

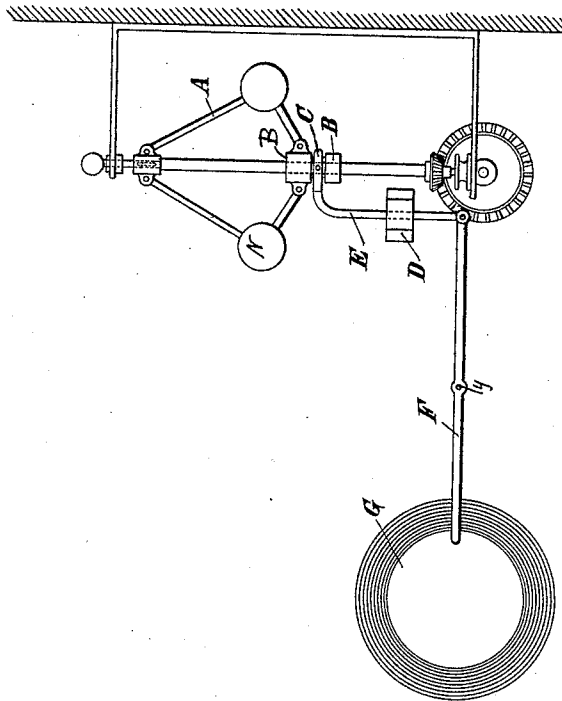
(No Model.)

E. LACHMANN.

RECORDER OF SPEED OF GOVERNORS OF MOTIVE POWER ENGINES.

No. 526,321.

Patented Sept. 18, 1894.



*Attest*  
*Miller Muller*  
*J. L. Middleton*

*Inventor*  
*Emil Lachmann*  
*by Ellis Spear*  
*ATTY.*

# UNITED STATES PATENT OFFICE.

EMIL LACHMANN, OF BERLIN, GERMANY.

RECORDER OF SPEED OF GOVERNORS OF MOTIVE-POWER ENGINES.

SPECIFICATION forming part of Letters Patent No. 526,321, dated September 18, 1894.

Application filed January 31, 1894. Serial No. 498,650. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL LACHMANN, of 19  
Kaiser-Wilhelmstrasse, Berlin, in the King-  
dom of Prussia, German Empire, have in-  
vented a new and useful Apparatus for Re-  
cording the Speed of Governors of Motive-  
Power Engines, of which the following is a  
specification, reference being had therein to  
the accompanying drawing.

This invention relates to a speed recording  
apparatus which graphically records all the  
positions of the governor during a determined  
period of time. The said apparatus is shown  
in elevation in the accompanying drawing.

A rod E (guided in a ring or guideway D  
parallel to the axis of the governor) engages  
by means of a fork C in the collar formed in  
the sleeve B to which the governor balls X  
carried on the arms A (of any motive power  
engine thus governed) are attached so that  
the upward or downward movement of the  
sleeve B caused by the action of said governor  
balls X is thereby imparted to the fork C and  
rod E carrying same. The other end of the  
rod E operates one end of a lever F which is  
mounted to turn on a fixed pin  $\gamma$  and is ar-  
ranged at right angles to the vertical axis of  
the governor balls. The other end of the  
lever F carries a pencil which works on a disk  
G which is provided with paper and is divided  
to a scale and is kept in rotary motion (at any  
desired speed) by means of clockwork. The  
lever F or the end thereof carrying the pencil  
will assume various positions relatively to the  
center or to the circumference of the disk G  
according as the movable sleeve B of the gov-

ernor is moved into its various positions up  
or down with the result that the continued  
motion or shifting of the governor will cause  
the pencil to draw a curve corresponding to  
the position of the arms A and thereby indi-  
cate the speed of the governor. From this  
curved or other line thus drawn on the disk  
G all variations in the speed of said governor  
can be seen and can be readily computed by  
the proper mathematical methods and calcu-  
lations.

By the term "pencil" I wish it to be un-  
derstood that I mean and intend thereby to  
refer to any suitable marking instrument or  
appliance capable of being used to delineate  
the desired record on the disk G.

What I claim, and desire to secure by Let-  
ters Patent of the United States is—

In combination, the governor with its shaft,  
the sliding sleeve B on said shaft, the rotary  
disk G having a scale on its face, the pivoted  
lever F having its free end movable over the  
face of the disk, the connection between the  
pivoted lever F and the sliding sleeve com-  
prising the sliding bar extending parallel  
with the governor shaft and having a laterally  
bent forked end engaging the sliding sleeve  
B and the guide D through which the said  
bar E slides, substantially as described.

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

EMIL LACHMANN.

Witnesses:

PAUL FISCHER,  
HANS BAUERLEIN.