

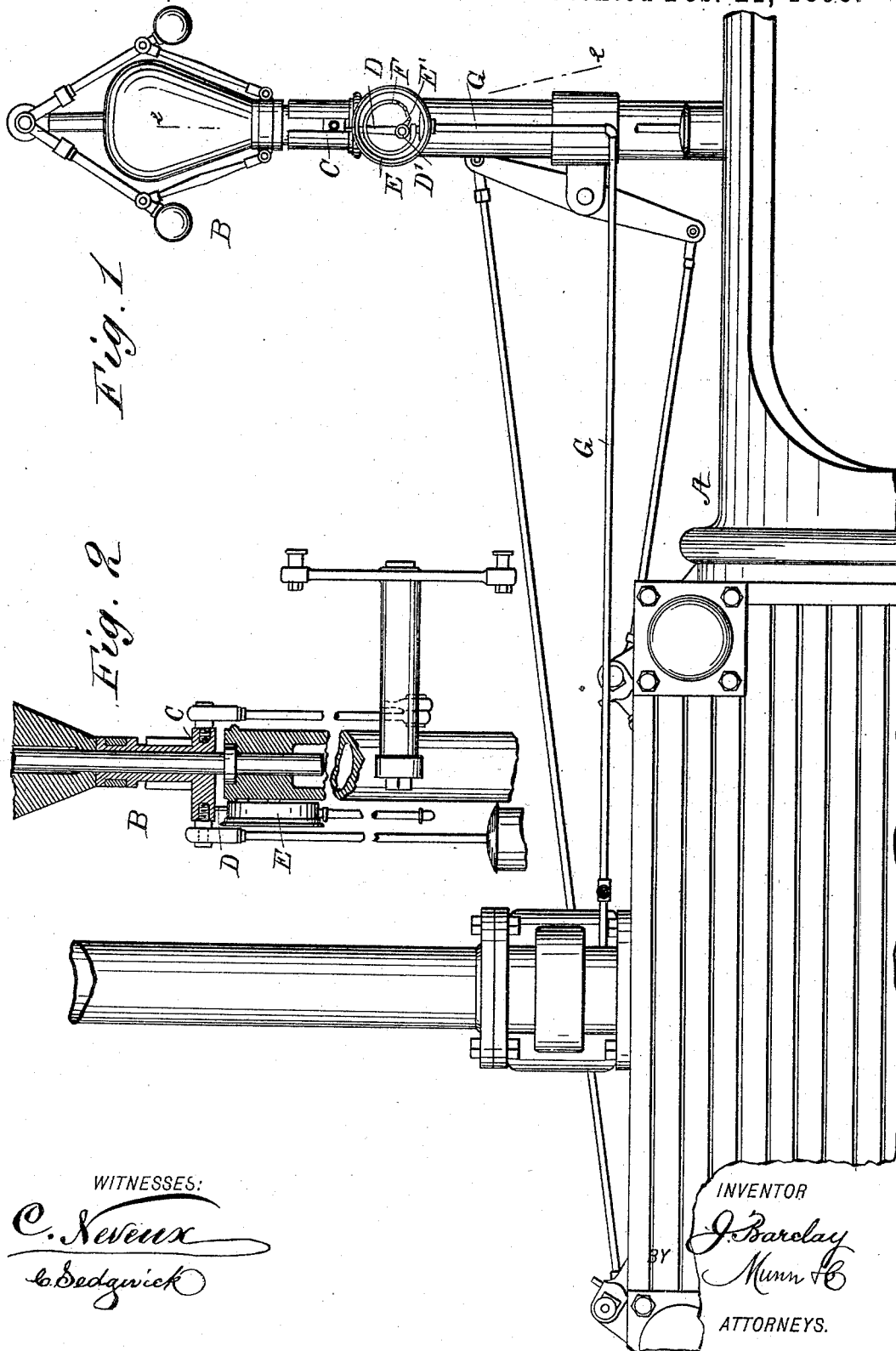
(No Model.)

2 Sheets—Sheet 1.

J. BARCLAY.  
SAFETY STOP FOR ENGINE GOVERNORS.

No. 492,258.

Patented Feb. 21, 1893.



WITNESSES:  
*C. Newell*  
*L. Sedgwick*

INVENTOR  
*J. Barclay*  
BY *Munn & B*  
ATTORNEYS.

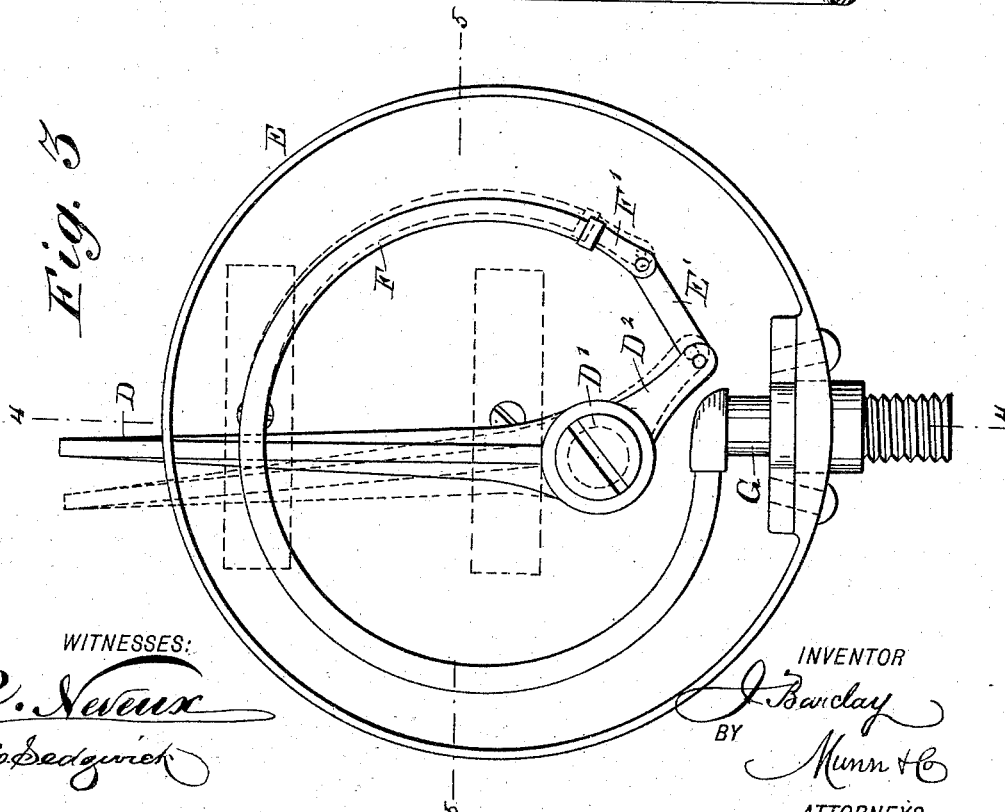
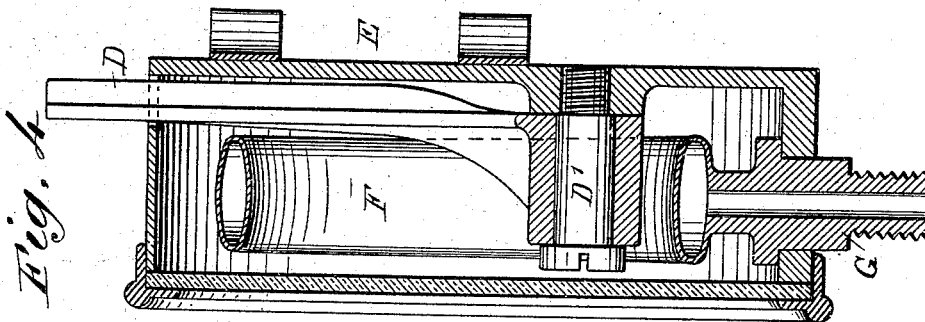
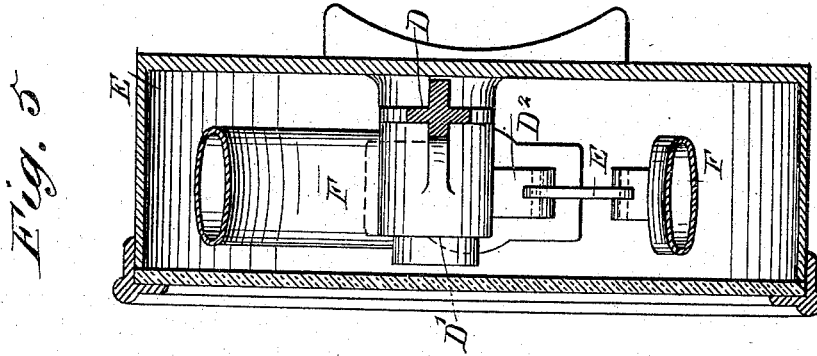
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WITNESSES:

*C. Naveux*  
*W. Sedgwick*

INVENTOR

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# UNITED STATES PATENT OFFICE.

JAMES BARCLAY, OF SIOUX CITY, IOWA.

## SAFETY-STOP FOR ENGINE-GOVERNORS.

SPECIFICATION forming part of Letters Patent No. 492,253, dated February 21, 1893.

Application filed December 2, 1892. Serial No. 453,800. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BARCLAY, of Sioux City, in the county of Woodbury and State of Iowa, have invented a new and Improved Automatic Safety-Stop for Engine-Governors, of which the following is a full, clear, and exact description.

The invention relates to governors for all engines and especially for the Corliss type, and its object is to provide a new and improved safety stop for all kinds of engine governors, which is simple and durable in construction, very effective and automatic in operation, and arranged to permit the governor, in case of accident, to drop sufficiently to throw the cams on the knock-off levers into action to prevent the cylinder from taking steam.

The invention consists of a stop adapted to support the governor sleeve when the motive agent is shut off, and to move from under the governor when the engine is running.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied; Fig. 2 is an enlarged transverse section of the same on the line 2—2 of Fig. 1; Fig. 3 is an enlarged face view of the stop; Fig. 4 is a transverse section of the same on the line 4—4 of Fig. 3; and Fig. 5 is a sectional plan view of the same on the line 5—5 of Fig. 3.

The engine A, of any approved construction is provided with the usual governor B, or any other governor, connected with the valve mechanism of Corliss type of engine, or with the valve stem of throttling governors, so that further description of the same is not deemed necessary.

The governor B is provided with its usual sleeve C, adapted to rest on a stop preferably made in the shape of a lever D, when the steam is shut off by the engineer. When, however, an accident happens to the governor while the engine is running, the stop D being from under the sleeve C permits the governor to drop sufficiently so as to completely shut off the steam from the engine.

It is understood that when the stop lever D supports the sleeve when the steam is shut off by the engineer closing the valve, then the

valves of the engine are still in position to take steam as soon as the engineer again opens the valve to start the engine. This stop lever D is controlled by the motive agent, and for this purpose, the following arrangement is made. The lever D is fulcrumed at D' within a casing E attached to the support of the governor, as plainly shown in Fig. 1. The lever D is provided with an extension D<sup>2</sup> pivotally connected by a link E' with the closed end F' of a spring tube F preferably bent in the shape of a segment of a circle, as plainly shown in Figs. 1 and 3.

The spring tube F is arranged within the casing E and is connected at its open end with a pipe G leading to the supply pipe or other part of the steam chest so that the motive agent can enter the said pipe G whenever the valve controlling the inlet of the steam through the inlet pipe is opened. Now, it will be seen that when the motive agent passes through the pipe G into the tube F, the latter swings outward at its free end as shown in dotted lines in Fig. 3, thus exerting with this free end, a pull on the extension D<sup>2</sup> of the lever D, whereby the latter swings from under the sleeve C to permit the latter to drop below its normal position in case of accident to the governor. As soon as the motive agent is cut off from the pipe G by closing the valve in the inlet pipe to the cylinder, then the tube F is relieved of the pressure of the steam and consequently its free end contracts so as to move the lever D back to its normal vertical position, as illustrated in Fig. 3, to support the sleeve C in a normal position. Now, it will be seen that while the engine is running, the lever D is swung from under the sleeve C by the pressure of the steam in the spring tube F so that in case of accident to the governor B, the latter can drop sufficiently to throw the cams on the knock-off levers into action so that the steam hooks cannot catch and open the valves, thus cutting off the steam supply and thereby stopping the engine. When the engine is running normally and the lever D has swung from under the sleeve C, as above mentioned and the engineer shuts off the steam from the supply pipe, then the lever D swings back to its normal position before the engine comes to a stop so that the lever D is ready to receive and support the

sleeve C, thus holding the governor in the proper position.

It is understood that I do not limit myself to the special construction and application of the stop for Corliss engines only, as the stop may be differently constructed and controlled by steam or motive power of the engine. Steam may be used for controlling the stop from the throttling valve, or the pipe between valve and cylinder or from the latter.

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

1. In an automatic safety stop for engine governors, the combination with a governor, of means controlled by the motive agent for supporting the governor when the motive agent is cut off, substantially as set forth.

2. In an automatic safety stop for engine governors, the combination with a governor, of a support for the governor when the motive agent is cut off, said support being controlled by the motive agent and adapted to be moved from under the governor while the engine is running, substantially as described.

3. An automatic safety stop for engine governors, provided with a stop lever controlled by the motive agent of the engine, and adapted to support the governor when the motive agent is shut off, substantially as shown and described.

4. An automatic safety stop for engine governors, comprising a lever adapted to support the governor in a normal position, and a spring tube connected with the said lever and connected with the steam supply for the engine, substantially as shown and described.

5. An automatic safety stop for engine governors, comprising a lever adapted to support the governor in a normal position, a link connected with an extension of the said lever, a spring tube closed at one end and connected at this closed end with the said link, and a pipe connected with the said tube and also connected with the steam supply, substantially as shown and described.

JAMES BARCLAY.

Witnesses:

J. E. GILPIN,  
L. S. LAMAR.