

No. 624,977.

H. E. REEVES.
TYPE TIE.

Patented May 16, 1899.

(Application filed Mar. 28, 1898.)

(No Model.)

Fig. 1.

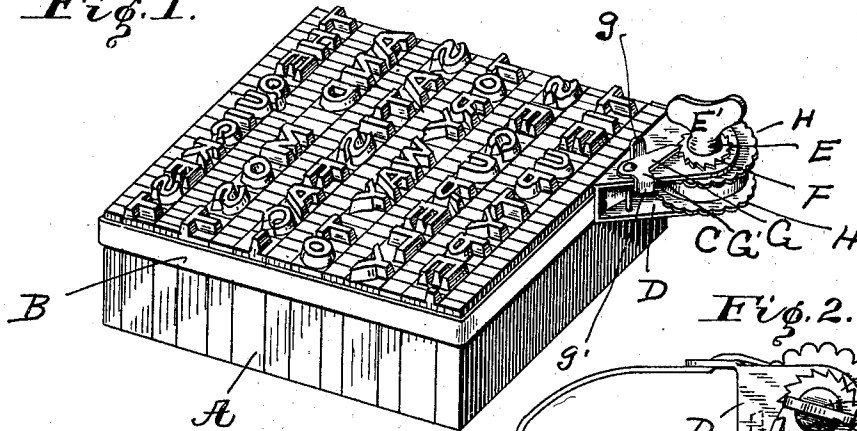


Fig. 2.

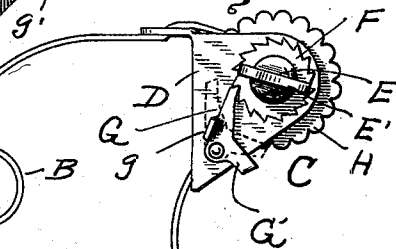


Fig. 3.

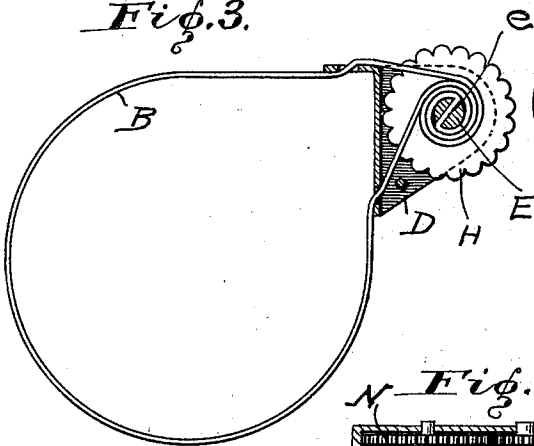


Fig. 5.

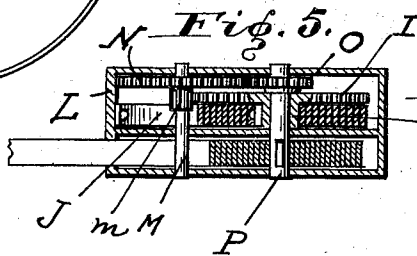
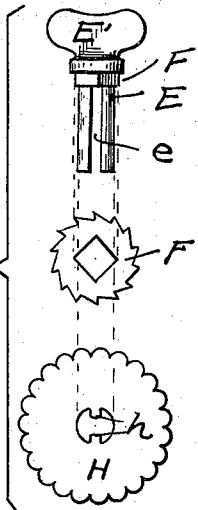


Fig. 4.



Witnesses:

F. W. Horner
Carl Schlegel.

Inventor,

Harry E. Reeves.

By Joseph A. Minturn,
Attorney.

UNITED STATES PATENT OFFICE.

HARRY E. REEVES, OF INDIANAPOLIS, INDIANA.

TYPE-TIE.

SPECIFICATION forming part of Letters Patent No. 624,977, dated May 16, 1899.

Application filed March 28, 1898. Serial No. 675,462. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. REEVES, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Type-Ties, of which the following is a specification.

The object of this invention is to provide means for holding movable type together during its removal from the galley to the chase. This has been done heretofore by wrapping a small cord around the type and tying the ends of the cord together; but the time consumed in wrapping and tying up the type has made a quicker means desirable; and it is the special object of this invention to provide a tie which can be quickly applied and which will be convenient to handle.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of a body of movable types held together by my improved tie. Fig. 2 is a plan view of the tape and reel mechanism. Fig. 3 is a section on a plane coinciding with the under side of the top plate of the reel-case. Fig. 4 represents detached views of the shaft, ratchet-wheel, and winding-wheel of the reel; and Fig. 5 is a vertical section of a modified reel, which employs a spring to automatically wind up the tape.

Similar letters of reference indicate like parts throughout these several views of the drawings.

A represents the types, which are of the usual form.

B is the tape of any suitable woven fabric, like cotton or linen, or any flexible material might be used which would serve as a tie to hold the type together.

C is the reel, which consists of the frame or case D, preferably open on its outer sides. The spindle E is mounted in this frame. It has the longitudinal slot *e*, through which the tape B is threaded. The ends of the tape are sewed together to form an endless band, and when the spindle E is rotated the tape on both sides of the spindle will be wound simultaneously thereon, thereby making the speed double what it would be were only one end of the tape secured to the spindle. Above the frame

D the spindle is squared to receive the ratchet-wheel F, and secured to the top of the case is the pawl G, the end of which can be turned into engagement with the ratchet-teeth on the wheel F, whereby the rotation of the spindle carrying the ratchet-wheel in the direction to unwind the tape will be prevented. A part *g* of the metal from which the pawl is made will be turned up to form a finger-hold, which will be principally useful in pressing the pawl into engagement with the wheel, and a lateral arm or extension *g'* will also be provided, the outer end of which will be turned down to engage the edge of the top plate of the frame and act as a stop to keep the pawl from swinging back too far away from the ratchet-wheel. This turned-down end *g'* is conveniently placed for pressure by the operator in holding the pawl back out of engagement with the ratchet-wheel. The upper end of the spindle will be provided with the wings E', whereby the rotation of the spindle in winding up the tape will be accomplished; but an additional and more convenient and rapid means for rotating the spindle will be provided by mounting at least one and preferably two disks H on the spindle between the tape and the horizontal plates of the frame, which disk or disks extend outside of the margin of the frame, where they will be rotated by drawing the palm of the hand in a horizontal direction across them. To increase the frictional contact between the disks and the hand, the edges of the former will be scalloped or otherwise indented, as shown in the drawings.

In practice the tape will be unwound to an extent sufficient to reach around the desired body of type and is placed around the latter while the type is in the galley and is tightened up before removal. In proving before the removal of the tie the reel will be easily pushed down the side of the type below the horizontal surface of the latter, and therefore out of the way.

In assembling the parts of the device the disks H will be placed in the frame between the horizontal plates of the latter, and the ratchet-wheel will be held in place above the upper plate. Then the spindle will be inserted through all of the parts and secured by battering its lower end or by any well-

known means to prevent its withdrawal and retain the parts in position. The disks H will have central openings corresponding in size and shape with the spindle in cross-section, including a transverse bridge to enter the slot in the spindle and keep the disk from rotating thereon; but in practice the bridge will be cut out centrally to make two spurs *h*, as shown in Fig. 4.

10 In the modification shown in Fig. 5, I is a cogged wheel which is loose on the tape-spindle. It has a hub *i*, to which one end of a coiled spring J is fastened, the other end of the spring being secured to the housing L.

15 A second spindle M has a pinion *m*, which meshes with the cogs of the wheel I, and the spindle also has the cogged wheel N, which meshes with a smaller cogged wheel O, mounted on the tape-shaft P and rotates with said shaft. By this mechanism the tape for tying the type is reeled in by the action of the spring.

20 In some respects this construction is preferable to the device in which the tape is reeled up by hand; but it is open to two serious objections, the first of which is the greater additional expense to manufacture, and the second is the liability of the spring to draw the tape prematurely and by catching the type "pi" it. This construction, however, is better than the ordinary elastic band for several reasons. The tape can be reeled out and held by a side pressure against one of the cogged wheels while the band is being slipped around the form of type, and both of the operator's

25 hands are practically free to make this adjustment of the band; but with the rubber the hands or fingers of the operator are employed to stretch the band large enough to go over the type and much more care is required

to prevent disturbing the type. Again, the size of the body of type varies from large to small and would require a large assortment of bands to meet the requirements of size, and where the page of type is large the band must be stiff and hard to stretch in order to give the required service, and this stiffness makes difficult the operation of application to the type.

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

1. In a type-tie, a frame or case a spindle mounted in the case, winding disk or disks mounted on the spindle and projecting beyond the limits of the frame, a lock to prevent the unwinding of the spindle and a flexible band secured to and adapted to be placed around the type and to be wound upon the spindle, all substantially as described and specified.

2. In a type-tie, a reel-case a spindle mounted in the case, a band to encircle the types, secured to and adapted to be wound upon the spindle, a ratchet-wheel mounted on the spindle and rotating with it and a pawl pivotally secured to the top of the case and adapted to be brought into engagement with the ratchet-wheel, said pawl having a lateral extension with a turned-down end to engage the edge of the case, substantially as described and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 7th day of March, A. D. 1898.

HARRY E. REEVES. [L. S.]

Witnesses:

ALFRED B. REEVES,
JOSEPH A. MINTURN.