(No Model.) 2 Sheets—Sheet 1.

H. WRIGHT.

MEANS FOR TRANSMITTING MOTION.

No. 332,692. Patented Dec. 15, 1885.

Fig. 1

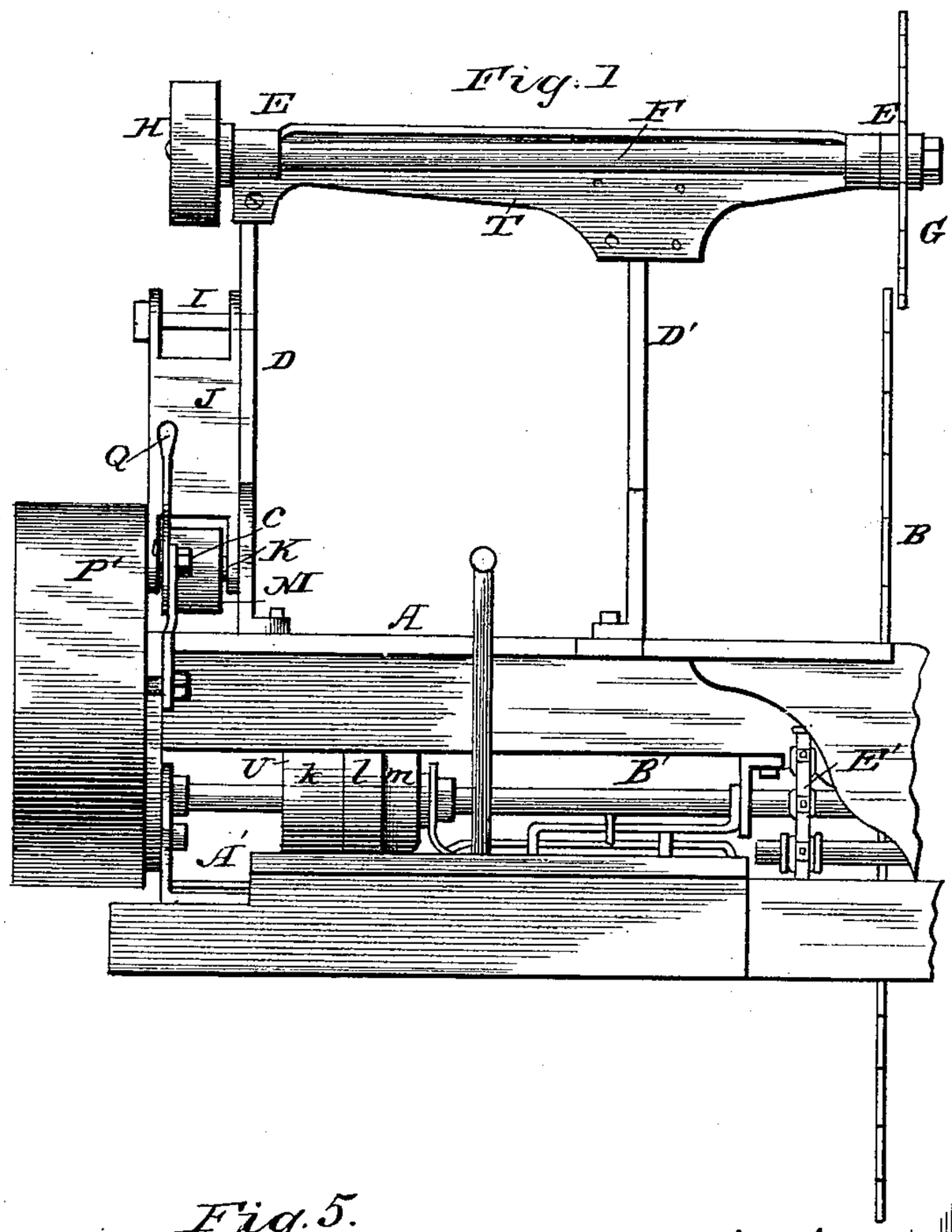


Fig. 5.

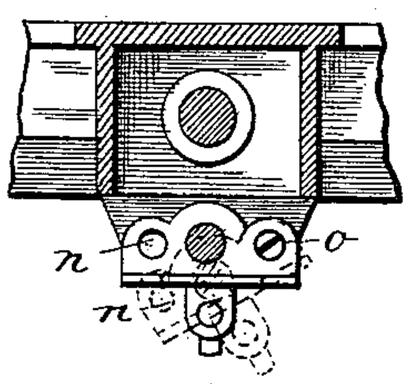
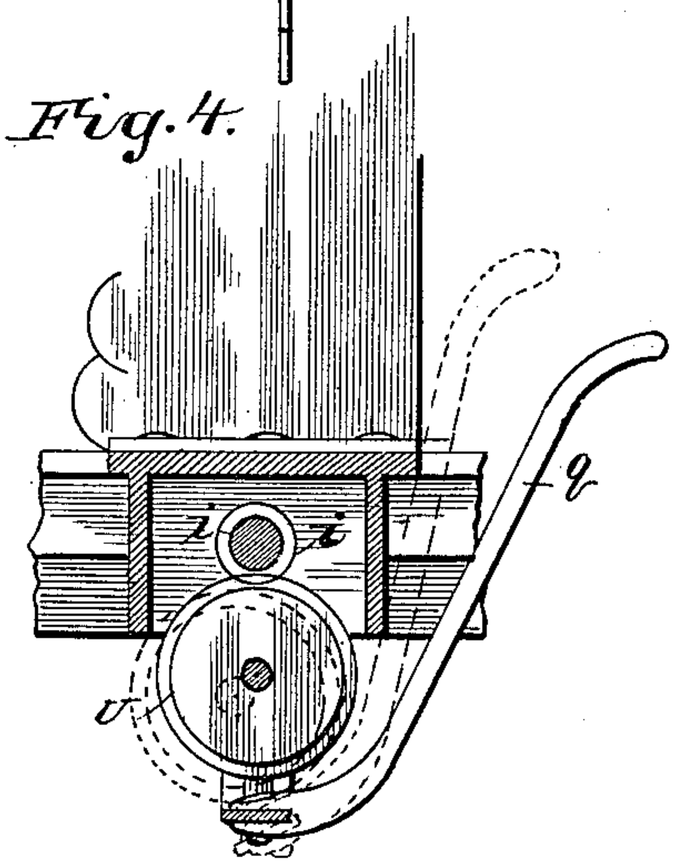


Fig. 4.



WITNESSES:

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Wm. E. Dyer

INVENTOR.

Hugh Wright

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ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

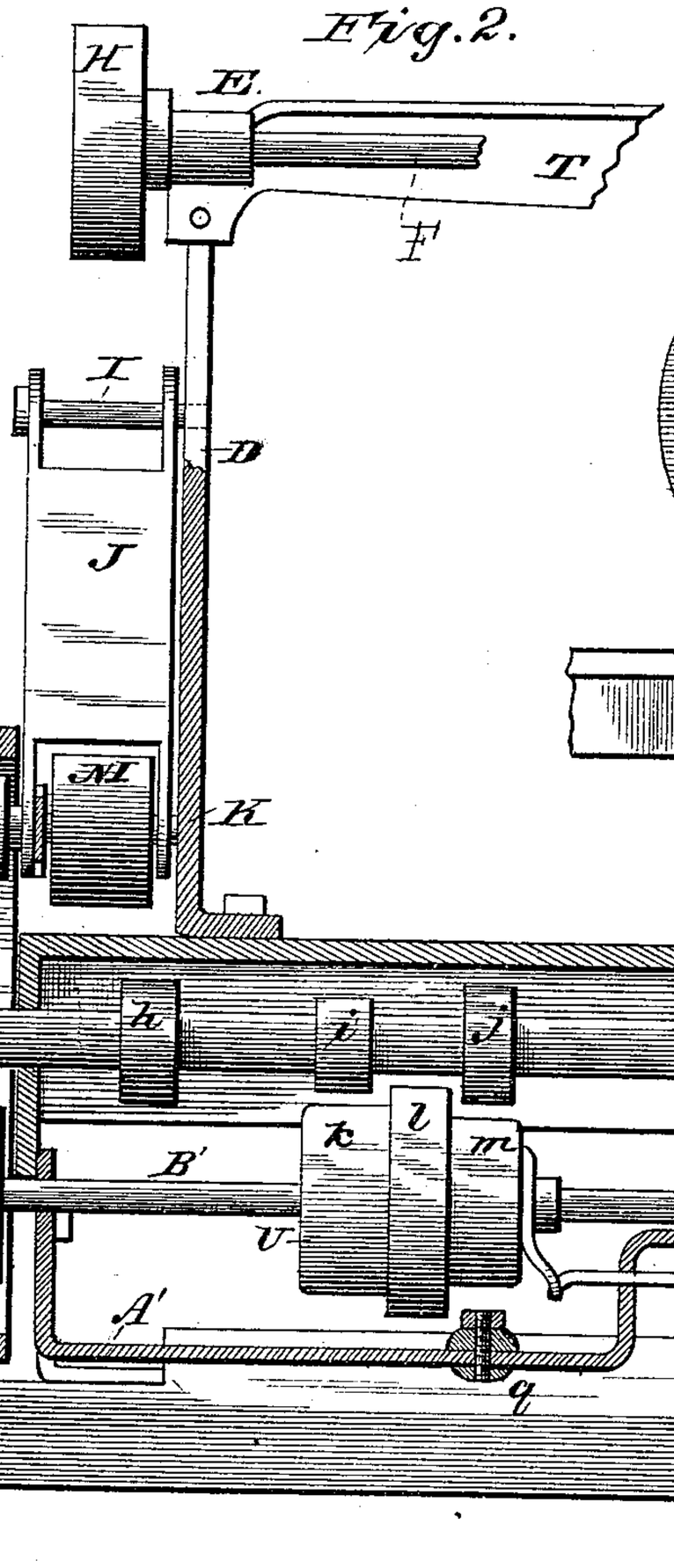
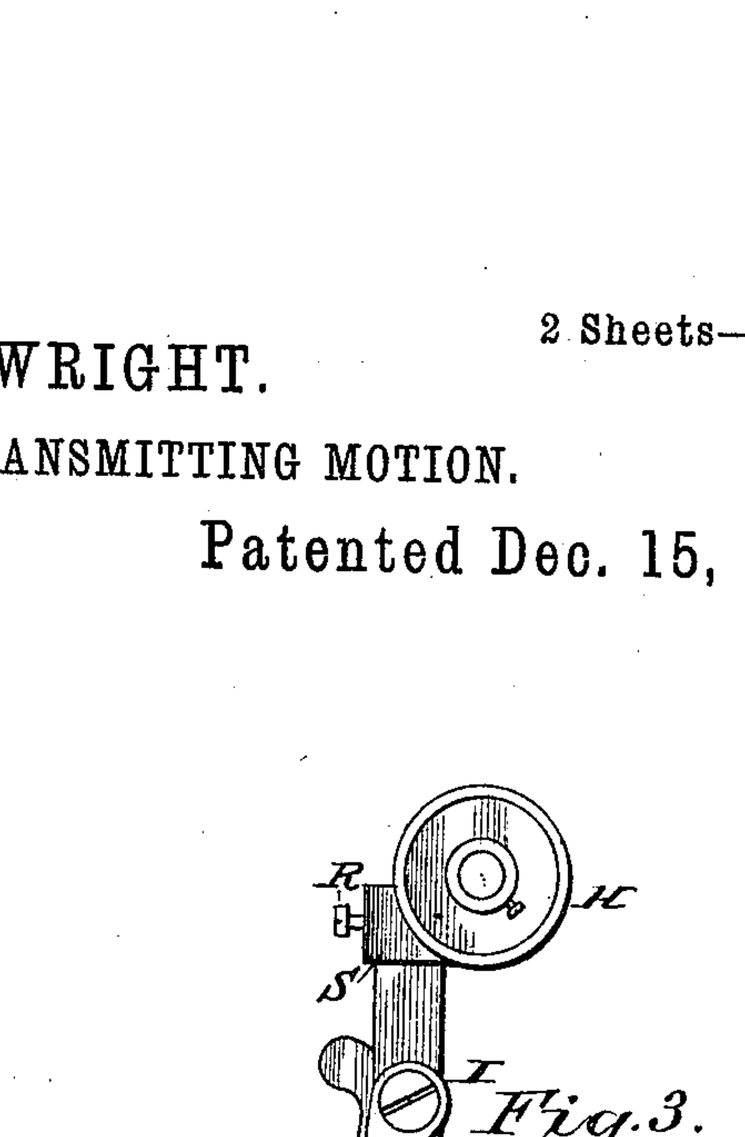


Fig. 3.



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UNITED STATES PATENT OFFICE.

HUGH WRIGHT, OF NEW LISBON, OHIO.

MEANS FOR TRANSMITTING MOTION.

SPECIFICATION forming part of Letters Patent No. 332,692, dated December 15, 1885.

Application filed June 17, 1885. Serial No. 168,937. (No model.)

To all whom it may concern:

Be it known that I, HUGH WRIGHT, a citizen of the United States, residing at New Lisbon, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Means for Transmitting Motion; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to means for transmitting motion from one shaft to another, and for the purpose of illustration I have shown it applied to a circular-saw mill in which two saws are used, the smaller one mounted above the larger.

The object of the invention is to provide a simple and efficient means for connecting and disconnecting two shafts and transmitting power from one shaft revolving in a given direction to another shaft, and causing it to revolve in the same direction.

My invention consists in the combination of devices hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form part of this specification, Figure 1 is an end elevation of a saw-mill embodying my invention. Fig. 2 is a vertical section. Fig. 3 is a side view of one of the brackets, showing the pivoted hanger attached thereto. Figs. 4 and 5 are detail views.

Reference being had to the accompanying drawings, A represents the frame of the saw, which is constructed of cast-iron. B represents the main saw secured upon the main shaft C in the usual manner. Upon the frame A are secured two vertical brackets, D D′, on which are arranged adjustable journals E, constructed in one piece, forming an integral part of the hanger T, for carrying the secondary or supplemental shaft F of the saw G, which saw is provided with a driving-pulley, H. To the bracket D is pivoted at I a hanger, J, in the end of which is journaled a shaft, K, upon which are mounted pulleys L M. Over the pulleys H M is placed a belt (not shown) for transmitting motion from the shaft C to shaft F and saw G. To the hanger I is attached an arm, N, which is provided with a slot, *a*, by which it is connected to lever Q. P represents a bracket secured to the frame A, and is provided with a slot, *b*, through which a bolt, *c*, attached to the lever Q passes. A stud, *d*, working in the slot *a* of the arm N, connects the lever Q with said arm. The main driving-pulley P′ is provided with projecting flanges *e f* on each side of the central web, *g*. The inner flange, *f*, incloses the friction-pulley L, and forms a frictional surface, against which the pulley is brought to bear.

When it is desired to put the upper saw in motion at the same time the main saw is at work, the operator seizes the lever Q and moves it in the direction indicated by the arrow in Fig. 3, which communicates motion to the swinging hanger I, and causes the pulley L to be brought in contact with the inner surface of the rim *f* of the pulley P′, which will transmit the motion of the shaft C to the belt-pulleys M H, shaft F, and saw G through the medium of a belt (not shown) which works upon the pulleys H M. The eccentric connection of the lever Q with the arm N locks the pulley M in either of its extreme positions, whether in or out of contact with the rim of the driving-pulley, and therefore requires no further attention from the operator after the pulley has been moved into either position until it is desired to move it positively.

The shaft F and its journals are adjustable upon the uprights or brackets D D′, and are secured in position by means of set-screws R, passing through yokes S, attached to the hanger T, which supports the journals E and the shaft F. One of said yokes and its set-screw are clearly shown in Fig. 3 of the drawings.

Upon the main shaft C are differential pulleys *h i j*. To the under side of the frame A is attached a swinging frame, A′, (shown in Figs. 1, 2, and 5,) which swinging frame is provided with double pivot-points at each end, (marked *n o*.) (Shown in Fig. 5.) By this arrangement of the double pivot-points *n o* for the swinging frame A′, it is adapted for either a right or left handed mill. On a supplemental shaft, B′, supported by the swinging frame, is mounted a differential pulley, U, having three frictional surfaces, *k*, *l*, and *m*, for giving different rates of speed to the sprocket-wheel C′ and the chain E, which communicates mo-

tion to the feed-rack of the mill. (Not shown.) The differential pulley is moved longitudinally on the shaft A by means of a shifting-lever, *p*. To the pivoted frame is attached a lever, *q*, by means of which said frame can be elevated, bringing the different friction-surfaces of the pulley U into contact with the pulleys *h i j*, as may be desired.

The swinging frame is moved into the position shown in Fig. 4 in dotted lines by lifting the lever *q*, thereby bringing the periphery of the pulley *r* on the shaft B′ into contact with the inner surface of the rim *f* of the driving-pulley P′, (see Fig. 2,) thereby obtaining a reverse motion of the feed mechanism of the saw.

The swinging frame A′ is elevated by pressing down on the lever *q*, thereby bringing the differential pulley U against the pulleys *h i j*, for the purpose hereinbefore stated.

It will be observed that by the construction shown the motion of the main shaft C is transmitted through its main driving-pulley P′ to the shafts B′ and F, by bringing the pulleys L and *r* to bear against the inner surface of the flange *f* of said pulley P′.

In another application filed herewith, Serial No. 168,919, I have claimed the feed mechanism shown for operating a saw-mill carriage, both of the present applications being divisions of my application No. 115,899, filed December 29, 1883, under requirement of the Patent Office.

Having thus fully described my invention, what I claim is—

1. The combination of a main shaft and its driving-pulley, provided with a frictional surface, as shown, a secondary shaft, a swinging hanger carrying a belt-pulley and a friction-pulley, and a lever for operating the swinging hanger to bring the friction-pulley into contact with the driving-pulley, substantially as described.

2. The combination of a main driving-pulley, provided with frictional surfaces, as shown, a swinging hanger supporting a friction and a belt pulley, and an operating-lever eccentrically connected to the hanger, and a bracket attached to the main frame, whereby the pulleys are secured in either position described, as and for the purpose set forth.

3. The combination of a bracket, a laterally-swinging hanger pivoted thereto and supporting a friction and a belt pulley, a driving-pulley provided with a frictional surface on the inner side of its rim, and a lever for operating the swinging hanger, substantially as described.

4. The combination of a main shaft, its driving-pulley, a secondary shaft adjustably supported upon brackets, and pulleys, substantially as shown, a swinging hanger supporting a friction-pulley, and an operating-lever, as and for the purpose set forth.

5. The combination of a main shaft and its driving-pulley, provided with an inner frictional surface, and two friction-pulleys bearing upon the main pulley, and adapted, through means substantially as described, to transmit motion from the main shaft to two supplemental shafts, as and for the purpose set forth.

6. The combination of a driving-pulley provided with frictional surfaces, as shown, a supplemental shaft supported in a swinging frame and carrying a friction-pulley, a lever for operating said frame, a swinging hanger and its pulleys, a lever for operating said hanger, and an additional shaft driven from the main pulley, substantially as shown and described.

7. The combination of pulley P′, provided with inner frictional surface, laterally-swinging hanger J, supporting pulleys L M, shaft F, pulley H, and lever Q, substantially as described.

8. The combination of pulley P′, shafts B′ and F, swinging hanger J, friction-pulleys L *r*, belt-pulleys M H, swinging frame A′, and operating-levers Q and *q*, substantially as described.

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

HUGH WRIGHT.

Witnesses:

JAMES J. JOHNSTON,

E. JOHNSTON.