

(No Model.)

H. H. UNZ.

TYPE WRITING MACHINE RIBBON SPOOL.

No. 605,032.

Patented May 31, 1898.

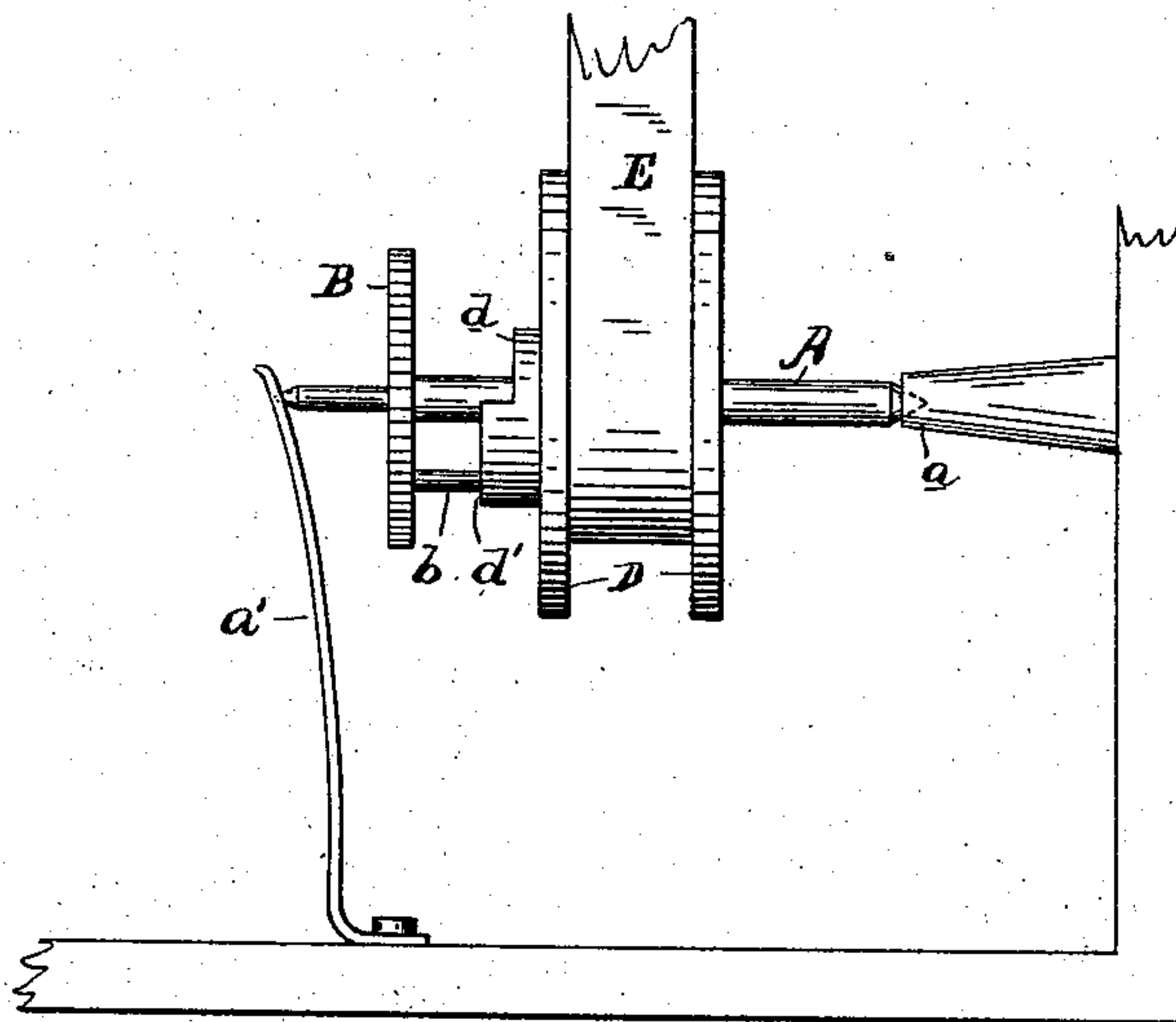


Fig. 1.

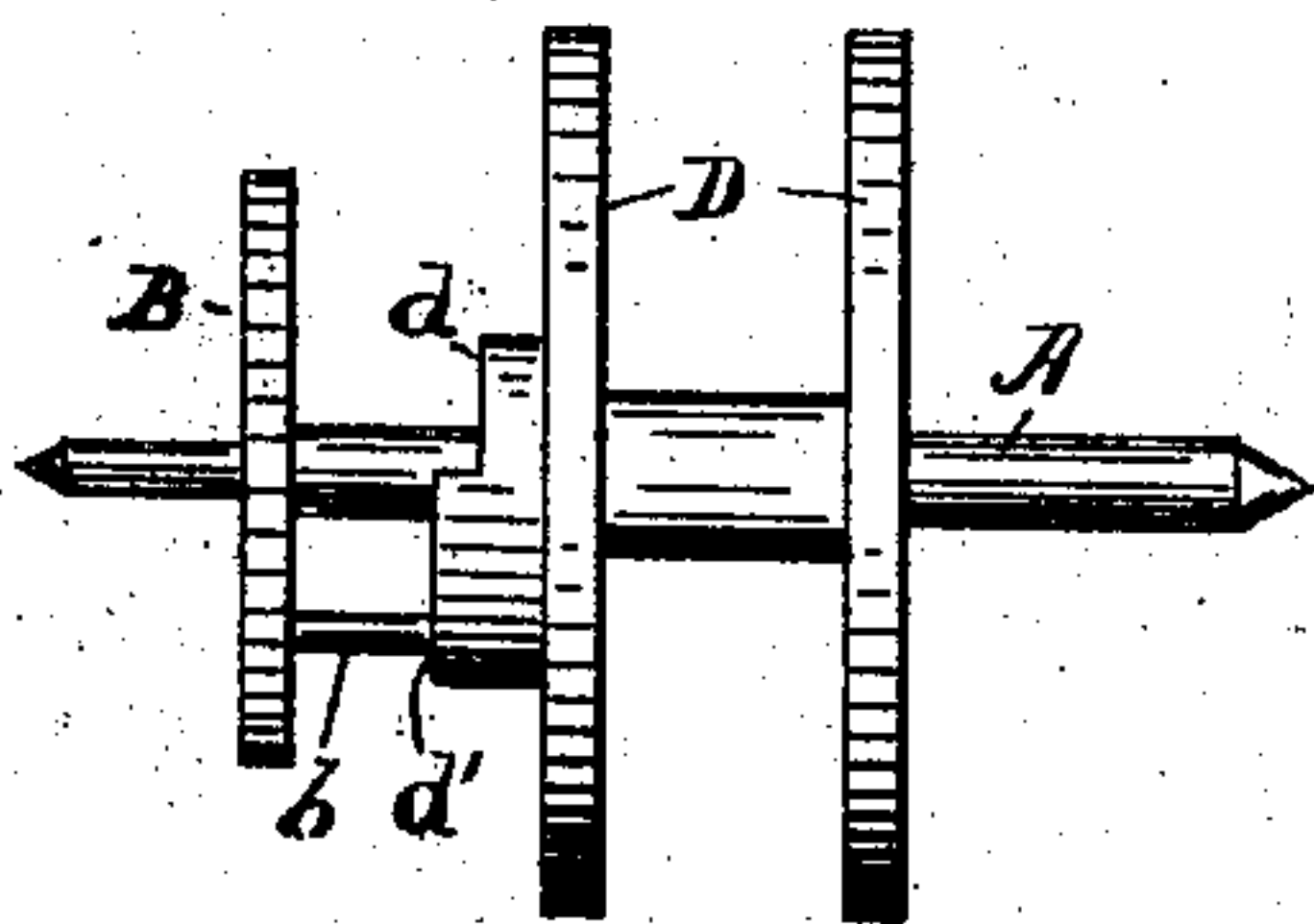


Fig. 2.

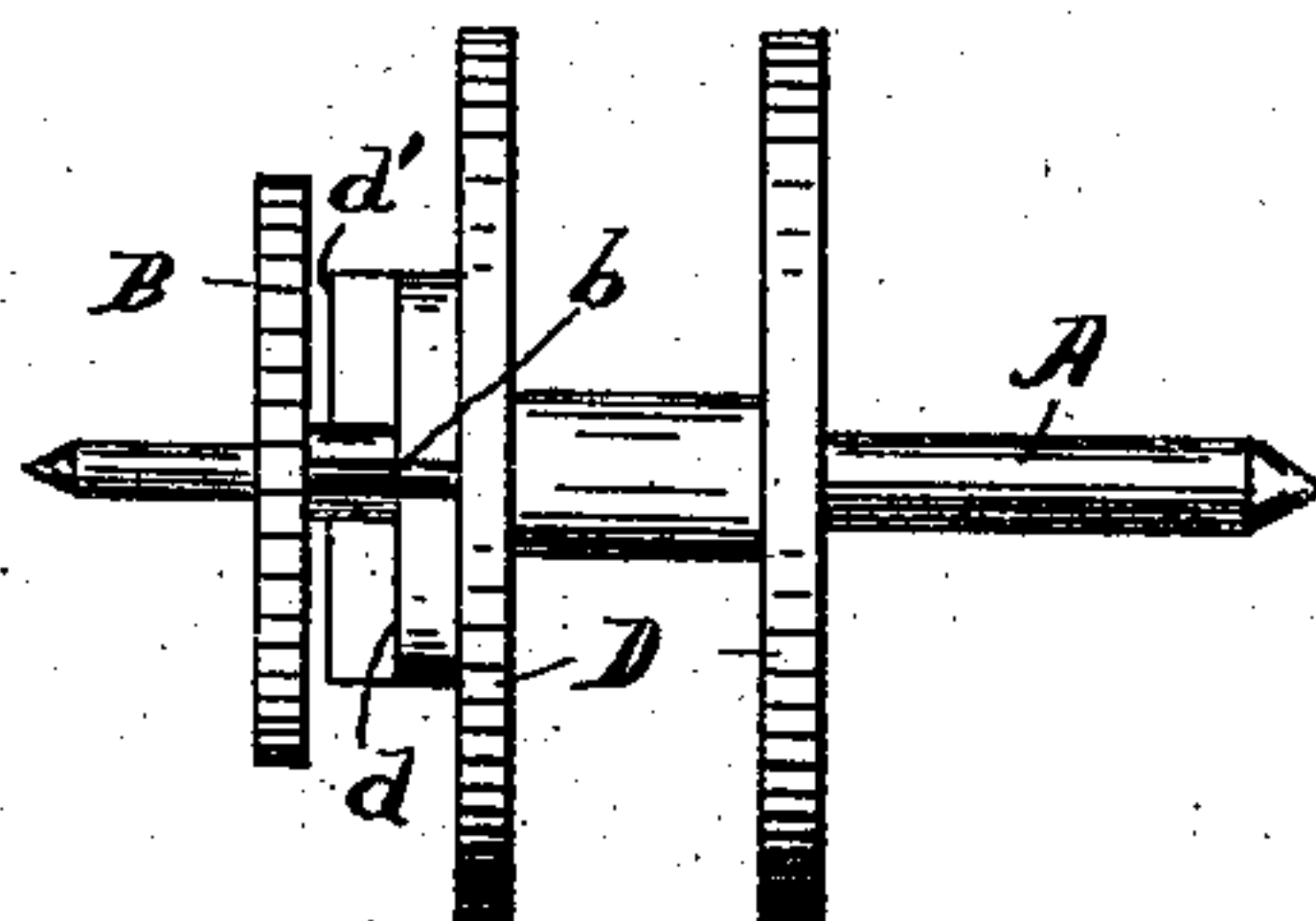


Fig. 4.

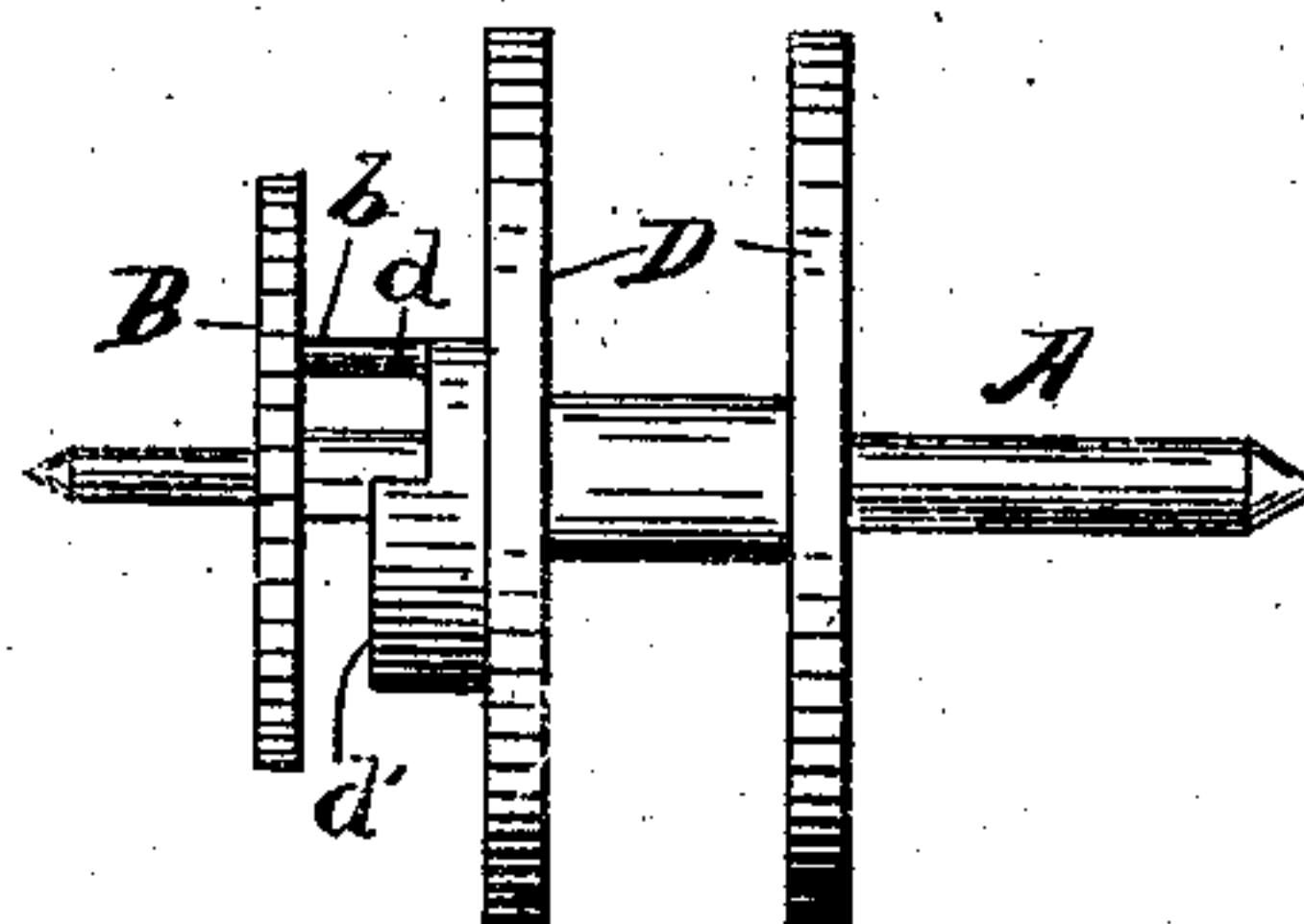


Fig. 3.

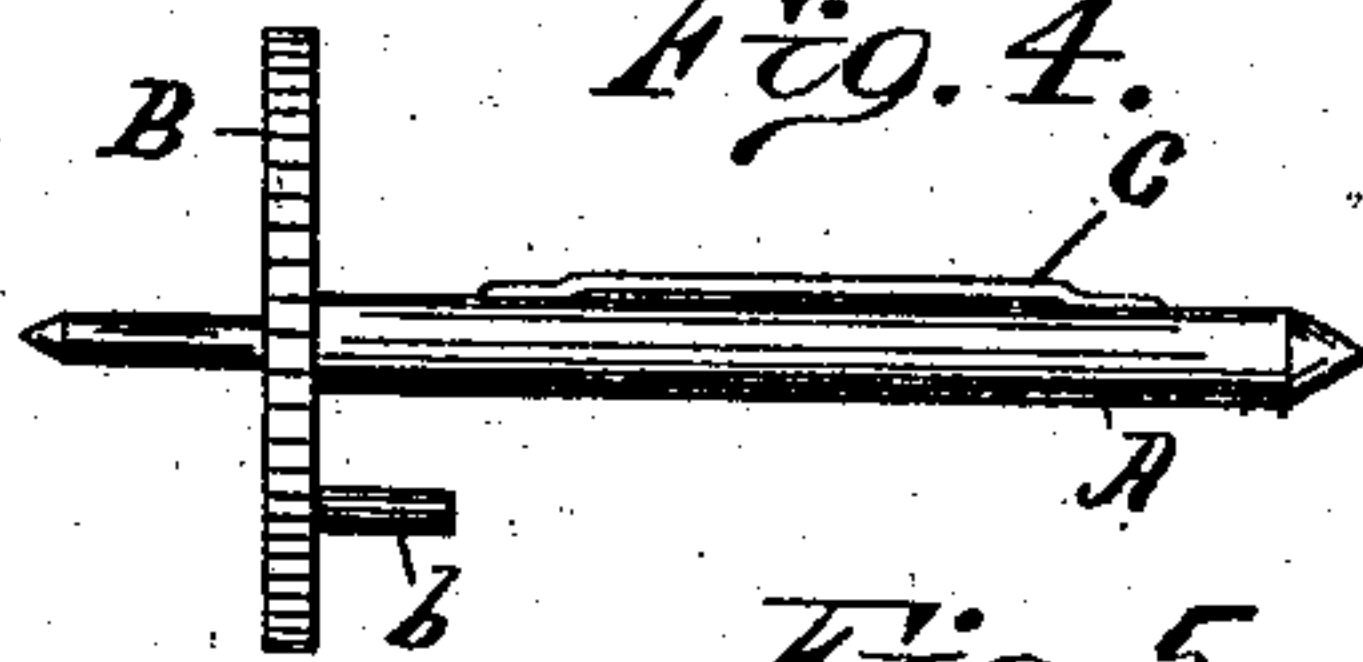


Fig. 5.

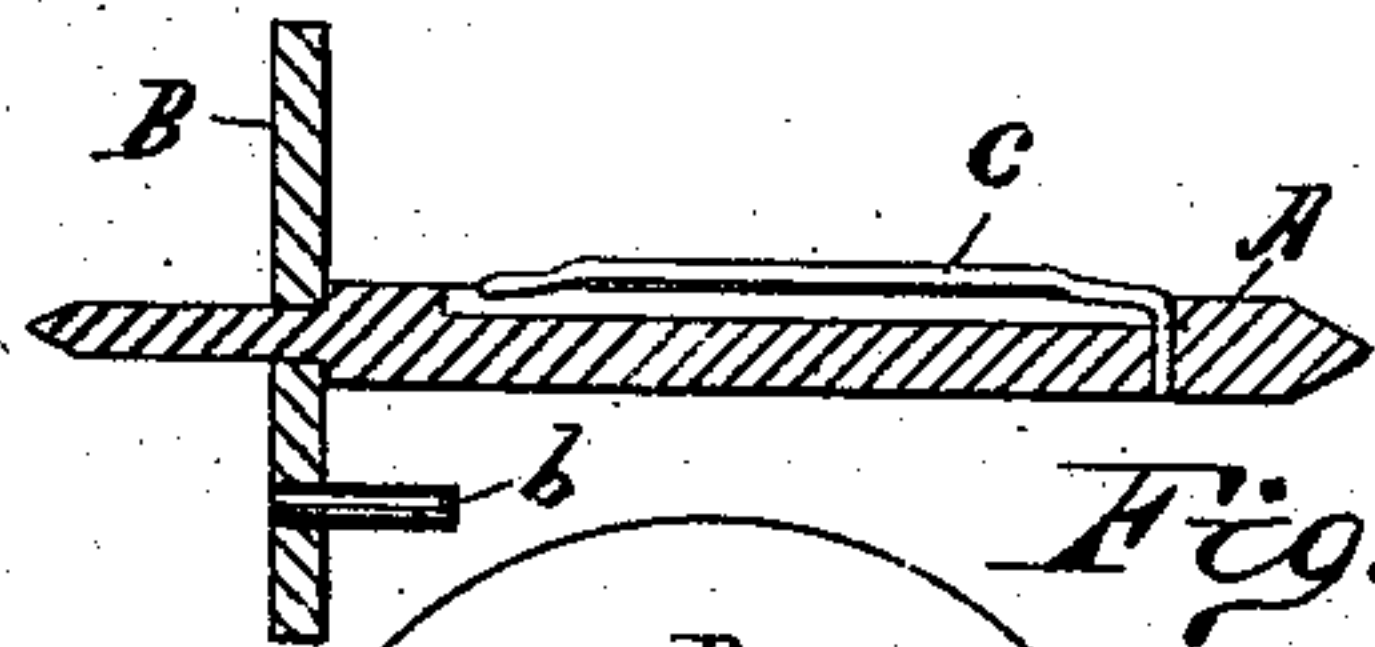


Fig. 6.

WITNESSES:

Frank H. Innes  
James H. Shields

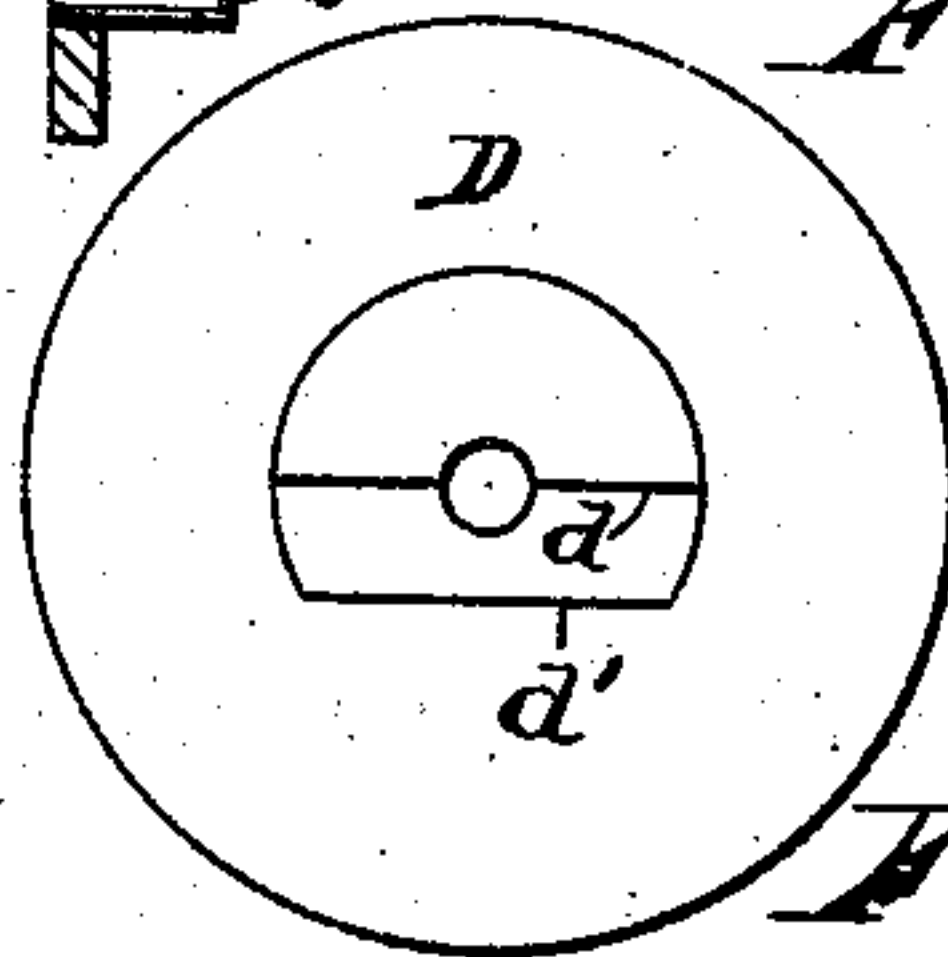


Fig. 7.

INVENTOR

H. H. Unz  
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# UNITED STATES PATENT OFFICE.

HENRY H. UNZ, OF PHILADELPHIA, PENNSYLVANIA.

## TYPE-WRITING-MACHINE RIBBON-SPOOL.

SPECIFICATION forming part of Letters Patent No. 605,032, dated May 31, 1898.

Application filed February 11, 1890. Serial No. 340,055. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. UNZ, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Ribbon-Spools for Type-Writing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

In the type-writer the type strikes at a certain point on the platen, and therefore strikes always at a certain point in the inking-ribbon. As ordinarily constructed, therefore, if the inking-ribbon be of some width, only a certain portion of it is useful in type-writing, and when it becomes worn or the ink exhausted it requires a new ribbon.

My invention has for its object an improved construction whereby the ribbon-spools carrying the inking-ribbon may be given a lateral movement, so that different portions of the inking-ribbon may be presented to the action of the type, and as one portion of the ribbon becomes worn the ribbon may be shifted, so as to present a different portion of the inking-ribbon to the action of the type, and thus the whole width of the ribbon may be used in the operation of type-writing.

In the drawings, Figure 1 is a perspective side view of ribbon-spool, driving ratchet-wheel, and ribbon-spool supports. Fig. 2 is a detached perspective view of ribbon-spool, shaft, and ratchet-wheel with spool in its most shifted position. Fig. 3 is a detached perspective view of same, showing spool in an intermediate shifted position. Fig. 4 is a detached perspective view of same, showing spool in its normal position. Fig. 5 is a view showing ratchet-wheel, ribbon-spool, shaft, and retaining-spring for retaining the spool on the shaft. Fig. 6 is a sectional view of Fig. 5. Fig. 7 is an end view of ribbon-spool.

A is the ribbon-spool shaft, supported between the fixed bearing *a* and the spring-arm *a'*. Upon this shaft is the ratchet-wheel B, provided with the projecting pin *b*.

C is a spring secured upon the shaft, as shown in Figs. 5 and 6. D is the ribbon-spool, which is slipped over the shaft B and held so

as to rotate with it by means of the spring C, pressing against the surface of said spool. Upon the end of this spool toward the ratchet-wheel are the steps or projecting surfaces *d d'*. The spool is normally in such a position that the projecting pin *b* rests against the surface of the head of the ribbon-spool.

E is the ribbon carried by the ribbon-spools. When for any reason it is desired to shift the ribbon-spool and the ribbon, the ribbon-spool is shifted and turned upon the shaft until the pin *b* rests against either of the projections *d* or *d'*, according to the extent of shift desired, by which it is retained. By this means I am enabled to so shift the ribbon-spool that I can cause the type to act upon different parts of the ribbon.

I have illustrated my invention with two projections or steps from the surface of the spool; but one may be used or more than two may be used without deviating from my invention. Only one spool is shown in the drawings; but of course it is obvious that a corresponding spool is used on the opposite side of the machine.

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

1. As a new article of manufacture, a ribbon-spool provided with a step or projection adapted to coact with a fixed stop on the machine for locating the position of the ribbon on the spool with reference to the point of impact of the type.

2. As a new article of manufacture, a ribbon-spool provided with two or more steps or projections at its head, said steps projecting different extents and adapted to coact with a fixed step or projection on the machine to locate the position of the ribbon with reference to the printing-point of the type and to vary the position of the ribbon with reference to said printing-point.

3. In a type-writing machine, in combination, a ribbon-spool provided with a step or projection at its head, and a stop upon the machine adapted to rest upon the step or projection to locate the position of the ribbon with reference to the printing-point of the type and to vary the position of the ribbon with reference to said printing-point.



4. In a type-writing machine, in combination, a ribbon-spool, provided with two or more projections or steps at its head, said steps projecting different extents, and a stop  
5. upon the machine adapted to rest against the steps upon the ribbon-spool.

5. In combination, a ribbon-spool shaft, a disk upon said shaft, a pin projecting from said disk, a ribbon-spool upon said shaft, and  
10 a projection or step upon the head of said spool, adjacent to the said disk.

6. In combination, a ribbon-spool shaft, a disk upon said shaft, a pin projecting from said disk, a ribbon-spool upon said shaft, and  
15 two or more projections or steps upon the head of said spool, adjacent to the said disk, said steps projecting different extents from the body of the head.

7. In combination, a ribbon-spool shaft, a  
20 driving ratchet-wheel upon said shaft, a projection from said ratchet-wheel, a ribbon-spool upon said shaft and a projection or step

upon the head of said spool adjacent to the said ratchet-wheel.

8. In combination, a ribbon-spool shaft, a  
25 driving ratchet-wheel upon said shaft, a pin projecting from said ratchet-wheel, a ribbon-spool upon said shaft, and projections or steps upon the head of said spool adjacent to the ratchet-wheel, said steps projecting different  
30 extents from the body of the head.

9. In combination, a ribbon-spool shaft, a spring substantially as described upon said shaft, a ribbon-spool retained upon said shaft by said spring, projections or steps upon the  
35 head of said spool, a driving ratchet-wheel upon said shaft and a pin projecting from said ratchet-wheel.

In testimony of which invention I have hereunto set my hand.

HENRY H. UNZ.

Witnesses:

LEWIS R. DICK,

FRANK S. BUSSE.