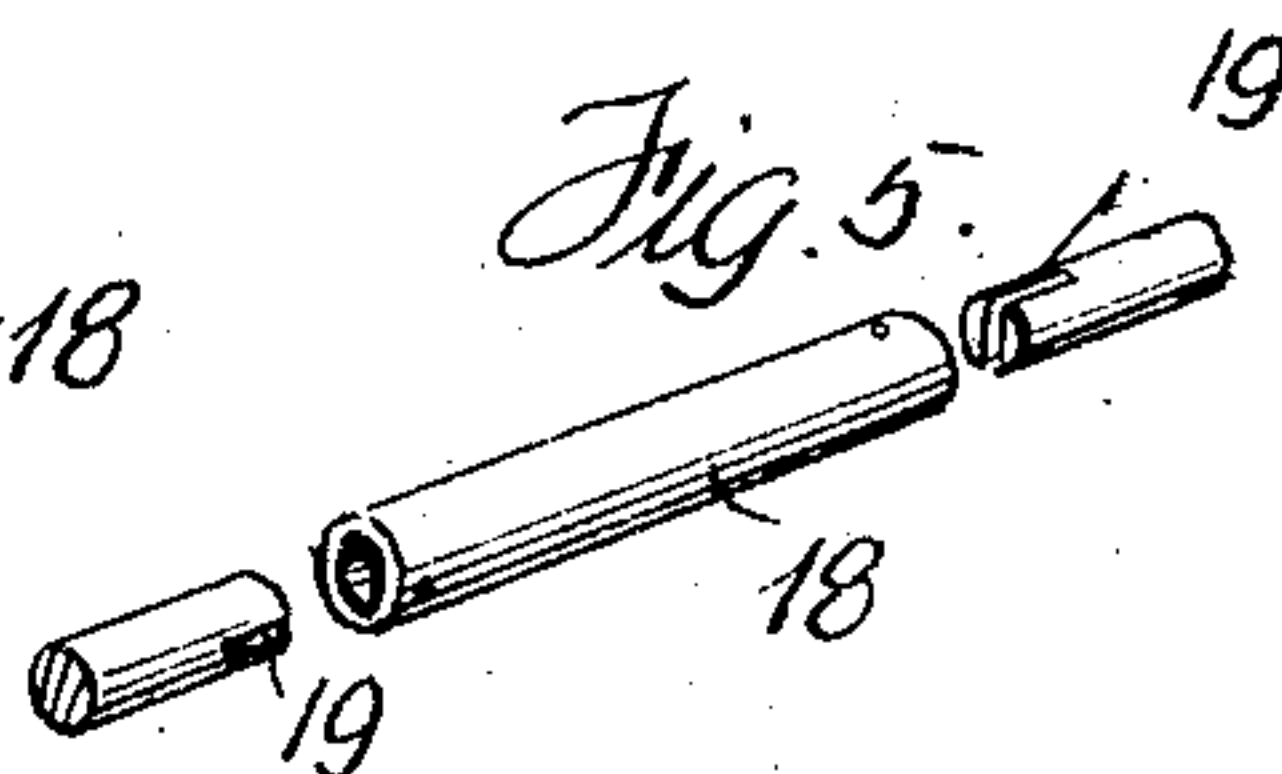
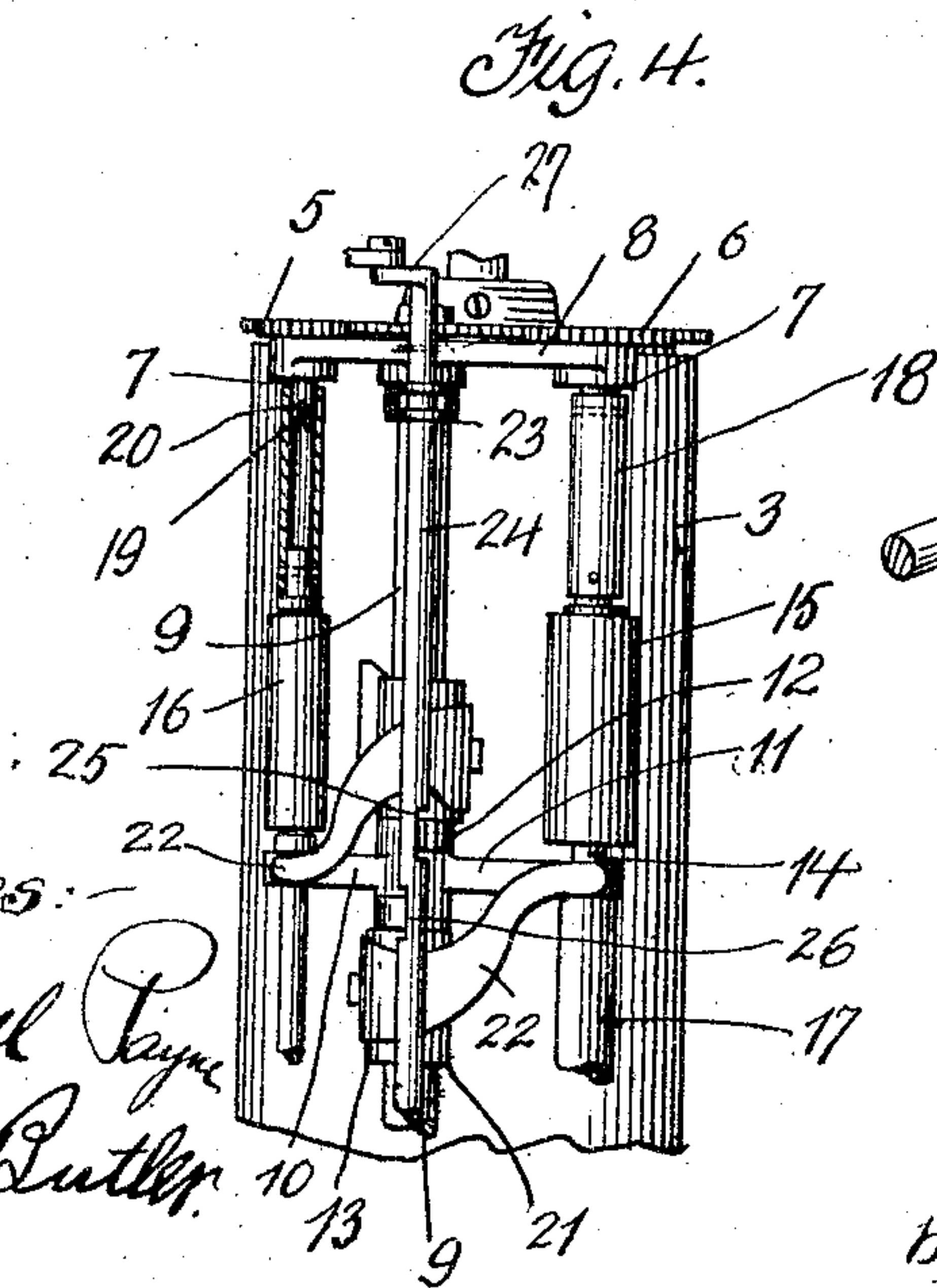
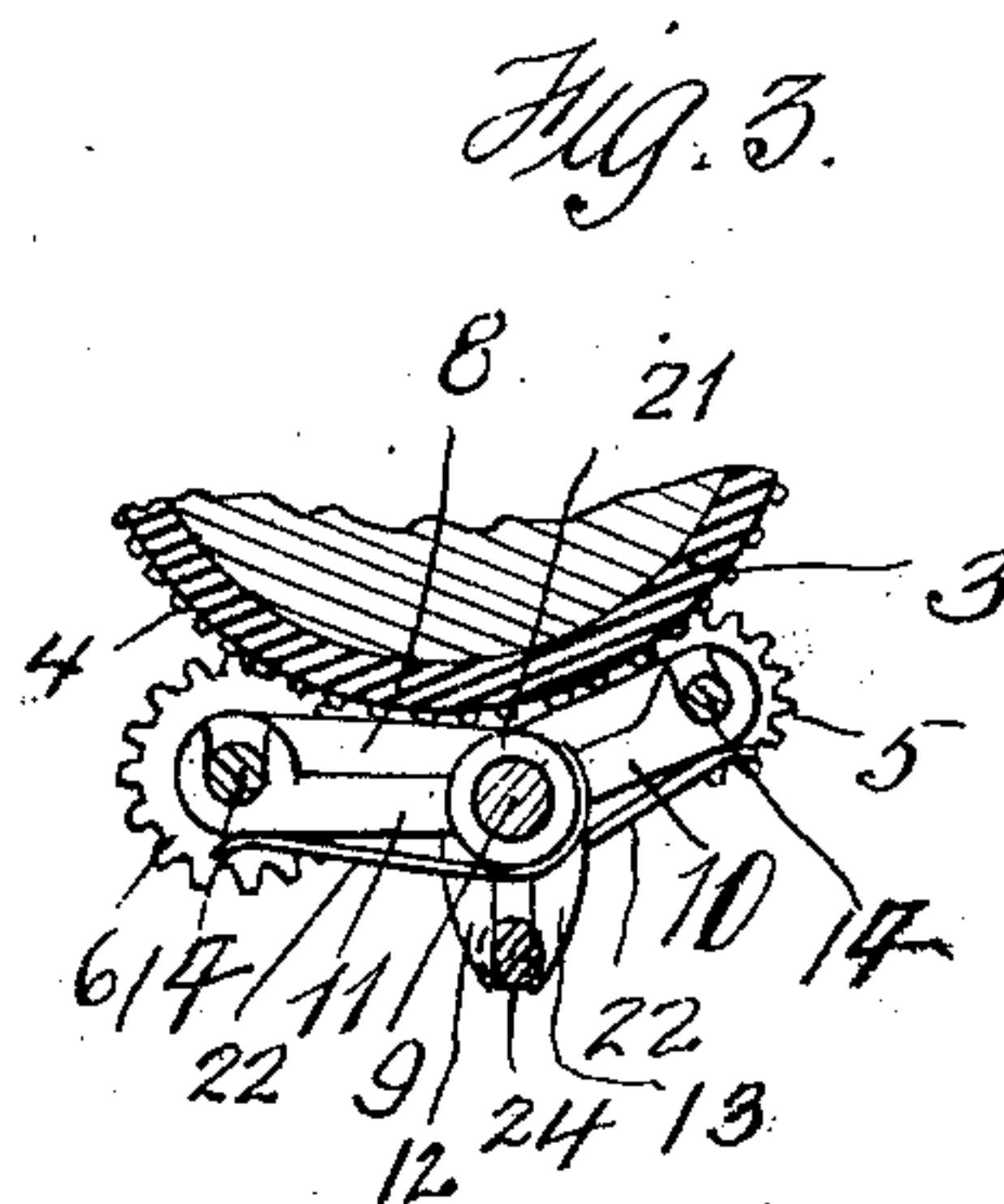
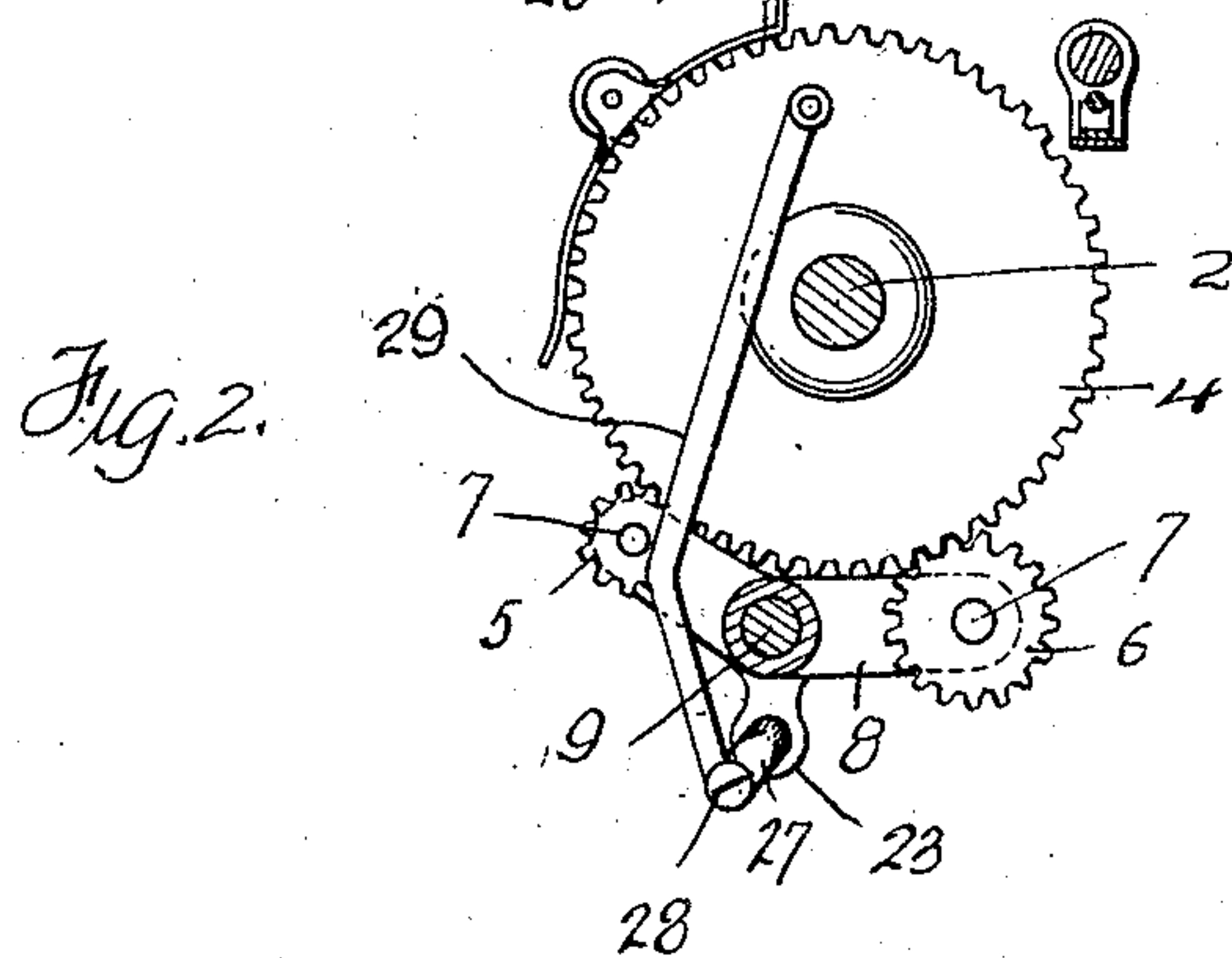
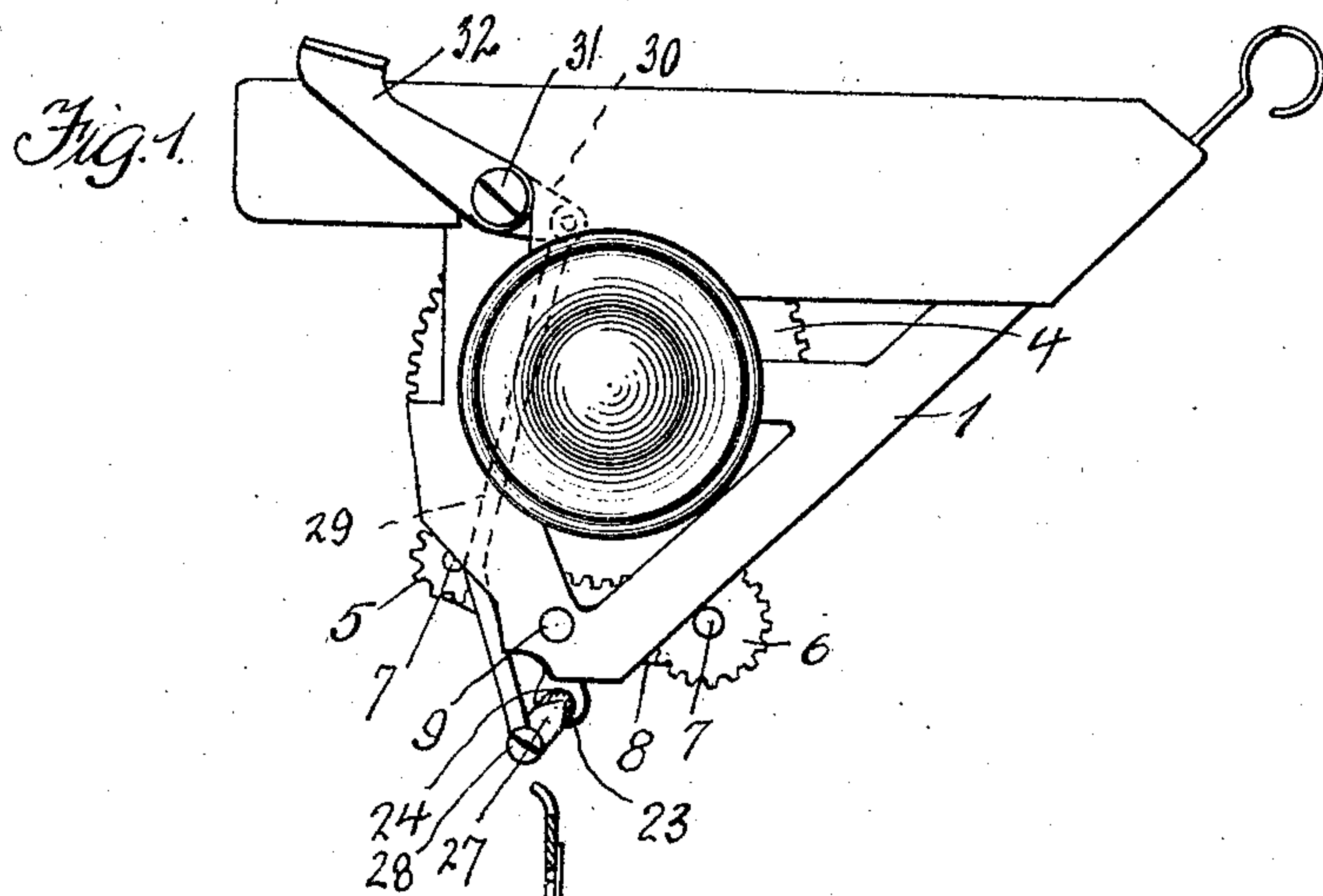


C. H. BROWN.
FEED ROLLER ATTACHMENT FOR TYPE WRITERS.
APPLICATION FILED NOV. 3, 1909.

978,820.

Patented Dec. 13, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

CLARENCE H. BROWN, OF PITTSBURG, PENNSYLVANIA.

FEED-ROLLER ATTACHMENT FOR TYPE-WRITERS.

978,820.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed November 3, 1909. Serial No. 526,013.

To all whom it may concern:

Be it known that I, CLARENCE H. BROWN, a citizen of the United States of America, residing at N. S. Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Feed-Roller Attachments for Type-Writers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a feed roller attachment for typewriting machines, and the object of my invention is to provide a typewriter with a novel attachment that will insure an even, steady and positive movement of the sheet over the platen of a typewriter.

My invention aims to provide an attachment that can be advantageously used in connection with that type of typewriting machine commonly known as the "Underwood", the attachment being easily installed without changing, modifying or in any manner whatsoever re-arranging the present parts of the Underwood typewriter. It has been designed whereby it can be applied to the Underwood machine at a comparatively small cost, and to increase the efficiency of the machine, particularly when a large number of sheets of paper are fed into the machine. Considerable trouble has been experienced in connection with various types of machines on account of the feeding mechanism failing to simultaneously move the various sheets of paper placed in the machine, especially when one or more of the sheets are stiff or of a greater thickness than others, the sheets of paper closest to the platen tending to move with the platen while other sheets lag behind or do not move at all.

My invention aims to obviate the defects of feeding mechanisms at present used by providing a simple, inexpensive and durable attachment that assures perfect alinement of one sheet with another when fed through the typewriting machine.

My invention will be hereinafter specifically described and then claimed, and reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of my invention, but it is to be understood that the structural elements thereof can be varied or changed without departing from the spirit or scope of the invention.

In the drawings:—Figure 1 is an end view of a platen holder constructed in accordance

with my invention, Fig. 2 is a cross sectional view of the same, Fig. 3 is a similar view of another portion of the platen holder, Fig. 4 is a bottom plan of a portion of the holder, and Fig. 5 is a perspective view of a detached universal connection adapted to form part of my attachment.

In the accompanying drawing I have illustrated a conventional form of platen holder adapted to be supported by the carriage of a typewriting machine, the holder comprising triangular end frames 1 supporting a revoluble shaft 2 upon which is mounted the platen 3. One end of the platen is provided with a large gear wheel 4 adapted to mesh with small gear wheels 5 and 6 mounted upon stub shafts 7, journaled in the ends of a cross head 8 mounted upon a longitudinal rod 9 fixed in the end frames 1.

Loosely mounted upon the rod 9 adjacent to the ends thereof are two oppositely disposed bearings 10 and 11, the bearing 10 having an off-set right angular lug 12 and the bearing 11 a similar lug 13, these lugs also being oppositely disposed.

The bearings 10 and 11 support revoluble shafts 14 and mounted upon these shafts are revoluble friction rollers 15 and 16 and spacing sleeves 17. The ends of the shafts 14 adjacent to the cross head 8 are connected to said cross head by universal connections, comprising sleeves 18 adapted to fit upon the confronting ends of the shafts 14 and the shaft 7. These shafts are provided with longitudinal slots 19 to receive transverse pins 20, carried by the sleeves 18. The pin 20 at one end of the sleeve is arranged at right angles to the pin 20 at the opposite end, and it is through the medium of the universal joints that the shafts 14 can be raised and lowered relative to the platen 3.

The friction rollers 15 are adapted to normally engage the platen 3 and revolve therewith, and for normally holding said rollers in engagement with the platen, the rod 9 is provided with sleeves 21 supporting curved springs 22 adapted to engage the bearings 10 and 11 and hold said bearings in an elevated position.

The rod 9 is provided with hangers 23 for a rock shaft 24, said rock shaft being provided with oppositely disposed flat surfaces 25 and 26 adapted to be engaged by the lugs 12 and 13. One end of the rock shaft 24 is provided with a crank 27, which is pivotally connected, as at 28 to an arm

29 connecting with the crank 30 of a shaft 31 revolubly mounted in the end frame 1, said shaft being provided with another crank or finger piece 32.

5 With the lugs 12 and 13 in engagement with the flat surfaces 25 and 26 of the rock shaft 24, the springs 22 normally support the shafts 14 in an elevated position with the friction rollers 15 and 16 in engagement
10 with the platen 3. The friction rollers 15 are of a greater diameter than the rollers 16 owing to the location of said rollers relative to the platen.

When the crank or finger piece 32 is de-
15 pressed, the shaft 24 is rocked to move the flat surfaces 25 and 26 out of engagement with the lugs 12 and 13 causing said lugs to engage the periphery of the rock shaft 24, and when in this position the bearings 10
20 and 11 are lowered, placing the springs 22 under tension. With the bearings lowered, the friction rollers 15 and 16 will be removed from the platen 3 and said platen can be freely rotated without necessarily mov-
25 ing the feed rollers.

When the crank or finger piece 32 is elevated the tension of the springs 22 is immediately released, allowing said springs to restore the bearings 10 and 11 to their normal position, with the friction rollers in
30 engagement with the platen.

It is through the medium of the friction rollers 15 and 16 that sheets of paper placed in engagement with the platen 3 can be
35 moved in unison without one sheet shifting relative to another. It is obvious that when the platen is rotated that the shafts 14 will

be rotated irrespective of their position relative to the platen, consequently I am enabled to feed numerous sheets of paper into
40 the machine and to maintain the position of the sheets relative to one another, whereby when they are adjusted back and forth there will be no slipping that would cause an imperfection in the printing by the use
45 of carbon or reproducing papers.

Having now described my invention what I claim as new, is:—

In a feed roller attachment for typewriting machines, the combination of a revolu- 50 ble platen, feed rollers, a driven shaft for each of said rollers, each of said shafts having a bifurcated end, spring-controlled bearings engaging with each of said shafts for normally maintaining the rollers in engage- 55 ment with the platen, means for shifting the bearings whereby the rollers are released from the platen, stub-shafts actuated from the platen and each having its inner end bifurcated, the furcations of the driven 60 shafts being disposed at right angles with respect to the furcations of the stub-shafts, and hollow cylindrical sleeves extending over the bifurcated ends of the driven and stub shafts and provided with transversely- 65 extending pins engaging in the furcations of said shafts whereby the shafts are universally connected together.

In testimony whereof I affix my signature in the presence of two witnesses.

CLARENCE H. BROWN.

Witnesses:

KARL H. BUTLER,
MARY M. HEDDEN.