

No. 842,918.

PATENTED FEB. 5, 1907.

E. J. STELJES.
TYPE PRINTING TELEGRAPH.
APPLICATION FILED APR. 17, 1905.

4 SHEETS—SHEET 1.

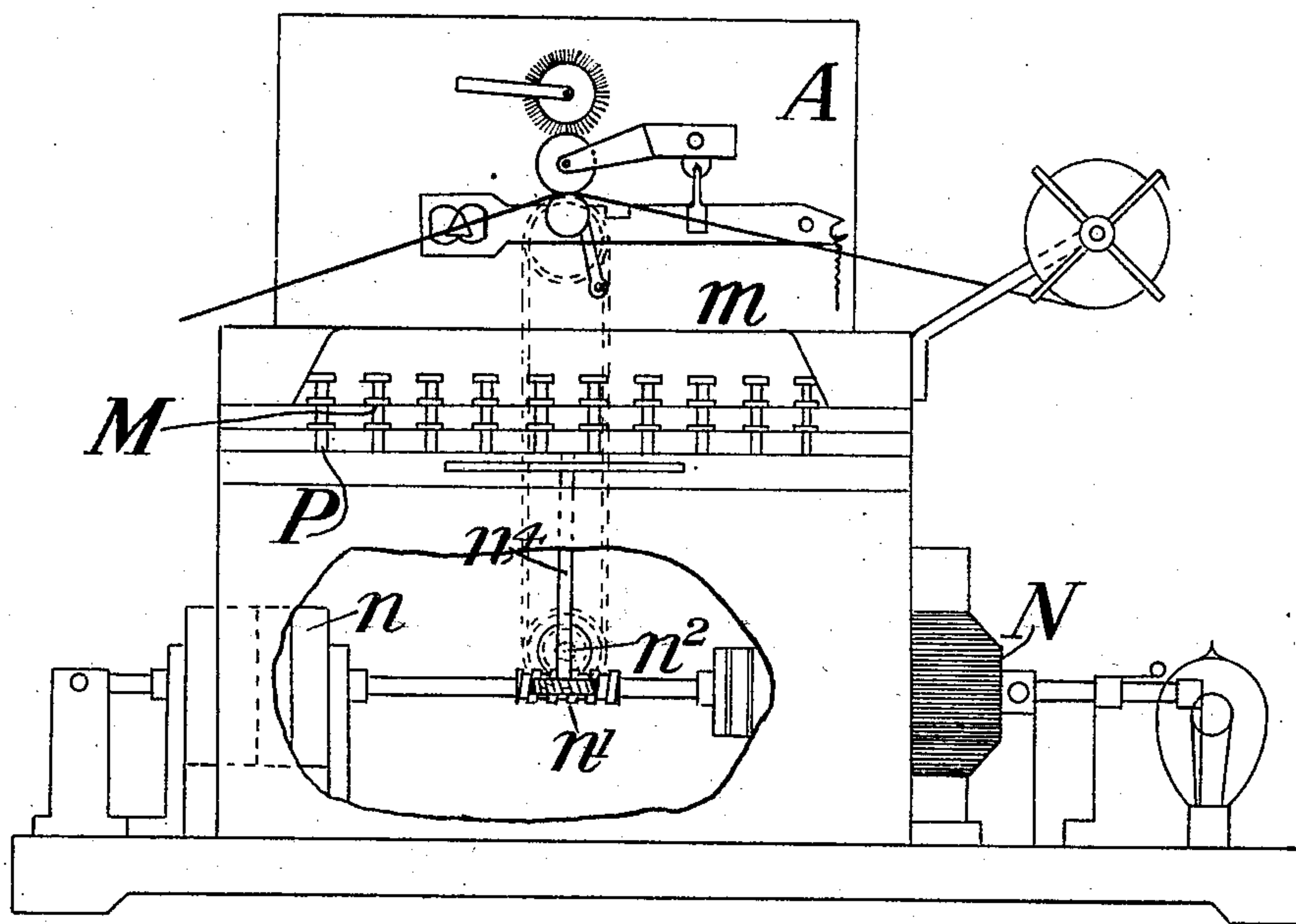


Fig. 1.

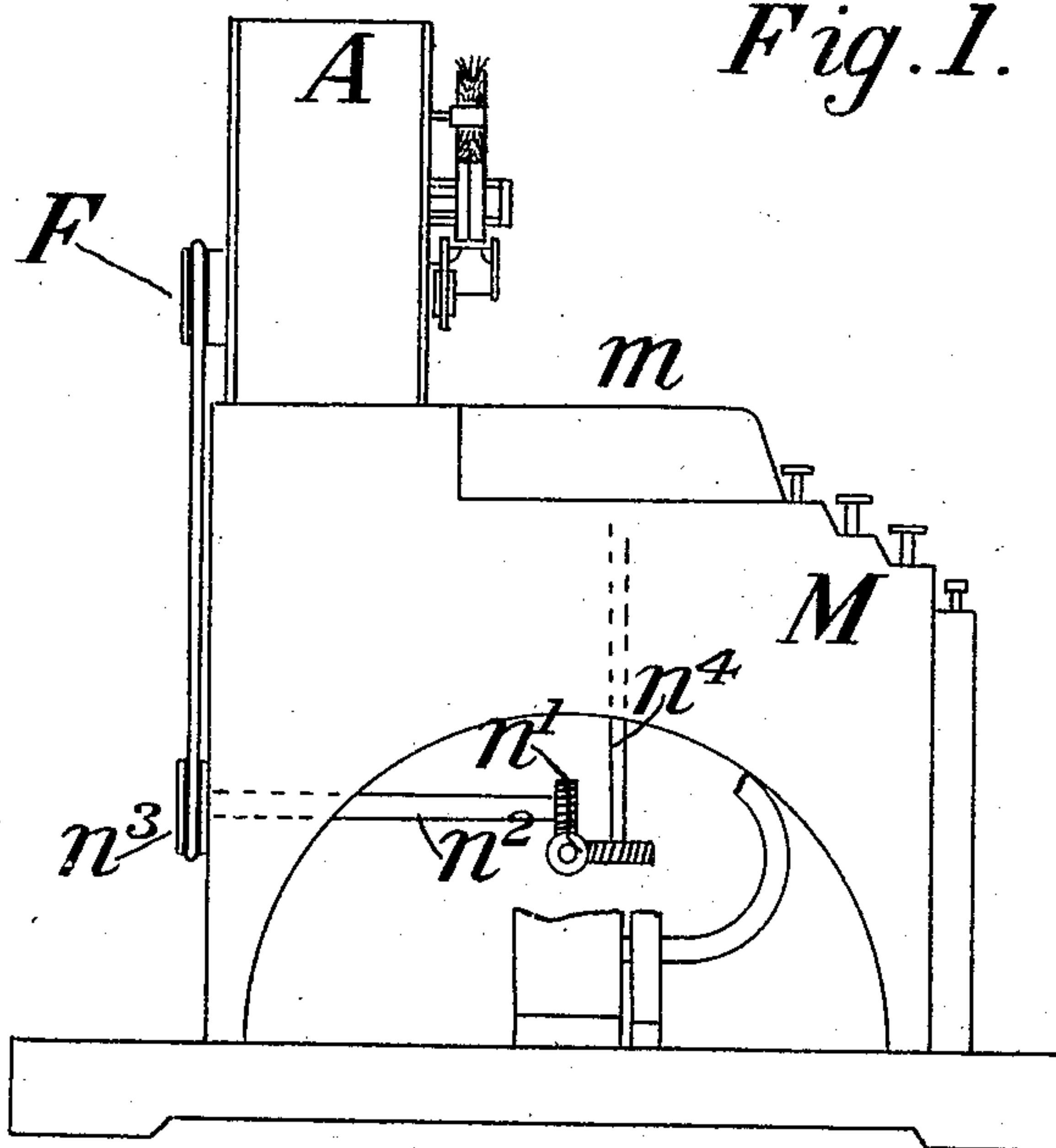


Fig. 2.

WITNESSES

W. P. Burke

A. F. Heuman.

INVENTOR

Edwin James Steljes

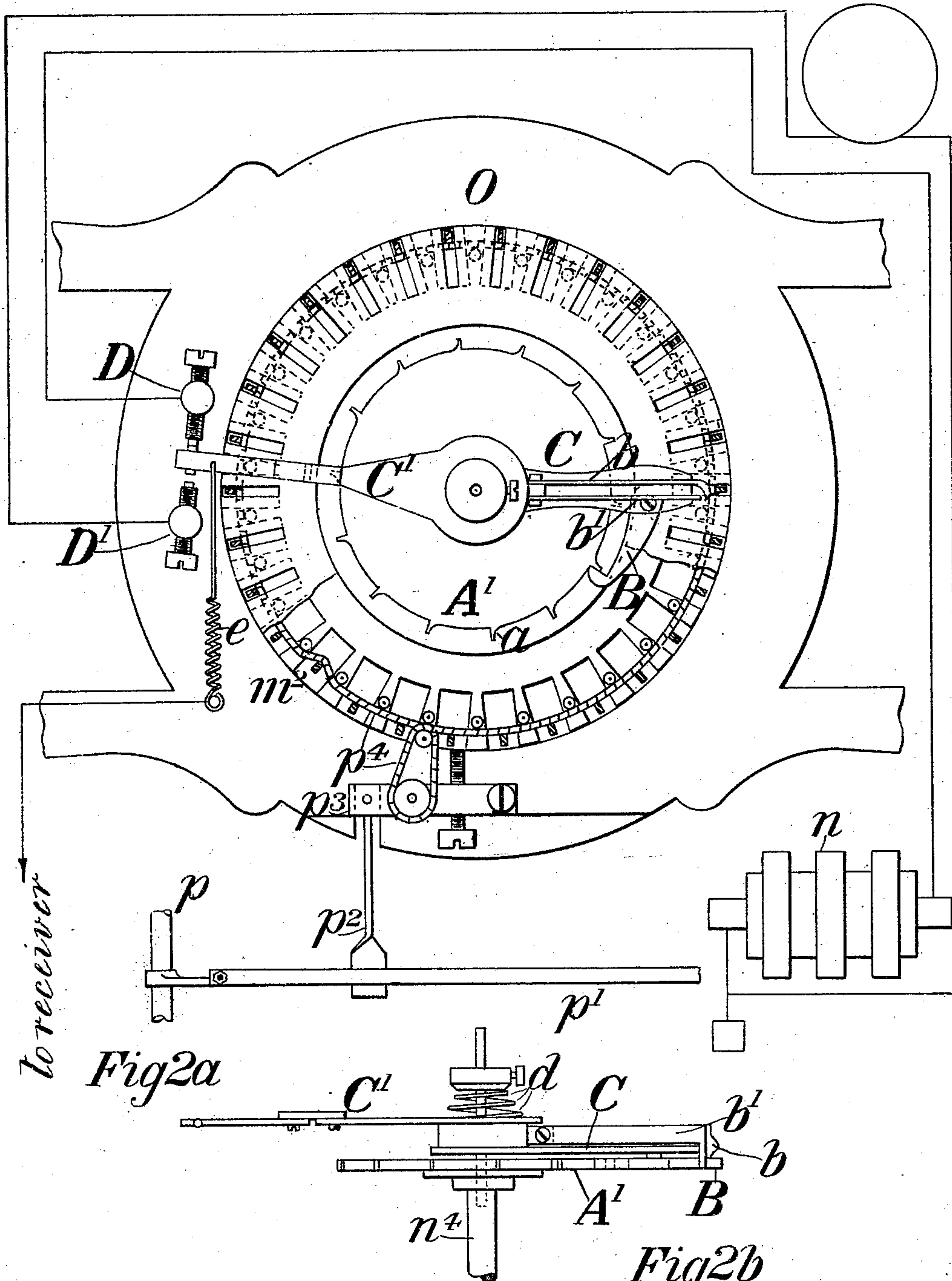
By Richard R. Steljes
ATTY'S

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4 SHEETS—SHEET 2.



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Fig 2b

INVENTOR

Edwin James Steljes

BY Richard W. Atty.

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4 SHEETS—SHEET 3.

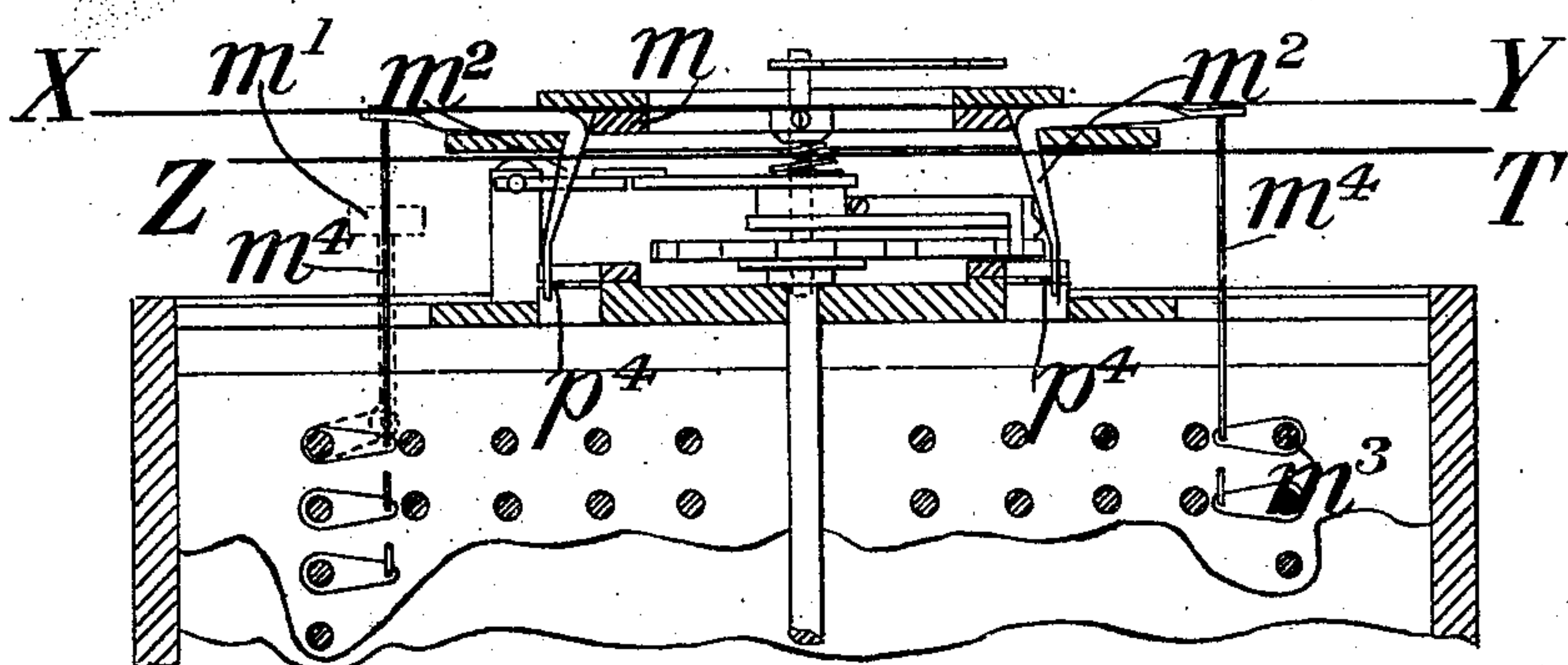


Fig 3

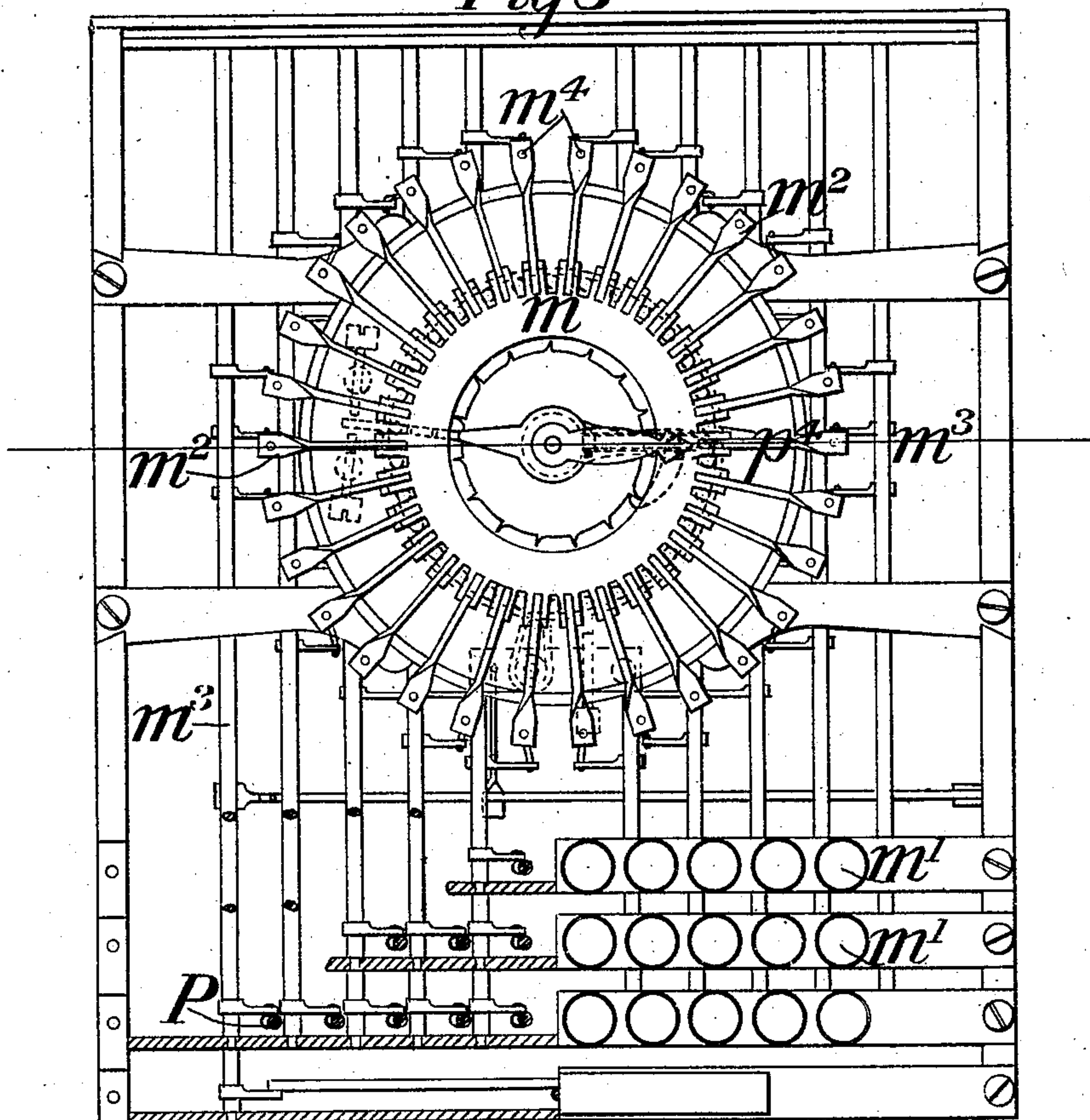


Fig 4

WITNESSES

W. P. Burke
A. F. Heuman

INVENTOR

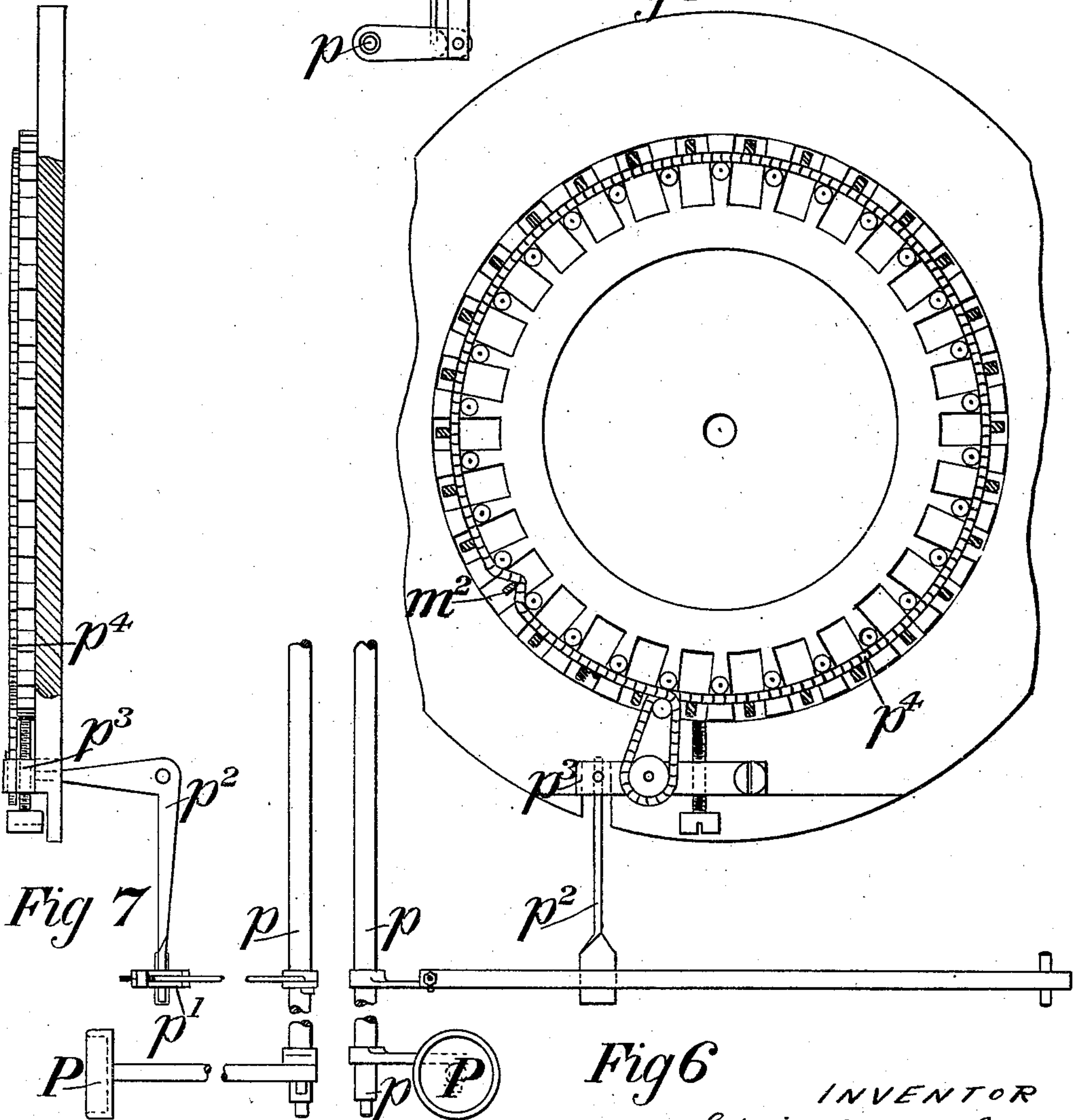
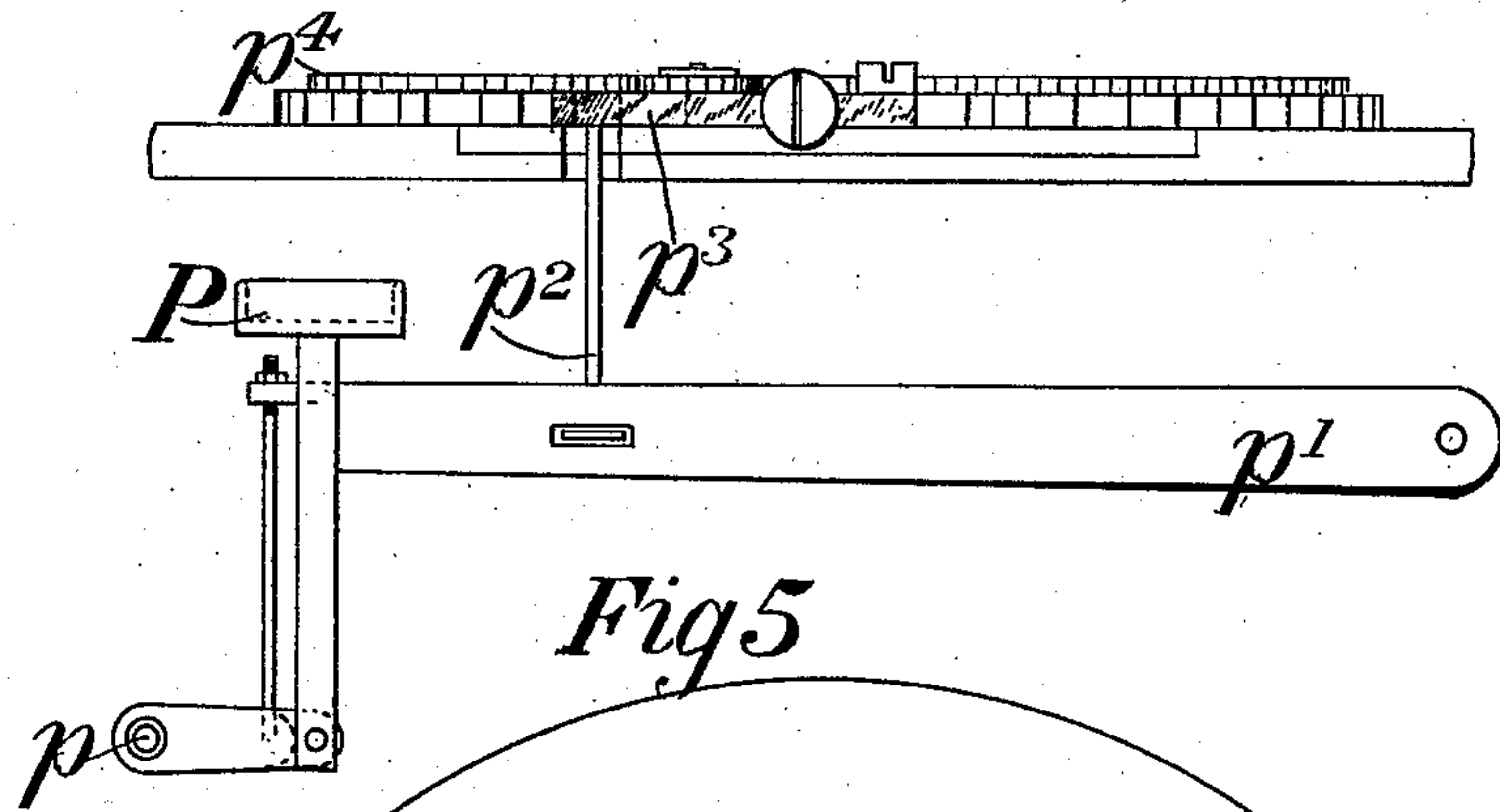
Edwin James Stelje
By Richard H. [Signature]
ATT.

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4 SHEETS—SHEET 4.



WITNESSES.
W. P. Burke
A. J. Heuman

Fig 6

INVENTOR
Edwin James Steljes
BY Richard R. [Signature]
ATTY'S

UNITED STATES PATENT OFFICE.

EDWIN JAMES STELJES, OF LONDON, ENGLAND.

TYPE-PRINTING TELEGRAPH.

No. 842,918.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed April 17, 1905. Serial No. 256,068.

To all whom it may concern:

Be it known that I, EDWIN JAMES STELJES, electrical engineer, a subject of the King of Great Britain and Ireland, residing at Mount View, Mount Pleasant Road, South Tottenham, London, in the county of Middlesex, have invented a new and useful Improvement in and Relating to Type-Printing Telegraphs, of which the following is a specification.

This invention relates to type-printing telegraphs, and consists in the arrangement of a Wheatstone transmitter with an added type-writer to facilitate its use in transmission.

Figure 1 is a front elevation of a transmitter with a known recorder upon the same stand. Fig. 2 is a side elevation of the same. Fig. 2^a is a plan of the Wheatstone transmitter on the line Z T in Fig. 3. Fig. 2^b is an elevation of the spindle and frictional accessories thereto. Fig. 3 is a side elevation of the arrangement of type-writing devices operating a Wheatstone transmitter. Fig. 4 is a plan of the Wheatstone transmitter, taken along the line X Y in Fig. 3. Fig. 5 is a side elevation of a synchronizing-key and the gear it operates in a Wheatstone transmitter. Fig. 6 is a plan of the same. Fig. 7 is a side elevation of the same.

In Figs. 1 and 2 I show the general arrangement of a transmitter m fitted with a type-writer M and a single recording instrument A of the type in which a type-wheel is included and in which the printing is effected by the cessation of the current in the line. Underneath the transmitter is fitted a motor N, operating an electro generator n . The center of this motor-shaft is fitted with a worm n' , which operates by a worm-wheel a horizontal shaft n^2 for driving by the pulley n^3 and a rubber band thereon the shaft and pulley F of the recorder. It also drives a vertical shaft n^4 to the transmitter by another worm-wheel, which operates the transmitter, as described below.

In order to explain the general action of a Wheatstone transmitter, Fig. 2^b, n^4 is the vertical shaft, driven by the motor N, Fig. 1. This carries fixed to it in the transmitter a wheel A', with side teeth projections a . This wheel constantly rotates, being driven continuously by the motor. Over these teeth a a pawl B is pressed into engagement by a back spring b of greater strength than a reacting spring b' . This reacting spring b' when the back spring b is pressed back by meeting

the stop device m^2 thrusts back the pawl B out of the teeth a . This stop device m^2 is more particularly described hereinafter. The wheel A' thus goes on, together with the shaft n^4 , while the pawl-lever C, tending to carry with it by frictional contact the contact making and breaking tail-lever C', stops at rest according to the position of the interpolated stop m^2 . While the transmitter is traveling with the pawl B in contact with the teeth a of the wheel A', the tail-lever C' makes a contact, with the fixed stop or contact D, being in frictional contact with this lever C by the spring d pressing it against the upper broad surface of C. This completes the circuit between the generator n to a distant receiver. As the pawl B and the arm C is arrested by an interpolated stop device the arm C is thus stopped, ceasing to produce a frictional entrainment upon the lever C'. The tail-lever C' is thus pulled from the stop or contact D by the spring e to the stop or contact D'. This breaks the current transmitted, the number of alternate impulses in the said current being proportional to the distance traveled by the arm C from O to the interpolated stop, which is thus caused to operate the receiver type-wheel to make the necessary movements from its position of O to the same indicated letter as corresponds to the interpolated stop device m^2 .

The arrangement of the type-writing device with the Wheatstone transmitter is shown in Figs. 3 and 4. m^2 are a series of bent levers, each representing separate letters on the Wheatstone transmitter. When one of these levers m^2 is rocked inward, so that the lower part comes in toward the center, it meets the spring b , as described in relation to Figs. 2^a or 2^b, where it forms a stop, pressing in the chain p^4 of the transmitter and arresting the movement of the revolving arm C, causing by the movement of the lever C' to the stop D' a stoppage of alternating current through the transmitter. The levers m^2 are each connected up by a rod m^4 to the axially-moving shafts m^3 , which are arranged three above one another and are connected directly to the keys m' , each marked with a separate letter.

In Figs. 5, 6, and 7 is shown a special clearance-key P. This operates on a rock-shaft p , which by a rocking lever p' operates a bell-crank p^2 . This pulls a sliding bar p^3 , which by a pulley lying within the transmitter-chain p^4 pulls out the slack of this chain,

so as to pull out the stopping device, which is left inserted by the action of the transmitter. As all the stops m^2 are thus pulled out, one of which always remains in by the action of the transmitter, this operation clears the path of the traveling arm C, enabling it to make as many complete turns as are necessary. Upon any known recorder is invariably fixed a special device for bringing the type-wheel of such a recorder into accord with the transmitter, it being requisite that the transmitter should make a series of turns—say three complete revolutions—for the purpose. The action of this clearance-key P enables the transmitter to be continuously revolved until the necessary accord is made between the type-wheel of the recorder and the transmitter.

This motor may be supplied with a commutator reversing the direction of a line-current taken from a battery source by which the current is alternatively reversed for the main-line circuit.

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

1. In combination in a type-writing transmitter a key to a known Wheatstone trans-

mitter, pierced with a hole at its end, a connecting-rod engaging the hole, a rock-shaft, a crank upon said rock-shaft operating the said connecting-rod and another crank upon the said rock-shaft and a vertical rod having a button thereon and actuating the transmitter-crank.

2. In combination in a type-writing transmitter, including a rotary arm, means employed to make the path of the revolving arm free for synchronization consisting of a special finger-key, a rock-shaft, means from the said finger-key to operate said rock-shaft and a hinged lever operated from said rock-shaft, a bell-crank operated by said lever, a lever carrying a roller within the transmitter-chain operated by the said bell-crank to draw up the said chain, so that the latter may be extended by the said apparatus to free the path of the revolving arm of the transmitter to permit synchronization.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN JAMES STELJES.

Witnesses:

JOHN C. FELL,
CHARLES CARTER.