

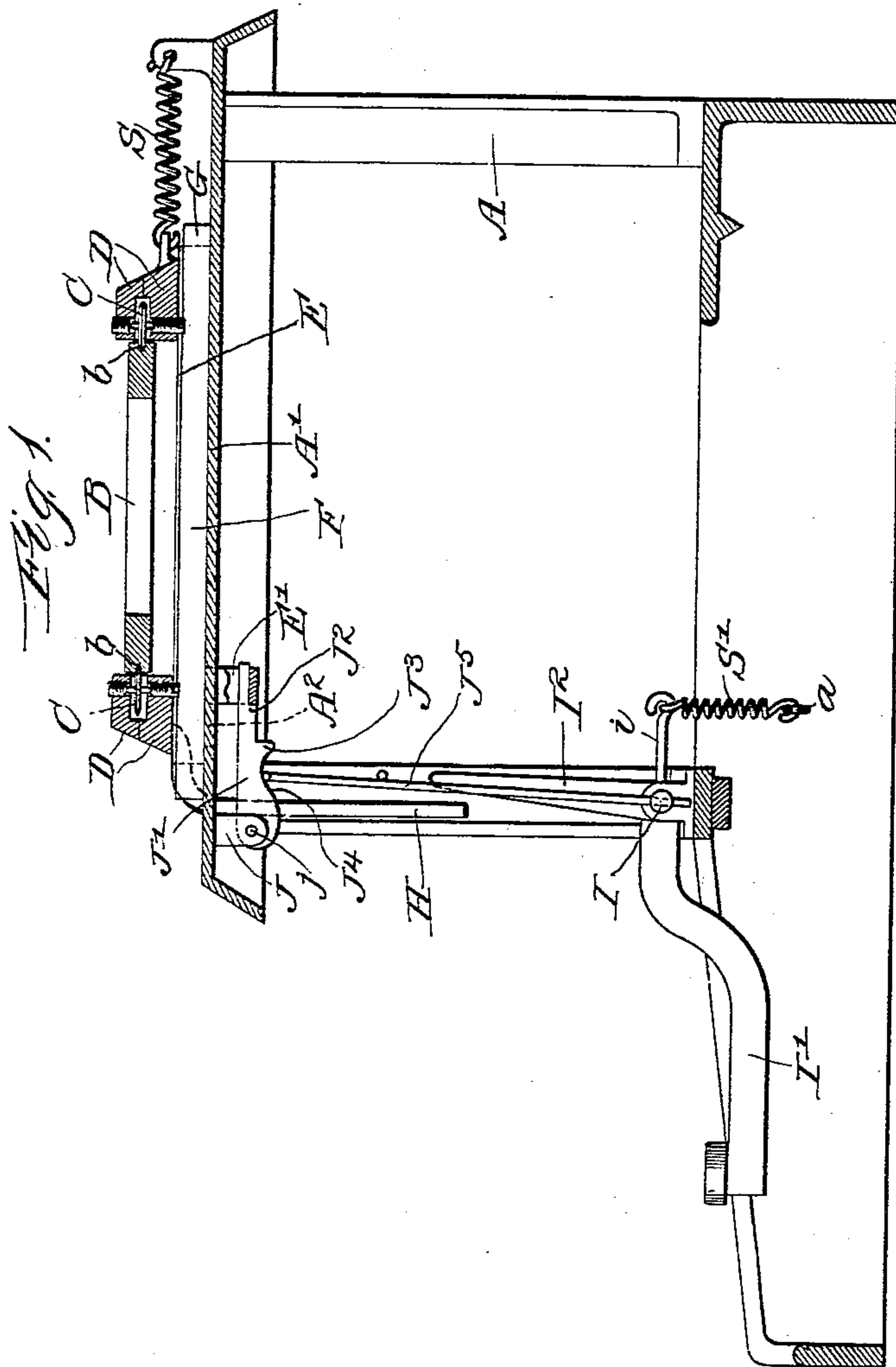
(No Model.)

2 Sheets—Sheet 1.

Z. G. SHOLES.
TYPE WRITING MACHINE.

No. 557,618.

Patented Apr. 7, 1896.



Witnesses:
Ambrose Risdon
Alice Linco.

Inventor:
Zachary G. Sholes
By Cyrus K. Ketchum

Z. G. SHOLES.
TYPE WRITING MACHINE.

No. 557,618.

Patented Apr. 7, 1896.

Fig. 2.

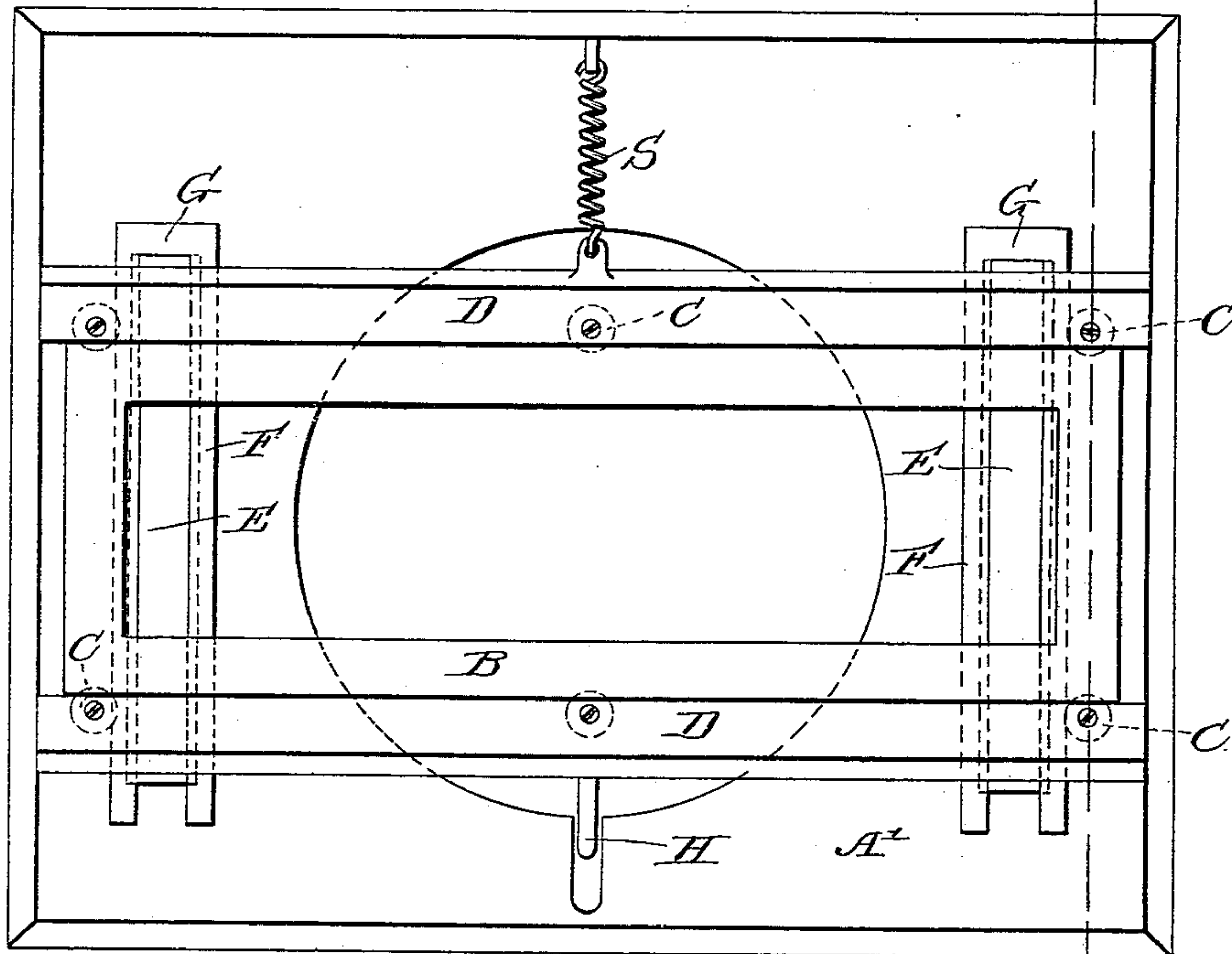
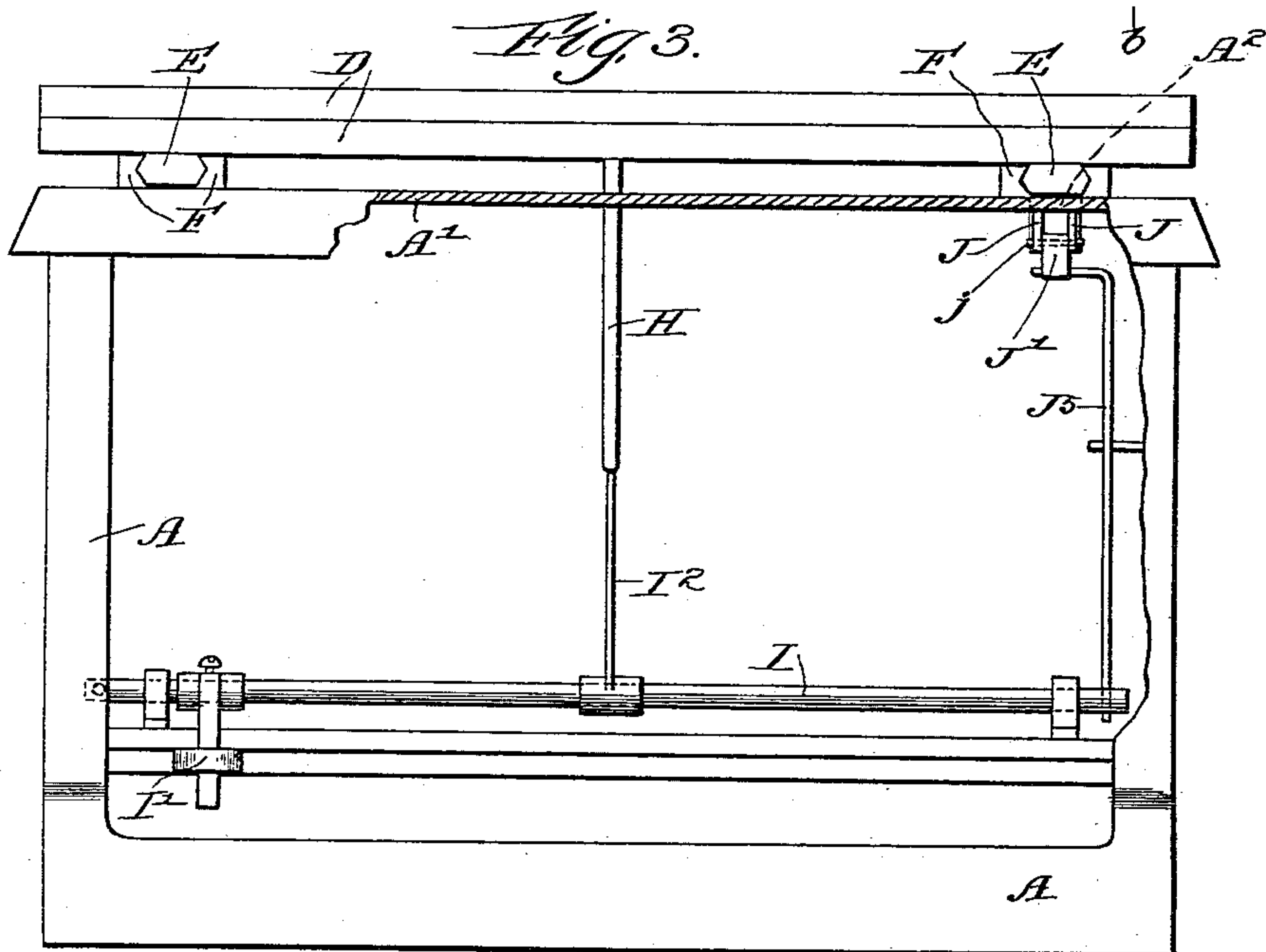


Fig. 3.



Witnesses:
Ambrose Risdon
Alice Luce

Inventor:
Zalmon G. Sholes
By Cyrus K. Wherry

UNITED STATES PATENT OFFICE.

ZALMON G. SHOLES, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE REMINGTON-SHOLES TYPEWRITER COMPANY, OF ILLINOIS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 557,618, dated April 7, 1896.

Application filed May 25, 1893. Serial No. 475,410. (No model.)

To all whom it may concern:

Be it known that I, ZALMON G. SHOLES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Type - Writers; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates particularly to type-writers in which the type-bars each bear two types and are mounted upon a stationary support, while provision is made for shifting the platen back and forth at right angles to its axis in order to bring it into such position as to allow first one and then the other of said types to come into contact with the platen, the platen standing normally at one limit of such transverse movement and being moved to the other limit by the operation of a key.

The object of the invention is to automatically lock the platen in the normal position and have it remain so until released manually when it is to be moved from the normal position.

I do not wish to be understood as claiming in this application, broadly, the combination, with two parts—namely, a platen and a support for the type-bars, one of said parts being mounted to reciprocate with reference to the other of said parts in a direction at right angles to the axis of the platen—of means for effecting the reciprocation and control of said reciprocating part, comprising an upper-case key mechanism and a lock mechanism, said lock mechanism directly engaging said reciprocating part to retain it rigidly in position when said upper-case key mechanism is in its normal position, said lock mechanism having a part extending into the path of travel of the upper-case key mechanism, whereby the initial shift of the upper-case key mech-

anism will release the lock mechanism, as this combination of elements forms the subject-matter of an application filed by me on April 7, 1893, Serial No. 469,493, the claims in this case being limited to mechanism for shifting the platen-carriage.

In the accompanying drawings, Figure 1 is a vertical section in the line *a b* of Fig. 2. Fig. 2 is a plan. Fig. 3 is a front elevation.

A is the frame of the machine.

B is the carriage upon which the ordinary platen is supported. This carriage is an elongated frame, and the platen is arranged upon said carriage with its axis parallel to the sides of said carriage. As the nature and manner of mounting said platen upon said carriage are familiar to those who understand this art, I deem it unnecessary to illustrate said platen in the drawings. Channels *b* are formed in the lateral edges of the carriage B, and wheels C, having their axes in the vertical position, extend into said channels and support said carriage. Said wheels are in turn supported by rails D, arranged parallel to and at each side of the carriage.

Longitudinal movement is imparted to the platen by the longitudinal reciprocation toward the right and left of said carriage between said rails D. The rails D rest upon cross-rails E, arranged at right angles to said rails. Said rails D are rigidly secured to said rails E. Said rails D rest loosely between stationary grooved rails F.

From the foregoing it will be obvious that the carriage B and rails D and E may be reciprocated toward and from the front of the machine upon ways formed by the rails F, while the carriage may be reciprocated longitudinally on the ways formed by the rails D. At the rear ends of the rails F there may be a stop G to limit the rearward movement of the rails E, whereby the rearward movement of the carriage and the platen is limited. A contracting spring S, attached to the rear side of the rear rail D, serves to draw the platen-carriage to its rear limit when free to move.

Beneath one of the rails E, near the front of the machine, the top plate A' of the frame A has an opening A², through which a stirrup E' extends from the rail E, the opening of the stirrup being parallel to said rail.

It will be seen that the rails D and E together constitute a frame which is reciprocable in a direction at right angles to the axis of the platen, and that said frame supports the platen-carriage, and that said carriage may reciprocate upon said frame in a direction parallel to the axis of the platen.

H is an arm extending downward from the front of the frame composed of the rails D and E toward the bottom of the machine.

I is a rock-shaft extending transversely across the machine near the lower portion of the frame A and beneath the arm H, and I' is a key-lever attached rigidly to said rock-shaft.

At the middle of said rock-shaft is located an arm I², which extends upward behind the arm H, almost in engagement with said arm H. An arm i, extending rearward from said rock-shaft, has attached to it at one end a contracting coiled spring S', while the other end extends downward and is attached to the frame A at a. This spring serves to hold said rock-shaft so as to keep the arm I² at its rearward limit and the key I' at its upward limit. On pressing said key from above said spring yields and allows said rock-shaft to rotate and bring the arm I² into engagement with the arm H, so that said arm H and the frame D E and the carriage B are drawn forward. On releasing said key the spring S' will return said carriage and frame and the arm H to the rearward limit, while the spring S' will rotate the rock-shaft and return the arm I² and the key I' to their normal position.

I will next describe the means for locking the frame D E in the rear or normal position. At the front of the stirrup E' two ears J depend from the top plate A' in planes parallel to the rails E, with proper space between them to receive a locking-pawl J'. A pin j extends through said ears and locking-pawl and hinges the latter to said ears. Thus said locking-pawl is afforded a hinge-support from the top plate. A similar support from any other stationary portion of the machine would answer my purpose. Said locking-pawl extends rearward to the front of the stirrup E' and is preferably extended rearward into or through said stirrup. On its lower side said pawl has a rearward-directed shoulder or stop J², which rests against the front of said stirrup when the latter is in its normal position. A little farther toward the front said pawl has another rearward-directed shoulder or stop J³. It remains now to provide means for raising said pawl simultaneously or substantially simultaneously with the depression of the key I'. For this purpose I have provided the lower portion of said pawl with a cam-face J⁴ and have attached an arm J⁵ to the

rock-shaft I and extended it upward and then laterally beneath the locking-pawl and in front of said cam-face and in engagement therewith. Since the arm I² is not quite in engagement with the arm H and the arm J⁵ is in engagement with said cam-face, it will be understood that the depression of the key I' will turn the rock-shaft I and move the arm J⁵ and the arm H forward simultaneously, the arm J⁵ being at once pressed against the cam-face J⁴ on the locking-pawl, so that it elevates the free end of the latter until the shoulder J² is out of the path of the stirrup E', while a continuation of the turning of the rock-shaft will subsequently bring the arm I² into engagement with the arm H, whereby the frame D E is drawn forward until the stirrup E' meets the shoulder J³, the arm J⁵ being designed to raise the locking-pawl only to a sufficient height to permit the stirrup to pass the shoulder J². It will be seen that the stop J³ limits the forward movement of the frame. The frame is held in its forward position as long as may be desired by continuing the depression of the key I'. The object of thus locking the frame D E against movement from its normal position is to guard against defective alinement of the writing resulting from movement of the frame caused by jars or by excessive pressure on the type-keys while the types bear against the platen.

The mechanism for unlocking the frame D E is preferably coupled with the shifting-key I', in order to simplify the operation of the machine. An extra key for unlocking said frame prior to shifting by means of the key C' would require a distinct operation. The interval required for releasing the locking mechanism when coupled to the key I' in the manner herein described is so slight as to be unnoticeable in operation.

I do not wish to be understood as claiming in this application, broadly, the combination, with the main frame, of a platen, a platen-support shiftable at right angles to the axis of the platen, a spring for holding the platen-support in normal position, a locking device to prevent the movement of the platen-support against the stress of the spring, a platen-shifting key, shifting connections between the platen-support and key, and a tripping connection between the shifting-key and the locking device, as this combination of elements forms the subject-matter of an application filed by me May 29, 1893, Serial No. 475,921.

I claim as my invention—

1. In a type-writer, the combination with the frame of the machine, of a platen-carriage, a carriage-supporting frame arranged on ways at right angles to the path of said carriage, an automatic spring for moving said frame to one limit of its path, a pawl, J', hinged to a stationary portion of the machine and arranged to rest normally in engagement with said frame, and a rock-shaft, I, and key, I',

I', of mechanism intervening between said rock-shaft and said locking-pawl and adapted to move the latter out of engagement with said frame, when said key is operated, substantially as shown and described.

2. In a type-writer, the combination with a carriage frame support movable at right angles to the path of said carriage, of a locking-pawl, J', rock-shaft, I, arm, J², arms, H,

and I², and key, I, arranged substantially as is shown and described.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of April, in the year 1893.

ZALMON G. SHOLES.

Witnesses:

CYRUS KEHR,
AMBROSE RISON.