

No. 639,059.

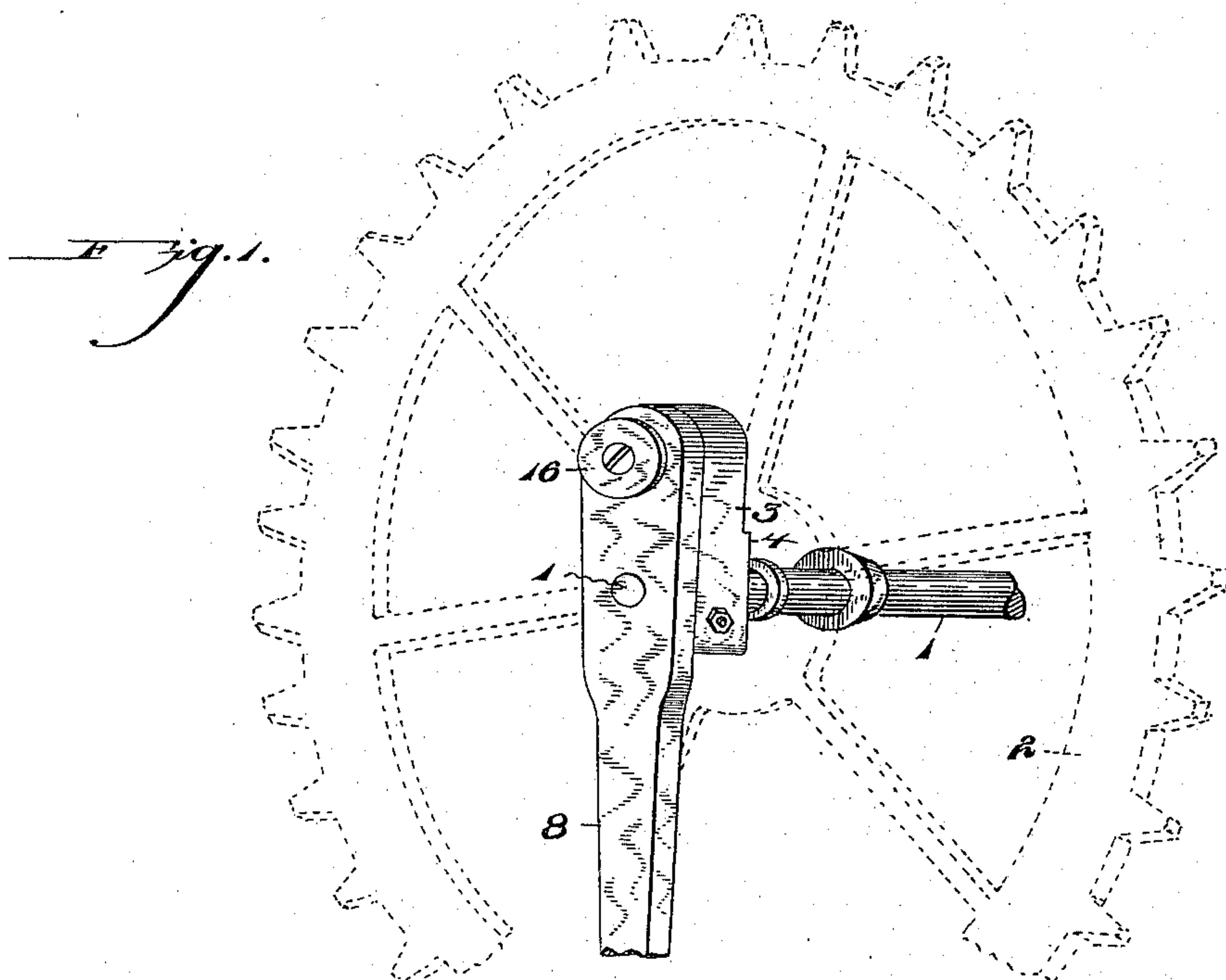
C. L. KINDSFATTER.

Patented Dec. 12, 1899.

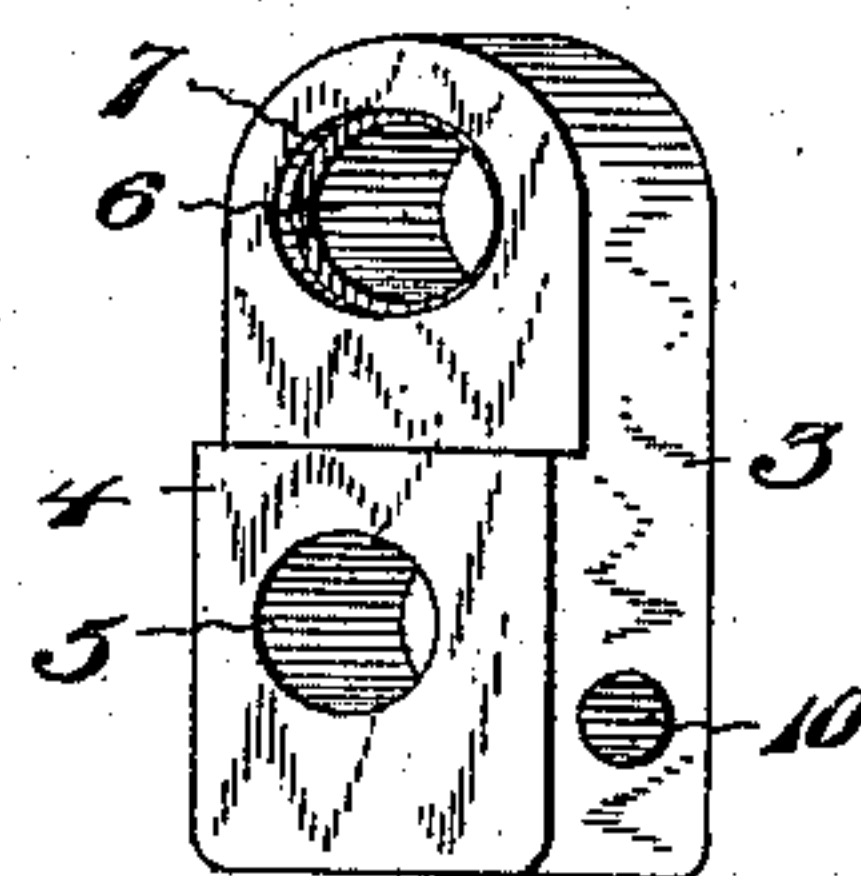
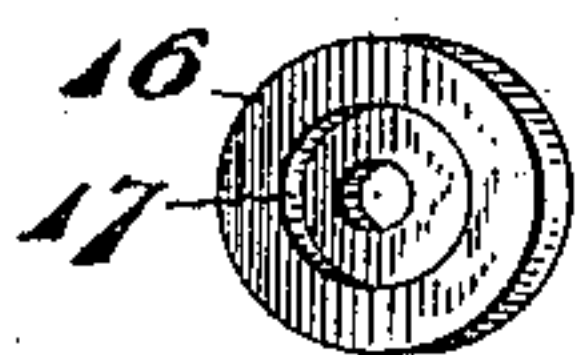
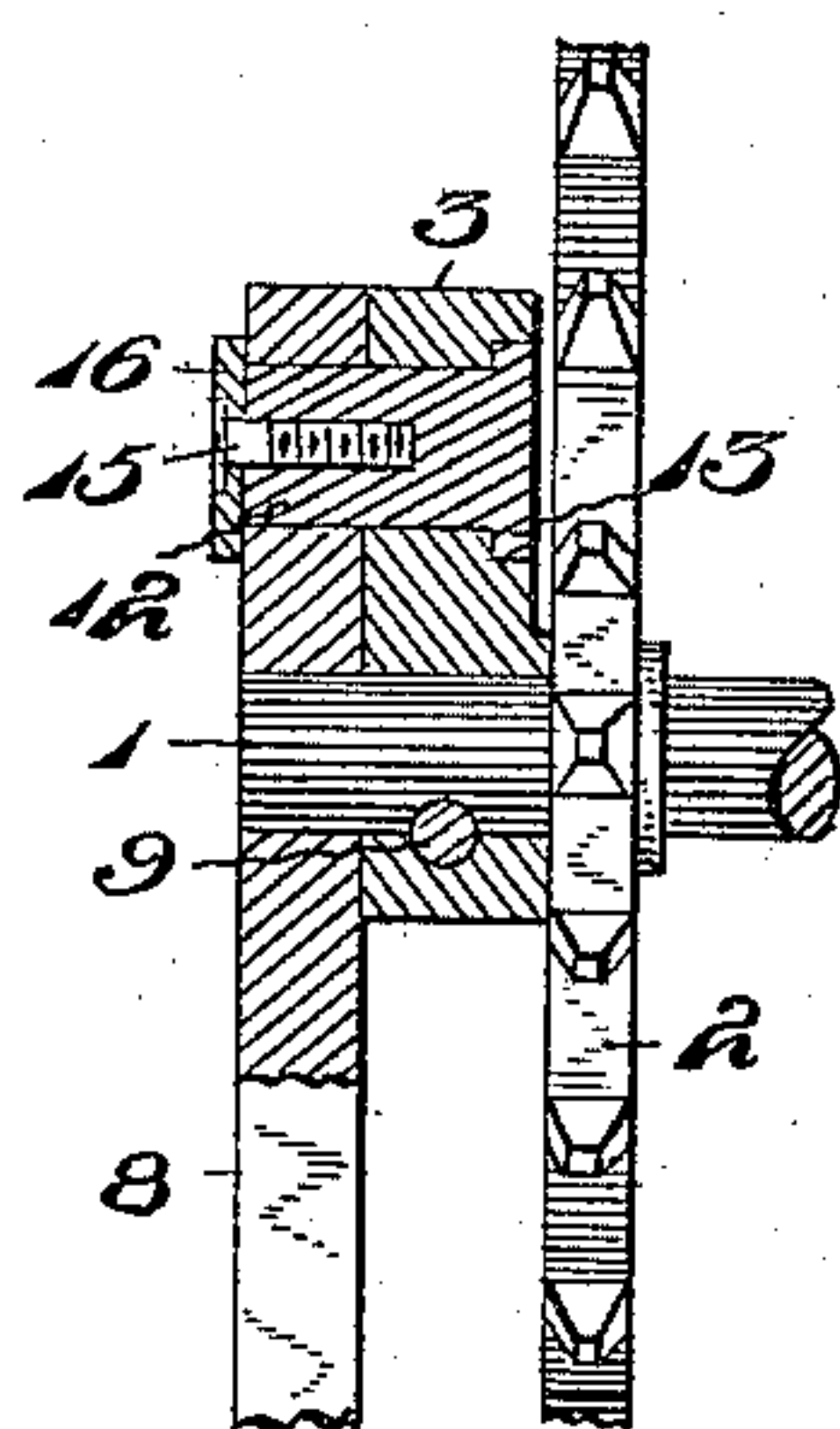
CRANK.

(Application filed Aug. 8, 1898.)

(No Model.)

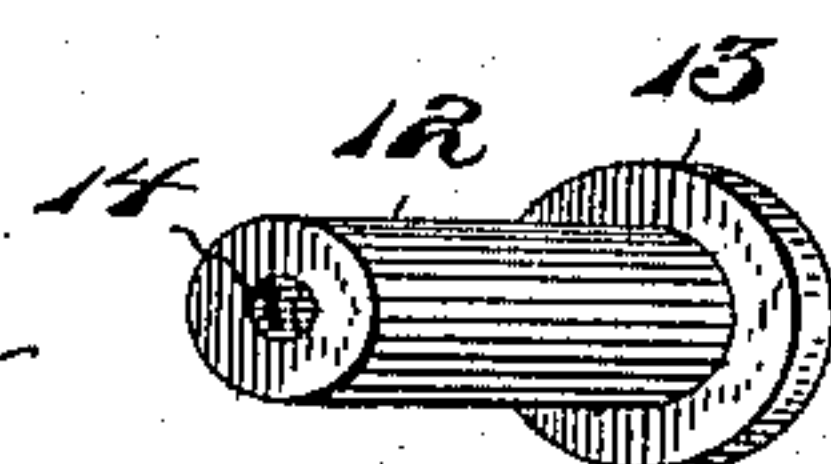


*Fig. 2.* *Fig. 3.* *Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CARL LORENZ KINDSFATTER, OF EAST LIVERPOOL, OHIO.

## CRANK.

SPECIFICATION forming part of Letters Patent No. 639,059, dated December 12, 1899.

Application filed August 8, 1898. Serial No. 688,021. (No model.)

*To all whom it may concern:*

Be it known that I, CARL LORENZ KINDSFATTER, a citizen of the United States of America, residing at East Liverpool, in the State of Ohio, have invented certain new and useful Improvements in Cranks for Shafting, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in cranks for shafting.

This invention relates to an improved device for lever and crank movement adapted for use in various machines in which a reciprocating or rotative movement is required. Such requirements are found in bicycles, power-presses, punching-machines, power-shears, and mechanical feed for various purposes. The mention of these will be sufficient to illustrate the general application of the movement.

The object of my invention is to provide a mechanism of this character for conveying motion and power; and it consists, essentially, of an auxiliary crank-arm mounted on the end of a shaft, and which has secured thereto the ordinary crank-arm. This latter is likewise mounted on the shaft and has its outer end flush with the outer end of the auxiliary crank-arm and is secured thereto by suitable means.

My invention further consists in the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, in which I have illustrated my invention as applied to a bicycle, and in which—

Figure 1 is a perspective view of my improved mechanism as applied to the shaft of a bicycle. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a detail perspective view of the securing-pin and parts therefor disassembled. Fig. 4 is a perspective view of the auxiliary crank-arm.

Referring to the drawings, in which like numerals of reference indicate corresponding parts throughout the several views, 1 indicates a shaft of a bicycle, showing the drive-wheel 2 in dotted lines in Fig. 1 and in full

lines in Fig. 2. Mounted upon the shaft near its end or ends is the auxiliary crank-arm 3, formed with a shoulder 4 and apertures 5 6. The auxiliary crank-arm is adapted to be mounted on the shaft by insertion of the same through the aperture 5. The inner face of the auxiliary crank-arm at the aperture 6 is adapted to be countersunk, as at 7. The shaft extends a suitable distance from the auxiliary crank-arm to allow the crank-arm 8 to be mounted thereon, and the auxiliary crank-arm is fastened to the shaft by means of the cotter-pin 9, operating in an opening 10, formed in the side thereof.

The free end of the crank-arm 8 is apertured, which coincides with the aperture 6 of the auxiliary crank-arm and is adapted to be secured thereto by means of the securing-pin 12, the head 13 thereof fitting neatly in the countersunk portion 7. The pin 12 has a screw-threaded aperture 14 extending longitudinally therein and is adapted to receive the fastening-pin 15, which is adapted to operate through the washer 16 and fit neatly therein, owing to the washer being countersunk, as at 17.

It will be seen from the foregoing description that the general application may be made of this means for increasing leverage and transmitting power to the crank-arm, owing to the securing thereto of the auxiliary crank-arm. As is the method now the crank-arm is secured to the shaft at one end, whereas securing the crank-arm, as I have shown, to the shaft and the end thereof to the auxiliary crank-arm allows for various sizes of crank-arms and auxiliary crank-arms to be used and obviates the necessity of changing the shaft when the auxiliary crank-arm is formed integral therewith. Furthermore, if the crank-arm or auxiliary crank-arm become broken it can be readily replaced by a new one without the removal of the shaft.

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

In combination with a drive-shaft, an auxiliary crank-arm mounted on one end thereof, said crank-arm provided near its free end with an opening having the inner face thereof countersunk, means operating through the lower side of the said crank-arm for securing

the same to the said shaft, a crank-arm  
mounted on one end of the said shaft engag-  
ing the outer face of the said auxiliary crank-  
arm, the said crank-arm mounted upon the  
5 said shaft so that one end thereof will be flush  
with the free end of the said auxiliary crank-  
arm, the said crank-arm provided with an  
opening registering with the opening in the  
said auxiliary crank-arm, a securing-pin ar-  
10 ranged in the said opening having its head  
mounted in the countersunk portion of the  
opening in the auxiliary crank-arm, the outer  
end of the said pin provided with a screw-  
threaded recess, a washer having its outer

face countersunk and also provided with a 15  
centrally-arranged opening registering with  
the recess in the end of the securing-pin, and  
a fastening-pin operating through the said  
opening and secured in the said recess for se-  
curing the said crank-arms together, sub- 20  
stantially as set forth.

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

CARL LORENZ KINDSFATTER.

Witnesses:

JOHN NOLAND,  
H. H. PATTERSON.