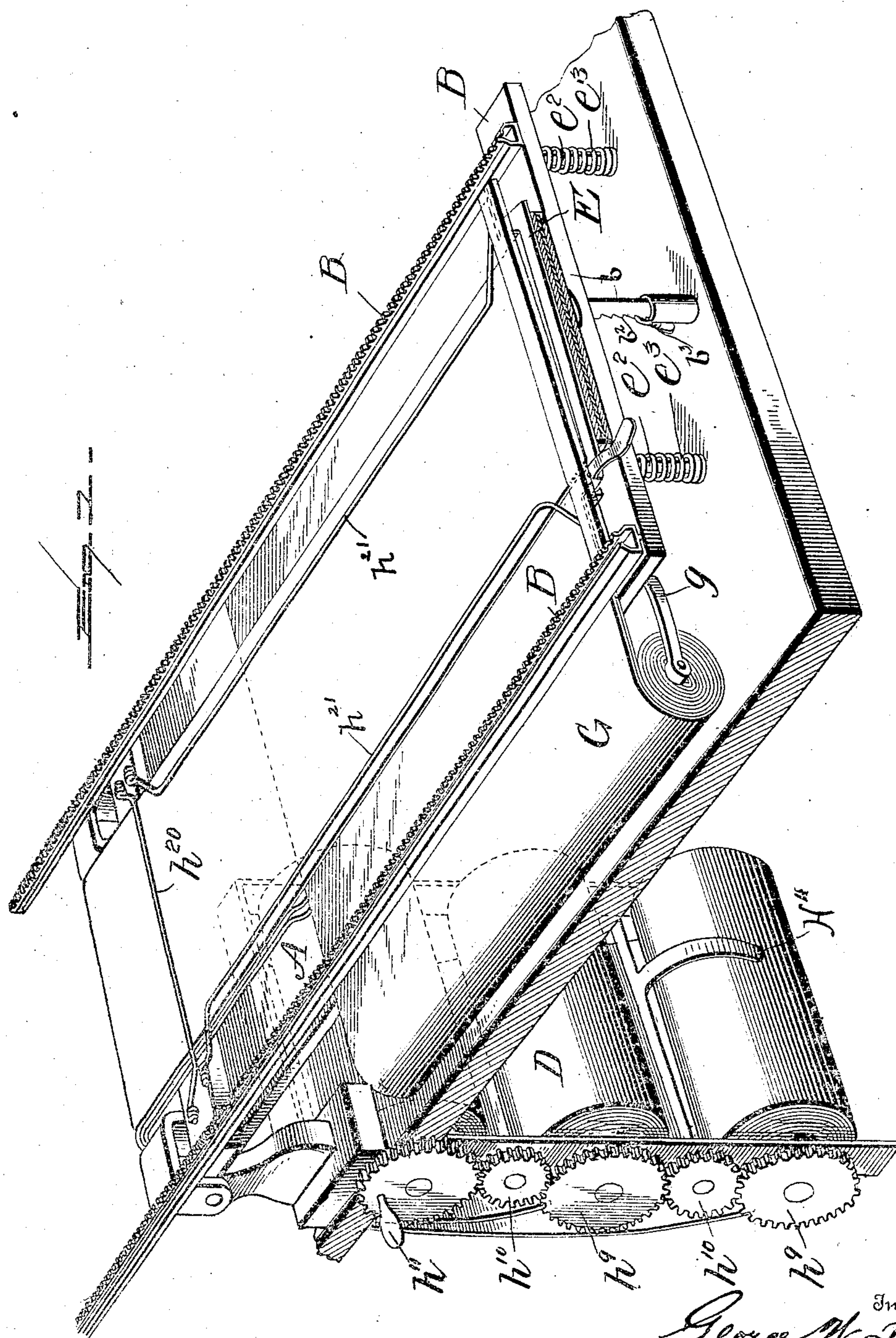


No. 863,056.

PATENTED AUG. 13, 1907.

G. W. DONNING.
TYPE WRITING MACHINE.
APPLICATION FILED SEPT. 23, 1901.

2 SHEETS—SHEET 1.



Witnesses
J. F. Doyle
Emmett H. Harvey

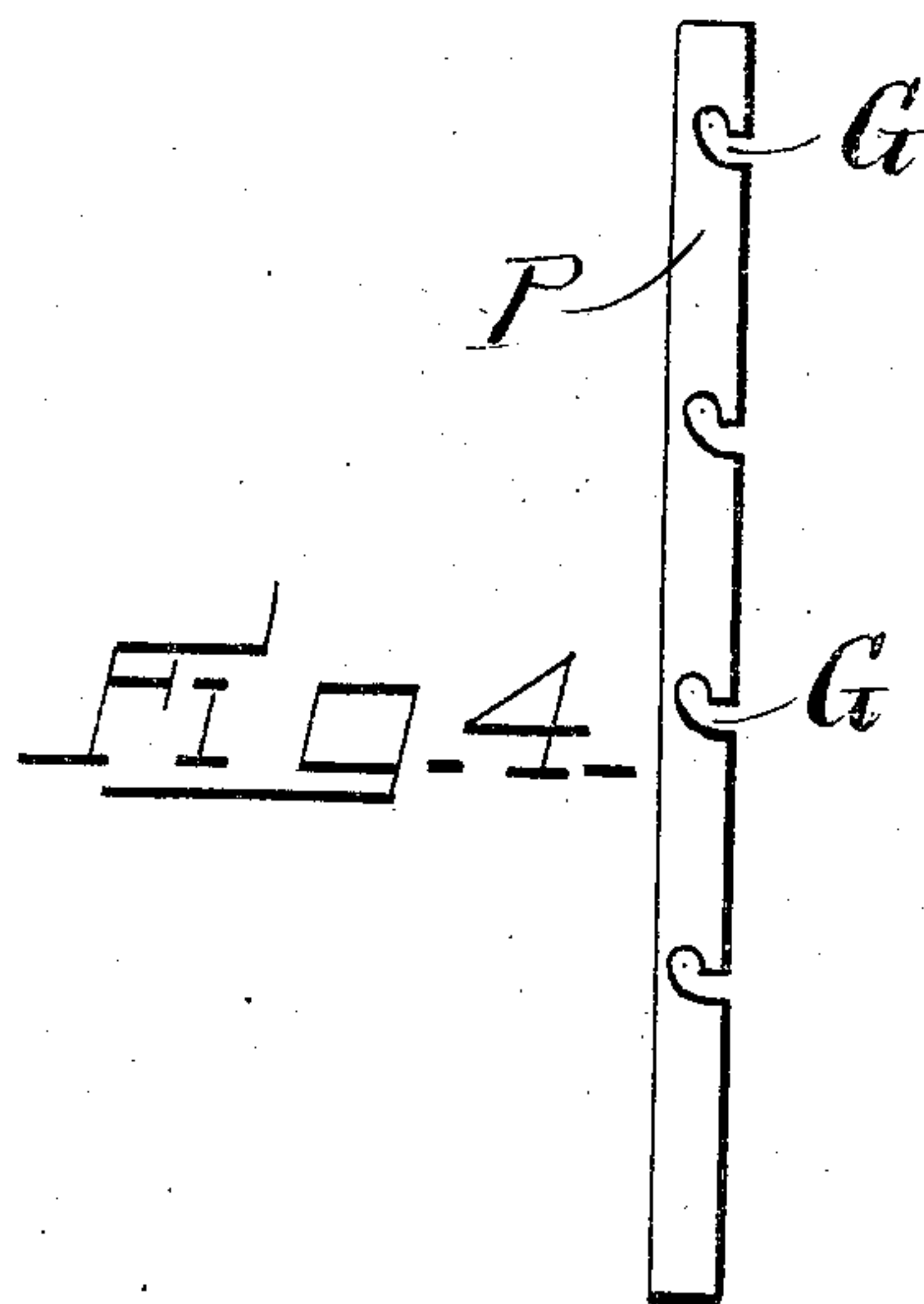
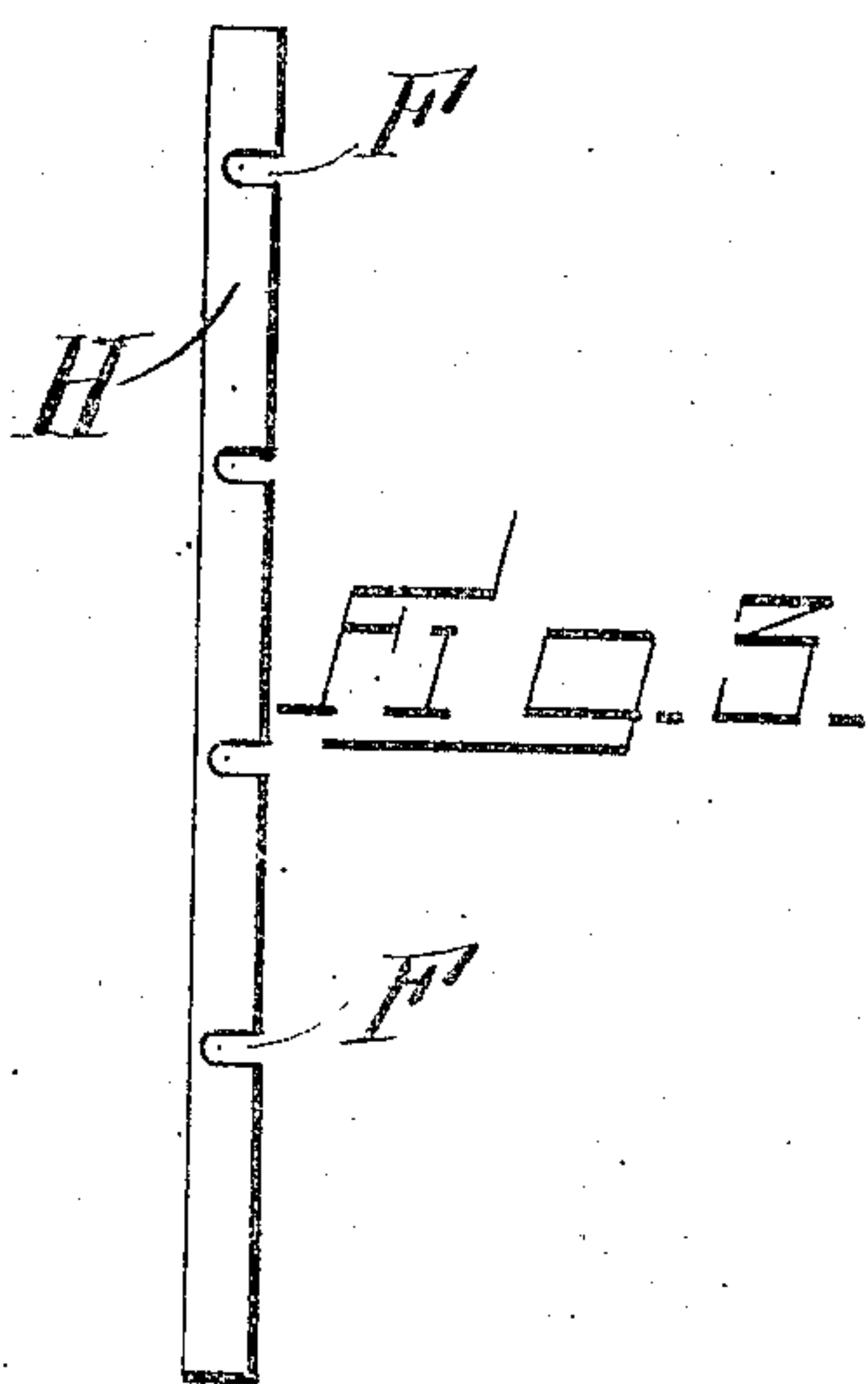
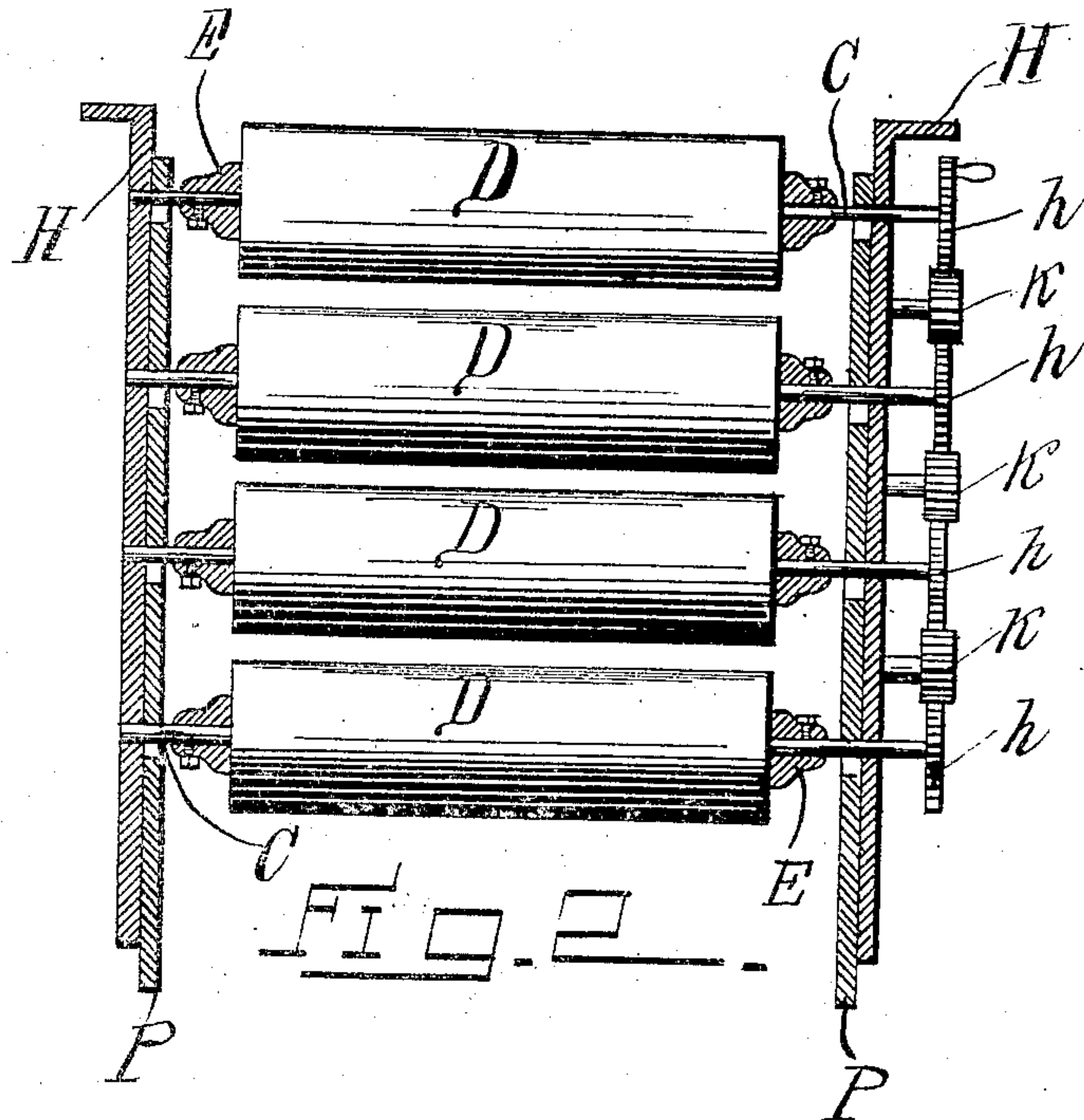
Inventor
George W. Donning
by
A. S. Dyer, Jr.,
Attorney.

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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. DONNING, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO HARRY T. AMBROSE,
OF ORANGE, NEW JERSEY.

TYPE-WRITING MACHINE.

No. 863,056.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed September 23, 1901. Serial No. 76,142.

To all whom it may concern:

Be it known that I, GEORGE W. DONNING, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to improvements in the method of mounting spindles for carrying paper or carbon rolls used in connection with typewriting machines, particularly that class of typewriters known as flat platen or commercial machines.

15 The invention may be said to reside in a novel form of locking member for preventing accidental removal of the spindles from slotted bearings, in which said spindles are mounted for convenience of access.

In the drawings: Figure 1 is a perspective view of the basal portion of a flat platen machine, associated with which is a series of paper rolls and their supporting spindles; Fig. 2 is a front elevation of the rolls and spindles mounted in supporting standards; Fig. 3 is a side view of one of the standards, showing the slotted bearings; and Fig. 4 is a side view of a locking plate used in connection therewith.

Referring to these drawings, A indicates the flat platen of a typewriter, and B longitudinal track rails upon which travels the writing mechanism, not illustrated.

For the purpose of delivering paper and carbon sheets over the platen, rolls may be suitably arranged. A carbon roll G has been shown at one side of the platen, and a series of paper rolls D, one above the other, at the rear of the platen. These rolls D are carried by spindles C, with which may cooperate suitable collars E for the proper retention of the rolls.

The spindles are to be supported in suitable members, and these have been illustrated as constituting upright standards H, through which the ends of the spindles pass. Without one of the standards, the ends of the spindles are conveniently provided with gears *h* which may mesh with intermediate gears *k*, or other devices may be resorted to for procuring any desired mode of rotation of the spindles and rolls.

The bearings in one or both of the standards may be

slotted for facilitating the positioning and shifting of the spindles. In Fig. 3 is illustrated one of the standards provided with horizontally slotted bearings F, within which the spindles may readily be inserted. In connection with such bearings, there is to be employed a locking plate, or plates P, to prevent accidental removal of the spindles. It is obvious that there might be a separate locking plate for each spindle end; but it is preferred, as shown in Fig. 4, to provide a single locking plate, having as many retaining slots G as there are slotted bearings. These slots G are curved, inclined, or otherwise irregular, preferably curved as shown, so that when the locking plate is applied to the spindles adjacent one of the standards H the side walls of the slots G will form a barrier closing the open end of the slotted bearings, as will be readily understood.

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

1. In a typewriter, the combination with a platen, and a spindle for supplying a paper or carbon web thereover; of a standard provided with a slotted bearing in which one end of the spindle is journaled, and a locking plate having a curved or angled slot adapted to slip over the portion of the spindle entering said slotted bearing to prevent accidental removal of the spindle therefrom, said slot being extended upward from its mouth at an angle to the slotted bearing.

2. In a typewriter, the combination with a platen, and a spindle for supplying a paper or carbon web thereto; of opposed standards in which the spindle is journaled, the bearing of one of said standards being slotted, and a locking plate adapted to be positioned adjacent said standard and being provided with a curved or angled slot constructed to receive the spindle and lock the same against displacement from the slotted bearing, said slot being extended upward from its mouth at an angle to the slotted bearing.

3. In a typewriter, the combination with a platen, and a series of spindles for delivering a plurality of paper or carbon webs, or both, to the platen; of a standard having a series of slotted bearings in which the adjacent ends of said spindles are journaled, and a locking plate having a series of curved or angled slots constructed to fit simultaneously over the portions of the spindles entering said bearings, said slots being extended upward from their mouths at an angle to the slotted bearings.

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

GEORGE W. DONNING.

Witnesses:

T. WELDEN,

DAVID H. LITTER.