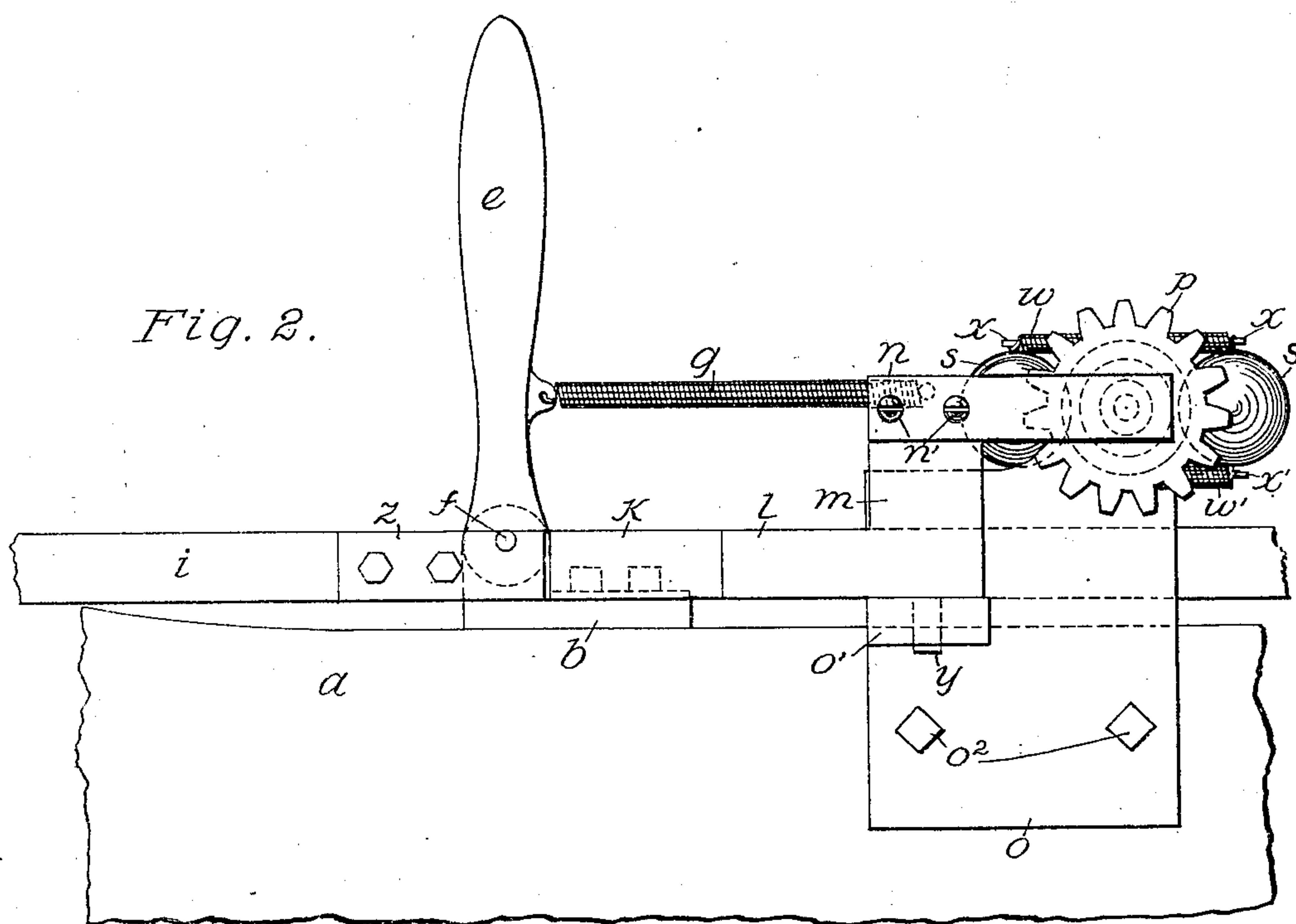
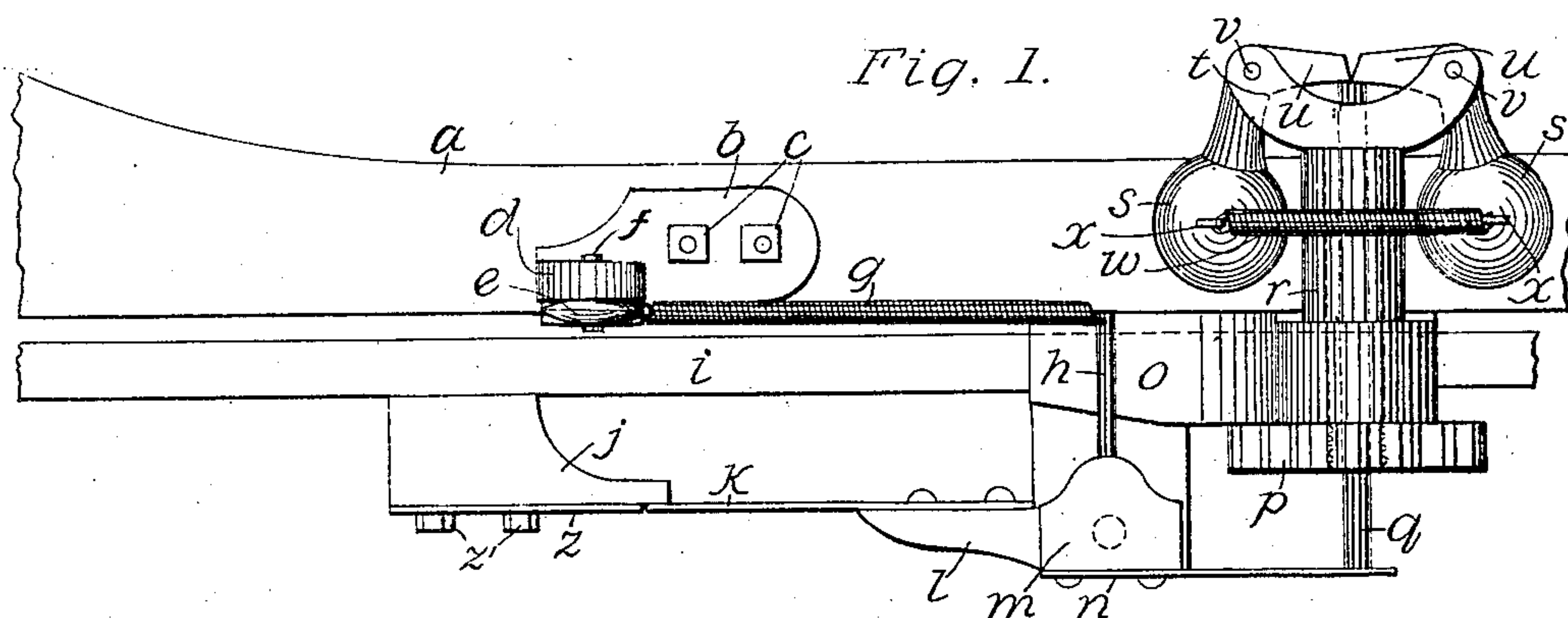


No. 862,599.

PATENTED AUG. 6, 1907.

L. W. WITRY.  
SPEED REGULATING DEVICE FOR EXPLOSIVE ENGINES.

APPLICATION FILED JULY 9, 1906.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## SPEED-REGULATING DEVICE FOR EXPLOSIVE-ENGINES.

No. 862,599.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed July 9, 1906. Serial No. 325,236.

*To all whom it may concern:*

Be it known that I, LOUIS W. WITRY, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Speed-Regulating Devices for Explosive-Engines, of which the following is a specification.

My invention relates to speed regulating devices for explosive engines, and the object of my improvements is to provide means whereby an engine governor may be influenced at will to retard or enhance the speed of the engine. This object I have effected by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of an engine governor supplied with my improved speed regulator, and Fig. 2 is a side elevation of the same.

Similar letters refer to similar parts throughout the several views.

Fastened to the engine frame *a* by bolts *o*<sup>2</sup> is a bracket *o*, which has a bearing *r* projecting inwardly to receive the shaft of the governor yoke *t*. Said shaft also has a bearing perforation to receive a slidable rod *q*. The governor balls *s*, *s* have their inwardly bent stems *u*, *u* pivoted to the yoke *t* on pivot bolts *v*, *v*, the inner ends of said stems nearly touching, and in contact with the inner end of the rod *q*. The balls *s*, *s* have hooks *x*, *x* and *x'*, *x'*, on opposite sides thereof, to which are connected contractile springs *w* and *w'* respectively. The outer end of the shaft of the yoke *t* bears a pinion *p*, whereby rotation is imparted to said governor balls *s*, *s* by any suitable source of power applied through any convenient system of intermediate gearing. The outer end of the rod *q* projects a sufficient distance beyond the outer face of the pinion *p*, and is contacted by the free end of a flat spring *n*, the latter having its other end fastened to the outer side of a rock-body *m* by screws *n'*. The rock-body *m* is supported by a perforated lug *o'*, a stud *y* projecting from the rock-body *m* into said perforation in said lug. Said lug projects outwardly from the bracket *o*. An extension member *l* projects from the side of the rock-body *m*, and bears a projecting spring *k*. A plate *b* having a perforated lug *d* is affixed to the engine bed *a* by means of bolts *c*. A handle lever *e* has its lower end pivoted on a short shaft *f*, the latter being mounted in the perforation in the lug *d*. The rock body *m* has an inwardly extending pin *h* between whose end

and the handle *e* a contractile spring *g* is connected. In case this feed regulator is used on a gasoline engine, the rod *i* which actuates the igniter and exhaust valve has a block *j* attached to it by means of bolts *z'*, a plate *z* shorter than the said block being fastened thereto by the said bolts. The exposed outer surface of the block *j* adjacent to the end of the plate *z* is positioned so that the free end of the spring *k* may contact with it when in one position to arrest the sliding movement in one direction of said block *j* and rod *i*, and thereby effect the frequency of action of the igniter and exhaust valve.

If it is desired to increase the speed of the engine, the same may be instantly effected by simply throwing the hand lever *e* forward a sufficient distance, said lever thus, through its elastic connection *g* and the pin *h*, rocking the rock body *m* so that the free end of the spring *n* pushes upon the rod *q* and produces a resistance to the centrifugal force of the balls and thus causes a higher speed of the engine. The rocking of the rock body *m* causes the displacement outward of the spring *k*, allowing the block *j* and rod *i* to freely move. If it is desired to slow up the engine the handle *e* is thrust rearward a sufficient distance causing a reversal of the above process. The spring *k* then, through the action of the governor, more easily interferes with the sliding action of the block *j* and the rod *i*. By throwing the lever *e* backward to its limit of movement the engine is stopped.

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

In a speed regulating device for explosive-engines, the combination with the engine frame, of centrifugal governor-balls mounted on levers pivotally connected to a rotatable sleeve, such levers having inwardly directed members, a slidable pin in said sleeve and projecting from each end thereof and having one end in contact with the inner sides of such inwardly directed members, a valve-rod and having a contact-block affixed thereto, a rock-body pivotally mounted on said frame having an arm adapted to rock into the path of said contact-block to contact therewith and intercept its motion, such rock-body having another arm adapted to contact with the outer end of said slidable pin, and such rock-body having a projection inwardly directed, a hand-lever pivoted to said frame, and a resilient connection between said hand-lever and the projection inwardly projected from said rock-body.

Signed at Waterloo, Iowa, this 15th day of June, 1906.

LOUIS W. WITRY.

Witnesses:

G. C. KENNEDY,  
C. M. JENSEN.