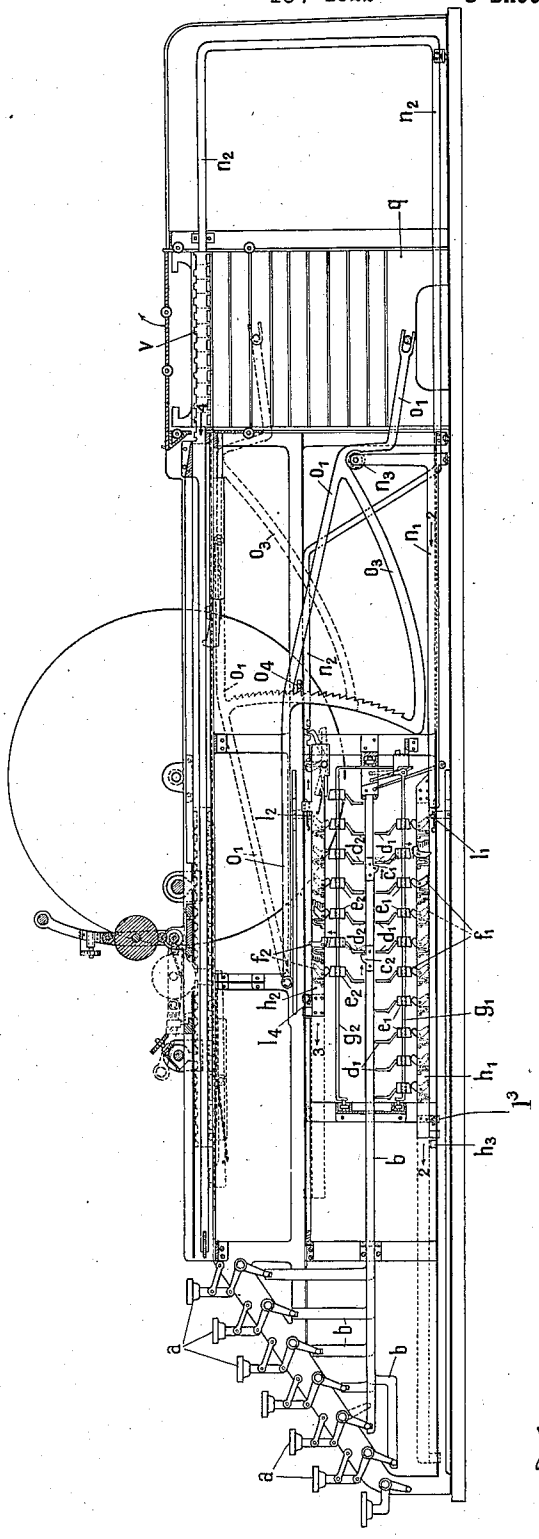
Oct. 23, 1923. 1,471,654

H. GRAF

WRITING MACHINE

Filed Nov. 16, 1922 3 Sheets-Sheet 1

Fig. 1.



Inventor:
Hans Graf
by: Parmelee & Co
his attys

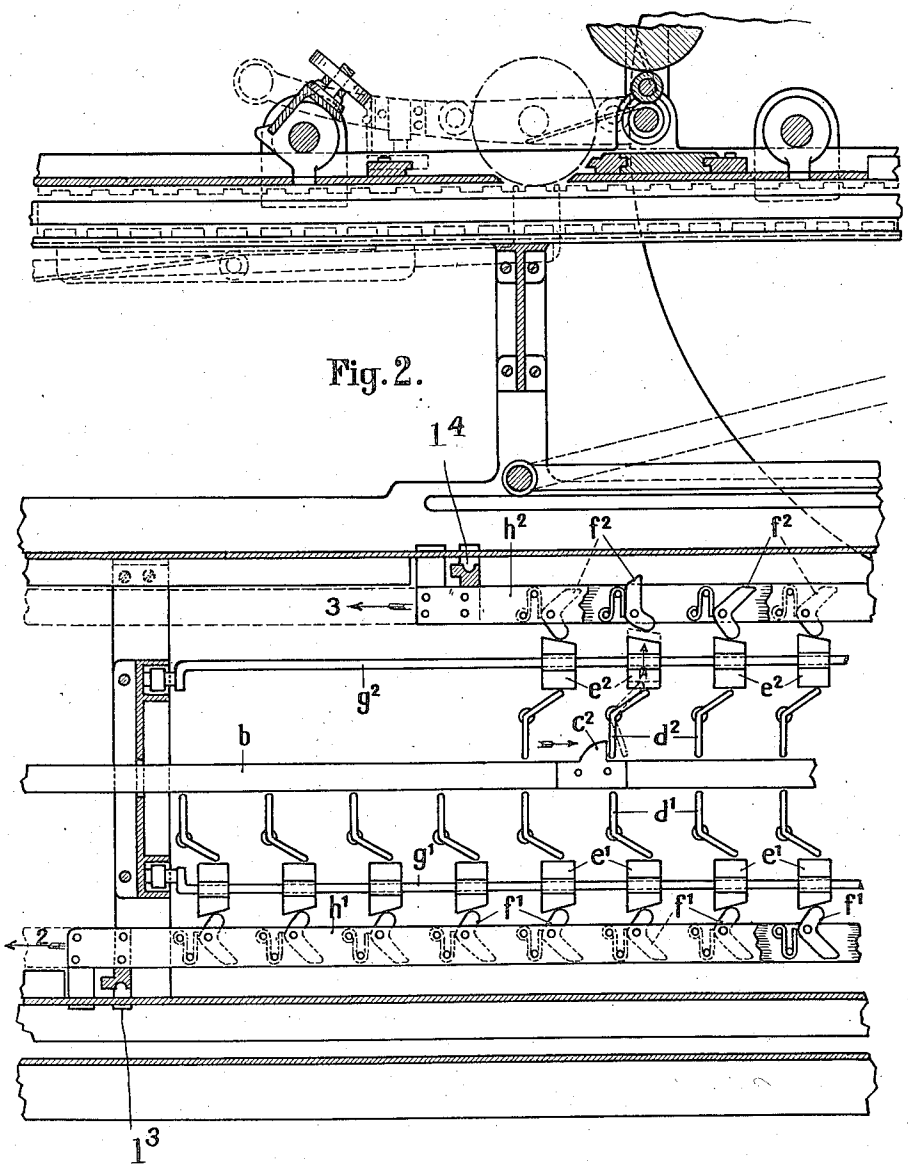
Oct. 23, 1923. 1,471,654

H. GRAF

WRITING MACHINE

Filed Nov. 16, 1922 3 Sheets-Sheet 2

Fig. 2.



Inventor:
Hans Graf
By: Pannenborg
his Att'y

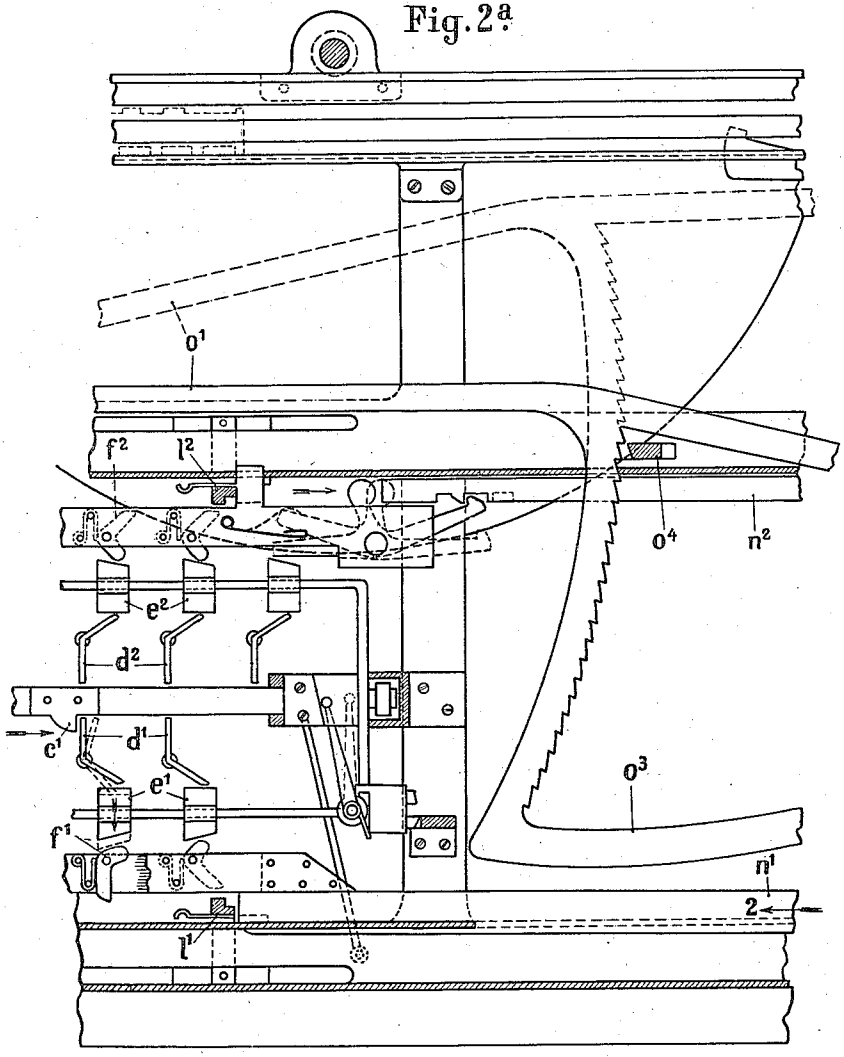
Oct. 23, 1923. 1,471,654

H. GRAF

WRITING MACHINE

Filed Nov. 16, 1922 3 Sheets-Sheet 3

Fig. 2a



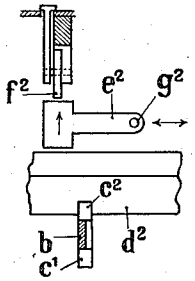


Fig. 3.

Inventor:
Hans Graf
By: Pennie & Edmonds
his att'ys

Patented Oct. 23, 1923. 1,471,654

UNITED STATES PATENT OFFICE.

HANS GRAF, OF LAUPEN-BERNE, SWITZERLAND, ASSIGNOR TO POLYGRAPHISCHE GESELLSCHAFT, OF LAUPEN-BERNE, SWITZERLAND, A FIRM.

WRITING MACHINE.

Application filed November 16, 1922. Serial No. 601,362.

To all whom it may concern:

Be it known that I, HANS GRAF, a citizen of the Swiss Republic, residing at Laupen-Berne, Switzerland, have invented certain new and useful Improvements in Writing Machines, of which the following is a specification.

This invention relates in general to writing machines and more particularly to machines of the kind described in the copending application Ser. No. 469,045.

The object of the invention is to provide improvements which enable the speed of operation of such machines to be increased.

To this end the typebar magazines are provided in accordance with the invention with means for securing a magazine in its raised or set position and for returning the typebar and magazine setting means to their normal positions while the magazine remains thus secured.

The invention is illustrated in the drawing in which—

Fig. 1 is a vertical front to back section through the entire machine.

Fig. 2 is a partial vertical section through the machine drawn to an enlarged scale and Fig. 2^a is an enlarged view of the central portion of Fig. 1.

Fig. 3 shows details of the register actuating members.

In Fig. 1 of the drawing keys a are shown which, when they are depressed, impart longitudinal movements to bars b provided with projections c^1, c^2 that cooperate with pivoted transverse bars d^1, d^2 adapted to turn or swing on axes extending along lines intermediate their top and bottom edges. The pivoted transverse bars are adapted to strike against strikers e, e^2, pivoted on bars g^1, g^2. The strikers e, e^2, which are preferably T-shaped, act upon registering members f^1, f^2 pivotally attached to typebar registers h^2 and magazine registers h^1. When a registering member is actuated (as the second member f^2 from the left end of the typebar register h^2) and a transverse bar l^2 is moved in the direction of the arrow 3, as by means described more fully in the above mentioned application, the register h^2 is shifted towards the left through a predetermined distance and by this means a typebar shifter n^2 pushes a typebar v out of its magazine and causes a certain type on the typebar to be brought into printing position. When a magazine registering member (as the second member f^1 from the right on the magazine register h^1) is actuated and the transverse bar l^1 is moved in the direction of the arrow 2 the magazine register h^1 pulls a magazine lifter n^1 a certain distance to the left thus causing a roller n^3 to roll along the bottom surface of a curved member o^3 attached to a lever o^1. The lever o^1 is thus caused to raise the typebar magazine q a certain distance corresponding to the magazine registering member that was operated as the result of the depression of a key a.

United with each lever o^1 is a curved rack that co-operates with a transverse bar o^4. When a lever o^1 has been raised it is secured in this position by the bar o^4 and the magazine can thus be kept raised while the parts n^1, n^2 and the registers h^1, h^2 are restored by means of the transverse rods l^1, l^2 and cooperating parts l^3, l^4 to their normal positions. During this restoring operation the printing operation can be performed with the aid of the typebars v and during the printing operation the operation of setting the types for a new line with the aid of the parts a, b, c^1, c^2, d^1, d^2, e^1, e^2, f^1, f^2 can be carried out.

I claim:—

1. In a writing machine, magazines, a plurality of typebars in the magazines, means for setting the magazines into different positions, means for shifting the typebars out of the magazines into certain positions, and means for securing a magazine in a set position and for returning the said setting means and shifting means to their normal positions while the said magazine remains secured.

2. In a writing machine, magazines, a plurality of typebars in the magazines, levers for setting the magazines into different positions, means for operating the said levers, means for shifting the typebars out of the magazines into certain positions, and means for securing a set lever in its operated position and for returning the said operating means and shifting means to their normal positions while the set lever remains secured.

3. In a writing machine, magazines, a plurality of typebars in the magazines, levers for raising the magazines into different positions, means for operating the said levers, means for shifting the typebars out of the magazines into certain positions, and means for securing a set lever in its raised position and for returning the said operating means

and shifting means to their normal positions while the set lever remains raised.

4. In a writing machine, magazines, a plurality of typebars in the magazines, levers for setting the magazines into different positions, means for operating the said levers, means for shifting the typebars out of the magazines into certain positions, and means for securing a set lever in its operated position and for returning the said operating means and shifting means to their normal positions while the set lever remains secured, the said securing means consisting of a curved rack on each lever, and a member adapted to engage a plurality of said racks.

5. In a writing machine, magazines, a plurality of typebars in the magazines, levers for setting the magazines into different positions, means for operating the said levers, means for shifting the type-bars out of the magazines into certain positions, and means for securing a set lever in its operated position and for returning the said operating means and shifting means to their normal positions while the set lever remains secured, the said securing means consisting of a curved rack on each lever, and a bar adapted to engage a plurality of said racks.

In testimony whereof I have affixed my signature in presence of one witness.

HANS GRAF.

Witness:
WERNER SCHÄFFER.