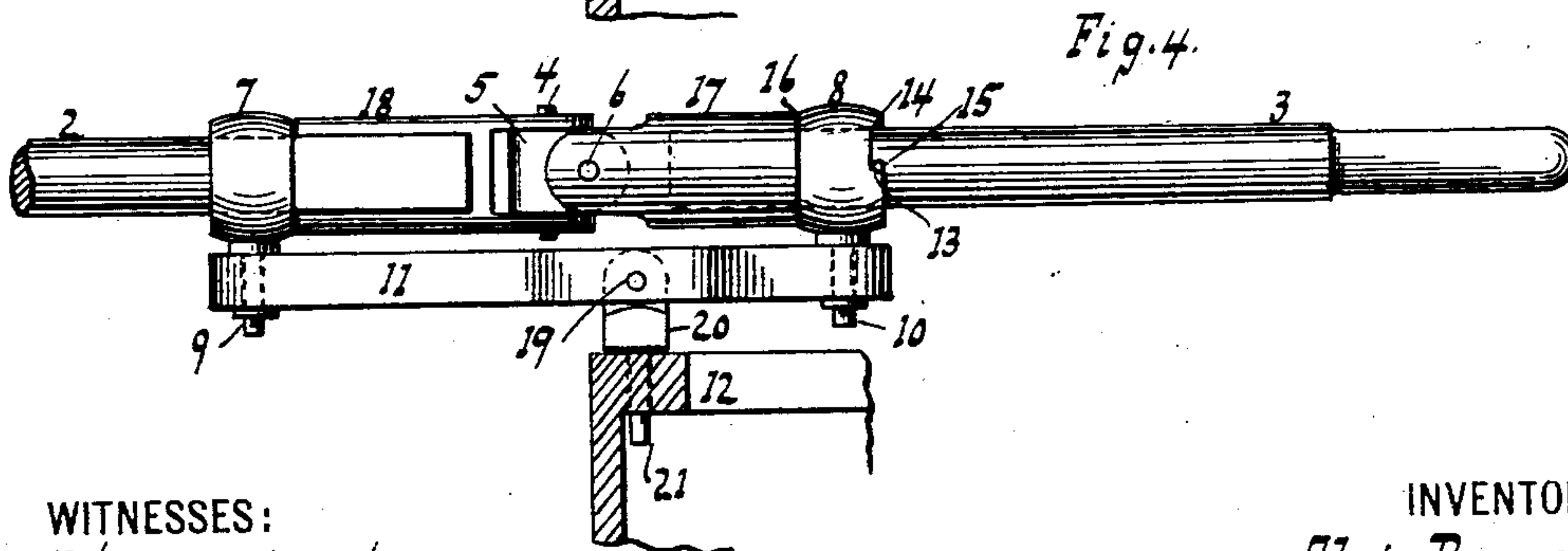
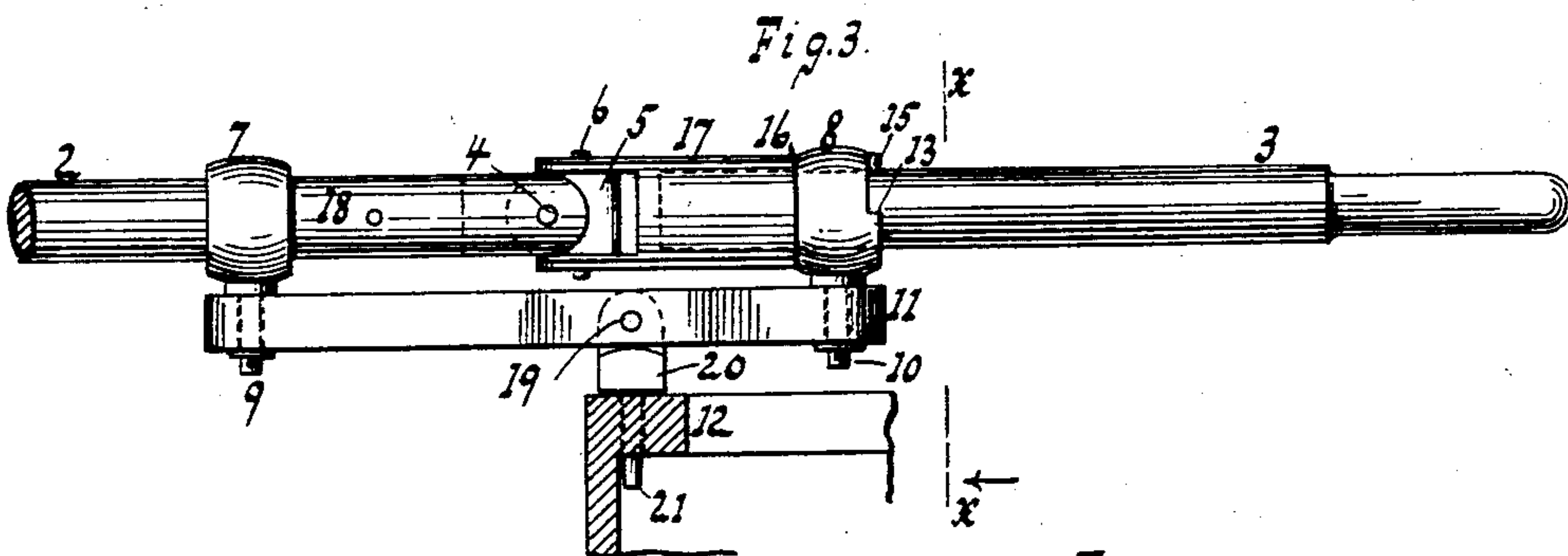
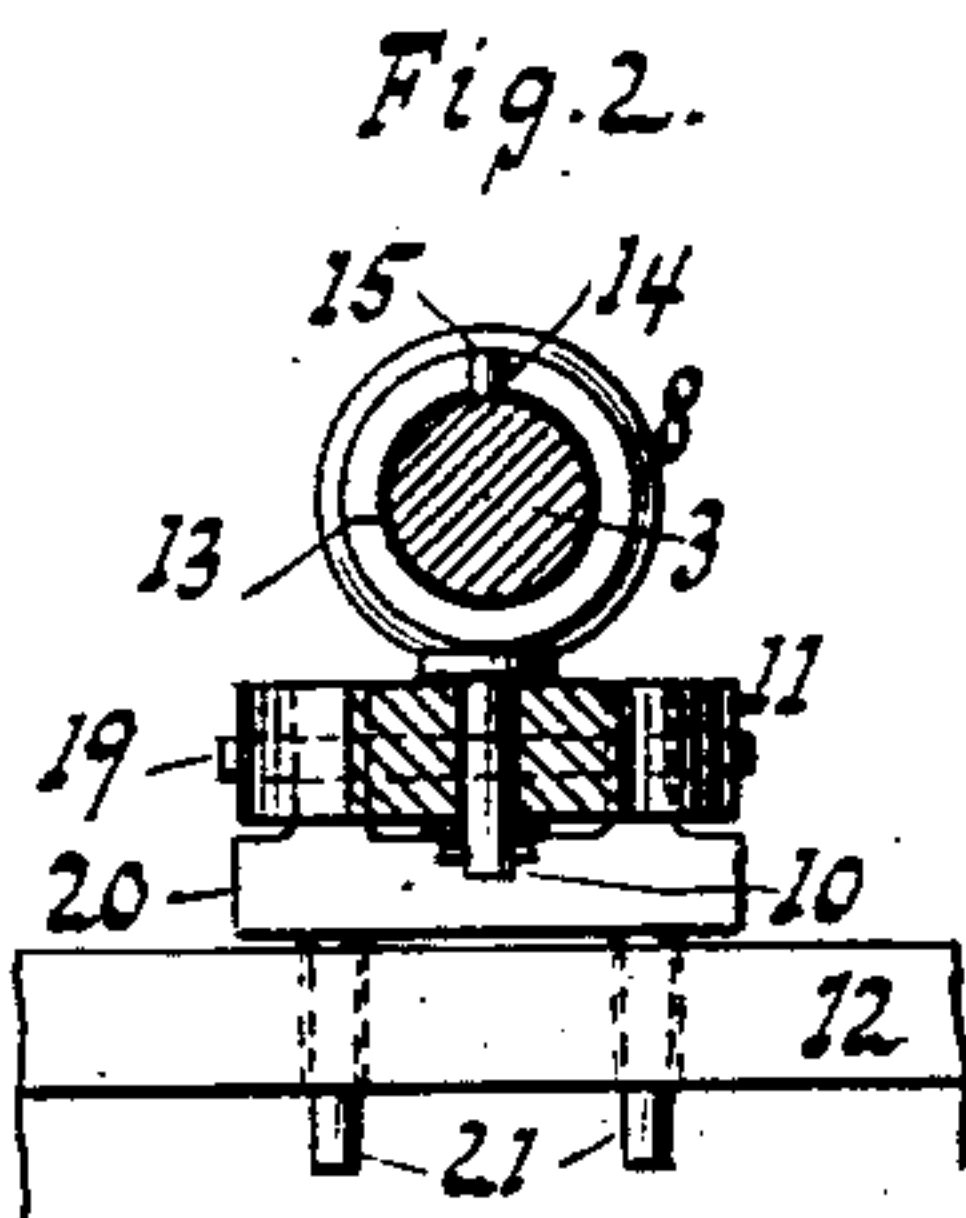
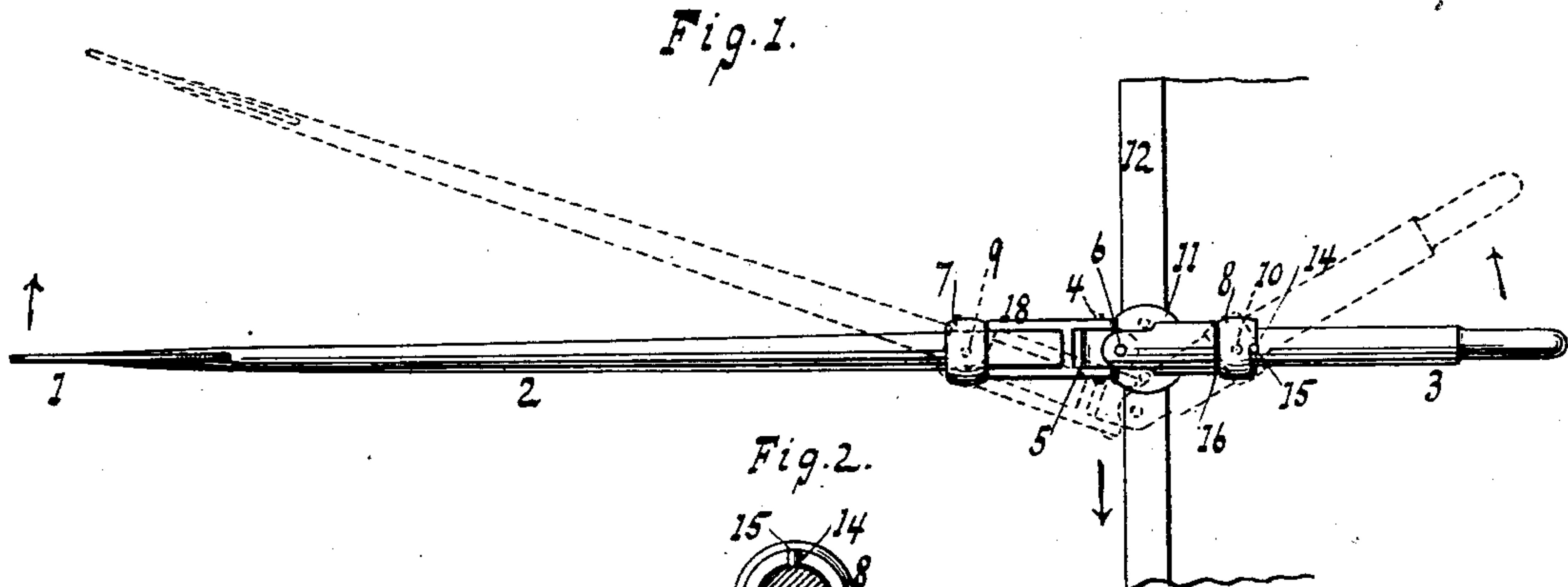


(No Model.)

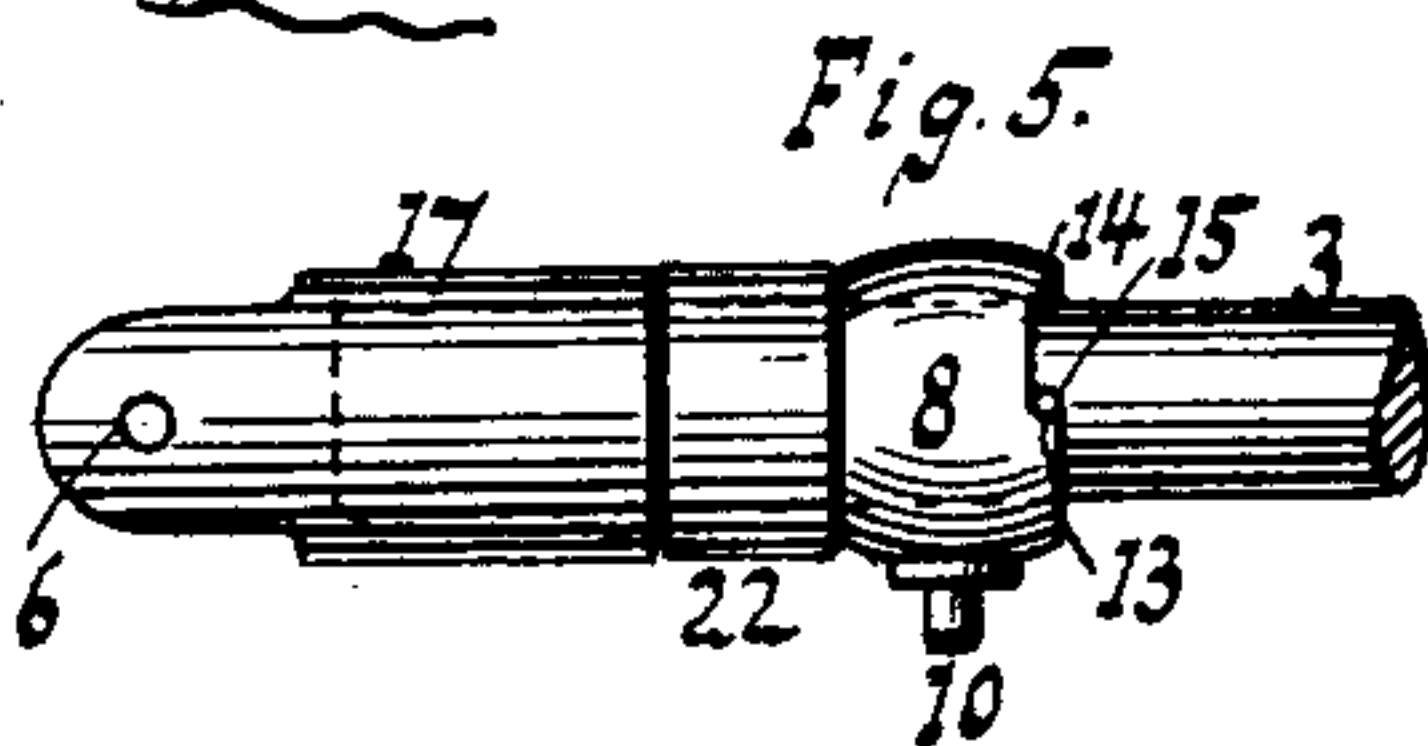
A. BOERGER.  
ROWING GEAR.

No. 587,639.

Patented Aug. 3, 1897.



WITNESSES:  
*William Miller*  
*Chas. C. Doringen.*



INVENTOR  
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# UNITED STATES PATENT OFFICE.

ALOIS BOERGER, OF NEW YORK, N. Y.

## ROWING-GEAR.

SPECIFICATION forming part of Letters Patent No. 587,639, dated August 3, 1897.

Application filed April 8, 1897. Serial No. 631,291. (No model.)

*To all whom it may concern:*

Be it known that I, ALOIS BOERGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Rowing-Gears, of which the following is a specification.

This invention relates to a rowing-gear for propelling the boat in the direction in which the rower faces and which can at the same time be feathered; and the invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the rowing-gear. Fig. 2 is a section along  $xx$ , Fig. 3. Fig. 3 is a side elevation of Fig. 1, enlarged. Fig. 4 is a view like Fig. 3, showing the oar feathered. Fig. 5 shows a filling or adjusting piece.

The oar has a blade 1, and the shaft is made in two parts or sections 2 and 3, suitably jointed, as by a knuckle or toggle joint 4, 5, and 6. The shaft-section 2 can slide, as well as turn, in a sleeve or bearing 7, and the shaft-section 3 can turn in sleeve 8. The sleeve or swivel bearings 7 and 8 are rotatively supported by or pivoted at 9 and 10 to a hinged or pivoted base or support 11 on the boat or gunwale 12. The jointed shaft 2 and 3 causes the oar-blade to propel the boat in the direction in which the rower is looking, and the relative shaft-sections 2 and 3 enable the blade 1 to be feathered, as seen by comparing Figs. 3 and 4. The knuckle-joint 4, 5, and 6 enables the shaft-sections to rotate or feather as well when the sections are in alignment as when they are at an angle to one another.

The sleeve 8 has stop-shoulders 13 and 14, and the shaft-section 3 has a stop-pin 15. When the shaft-sections are rotated to bring stop-pin 15 to shoulder 14, Figs. 1 and 3, the blade 1 is in position to take the water. When the stops 13 and 15 are in touch, Fig. 4, the blade is feathered for recovering or cutting through the air. The stops 13, 14, and 15 limit to a quarter-turn or prevent excessive rotation of the shaft-sections. The shaft-

section 3 is shown with a shoulder 16, sitting against sleeve 8 to prevent the section 3 from sliding or carrying stop 15 out of reach of shoulders 13 and 14.

The shoulder 16 can be readily formed by a sleeve or collar 17, of sufficient size, secured to handle-section 3 and serving to support the pivot 6, connecting with block 5 of the joint. A fork or collar 18 on shaft-section 2 serves as a bearing for the joint pivot or pintle 4. The support 11 is shown supported on a pivot or joint 19, so that the support can swing for dipping and raising blade 1. The pivot 19 is supported by bearing 20, which can be removably or suitably connected to the gunwale, as by pins 21.

The sleeve 17 could be adjustably mounted on section 3, and by setting said sleeve 17, for example, outward along section 3 and interposing a ring or filling between said sleeve 17 and swivel-bearing 8 the inner or handle end of section 3 will be set or moved inward or toward the center or keel line of the boat, as for giving greater leverage or for adjusting to a wider boat. Likewise the form of the joint 4 5 6 can be suitably modified, as seen fit.

The sections 2 and 3 could be obtained by cutting in two an ordinary oar or shaft. Worn oars can thus be utilized.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a pivoted base or support provided with swiveled bearings, one of the bearings having stop-shoulders, and an oar composed of two sections jointed together, and mounted and turning axially in said swiveled bearings, one of the oar-sections having a projecting stop-pin cooperating with the stop-shoulder to limit the axial turning motion and the other oar-section slidable lengthwise in the other swiveled bearing, substantially as and for the purposes described.

2. An oar comprising sections, a pivot-joint for connecting the sections and swivel-bearings in which said sections are rotatively or featheringly mounted, one of said sections having a collar or sleeve forming a bearing for a joint-pivot and also a shoulder made to sit against a face of a swivel-bearing, the oar



posite face of said last-named swivel-bearing  
having stops or shoulders, and said section  
having a stud or stop made to coöperate with  
the shoulders of said bearing to limit the ro-  
5 tation of the sections substantially as de-  
scribed.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing  
witnesses.

ALOIS BOERGER.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.