

No. 678,172.

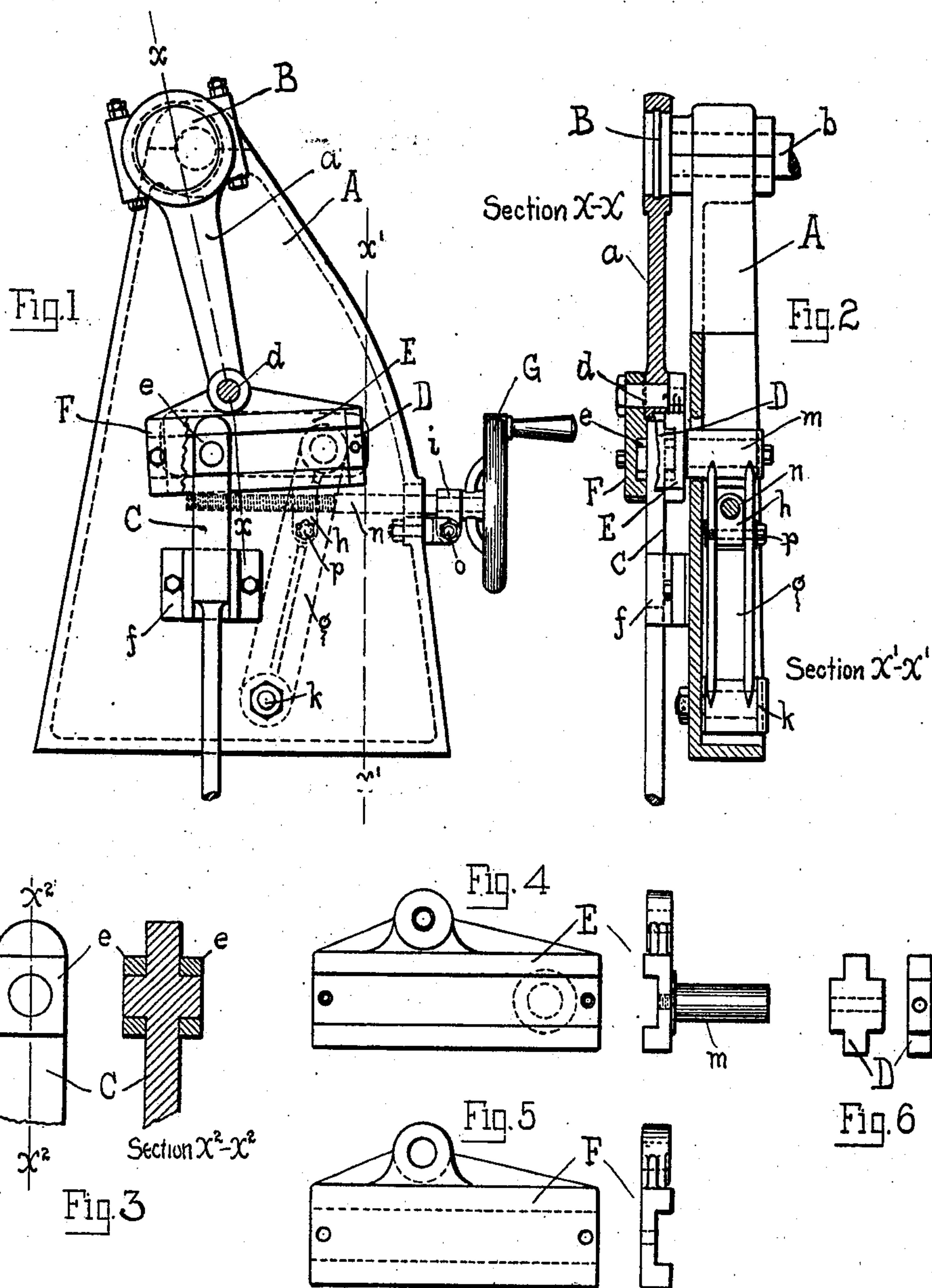
Patented July 9, 1901.

B. W. GRIST.

ADJUSTABLE STROKE MECHANISM.

(Application filed Sept. 4, 1900.)

(No Model.)



WITNESSES :

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BENJAMIN W. GRIST, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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ADJUSTABLE STROKE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 678,172, dated July 9, 1901.

Application filed September 4, 1900. Serial No. 28,934. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. GRIST, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Adjustable Stroke Mechanism, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of an improved construction of adjustable stroke mechanism which is capable of general adaptation, but which is shown in the present instance as being especially adapted to pumping machinery.

It further consists of novel details of construction, all of which will be hereinafter fully described and claimed.

Figure 1 represents an end elevation of an adjustable stroke mechanism for pumping and other machinery embodying my invention. Fig. 2 represents sections on lines $x-x$ and $x'-x'$, Fig. 1. Fig. 3 represents an elevation and section of upper end of pump ram or plunger. Fig. 4 represents a side and end elevation of half of a box. Fig. 5 represents a side elevation and end elevation of half of the box. Fig. 6 represents side and end elevations of the pieces forming the end of the rectangular box.

Similar letters of reference indicate corresponding parts in the figures.

A designates a portion of the frame or housing in which the shaft b has its bearings, said shaft having the eccentric or crank B mounted thereon and said eccentric being provided with the eccentric-rod a .

C designates a pump plunger or ram which is connected to the block or blocks e and reciprocates in the guide f , said blocks fitting in the box-sections E and F on each side of the pump-ram, whereby power is transmitted to the latter through the eccentric-rod a , which is connected to said boxes or box-sections E and F by the pin d , said boxes having the ends D.

G designates a hand-wheel whereby the screw n is actuated according to requirements, said screw passing through the nut h and being supported in the bearing i .

m designates a trunnion extending from one side of the boxes, said trunnion being mount-

ed in a suitable bearing, from which depends the lever g , the lower end of the latter being supported upon the stud k .

p designates a pin for connecting the nut h of the regulating-screw to the lever g , which supports the boxes.

It will be seen from the foregoing that through the medium of the hand-wheel G, the screw n , nut h , and the trunnion m the boxes can be adjusted according to requirements and the stroke of the ram varied or adjusted from zero to the maximum stroke, it being apparent that a movement of the boxes E and F to the right or left of the position indicated will cause the desired variation in the stroke of the ram to take place.

It will be apparent that changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction I have herein shown and described.

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

1. The combination of vibratory driving and driven members, and a pivotally-mounted box pivotally connected with the driving member and consisting of side pieces between which said driven member is pivotally mounted and is longitudinally movable.

2. The combination of vibratory driving and driven members, a pivotally-mounted box pivotally connected with the driving member and consisting of side pieces, and blocks mounted to slide longitudinally upon said side pieces, said driven member being situated between said side pieces and pivotally connected with said blocks.

3. The combination of vibratory driving and driven members, a box pivotally connected with said driving member, said driven member being pivotally connected with and longitudinally slidable upon said box, a lever upon which said box is pivotally mounted, a pivoted nut upon said lever, and a longitudinally-immovable screw-shaft engaging said nut.

B. W. GRIST.

Witnesses:

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W. C. DU CONET, Jr.