

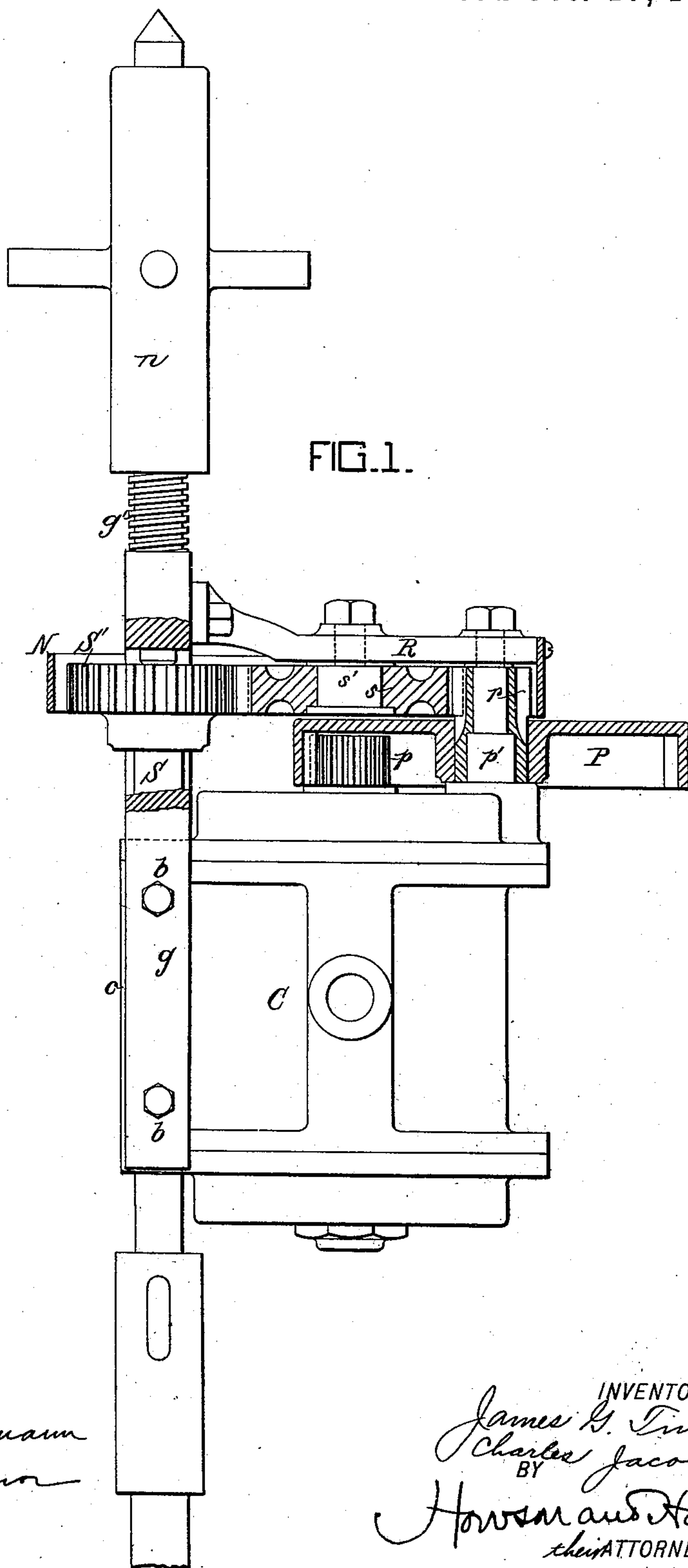
(No Model.)

2 Sheets—Sheet 1.

J. G. TIMOLAT & C. JACOBSON.  
PORTABLE DRILL.

No. 506,954.

Patented Oct. 17, 1893.



WITNESSES:

*George Baumann*  
*S. C. Connor*

INVENTORS

*James G. Timolat*  
*Charles Jacobson*  
BY  
*Horsman and Horsman*  
their ATTORNEYS.

(No. Model.)

2 Sheets—Sheet 2.

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FIG. 2.

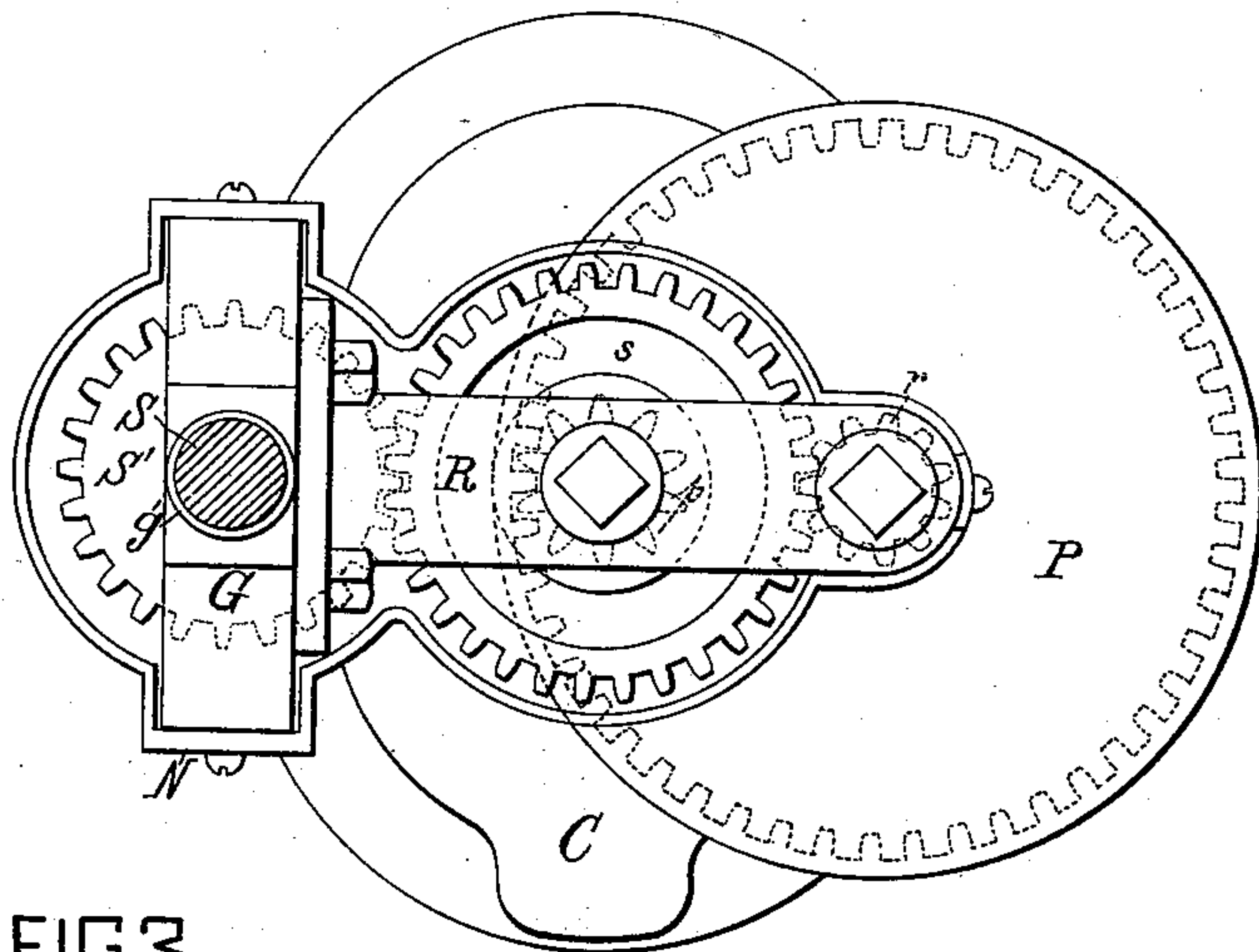
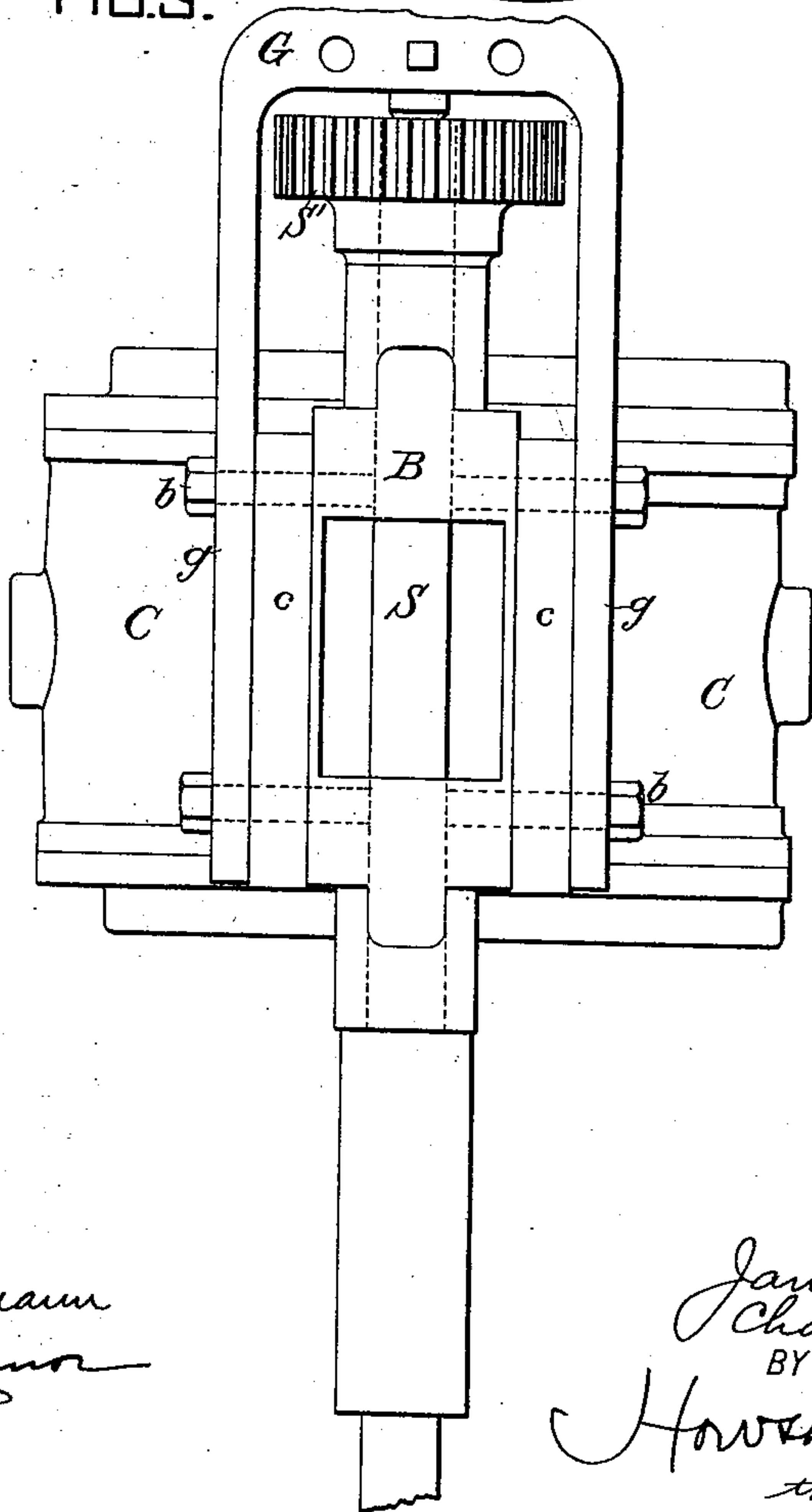


FIG. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES G. TIMOLAT AND CHARLES JACOBSON, OF NEW YORK, N. Y.

## PORTABLE DRILL.

SPECIFICATION forming part of Letters Patent No. 506,954, dated October 17, 1893.

Application filed August 16, 1893. Serial No. 483,291. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES G. TIMOLAT and CHARLES JACOBSON, both citizens of the United States of America, and residents of New York city, New York, have invented Improvements in Portable Drills, of which the following is a specification.

Our invention consists of certain improvements in the construction of portable drilling machines, the main object of our invention being to construct the drill simply, compactly and strongly, and so that the drilling may be run at a relatively slow speed.

In the accompanying drawings: Figure 1 is a side elevation, partly in section, of a drill constructed in accordance with our invention. Fig. 2 is a plan or end view, but with the feed screw in section; and Fig. 3 is a rear view showing the manner of securing the frame and the bearing for the drill spindle to the cylinder.

The engine C is a rotary engine of any suitable construction, and upon the side of the cylinder are formed lugs *c c*, to the outer side of which are secured the legs *g g* of the frame G, which carries at its upper part the feed screw *g'*. Upon this latter is fitted the bearing nut *n*, the outer end of which is to bear against a suitable support forming a point of resistance for the drill in its forward motion. Between the lugs *c c* of the cylinder there is fitted and secured the bearing piece B for the drill spindle S, this bearing piece being secured to the cylinder by the same screws or bolts *b* which secure the legs of the forked frame G to the cylinder. The shaft of the rotary drum within the cylinder passes through the stuffing box in the cylinder head and carries on its end a pinion *p* which gears with the teeth of an internal gear wheel P mounted to turn upon a fixed pin *p'* upon the cylinder head. Fixed to, or formed in one with this internal gear, there is on its upper or outer side a pinion *r* gearing with a gear wheel *s* turning on a pin *s'*, carried by the bracket R, which at one end is

bolted to the upper part of the frame G, while the other end is bolted to the fixed pin *p'* which passes up through the internal gear P and its pinion. The gear *s* meshes with a pinion *S'* on the upper end of the drill spindle S.

We prefer to inclose the gears within a protective ring N of suitable shape which may be secured by screws to the forks of the frame G and to the outer end of the bracket R.

The above described construction of drill is simple, compact and strong, and will permit of the engine being run at relatively high speed without damage to the drill and will at the same time enable the device to sustain the strains to which it has to be subjected.

We claim as our invention—

1. The combination of a rotary engine having a pinion on the shaft of its drum and an internal gear wheel geared to the shaft, an external pinion on the said gear wheel, a drill spindle to which the said pinion is geared, a frame for the drill spindle carried by the cylinder, a fixed pin on the cylinder for the said internal gear and a bracket connecting the said fixed pin and frame, substantially as set forth.

2. The combination of the rotary engine of a portable drill having a pinion on the shaft of its drum with an internal gear meshing with said pinion, an external pinion on the internal gear, a fixed pin for the latter, a drill spindle and a frame therefor carried by the engine, a bracket connecting the said frame and fixed pin and a gear wheel carried by the bracket and gearing the said external pinion with the drill spindle, all substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES G. TIMOLAT.  
CHARLES JACOBSON.

Witnesses:

EDITH J. GRISWOLD,  
HUBERT HOWSON.