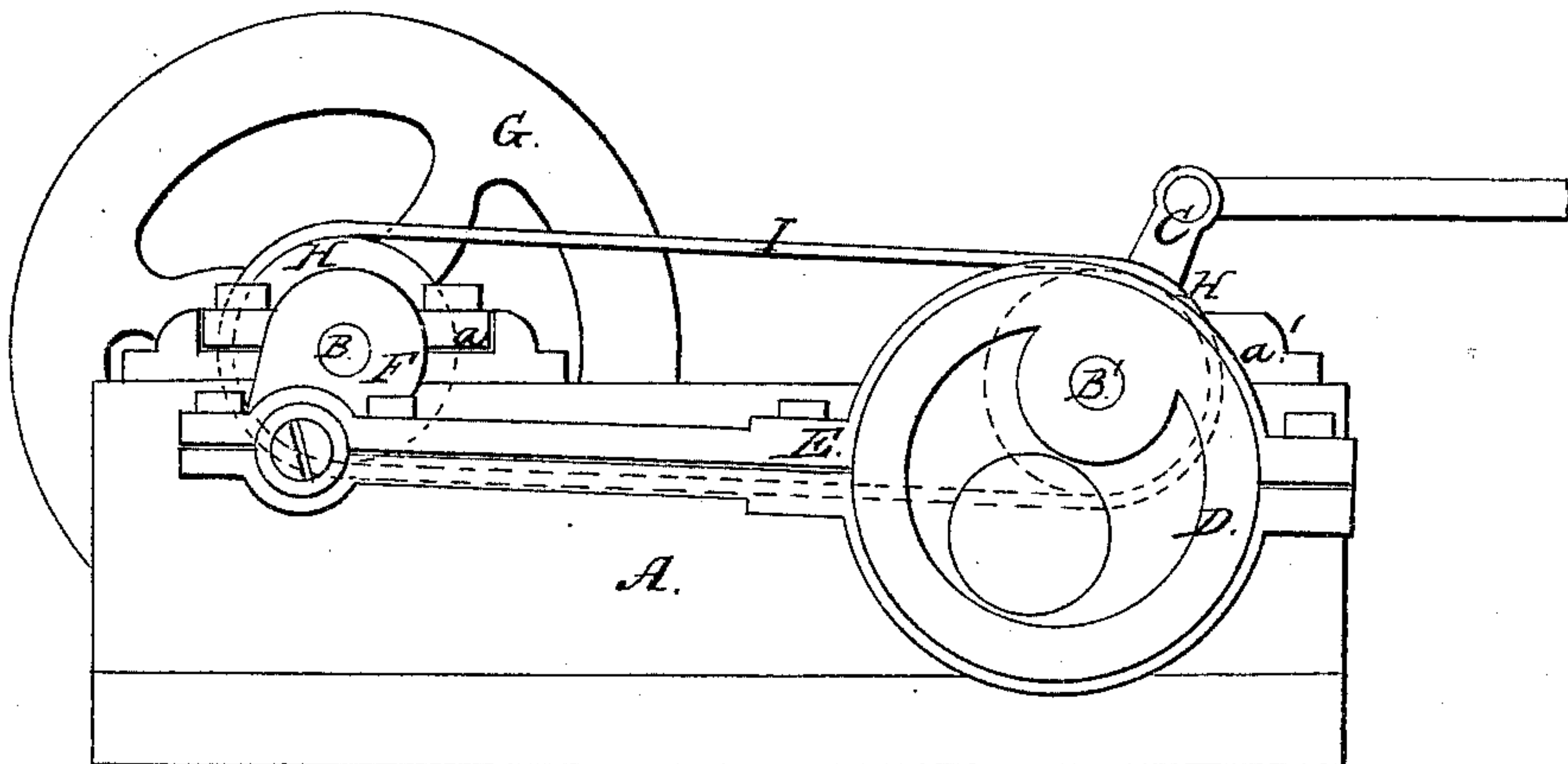
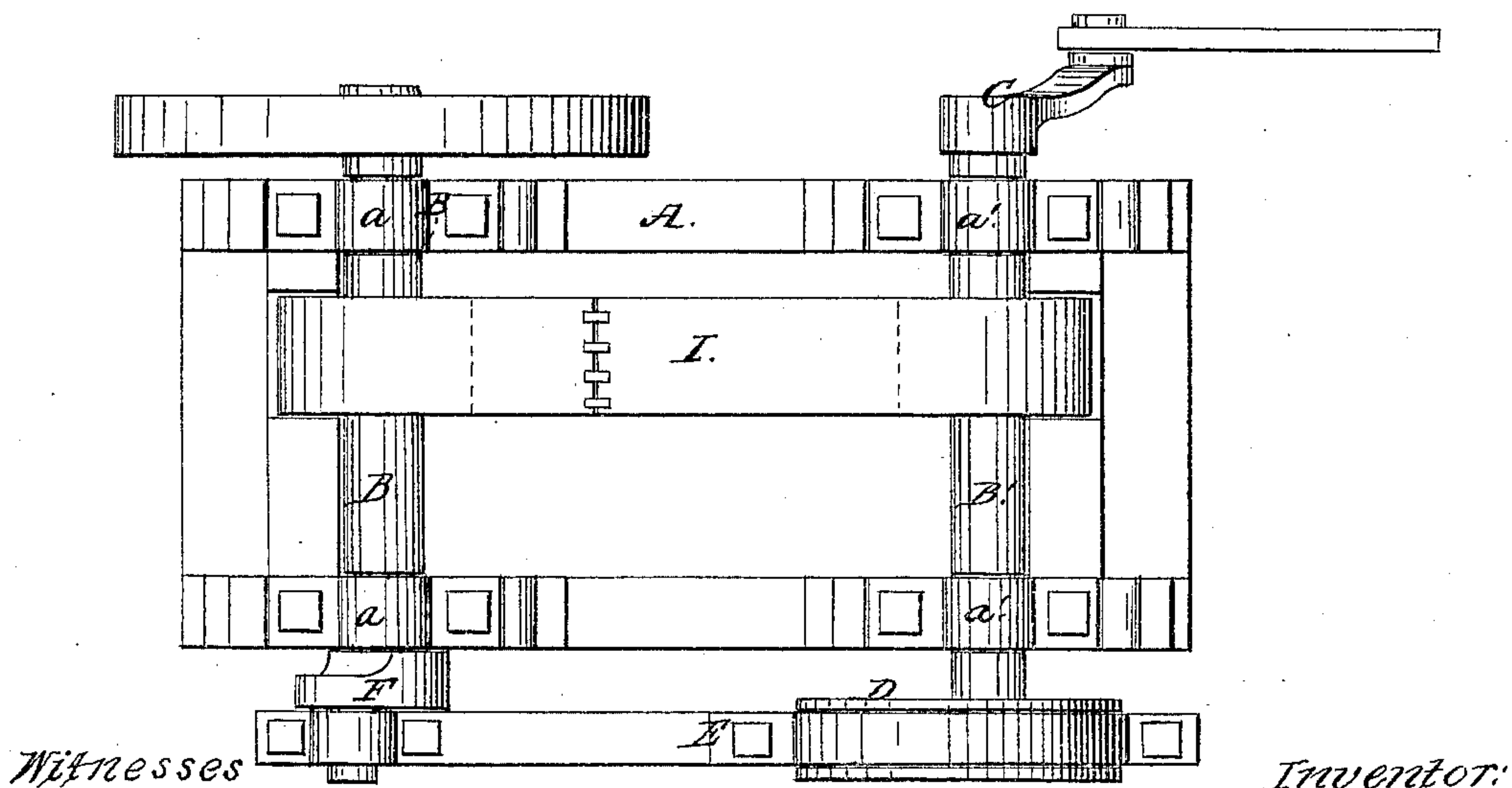


*J. W. Browning,*  
*Mechanical Movement.*  
*N<sup>o</sup> 44,594. Patented Oct. 11, 1864.*  
*Fig. 1.*



*Fig. 2.*



Witnesses

Inventor:

*C. L. Topliff*  
*Theo. Tusch*

*John W. Browning*  
*per Munn & Co*  
*attys*

# UNITED STATES PATENT OFFICE.

JOHN W. BROWNING, OF MATTOON, ILLINOIS.

## IMPROVED DEVICE FOR TRANSMITTING MOTION.

Specification forming part of Letters Patent No. 44,594, dated October 11, 1864.

*To all whom it may concern:*

Be it known that I, JOHN W. BROWNING, of Mattoon, in the county of Coles and State of Illinois, have invented a new and Improved Device for Transmitting Motion; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to fully understand and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate like parts.

The object of this invention is a simple and effective device to overcome the dead-centers in machines in which reciprocating motion is to be converted into continuous rotary motion.

The invention consists in the use of two shafts, which are connected by a belt, or provided with a fly-wheel, each in combination with an eccentric on one connecting with a crank on the other shaft and with the main crank that connects by a pitman or other suitable means with the cross-head of a steam-engine or other source of power in such a manner that by the combined action of the cranks, eccentrics, and fly-wheel or fly-wheels the dead-centers are overcome and the reciprocating motion of the piston of the engine or other prime motor is converted into continuous rotary motion.

A represents a frame, of wood or any other suitable material, which supports four journal-boxes, *a a'*, as clearly shown in Fig. 2 of the drawings. These journal-boxes form the bear-

ings for the two shafts B B', one of which carries the main crank C, that is intended to connect by a suitable pitman with the cross-head of a steam-engine or with the corresponding part of another prime motor. The shaft B', on one end of which the main crank C is mounted, carries on its opposite end the eccentric D, and this eccentric connects by a strap and rod, E, with a crank, F, that is mounted on the end of the shaft B. It is obvious that the throw of this crank must be equal to the eccentricity of the disk D, and these two parts must be placed in such relation toward each other that the rotary motion imparted to the shaft B will be transmitted to the shaft B'.

G is a fly-wheel, which is mounted on the shaft B; or, instead of this, each of the two shafts may be furnished with a hand-wheel, H H, to receive a belt, I, so that the momentum of one fly-wheel, G, acts with equal force on both shafts B B'. By this combination of one or two fly-wheels with the shafts B B' and with the cranks C F and eccentric D the dead-centers are effectually overcome, and the reciprocating of the piston of a steam-engine or other equivalent motor is converted into a uniform and continuous rotary motion.

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

The combination of the cranks C F, eccentric D, shafts B B', and fly-wheel G, (one or more,) constructed and operating in the manner and for the purpose set forth.

JOHN W. BROWNING.

Witnesses:

L. S. CHAPIN,  
D. T. MCINTYRE.