

No. 688,126.

Patented Dec. 3, 1901.

T. H. ROLFE.  
SIEVE HOLDER.

(Application filed Apr. 17, 1901.)

(No Model.)

Fig. 1.

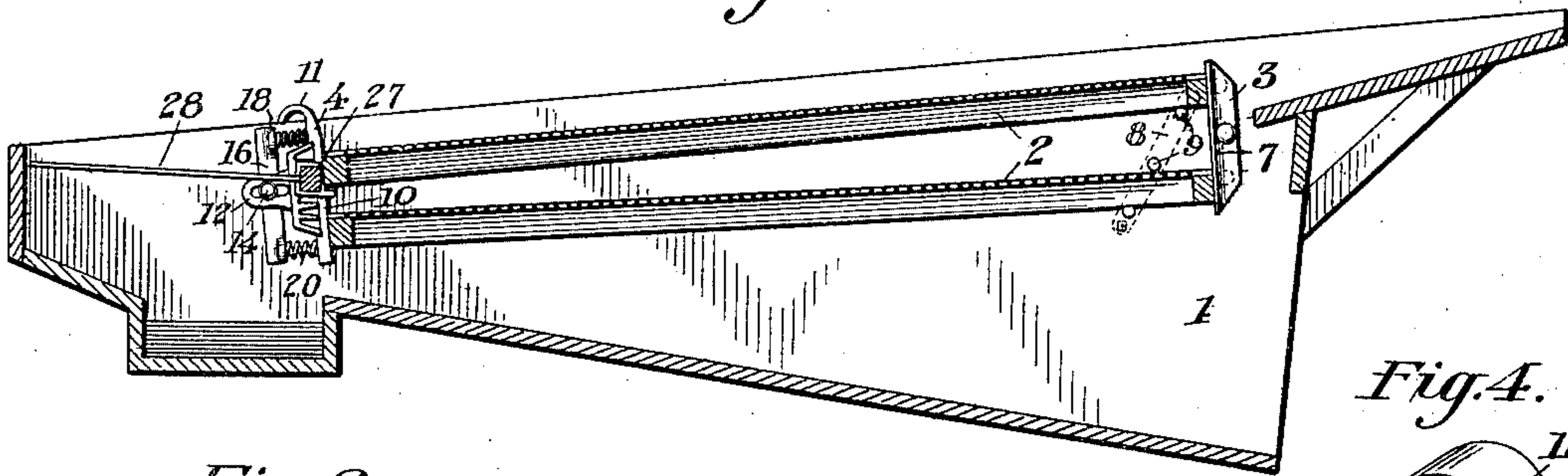


Fig. 2.

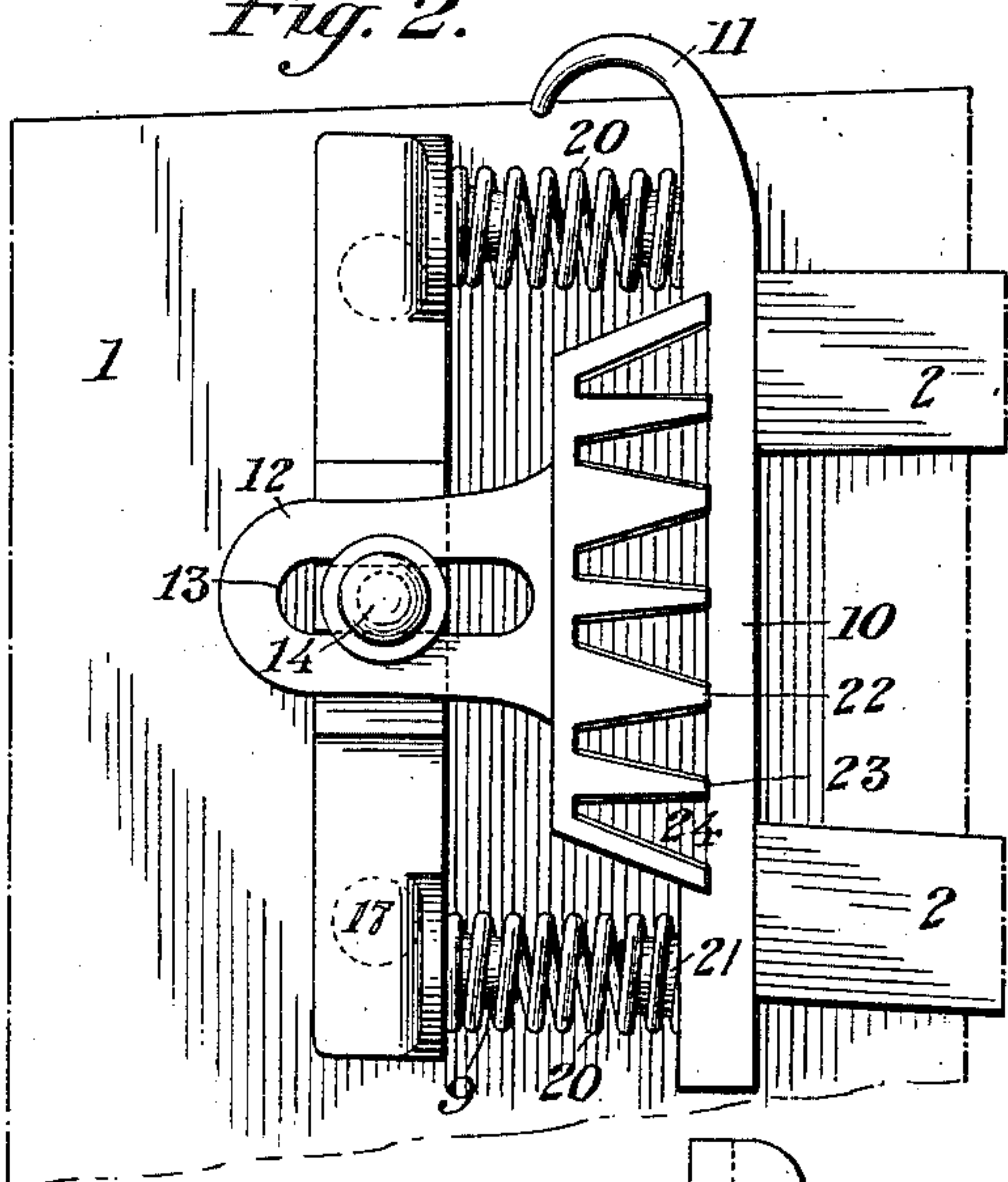


Fig. 3.

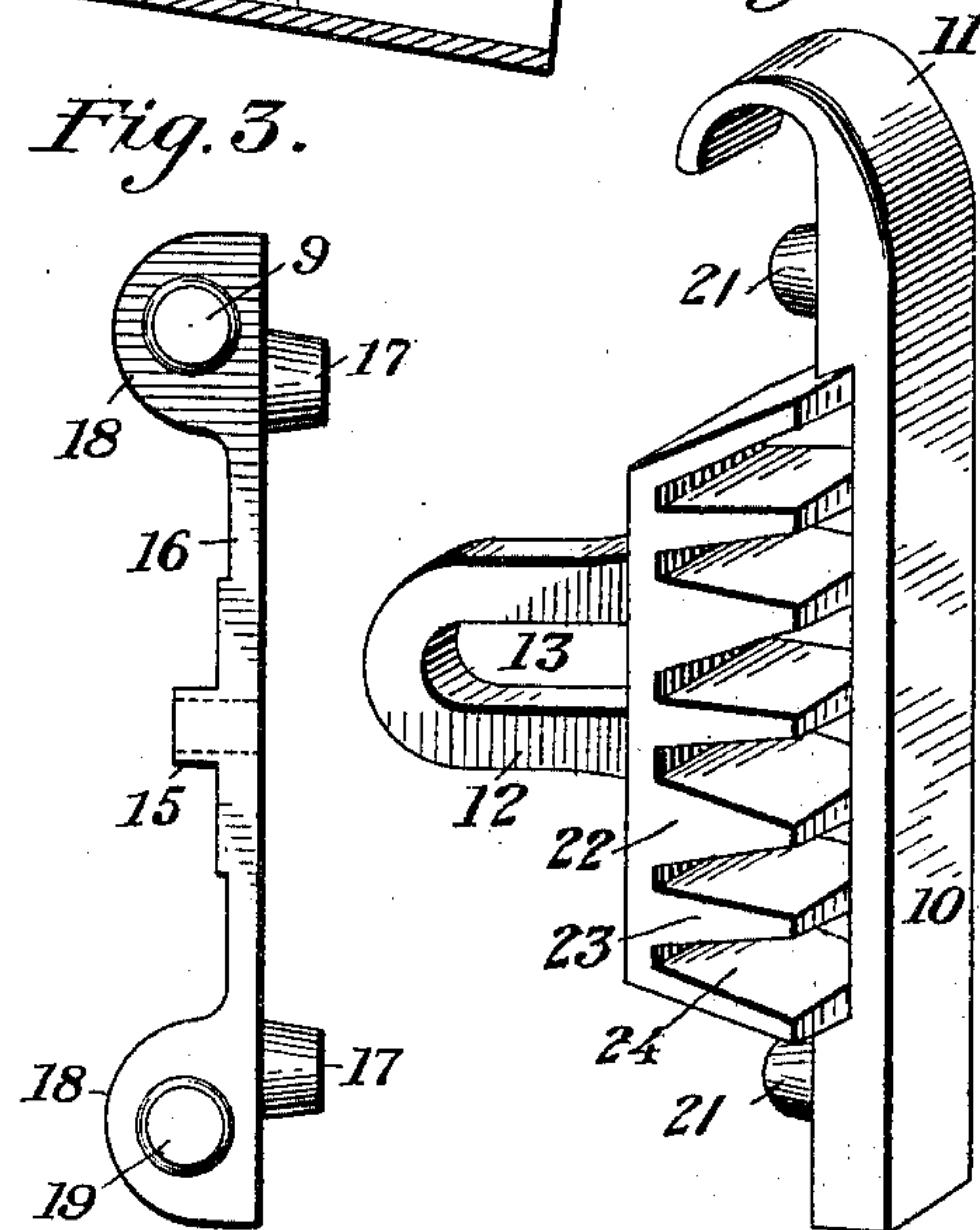


Fig. 5.

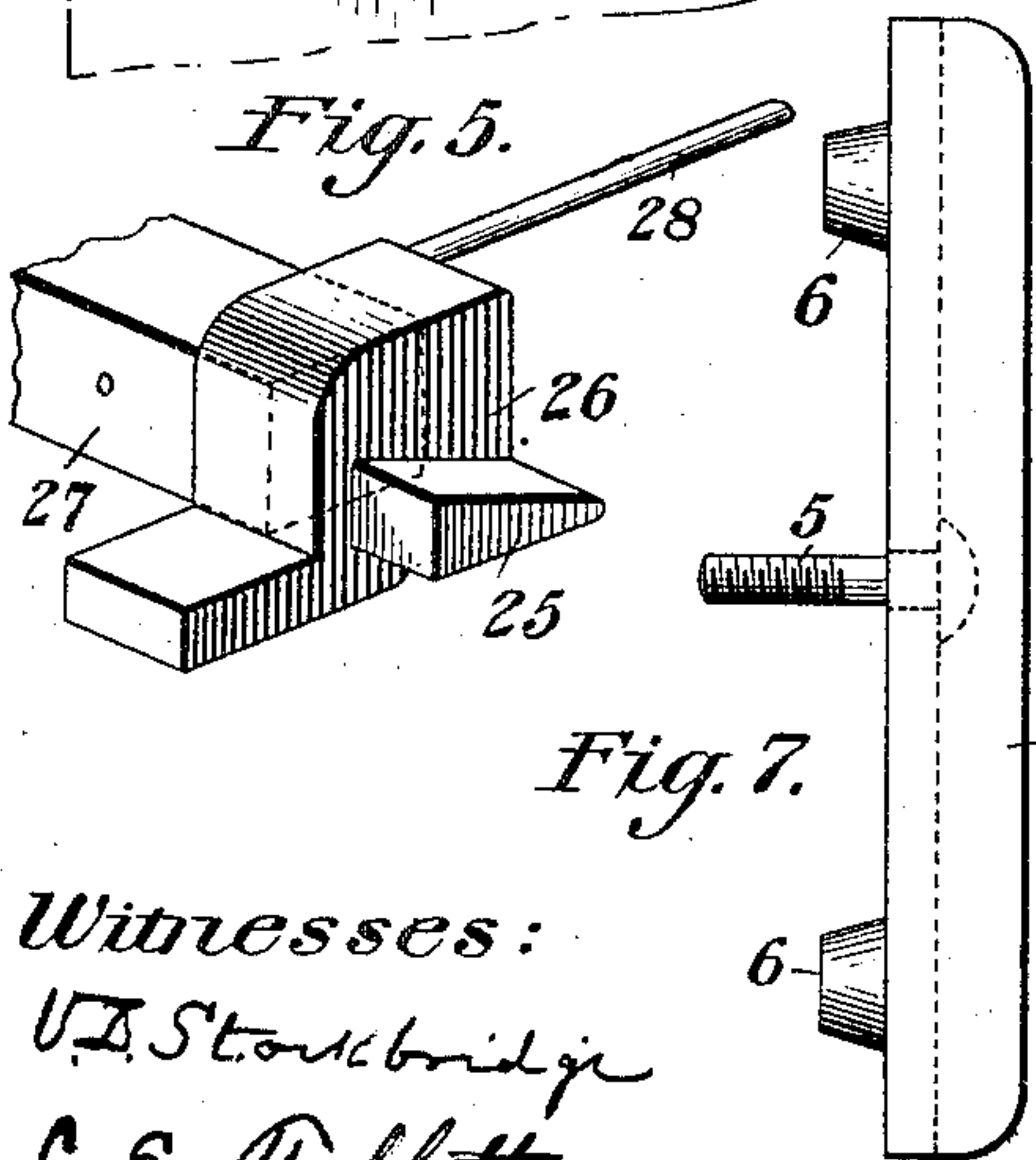


Fig. 7.

Fig. 6.

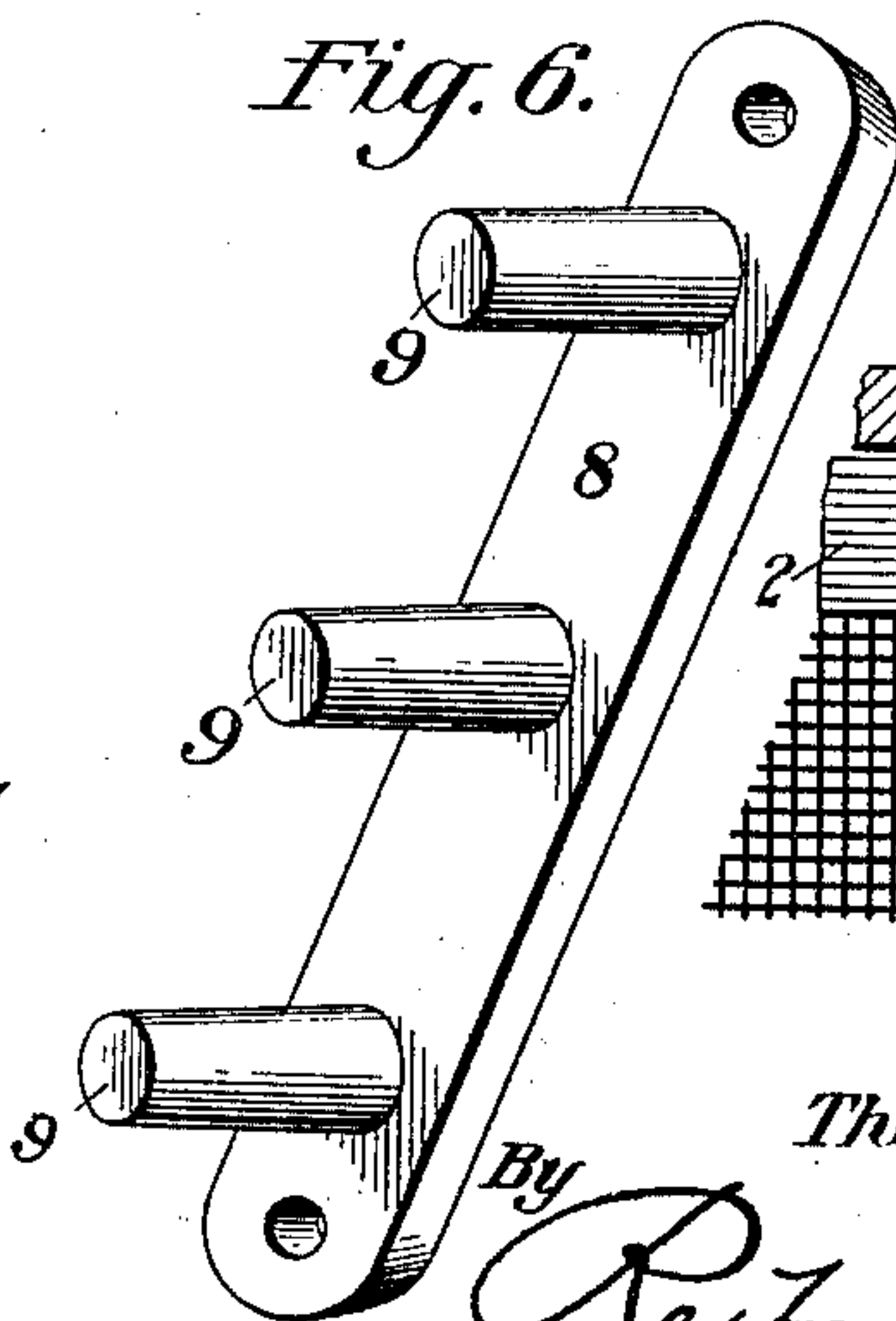
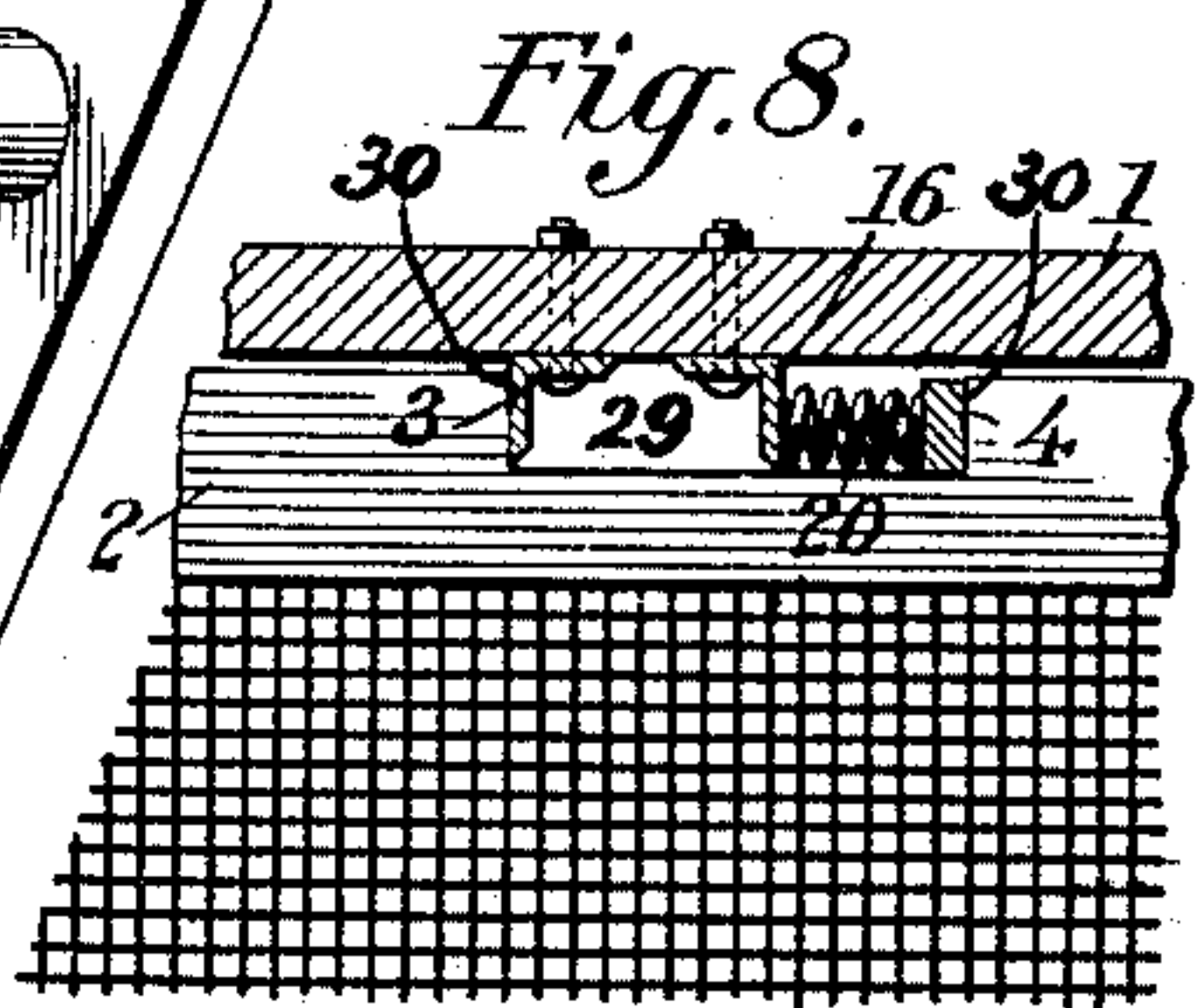


Fig. 8.



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# UNITED STATES PATENT OFFICE.

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## SIEVE-HOLDER.

**SPECIFICATION** forming part of Letters Patent No. 688,126, dated December 3, 1901.

Application filed April 17, 1901. Serial No. 56,261. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. ROLFE, a citizen of the United States, residing at Battlecreek, in the county of Calhoun and State of Michigan, have invented a certain new and useful Sieve-Holder, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sieve-holders, and is especially designed with reference to the retention in place of sieves within the vibratory or shaking shoe of a threshing-machine.

The primary object of the present invention is to provide simple, easily-operated, and reliable means for holding one or more sieves in place and enabling the same to be readily removed and replaced or interchanged, while at the same time the sieves are separately or collectively held firmly in place without liability of rattling or being subjected to end or side play and consequent wear.

In connection with the sieve-holding means it is also an object of this invention to provide supplemental means for holding in place the head or bar of the tailings-rake.

With the above and other objects in view, the nature of which will become apparent as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a vertical longitudinal section through a threshing-machine shoe, showing a pair of sieves held in place by the sieve-holding device. Fig. 2 is an enlarged detail elevation of the yielding stop and the parts connected therewith. Fig. 3 is an edge view of the bracket member of the yielding stop. Fig. 4 is a perspective view of the body of the yielding stop, showing the rack extension and slotted guide-flange. Fig. 5 is a detail perspective view of one of the rake-head caps, showing also a portion of the rake-head and one of the tines. Fig. 6 is a detail perspective view of the stud-plate. Fig. 7 is an edge view of the fixed stop. Fig. 8 is a detail plan view showing the manner of associating the stops with the side bars of a sieve at a point intermediate the ends of the sieve.

Like numerals of reference denote like parts in all figures of the drawings.

In Fig. 1 I have illustrated the sieve-holding device as applied to an ordinary threshing-machine shoe, (indicated at 1,) which shoe may be of any ordinary or preferred construction, as it forms no part of the present invention. 2 represents a pair of sieves arranged within the shoe in the ordinary position and held in place by oppositely-located stops 3 and 4, forming elements of the present invention. It will be understood that two sets of stops, such as are illustrated at 3 and 4 in Fig. 1, are employed for each shoe, the stops 3 being secured to the inner walls of the shoe opposite to each other and the other stops 4 being also arranged opposite each other and secured by the means hereinafter described to the opposite inner walls of the shoe.

Each of the stops 3 is rigidly connected to the shoe by means of a fastening-bolt 5, and in order to prevent any liability of the stop twisting said stop is provided adjacent to its ends with projecting knobs 6, which enter corresponding sockets in the side board of the shoe. Each of the stops 3 is also provided with a laterally-projecting flange 7, forming a seat, against which portions of the sieve-frames are adapted to bear, as shown in Fig. 1.

Adjacent to the fixed stop 3 there is arranged a stud-plate 8, preferably secured to the outer wall of the shoe and having inwardly-projecting supporting-studs 9, which pass through openings in the shoe and project sufficiently within the same to form rests for the adjacent end portions of the sieve-frames, as also illustrated in Fig. 1.

Each of the stops 4 is movable and yieldingly supported, so as to bear with a stiff but yielding pressure against the ends of the sieves opposite those which bear against the fixed stops 3. The yielding stop 4 consists of a body portion 10 in the form of a bar extending transversely of the planes of the sieves and substantially at right angles to the length of the sieves, the said yielding stop being provided at its upper end with handle extension 11, whereby it may be operated while removing or replacing sieves. The yielding stop 4 is also provided with a



laterally-projecting guide-flange 12, having a longitudinal slot 13, through which passes a guide-bolt 14, the said bolt also passing through an opening formed in a rectangular boss or lug 15, projecting laterally from a bracket 16, secured to the inner wall of the side of the shoe. The bolt 14 also passes through the side of the shoe and is securely held by a nut or the equivalent. The bracket 16 is held against turning by means of knobs 17, which project from the inner surface thereof into corresponding sockets in the side wall of the shoe, similar to the arrangement described in connection with the fixed stop 3. The bracket 16 is also provided with laterally-projecting spring-seats 18, having spring holding-knobs 19, which are encircled by the adjacent ends of coiled springs 20, the opposite ends of which encircle spring holding-knobs 21 on the adjacent side of the yielding end stop 4.

By means of the construction just described it will be seen that the body of the yielding stop is forced in the direction of the fixed stop 3 and into forcible contact with the sieves by means of the springs 20, which take up any looseness which would otherwise occur in the ordinary mounting of the sieve-frames and prevent rattling and wear under the rapid vibration or shaking of the shoe. It will also be apparent that by grasping the handle extension 11 the tension of the springs 20 may be overcome sufficiently to release the sieves or allow the sieves to be inserted in position and held by the fixed and movable end stops.

Each movable stop is further provided with a rack extension 22, projecting laterally from the body of the stop and comprising a series of ledges or teeth 23, with intervening recesses 24, any one of which is adapted to receive a wedge-shaped lug 25, projecting from a cap 26, applicable to the end of the rake-bar or head 27 of the tailings-rake (indicated at 28.) The rack extension 22 provides for setting the rake higher or lower, and the notches or recesses 24 are preferably arranged at varying angles, so that in setting the rake higher or lower the angle or inclination of the rake may be correspondingly varied to suit requirements and the nature of the material being operated upon.

Instead of utilizing the fixed and movable stops at the ends of the sieves said stops may be arranged intermediate the ends of the sieves, as illustrated in Fig. 8, in which case the side bars of the sieves are provided with notches or recesses 29, forming oppositely-located shoulders 30, one of which bears against the fixed stop and the other against the yielding or movable stop. The notches or recesses 29 may be of sufficient length to receive both the fixed and movable stops, or separate notches or recesses may be provided, one for each stop.

The construction above described enables a plurality of sieves to be held tightly within

the shoe at the same time and at any desired inclination with respect to each other and to a horizontal plane. In order to effect a thorough cleaning of the grain, two sieves are almost universally used. The upper sieve is somewhat coarser than the lower one, so as to remove the coarse material, and the said upper sieve is generally placed on a slant or incline to facilitate the working off of the weeds, straw, chaff, &c. The lower or second sieve is usually much finer than the upper one, and by it the final cleaning is effected. The sieve-holding device enables both of such sieves to be tightly held in place and adjusted as to their angles until the proper inclination is obtained for securing the best results. Any slight difference in the lengths of the sieves is at the same time compensated for, whether such difference in length be caused by error in manufacture or by subsequent wear of the sieve-frames. The device also permits an easy and speedy adjustment of the sieves without the use of special tools or appliances.

It will be apparent that the sieve-holder hereinabove described is susceptible of considerable change in the details of carrying out the invention, and I therefore reserve the right to make such changes as properly fall within the scope of the appended claims.

Having thus described the invention, what is new, and desired to be secured by Letters Patent, is—

1. A sieve - holding device comprising a bracket, a stop having a sliding engagement therewith, and a spring interposed between the bracket and stop and acting to force the stop away from the bracket and against the sieve with a yielding pressure, the arrangement permitting the sieve to be adjusted or lifted out of place by pressing the movable stop back and overcoming the tension of the spring.

2. A sieve - holding device comprising a bracket, a movable stop having a sliding engagement with the bracket, and springs interposed between the opposite ends of the stop and bracket and acting to force the stop away from the bracket with a yielding pressure.

3. The combination with a shoe, and a sieve, of a fixed stop, and a slidable stop acting in opposite directions against the sieve, a supporting-bracket for the slidable stop, and a spring interposed between the bracket and slidable stop and acting to force the stop away from the bracket with a yielding pressure, the arrangement permitting the sieve to be adjusted or lifted out of place by pressing the movable stop back and overcoming the tension of the spring.

4. A sieve - holding device comprising a bracket, a stop having a sliding engagement therewith and provided with a plane abutting face for contact with the sieve, and a spring interposed between the bracket and stop and acting to force the stop away from



the bracket and against the sieve with a yielding pressure.

5     5. The combination with a shoe, and a sieve mounted therein, of a pair of movable stops at one end of the sieve, rack extensions on said stops, a rake having end caps provided with lugs to fit the rack extensions, and other stops for the opposite end of the sieve.

10    6. The combination with a shoe, and one or more sieves, of fixed and yieldingly-supported

stops for respectively holding the opposite ends of the sieves, and a stud-plate provided with studs which act to sustain the sieves during the operation of adjustment.

In testimony whereof I affix my signature 15  
in presence of two witnesses.

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