No. 679,359. Patented July 30, 1901.

E. S. BRETT.

CLUTCH.

(Application filed Feb. 11, 1901.)

(No Model.)

Fig 1

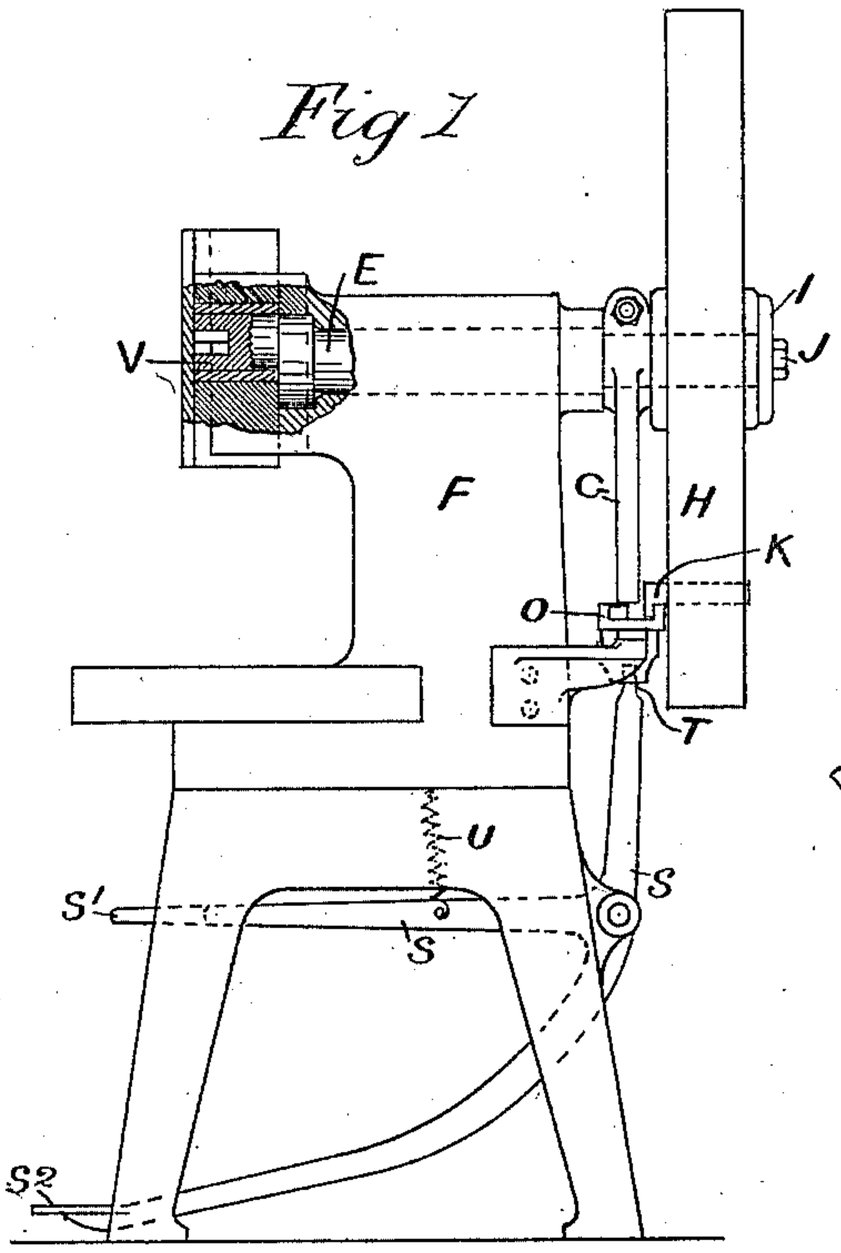

Fig 2

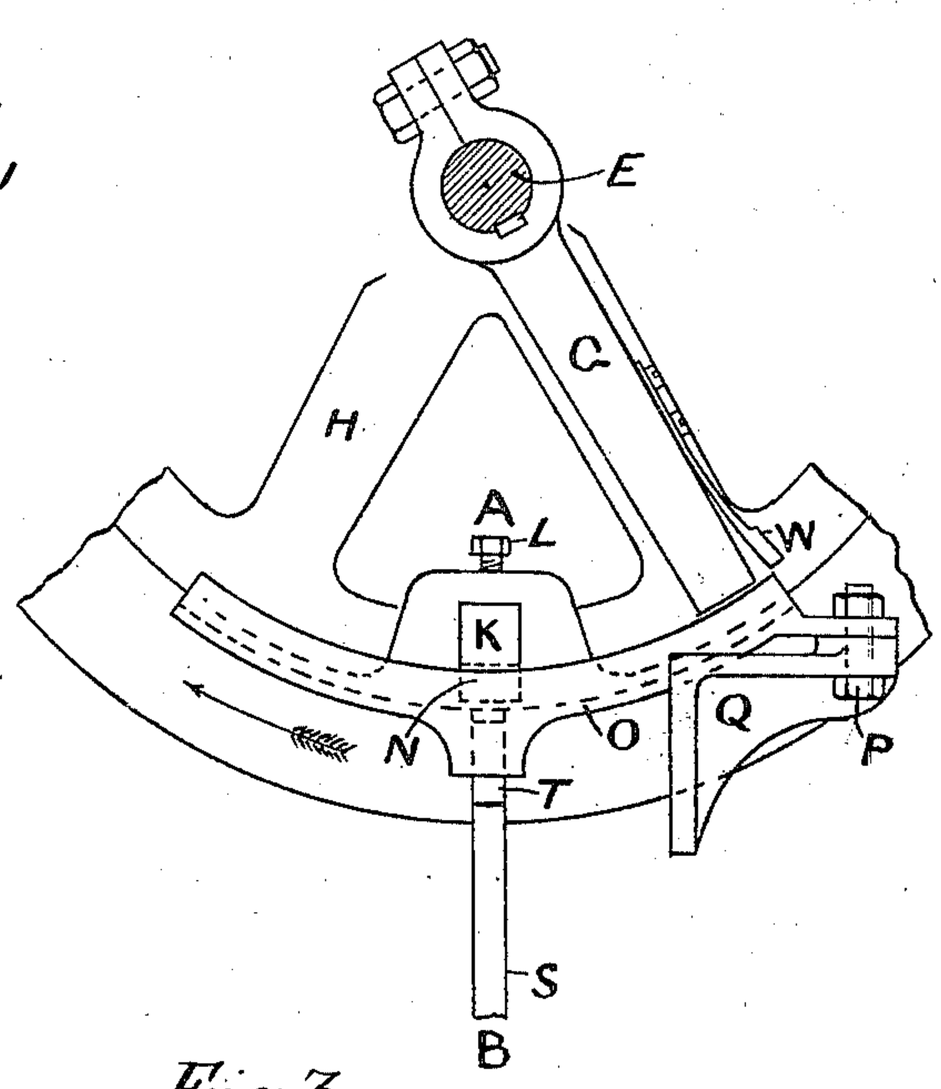

Fig 3

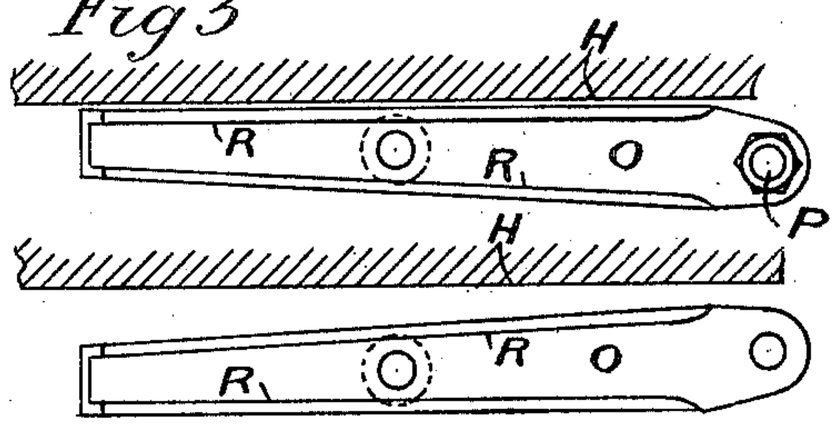

Fig 4

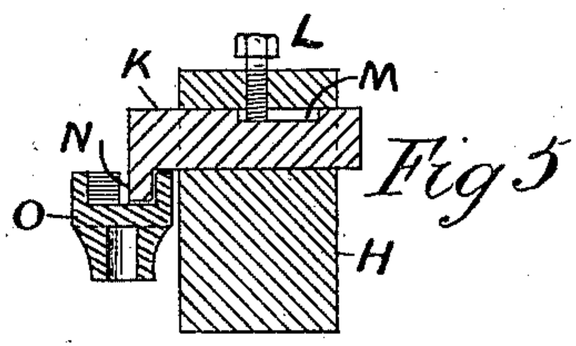

Fig 5

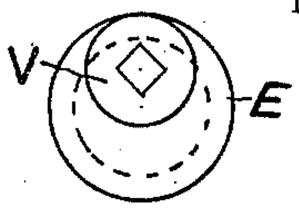

Fig 7

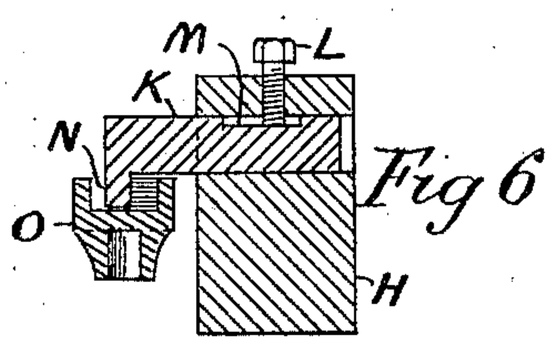

Fig 6

Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD SAMUEL BRETT, OF COVENTRY, ENGLAND.

CLUTCH.

SPECIFICATION forming part of Letters Patent No. 679,359, dated July 30, 1901.

Application filed February 11, 1901. Serial No. 46,909. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAMUEL BRETT, a subject of the King of Great Britain, and a resident of Ashfield, Coundon road, Coventry, England, have invented new and useful Improvements in Clutches, (for which I have made application for patent in Great Britain under No. 12,540, bearing date July 12, 1900,) of which the following is a specification.

My invention relates to improvements in clutches for driving machinery; and its objects are to provide means for starting or stopping the machinery, in combination with a continuously-running wheel, also to provide that the cessation of movement shall be at a given point. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a general side view of this my invention applied to a power-press. Fig. 2 is a detail and enlarged front view of the clutch device with bracket supporting same. Fig. 3 is a detail plan view of the controlling-guide as seen when the machinery is stopped. Fig. 4 is a plan view showing the controlling-guide as seen when the machinery is put in motion. Fig. 5 is a sectional detail view of the driving-slide on line A B, Fig. 2, as seen when the machinery is at rest. Fig. 6 is a sectional detail view of the driving-slide on line A B, Fig. 2, as seen when the machinery is put into motion. Fig. 7 is a front view in detail of the shaft.

Similar letters refer to similar parts throughout the several views.

I have illustrated this my invention as applied to a power-press, as it is usefully adaptable to such purposes; but it will be clear that my invention may be equally well applied to the stopping and starting of other moving machinery.

The shaft E is carried in suitable bearings in frame F. Keyed or otherwise securely fastened to the shaft is the driving-arm G. Adjoining the arm is the driving-wheel H, which may be driven by band or otherwise. This wheel runs freely on the shaft, being controlled from end movement by plate I and pin J. Near the rim of the wheel a slideway is made to carry the slide K, whose limit of movement is controlled by screw-pin L, engaging in recess M. The front end of this slide is furnished with a downwardly-projecting head N, by which it may be moved inwardly or outwardly.

O is a movable guide carried pivotwise at its one end by pin P from the bracket Q, which latter is secured to the frame F. This guide is channel-shaped by reason of the sides R R, which narrow toward each other as they approach the outer end of the guide. Looking at the guide sidewise, Fig. 2, it will be seen that it is part circular in shape, agreeing with the path of travel of the end of the arm G.

S is a lever which may be operated by hand at S′ or by foot at S^2, whose upper end T engages with the guide O for the purpose of moving the said guide to and fro into either of the two positions shown in Figs. 3 and 4. A spring U is used to hold the lever S in its upward position, and thereby tends to keep the guide O in the position shown in Fig. 3.

It will therefore be understood that the wheel H is continuously in motion. As it revolves the head N of the slide K travels along the guide O. When the guide O is free to the action of spring U, through the lever S the said slide K is held inward and clear of the arm G. Consequently no motion is imparted to the shaft E. When the lever S is depressed, the guide O is moved into the position shown in Fig. 4. Consequently the head N of the slide K as it travels along the guide is drawn outward as seen in Fig. 6, and comes in contact with arm G and carries it forward as long as the guide is retained in that position, and thereby a corresponding motion is imparted to the shaft E. Upon the lever S being again left free to action of spring U the guide O is returned to the position shown in Fig. 3, which pushes back the slide K clear of the arm G, and motion of the shaft ceases. It will be further noticed that by this arrangement of mechanism the shaft E will probably be always disconnected at the same point in its revolution by reason of the guide O, when being pushed from the driving position (shown in Fig. 4) to the rest position (shown in Fig. 3,) always forcing the slide K clear of the arm G at the same point of travel. Therefore in the case of a power-press, as illustrated, it is only necessary to adjust the relative position of the end

of the arm G with that of the crank V upon the shaft to secure the highest position of the latter when the shaft is thrown out of gear. Again, I may lessen the concussion due to the sudden contact of the slide K against the arm G by a spring-cushion, such as W, which is secured to the arm, as shown in Fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

In clutches for starting and stopping machinery the combination with the shaft E, arm G rigidly secured thereto, and free wheel H having driving-slide K, with movable guide O and operating-lever S, all substantially as set forth and shown.

EDWARD SAMUEL BRETT.

Witnesses:
C. HAYWARD POWELL,
BERNARD BRETT.