

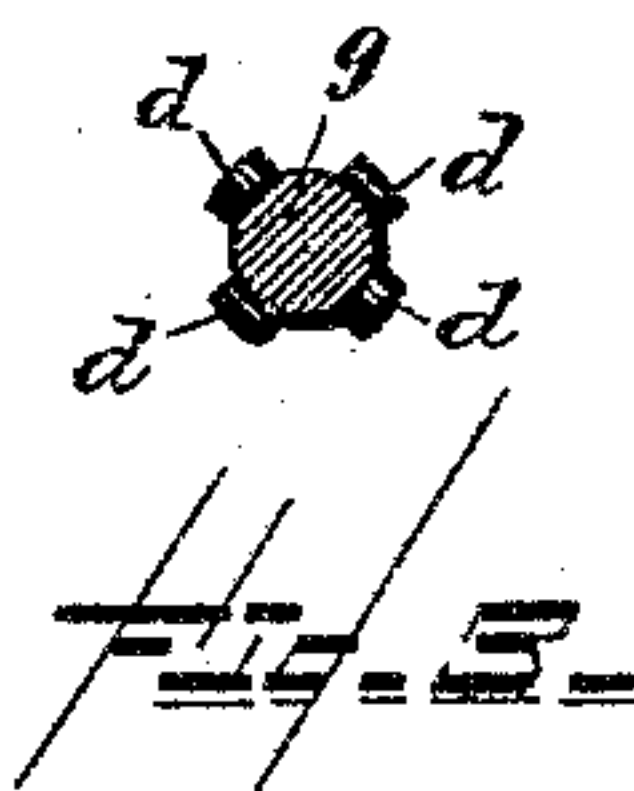
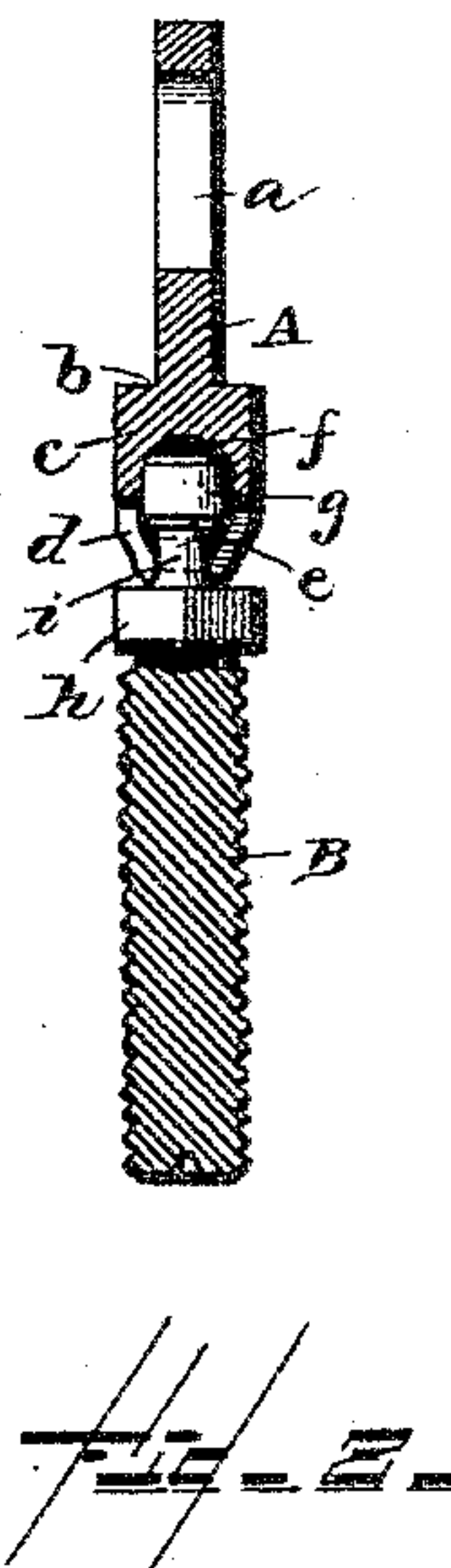
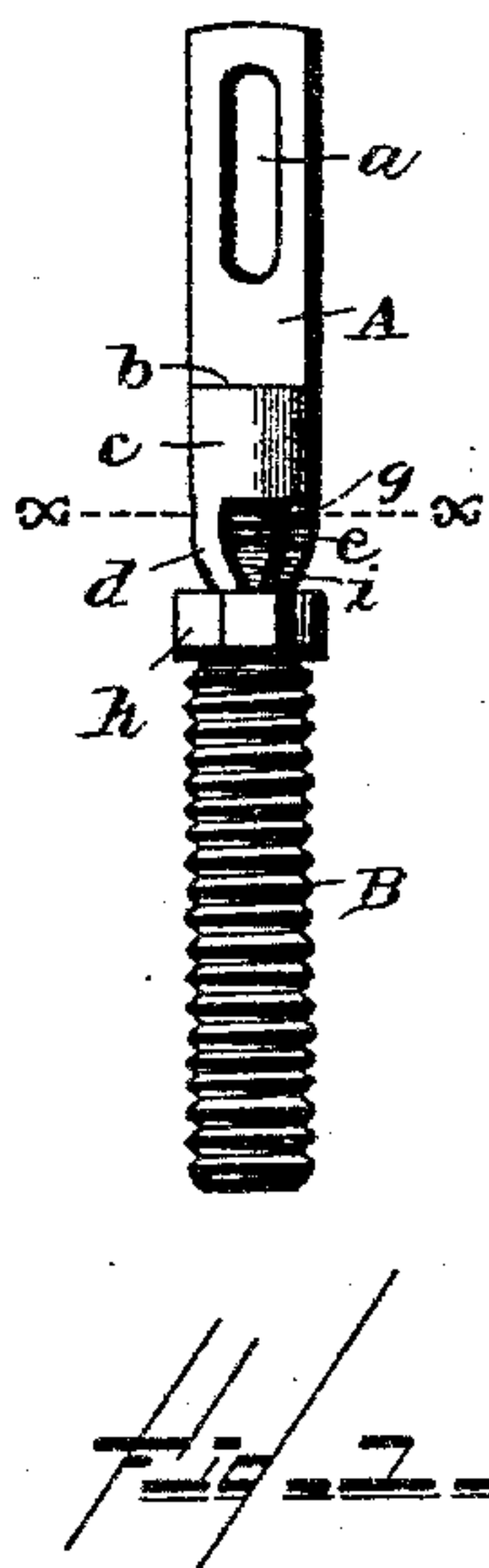
(No Model.)

J. F. McGRATH.

LEVER SCREW FOR SPINNING MACHINES.

No. 412,288.

Patented Oct. 8, 1889.



Witnesses

*Albert Spinden*  
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Inventor

*John F. McGrath*

By *his* Attorney

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# UNITED STATES PATENT OFFICE.

JOHN F. McGRATH, OF TAUNTON, MASSACHUSETTS.

## LEVER-SCREW FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 412,288, dated October 8, 1889.

Application filed May 31, 1889. Serial No. 312,726. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. McGRATH, a citizen of the United States, residing at Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Lever-Screws for Spinning-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention has relation to that class of lever-screws which are employed for holding weight-levers of the rolls of spinning-machines, and the object thereof is to provide a simple and effective means of connecting the slotted head to the head of the screw.

The novelty in the present instance resides in the peculiarities of construction and the combinations, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation of a lever-screw constructed in accordance with my invention. Fig. 2 is a sectional elevation thereof, and Fig. 3 is a horizontal section taken on the line  $x x$  of Fig. 1.

Referring now to the details of the drawings by letter, A designates the head, slotted, as at  $a$ , to engage the hooked end of the weight-lever (not shown) in the usual manner. This head, below the slotted portion, is provided with a shoulder  $b$ , below which is the cylindrical portion  $c$ , from which project downward the arms or prongs  $d$ , preferably four in number; but the number may be varied at will without departing from the spirit of the invention. The forming of these prongs or arms of course leaves an opening between each two prongs, as shown at  $e$ , so that the contact-bearing surfaces of the slotted head and head of the screw will be lessened. The cylindrical portion  $c$  of the slotted head,

above the junction of the prongs or arms therewith, is formed with a cavity  $f$ , in which works the head  $g$  of the screw B, said screw being formed near its upper end with a polygonal portion  $h$ , adapted to receive a wrench or other suitable tool by which it may be turned. The portion of the screw between the head  $g$  and the portion  $h$  is formed with a circumferential groove  $i$ , preferably rounded, as shown, to receive the ends of the prongs or arms of the slotted head.

To secure the two parts together it is only necessary to place the head of the screw in the cavity of the slotted head and then bend inward the prongs or arms of the slotted head. The said prongs will rest with their ends in the groove of the head of the screw and prevent separation of the parts and yet allow of free movement of the parts on each other, forming a swivel-joint.

By the above construction I provide a cheap and simple device for the purpose set forth, dispense with locking-keys, which are apt to work loose or become lost, and which requires no special adaptation of the head of the screw other than the forming of the groove therein, as shown. The parts may be readily put together or detached when desired.

The slotted head is made of malleable iron, and after it is cast there is nothing to do to it. The slot and hole for the ball being all cast at once, it leaves no hole for a machinist to drill or slot to make. This is a decided advantage over prior constructions of this class of devices, wherein considerable time and labor have to be expended to complete the parts, which adds materially to the cost. By my construction I can produce a better article, more readily put together, more satisfactory in results, and less liable to become separated, at less than one-half the cost of the prior construction.

What I claim as new is—

1. The lever-screw composed of the slotted head formed with a cavity, as shown, and with prongs, and the screw formed with a head held in said cavity by said prongs, substantially as shown and described.

2. The lever-screw composed of the screw having a polygonal portion and a head above

said portion, with a groove between the head  
and polygonal portion, and the slotted head  
formed with a cavity, as shown, and with  
prongs adapted to engage the head of the  
5 screw and hold the same in said cavity, as set  
forth.

In testimony that I claim the above I have

hereunto subscribed my name in the pres-  
ence of two witnesses.

JOHN F. McGRATH.

Witnesses:

JOHN H. GALLIGAN,  
BRYAN J. DINNEEN.