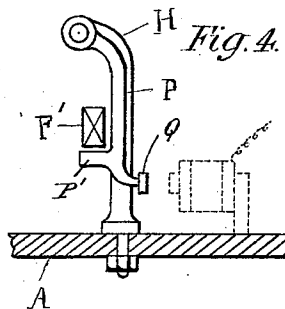
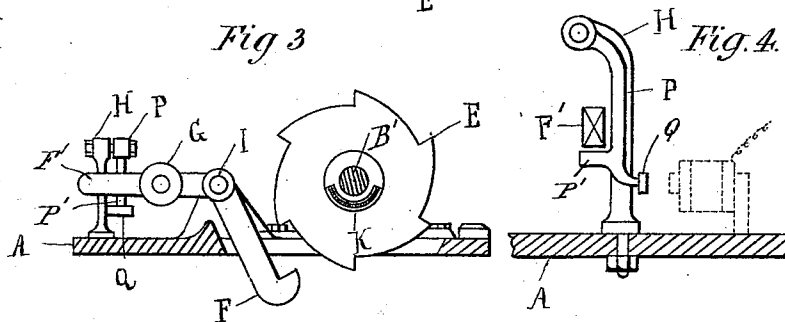
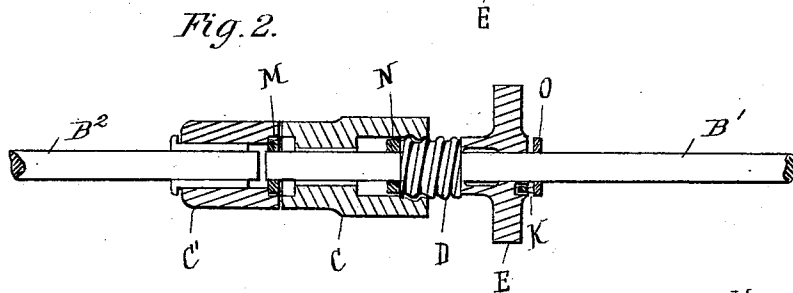
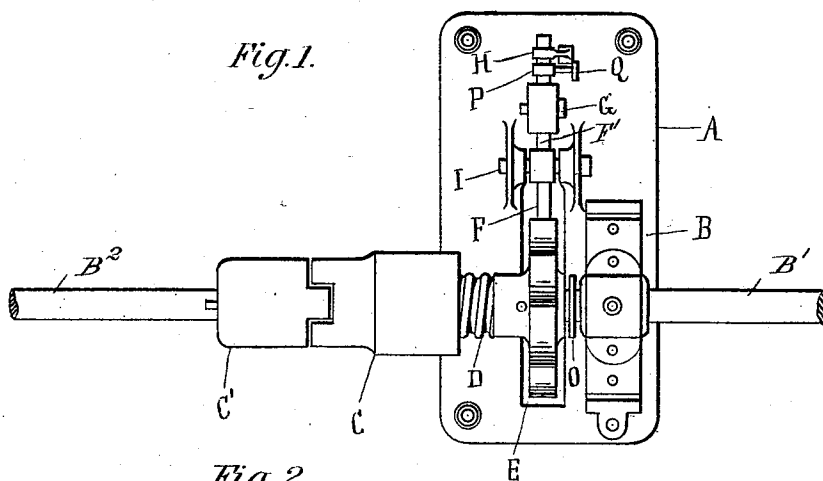


(No Model.)

A. COURTIAL.
STOP MECHANISM FOR SHAFTHING.

No. 512,578.

Patented Jan. 9, 1894.



Witnesses.
Lucy Corwin

B. M. Farrell Patent Agent

Inventor.

Auguste Courtial

UNITED STATES PATENT OFFICE.

AUGUSTE COURTIAL, OF TURIN, ITALY.

STOP MECHANISM FOR SHAFTING.

SPECIFICATION forming part of Letters Patent No. 512,578, dated January 9, 1894.

Application filed August 29, 1893. Serial No. 484,339. (No model.) Patented in Italy March 10, 1893, LXVIII, 499, and in Belgium May 21, 1893, No. 104,723.

To all whom it may concern:

Be it known that I, AUGUSTE COURTIAL, a citizen of the French Republic, residing at Turin, Italy, have invented a certain new and useful Improvement in Shaft-Couplings and Gear for Operating the Same, (for which I have obtained Letters Patent in Italy, dated March 10, 1893, Vol. LXVIII, No. 499, and in Belgium, dated May 21, 1893, No. 104,723,) of which the following is a specification.

My invention relates to an improvement in shaft couplings and in gear for operating same, the object of my invention being to provide an arrangement of apparatus by which the main shafting of a workshop may be promptly stopped in the event of a workman becoming caught by some of the machinery or to enable it to be stopped quickly for other purposes though the apparatus is equally applicable for the stopping of the shafting of single machines and the like. In the event of the apparatus being used for the stopping of the entire machinery in a workshop it is preferably placed as close to the motor end of the main shaft as possible an apparatus adapted for this purpose being shown in the accompanying drawings, in which—

Figure 1 is a plan of same. Fig. 2 is a sectional elevation of the coupling device only. Fig. 3 is a side elevation of the stopping device only, and Fig. 4 is an elevation on an enlarged scale of a part of the mechanism for operating the stopping device.

In the drawings A is a suitable base plate which may be affixed to a wall or the like, on a bracket B of which is held the driven shaft B' which transmits the power through the work-shop or the like. The driving shaft B² which is at the motor end is carried in the usual way by suitable brackets and has affixed to it by a key or keys a block C' forming part of a suitable coupling device of which the block C forms the other part. The block C is provided with an internal or female screw thread as shown in Fig. 2, such screw-thread engaging with a corresponding male thread D loose on the shaft B' to which is secured a ratchet wheel E, having any convenient number of teeth. The block C is capable of sliding upon the shaft B' which is pro-

vided with collars M. N. O as shown for keeping the various parts in position.

A pawl F pivoted at I in a suitable bracket is arranged on the base A such pawl having an extension arm F' which carries a balance weight G. When the pawl is in the position shown in Fig. 3 which is its normal position when the shafting is running, the arm F' rests upon a projection P' (Fig. 4) of an arm P which is pivotally hung to a bracket H as shown in Figs. 1, 3, and 4. This arm P has an extension to which is attached an armature plate Q adapted to be attracted by the electro magnet shown in dotted lines in Fig. 4.

The ratchet wheel E is formed with a semi-circular recess in the hub in which is placed loosely a corrugated strip of metal K while the inside face of the collar O is undulated to correspond with the corrugations of the strip K, such collar O being fixed on the shaft close up to the strip or spring after the latter is in place. In this way the ratchet E is caused to rotate with the shaft B, but if the ratchet E is suddenly stopped for the purpose hereinafter explained the undulated portion of the collar O will compress the strip K, and ride over same thus preventing the shock which might occur from the sudden stoppage of the shaft.

When it is desired to stop the shafting a push button (of which there may be any suitable number on the circuit of the electro magnet) is operated so that the magnet is caused to draw the armature Q toward it thus releasing the arm F' and causing the latter to drop so as to bring the pawl into engagement with the ratchet wheel and thus hold the latter. The result of this is that the motion which the block C has had imparted to it by the rotating shaft will cause it to screw itself upon the screw D so as to withdraw itself from the block C' thus opening the clutch and releasing the shaft B' from the driving shaft B².

It will be evident that in place of operating the arm P by means of an electro magnet and armature it may be operated by means of bell wires controlled by bell pulls placed in different parts of the workshop.

What I claim is—

The combination with a driving and a driven shaft, of a clutch mechanism adapted

to connect the two; a female screw on the part
of the clutch connected to the driving shaft,
a hub carrying a male screw loose on the
driven shaft, a ratchet connected to said hub,
5 a counterweighted pawl adapted to engage
said ratchet, a pivoted arm normally support-
ing said pawl clear of said ratchet, an arma-
ture attached to said arm, and an electro mag-
net adapted to attract said armature and to

release said pawl, substantially as and for the
purposes described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

AUGUSTE COURTIAL.

Witnesses:

LUDGO CERRINA,
G. M. SARAELLI.