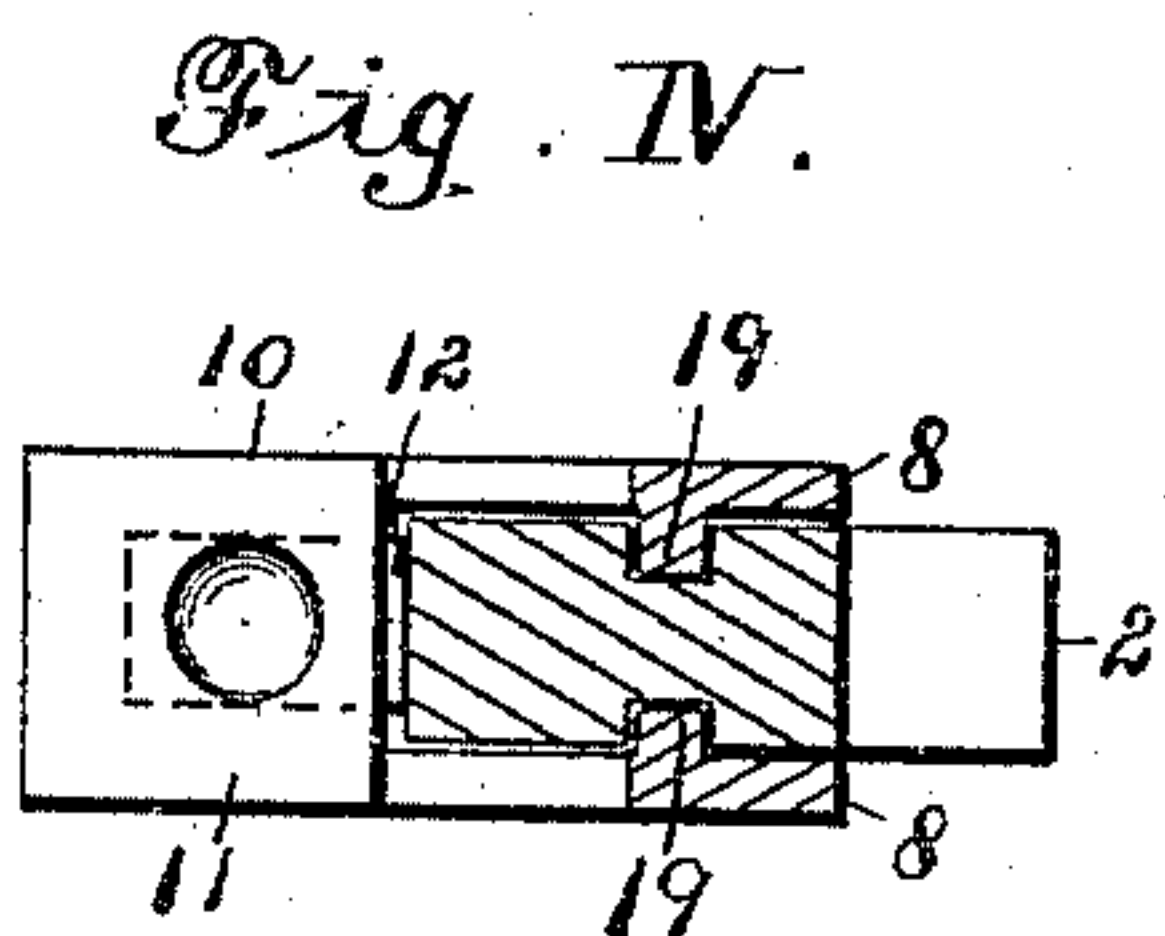
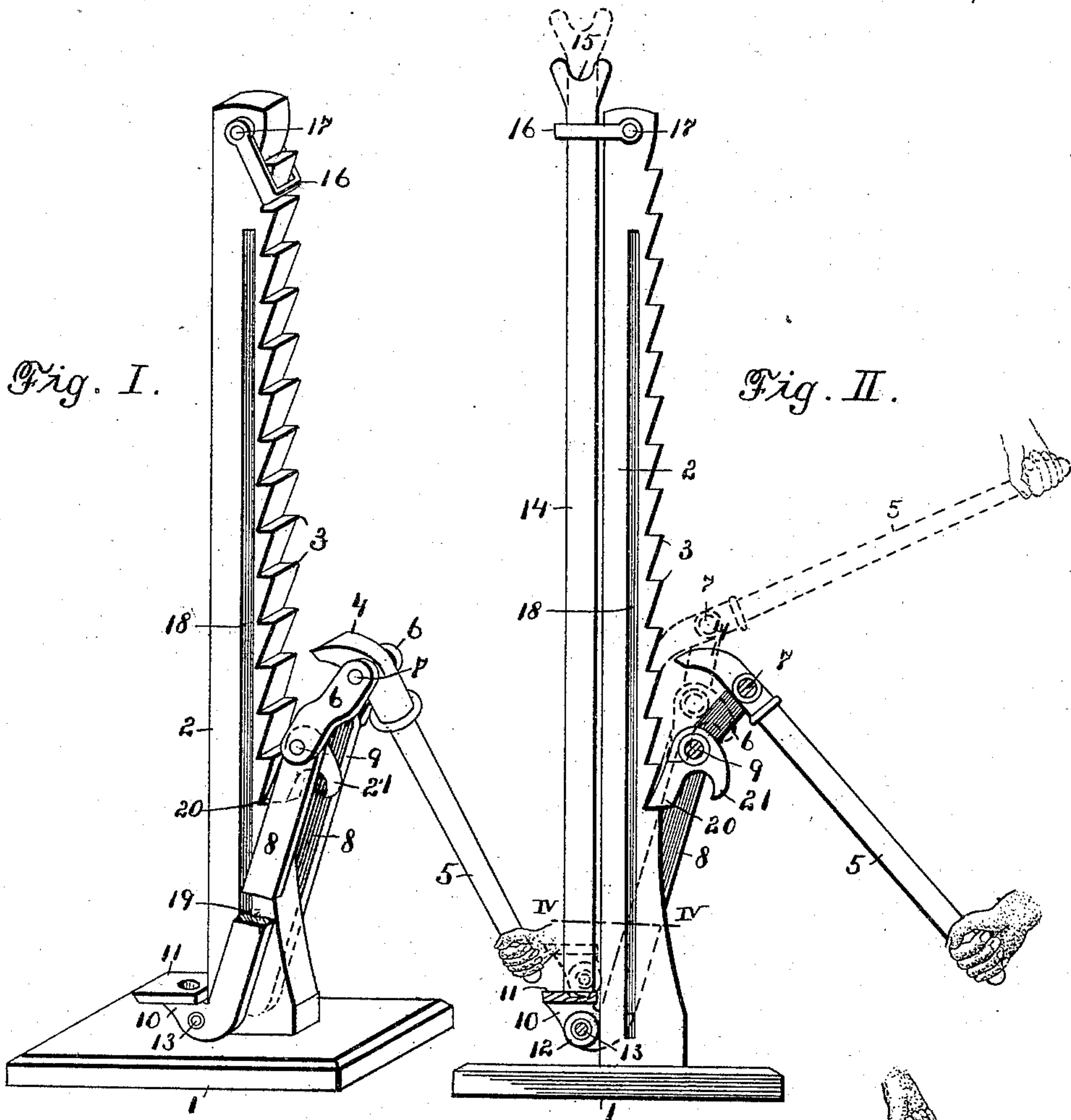


(No Model.)

W. S. LIVENGOOD.
LIFTING JACK.

No. 445,900.

Patented Feb. 3, 1891.



Witnesses:
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UNITED STATES PATENT OFFICE.

WINFIELD S. LIVENGOD, OF KANSAS CITY, MISSOURI.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 445,900, dated February 3, 1891.

Application filed July 12, 1890. Serial No. 358,569. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD S. LIVENGOD, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved lifting-jack; and my invention consists in features of novelty hereinafter described, and pointed out in the claims.

Figure I is a perspective of my improved device. Fig. II is a side elevation. Fig. III is a detail side view showing a portion of one arm broken away in order to show the supporting-dog. Fig. IV is a transverse section taken on line IV IV, Fig. II.

Referring to the drawings, 1 represents the base, on which there is a standard 2.

3 represents a series of notches or rack on the standard, with which the inner end 4 of a lever 5 may engage. The lever is formed in two parts, the part 4 having a socket in which the part 5 may be secured.

6 represents two links, which are pivoted to the lever, as shown at 7, the opposite ends of the links being pivoted to two bars 8 by a pin 9. The bars 8 extend downwardly and forwardly on either side of the standard 2, said bars terminating in a foot 10, the foot 10 being on the opposite side of the standard from the pin 9. The upper portion of the foot 10 has a flat surface 11.

12 represents an anti-friction roller journaled to the foot at 13.

14 represents a bar having an upper forked end 15. The lower end of the bar 14 rests upon the flat surface of the foot and the upper end is guided and held in its proper position by a clevis 16, pivoted to the upper end of the standard, as shown at 17.

18 represents grooves in the side of the standards 2, in which work lugs 19 on the bars 8, the bars thus being guided as they are moved up and down.

20 represents a supporting-dog pivoted on the pin 9, said dog having a hand-piece 21 by which the dog may be moved on its pivoted bearing.

In operation the jack is placed with the

forked end 15 of the bar 14 under the article that it is desired to raise, the various parts of the device being in the position shown in full lines in Figs. I and II. The lever 5 is then placed with the inner end 4 resting in one of the notches 3. The lever is then raised, as shown by dotted lines, Fig. II, the links 6, bars 8, and foot 10 all being raised until the dog 20 comes on line with the next one of the notches 3 above its starting-point, on which it rests and thus supports the load, thus releasing the lever 5. The outer end of the lever is then again depressed, the inner end again engaging the next higher notch and the lever again raised as at first, thus raising the load the distance of one more notch, and so on until the load or article has been raised to the desired position, the action on the lever being practically the same as that of a pump-handle, with the exception that force is exerted on the handle as it ascends instead of as it descends. As the jack is being operated the anti-friction rollers 12 will travel along on the face of the standard, thus avoiding the friction of the foot against the standard. At times it is desired to raise an article too low for the bar 14 to pass under it. In such a case I remove the bar 14, turn the clevis 16 back, as shown in Fig. I, and place the foot 10 beneath the object to be raised.

When it is desired to lower the object, I can either do so by supporting the weight on the lever, pulling the dog 20 back out of engagement with the notches 3, then throw the lever up against the notches, and let the object drop; or I can let it down by degrees in the same manner that it is raised, with the exception that the action is reversed.

By the use of my device I can raise very heavy objects and hold them at any desired point.

It will be seen that as the lever 5 is being raised the weight of the dog 20 will throw it into engagement with the notches and the device thus work automatically.

I claim as my invention—

1. In a lifting-jack, the combination of a notched standard, a lifting-foot, bars on said foot, a lever, and pivoted links for connecting the lever with the bars, substantially as described, and for the purpose set forth.

2. In a lifting-jack, the combination of the

notched standard 2, foot 10, roller 12, jour-
naled in said foot, bars 8, connected with the
foot, a lever, links 6, pivoted at their upper
ends to the lever, pin 9, forming a pivotal con-
5 nection between the arms 8 and links 6, and
a dog 20 on said pin, said dog at times en-
gaging the notches 3 in the standard, substan-
tially as described, and for the purpose set
forth.

10 3. In a lifting-jack, the combination of a
notched standard, grooves 18 in the standard,
a movable foot, bars 8, connected with the foot,
lugs 19 on the bars, a lever, links 6, connect-
ing said bars with the lever, pin 9, dog 20 on
15 said pin, hand-piece on the dog, and forked
bar 14, resting on the foot, substantially as
described, and for the purpose set forth.

4. In a lifting-jack, the combination of the
base 1, standard 2, secured to the base,
notches 3 on said standard, foot 10, roller 12 20
on the foot, lever 5, having an inner end 4,
links 6, pivoted to the lever, arms 8, forming
a connection between the foot and links 6,
supporting-dog 20, bar 14, resting on the foot
and having a forked upper end, and a clevis 25
16 for guiding and holding the upper end of
the bar 14, substantially as described, and for
the purpose set forth.

WINFIELD S. LIVENGOOD.

Witnesses:

JAS. E. KNIGHT,
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