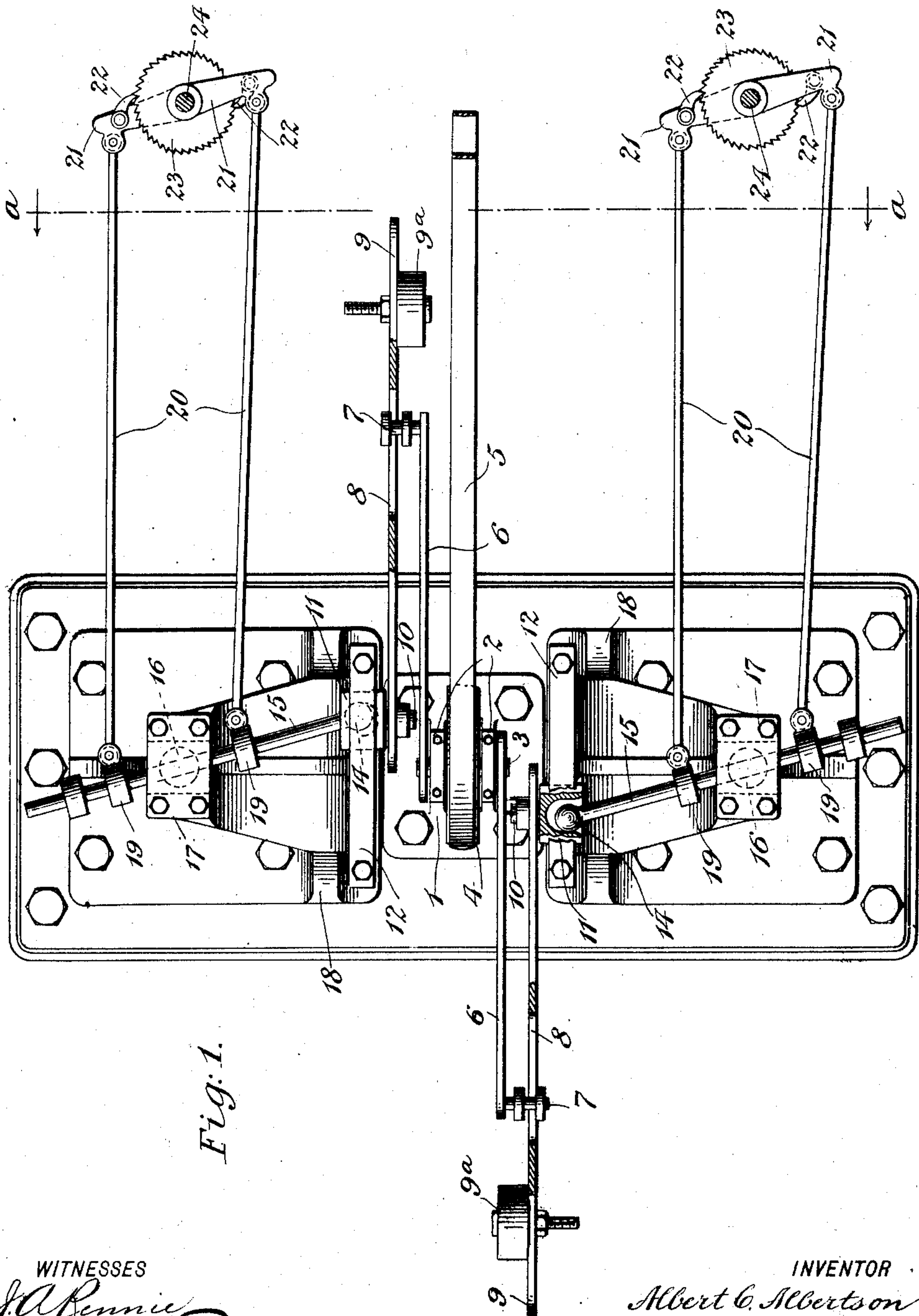


A. C. ALBERTSON.  
POWER TRANSMITTING DEVICE.  
APPLICATION FILED JAN. 29, 1908.

909,127.

Patented Jan. 5, 1909.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig:2.

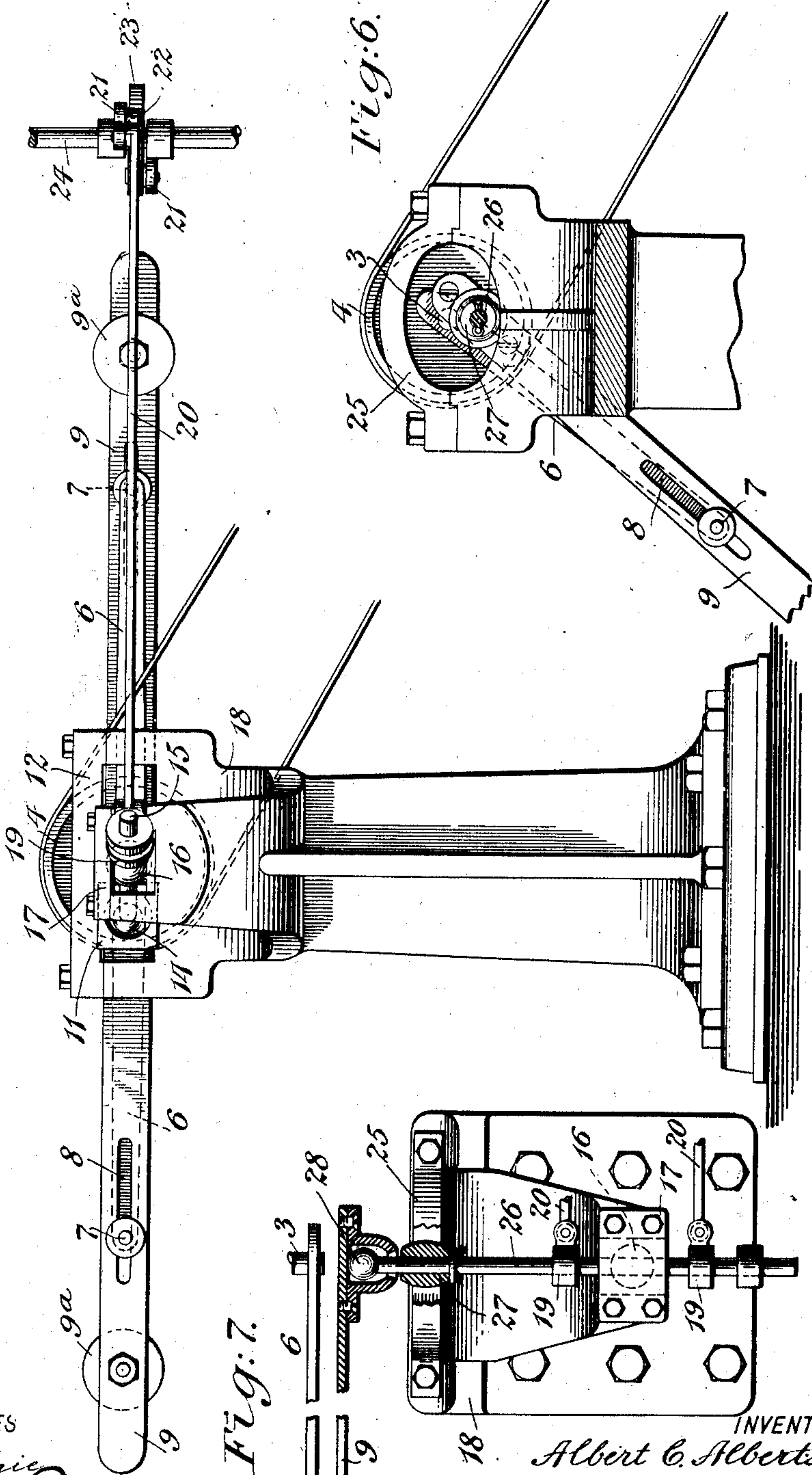


Fig:6.

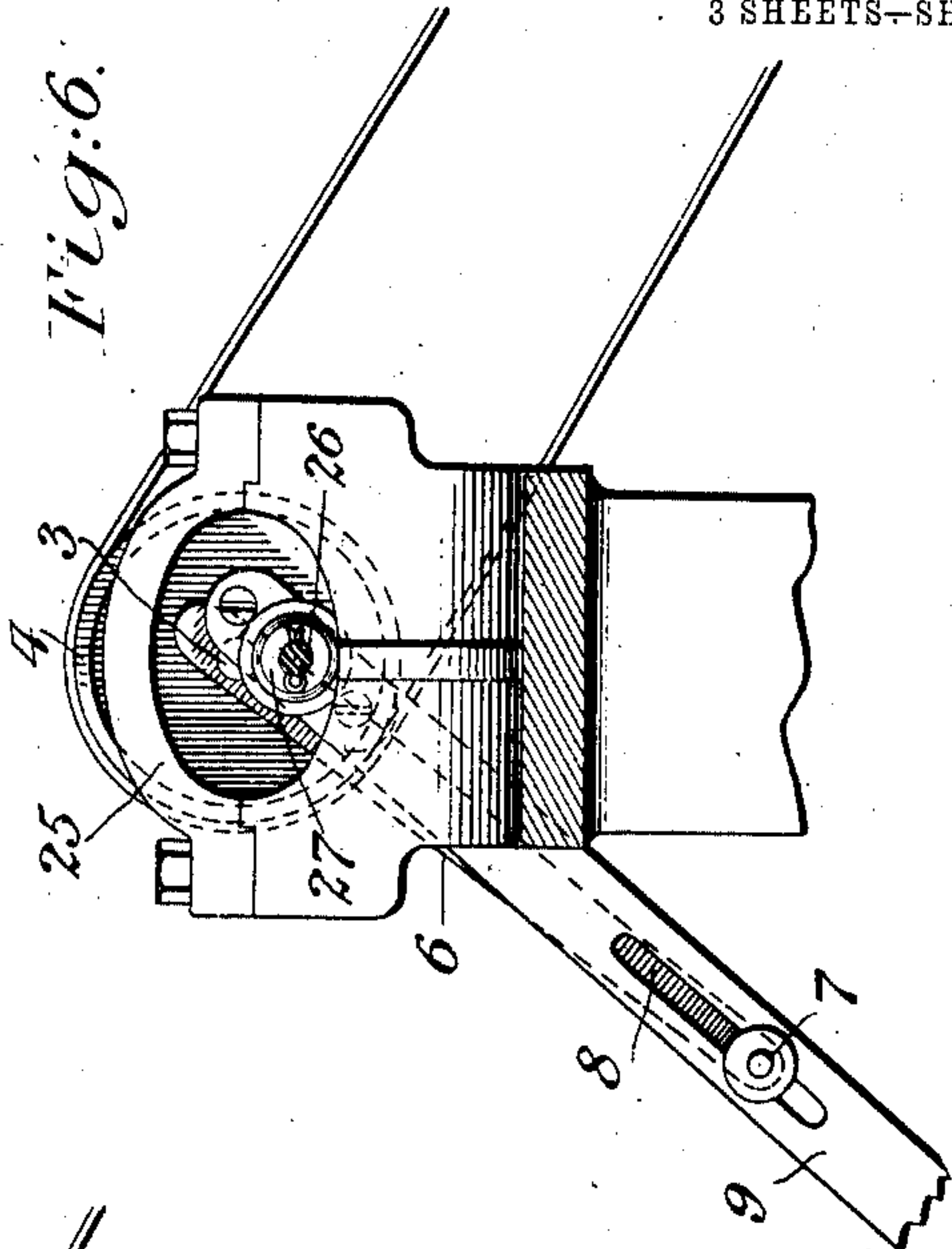
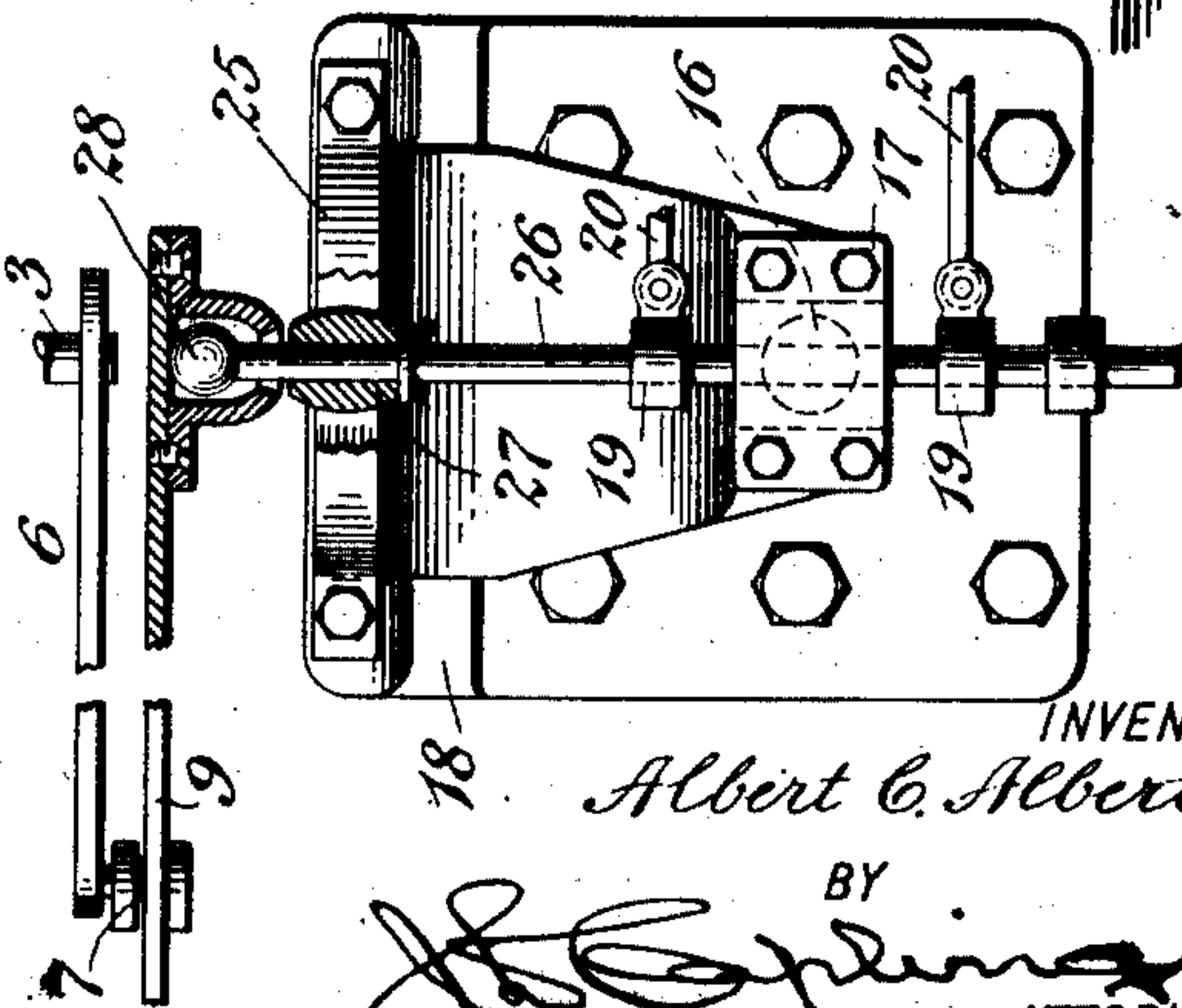


Fig:7.



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3 SHEETS—SHEET 3.

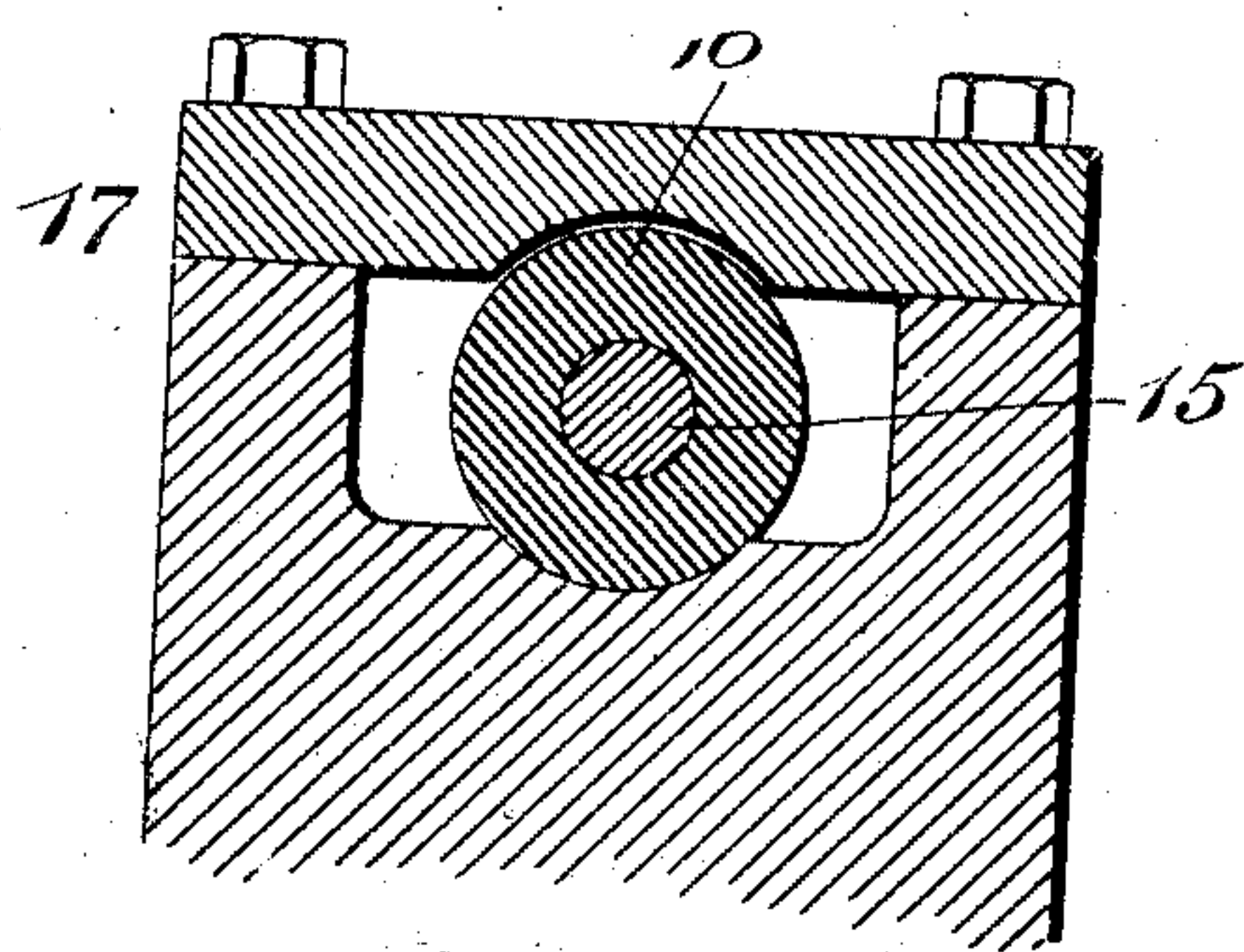
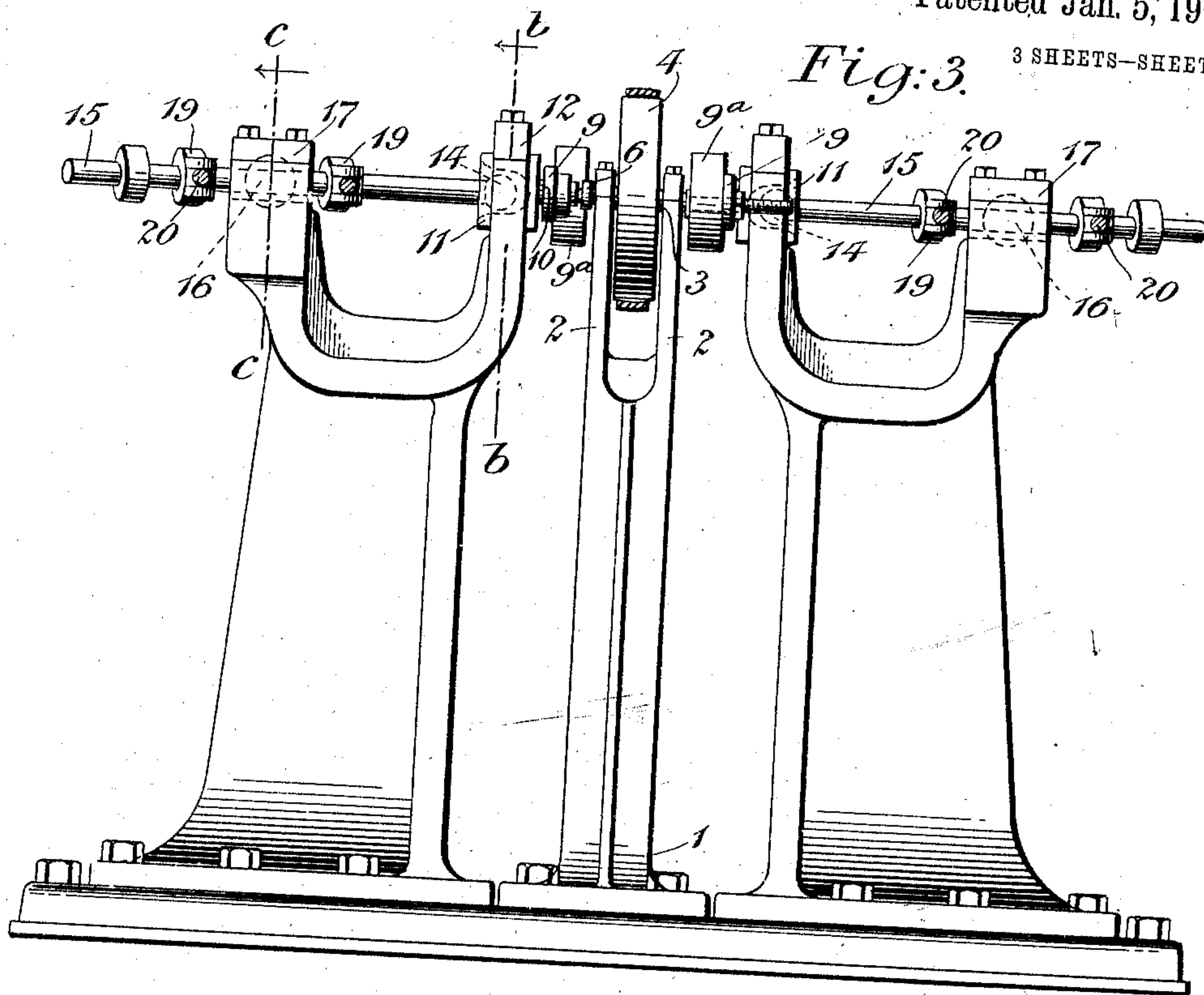


Fig. 5.

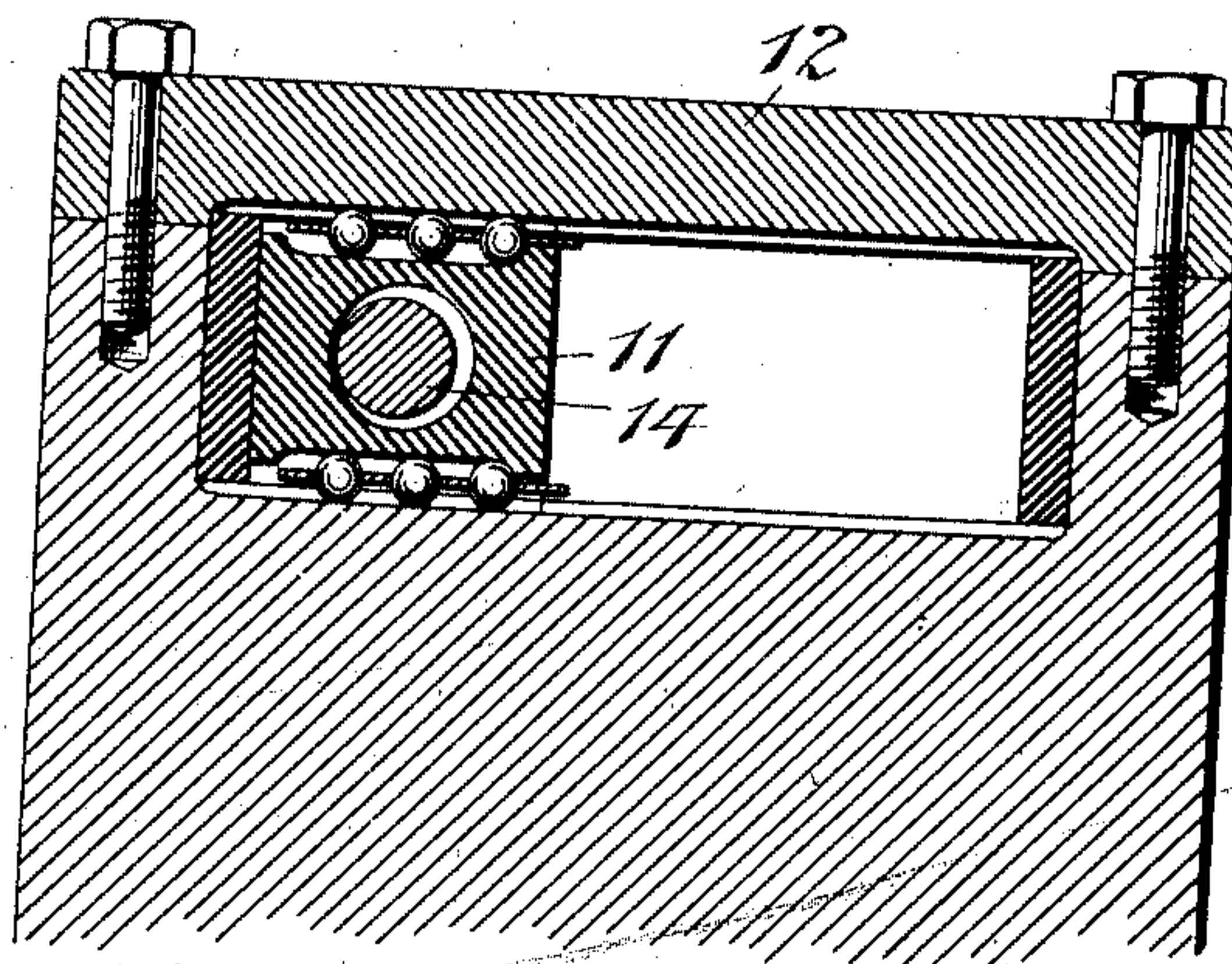


Fig. 4.

WITNESSES

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# UNITED STATES PATENT OFFICE.

ALBERT C. ALBERTSON, OF NEW YORK, N. Y.

## POWER-TRANSMITTING DEVICE.

No. 909,127.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed January 29, 1908. Serial No. 413,308.

*To all whom it may concern:*

Be it known that I, ALBERT C. ALBERTSON, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain Improvements in Power-Transmitting Devices, of which the following is a specification.

This invention relates to certain improvements in power transmitting devices, and has for its object to provide a device of this general character of a simple and comparatively inexpensive nature, and of a novel and improved construction wherein the centrifugal force generated in revolving or rotating bodies is employed in the transmission of power, the construction and arrangement of the parts being such that the said centrifugal force is communicated through certain mechanical instrumentalities to attain an improved and useful result in the transmission of power.

The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts of the improved power transmitting device, whereby certain important advantages are attained, and the device is rendered simpler, less expensive, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings which serve to illustrate my invention—Figure 1 is a plan view showing one embodiment of the improved power transmitting device; Fig. 2 is a side elevation of the device, as shown in Fig. 1; Fig. 3 is a sectional view taken vertically through the device in the plane indicated by line *a—b* in Fig. 1, and showing certain features of construction to be hereinafter described; Fig. 4 is an enlarged sectional detail view taken in the plane indicated by the line *b—b* in Fig. 3; Fig. 5 is a sectional detail view somewhat similar to Fig. 4, but taken in the plane indicated by the line *c—c* in Fig. 3; Fig. 6 is a partial sectional view illustrating a modified formation of the improved power transmitting device, and—Fig. 7 is a fragmentary detail view showing certain features of construction of the device as illustrated in Fig. 6.

Referring first to Figs. 1 to 5, 1 represents a frame having spaced bearing pieces 2, 2, in which is journaled a shaft 3, having a grooved sheave or pulley 4, secured upon it between

the said bearing pieces, and in position to receive one end of a band or belt 5, by means of which the said sheave or pulley 4 and the shaft 3 whereon the same is secured, are driven from any suitable source of power (not shown). The extremities of the shaft 3 are provided, beyond the bearing pieces 2, 2, with crank arms 6, 6, which are extended in opposite directions, respectively, from said shaft, and are provided, at their outer ends, with wrist-pins 7, 7, which are engaged in slotted guide-ways 8, 8, produced in rods 9, 9, held to turn, at their inner ends, upon pins or studs 10, 10, extended from slide blocks 11, 11, mounted for sliding reciprocatory movement in horizontal directions in guide-ways 12, 12, produced in frame members 18, 18, erected at opposite ends of shaft 3.

The outer ends of the rods 9, 9, are provided with weights 9<sup>a</sup>, 9<sup>a</sup>, and the arrangement of the parts as above described is such that the movement of the shaft 3 is communicated by reason of the connection of its crank arms 6, 6, to the rods 9, 9, in such manner as to cause the same to turn upon the pins 10, 10, as centers, and as the speed of movement of said rods 9, 9, increases, the centrifugal force generated thereby is permitted to throw the slide blocks 11, 11, in opposite directions along the respective guide-ways 12, 12, the slots 8, 8, wherewith the wrist pins 7 of the said crank arms 6, 6, are engaged, permitting movement of the said rods 9, 9, in unison with the slide blocks 11, and in the direction of their guide-ways 12, independently of the said crank arms 6, 6. By this arrangement of the parts, as the speed of rotatory movement of the rods 9, 9, increases, the centrifugal force is caused to act with increased power upon the rods 9, 9, and causes the slide blocks 11, 11, with which the said rods are connected to reciprocate along the guide-ways 12, 12, in the frame members 18, 18, in opposite directions to each other.

Upon the frame members 18, 18, outside of the guide-ways 12, 12, wherein the slide blocks 11 play, are arranged bearing pieces 17, 17, wherein are pivoted, as shown at 16, rods or levers 15, 15, the inner ends of which have rounded enlargements 14, 14, loosely engaged in sockets in the outer sides of the said slide blocks 11, whereby it will be seen that the reciprocatory movement of the slide blocks 11 is imparted to the rods or levers 15, in such a manner as to reciprocate



the same pivotally upon their pivotal connections with the bearing pieces 17. Upon the levers 15 are mounted collars 19, 19, of which there are two for each lever, one such collar being at each side of the pivotal connection of said lever with the corresponding bearing piece 17, and 20, 20, represent links connecting said collars with pawl arms 21, 21, mounted to oscillate upon shafts 24, 24, whereon are carried ratchet wheels 23, 23, the teeth of which are engaged by pawls 22, 22, carried by the said pawl arms 21, 21, in a well known way. By this arrangement the oscillatory movement of the rods or levers 15, 15, is communicated through the links 20 and pawls 22 to the ratchet wheels 23, 23 in such a way as to impart intermittent rotatory movement to the shafts 24, 24, and since the throw of the pawls 22 over the perimeters of the ratchet wheels 23, 23 will vary with the speed of rotatory movement of the rods 9, 9, and will gradually increase as the throw of the slide blocks 11 increases upon the rise of the centrifugal force incident to increased speed of rotation of the said rods 9, 9, it will be seen that the speed at which the shafts 24 24 are turned by the mechanism will also be commensurate with the speed of movement of the parts and with the increase of centrifugal force generated by the rotation of the rods 9, 9.

From the above description of my improvements, it will be seen that the power transmitting device constructed according to my invention is of an extremely simple and comparatively inexpensive construction, and is particularly well adapted for use by reason of the effective operation attained by the utilization of the centrifugal force, which insures actuation of the driven devices in unison with the increase of speed of the rods or members 9, and it will also be obvious from the above description that the device is susceptible of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise formation and arrangement of the several parts of the device as herein set forth in carrying out my invention in practice. For example, in some cases, the slide blocks 11, 11, may be dispensed with, and as shown in Figs. 6 and 7, the guide-ways 12 may be replaced by elliptical guide-ways 25, in which the inner ends of the levers 15 15 are extended and adapted to travel as shown at 26 in Figs. 6 and 7, the said inner ends 26 of the levers carrying rollers or sleeves 27 for rolling contact upon said elliptical guide-ways and having at their inner extremities loose connection with the inner ends of the rods or members 9, 9, as clearly shown at 28. By this arrangement a great portion of the impact and shock produced by the striking of the slide

block 11 upon the ends of its guide way when the device is being operated at high speed is avoided and a more even and uniform and economical operation of the improved power transmitting device is attained.

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

1. A power transmitting device comprising a frame having a guide, a part mounted for reciprocatory movement along the guide, a weighted member one end of which is mounted to turn on said reciprocatory part, and a rotatory part having a crank slidably connected with said weighted member.

2. A power transmitting device comprising a frame having parallel spaced guides arranged opposite to each other, parts mounted for reciprocatory movement along the respective guides, weighted members each having one end mounted to turn on one of the respective reciprocatory parts, and a rotatory part arranged to turn between the spaced guides and having oppositely arranged crank portions slidably connected with the respective weighted members.

3. A power transmitting device comprising a plurality of oppositely arranged members adapted for independent movement under centrifugal force, a rotatory part between said members having oppositely directed cranks each of which has sliding connection with one of said first-named members to compel turning movement thereof, parts connected for movement in unison with the respective members, and guides wherein the said parts are engaged for reciprocatory movement.

4. A power transmitting device comprising a plurality of oppositely arranged members adapted for independent movement under centrifugal force, a shaft journaled between said members and parallel with the axis of rotation thereof, a pulley on said shaft, oppositely directed crank arms on said shaft having sliding connection with the first-named members to compel turning movement thereof, parts connected for movement in unison with the respective members, and guide-ways wherein the said parts are engaged for reciprocatory movement.

5. A power transmitting device comprising parallel spaced guide-ways, slide-blocks mounted for reciprocatory movement in the respective guide-ways, members pivotally connected at their inner ends with the respective slide blocks and having their outer ends extended outwardly therefrom in opposite directions respectively and provided with weights, a shaft mounted to turn between the guide-ways and provided with driving mechanism, and oppositely directed crank arms carried at opposite ends of said shaft and having at their outer ends sliding connection with said pivoted members to



compel the same to turn in unison with said shaft.

6. A power transmitting mechanism comprising parallel spaced guide-ways, slide blocks mounted for reciprocatory movement along the respective guide-ways, members pivotally connected at their inner ends with the respective slide blocks and having their outer ends extended outwardly therefrom in opposite directions, respectively, and provided with weights, a shaft mounted to turn between the guide-ways and provided with driving mechanism, crank arms oppositely directed at opposite ends of said shaft and

having at their outer ends sliding connection with said pivoted members to compel turning movement thereof in unison with said shaft, and pivotally mounted levers connected for movement in unison with the respective slide blocks. 15

In witness whereof I have hereunto signed my name this 28th day of Jan'y 1908, in the presence of two subscribing witnesses. 20

ALBERT C. ALBERTSON.

Witnesses:

J. D. CAPLINGER,  
A. F. CONNETT.