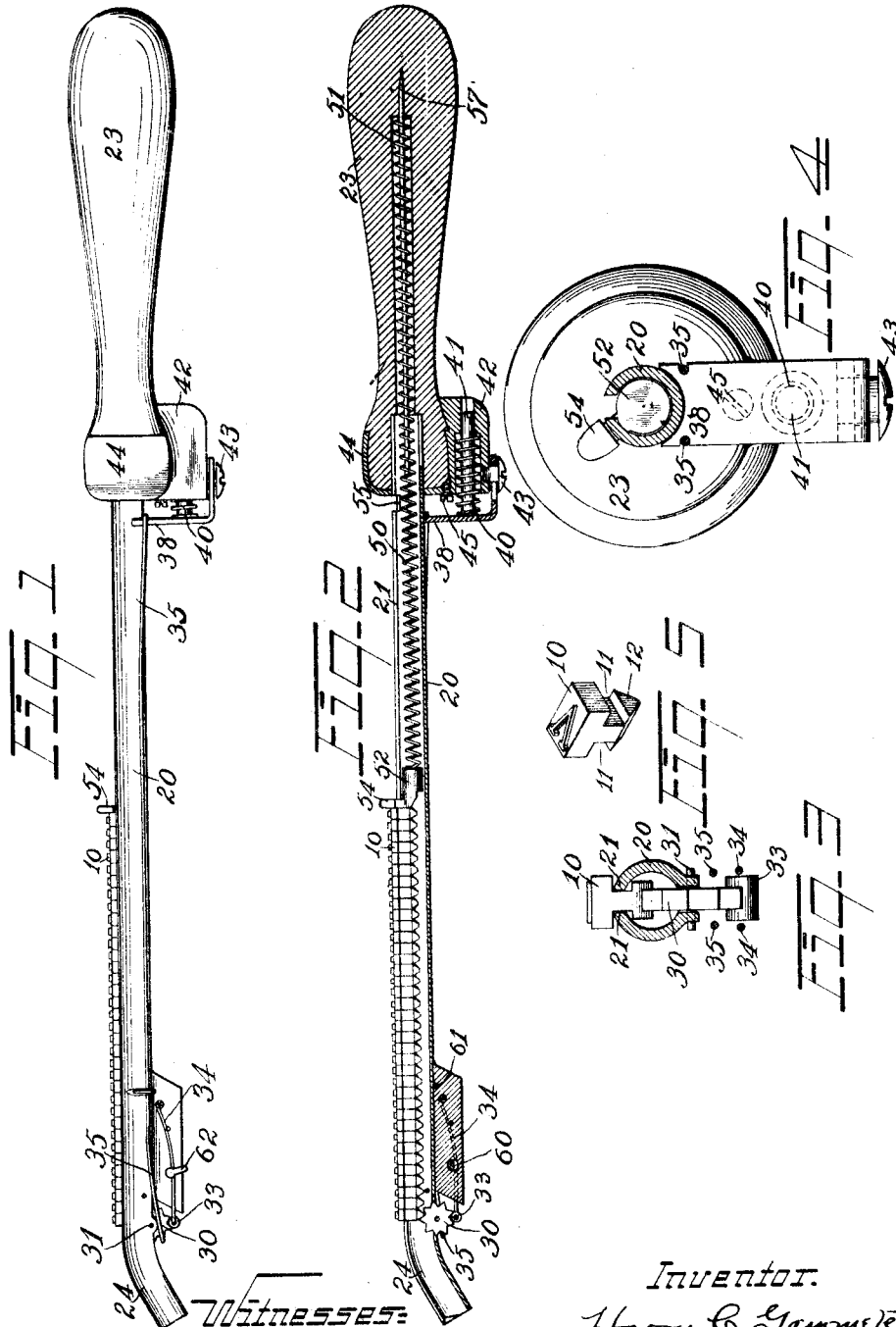


H. C. GAMMETER.
TYPE DISTRIBUTING IMPLEMENT.
APPLICATION FILED JUNE 18, 1908.

1,051,725.

Patented Jan. 28, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY C. GAMMETER, OF BRATENAH, OHIO, ASSIGNOR TO THE AMERICAN MULTIGRAPH COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

TYPE-DISTRIBUTING IMPLEMENT.

1,051,725.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed June 18, 1908. Serial No. 439,118.

To all whom it may concern:

Be it known that I, HARRY C. GAMMETER, a citizen of the United States, residing at Bratenahl, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Type-Distributing Implements, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a very simple and efficient tool for the hand distribution of type.

My tool is particularly effective with specially formed type which are adapted to be strung in a loose line, for example, the short type used in the multigraph and grooved on their opposite sides. My invention provides a holder for a line of type, the holder being formed with a handle whereby it may be conveniently held and moved about, and means easily actuated by the operator's finger for causing the ejection of a type at a time. I thus enable very rapid distribution, the holder being moved about from place to place to discharge into different receptacles according to the type to be ejected.

The invention comprises the broad combination of a type holder adapted to be held in the hand and moved from place to place, and finger controlled discharging means therefor.

The more complete embodiment of the invention herein shown and hereinafter more fully described is also comprised within my invention.

The drawings clearly disclose my invention in a simple and satisfactory form.

Figure 1 is a side elevation of the implement complete; Fig. 2 is a longitudinal section thereof; Fig. 3 is an enlarged cross section through the holder adjacent to the discharge controller; Fig. 4 is an enlarged cross section taken through the barrel looking toward the handle; Fig. 5 is a perspective of the type which the particular holder shown is designed to distribute.

My distributing implement, as shown in the above mentioned figures, is designed to carry a line of type. A portion of such line is shown in Figs. 1 and 2, designated 10, and the individual type being shown in Fig. 5. This type has grooves 11 on its opposite

sides and has its foot 12 beveled in opposite directions. This is the regular multigraph type and is covered by Patent No. 836,026.

The barrel of my implement which may hold a row of the described type comprises a split tube 20, the edges of the tube adjacent to the split, as indicated by 21, being adapted to occupy the grooves in the type. This tube is set at one end into the handle 23 whereby the tool may be conveniently held in the hand and moved from place to place. It is to be understood that, it being the purpose of this implement to eject the type, one at a time, from the free end of the tube, allowing them to drop into their respective receptacles, this free end is preferably bent downwardly, as shown at 24, to enable this to be accomplished more conveniently. To control the discharge of the type, I provide near the free end of the tube, a star wheel 30, loosely journaled on a pin 31 secured to the under side of the tube 20. This star wheel projects into the barrel in such position that its teeth take between the feet of the successive types, as shown in Fig. 2. Accordingly every time the star wheel is turned one tooth, one type may be ejected.

33 comprises a small roller held by a spring bail 34 and bearing against the star wheel, thereby holding it against accidental rotation. To rotate the wheel a tooth at a time to discharge the type, I provide the wire bail 35 which extends across the star wheel, engaging on its forward side. This bail extends rearwardly and has both its arms secured to a slidable finger piece 38, which is loosely mounted on the handle. It will be seen from this construction that if the finger piece 38 is drawn toward the handle, the star wheel will be rotated, its under side rearward, one tooth, thus feeding forward and discharging one type. The finger piece 38 which operates to discharge the type is normally pressed forward by a spring 40 surrounding a stud 41 carried by the finger piece and guided in a boss 42 on the under side of the handle, the spring occupying a recess in this boss. The finger piece is guided by being loosely slotted around a screw 43, screwing into the boss. This boss has a collar or ferrule 44 secured to it which closely embraces the end of the handle 23, which may be of wood, and holds

the boss thereto. A suitable set screw 45 prevents any shifting of the ferrule on the handle.

The mechanism above described is sufficient to provide an efficient distributing implement, the finger piece being pulled by the operator's first finger, like a gun trigger, gravity being relied on to feed the type to the star wheel. However, as the described construction is operative only when the tube extends downwardly toward the star wheel, I prefer to provide a spring to insure the type being fed forward to assist gravity, and to prevent any sticking if the type should be dirty. This spring is shown in Fig. 2 and comprises a long light helical spring 50 which may occupy the barrel and extend into an axial recess 51 in the handle. This spring has on its free end a suitable plunger 52 adapted to bear against the type. This spring is of sufficient length so that it may cause the plunger to bear with some force against the type, even if there is only one in the holder; at the same time, the spring is coiled loosely enough, and the recess 51 is long enough, so that the whole spring may be compressed within the recess 51 and the portion of the tube which is within the handle. A suitable rod 57 may be provided in the handle axially of the recess 51 to guide the spring. The spring 50 may be held in the compressed position by a lug 54 on the plunger 52 which is adapted to be turned into a notch 55 in the barrel by an easy movement of the operator's thumb. When the plunger and spring are so located, as shown in Fig. 4, the spring is idle. Whenever desired, however, the turning of the plunger on its axis to bring the lug out of the notch, (the lug furnishing the handle for this purpose), frees the spring to the action of the type, allowing it to assume the position shown in Fig. 2. While the spring 50 has sufficient extensibility to shove the plunger 52 along the barrel clear to the star wheel, it does not have sufficient force even when compressed to the limit to rotate the star wheel against the restraint of the detent spring 34.

When the holder is to be loaded with type, the spring 50 is compressed and locked. In such position, the type may be forced by hand through the open end of the holder past the star wheel, thus loading the holder.

To make such loading operation easier, it is desirable to remove the detent roller 33 from engagement with the star wheel. To accomplish this, I provide an eccentric pin 60 journaled in the boss 61 on the under side of the tube, which carries the spring 34. This pin has flattened portions which normally stand above the spring 34 and do not interfere with its operation. When the pin is turned on its axle, however, substantially halfway around, it cams the spring down

so as to hold the roller away from the star wheel. The pin has a small handle 62 enabling such operation. This withdrawal of the detent allows the type to be very easily shoved into place.

It will be seen that this tool may be very quickly loaded with a supply of type and may be made of such dimensions as to carry a whole line of type and that the type may be distributed from the holder with great rapidity. The operator simply reads the whole clause, or a convenient portion of it, in the holder and then moves the holder from receptacle to receptacle, spelling out the words and pulling the finger piece 38 for each letter. With a little practice, the speed of distribution is only limited by the time required to move the holder from receptacle to receptacle.

It should be stated that, while the star wheel controller, arranged to cooperate with type having beveled feet, is claimed herein broadly, it is also claimed in combination with a type case in my application No. 308,378, filed March 28, 1906, which may be referred to as a date of record in the Patent Office of whatever is common to that application and the present one. Reference should also be made to my pending applications No. 236,463, filed December 12, 1904; No. 497,905, filed May 24, 1909; and No. 585,213, filed October 4, 1910, for claims on or relating to holders for grooved type, or means for conveying the same consisting of split or slotted tubes.

Having thus described my invention, I claim:

1. A portable type distributing implement comprising a type holder, a handle, and means forming a permanent part of the implement for causing complete discharge of type from the holder.

2. In a type distributing hand implement, the combination of a holder adapted to carry a row of type, mechanism mounted on the holder for completely discharging the type therefrom, finger mechanism for operating the discharging mechanism and a handle carrying all of said parts.

3. In a type distributing implement, the combination of a holder for a line of type, a handle at one end of the holder, a discharge controller near the other end of the holder, and operating means for such discharge controller located adjacent to the handle.

4. In a type distributing implement, the combination of a type holder, a handle at one end thereof, a movable finger piece adjacent to the handle, mechanism near the other end of the type holder for controlling the discharge, and a connecting rod between said mechanism and said movable finger piece.

5. In a portable type-distributing implement, the combination of means for holding

a line of type, a star wheel carried by the holder and adapted to engage successive type to feed them out one at a time, and finger controller means for giving said star wheel successive portions of a rotation.

6. A portable typeholder adapted to carry type grooved on their opposite sides and having beveled feet, said type holder having means entering such grooves to loosely hold the type, a star wheel adapted to have its teeth enter between the bevels of successive type to discharge them one at a time, and finger operated means for controlling such star wheel.

7. In a type distributing implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves in opposite sides of type and loosely hold a line thereof, a handle on one end of such tube whereby it may be moved from place to place, and means for controlling the discharge from such tube.

8. In a type distributing implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves in opposite sides of type and loosely hold a line thereof, a handle on one end of such tube whereby it may be moved from place to place, means for controlling the discharge from such tube, and means adjacent to the handle for operating such discharging mechanism.

9. In a type distributing implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves in opposite sides of type and loosely hold a line thereof, a handle on one end of such tube whereby it may be moved from place to place, and means for controlling the discharge from such tube, said means comprising a star wheel carried on the under side of said tube adjacent its free end.

10. In a type distributing implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves in opposite sides of type and loosely hold a line thereof, a handle on one end of such tube whereby it may be moved from place to place, means for controlling the discharge from such tube, said means comprising a star wheel carried on the under side of said tube adjacent its free end, a movable fingerpiece carried by the handle, and a connecting rod connecting said finger piece with the star wheel for operating the latter by the movement of the finger piece.

11. In a type distributing implement, the combination of a split tube, a star wheel carried at the base of the tube and adapted to engage the foot of type in the tube, and a finger piece connected to operate the star wheel.

12. In a type distributing implement, the combination of a split tube, a star wheel car-

ried at the base of the tube and adapted to engage the foot of type in the tube, a bail surrounding the star wheel, and means for pulling on said bail.

13. In a type-distributing implement, the combination of a split tube, a star wheel carried at the base of the tube and adapted to engage the foot of type in the tube, means for giving partial rotations to the star wheel, a spring detent for preventing inopportune rotation of the star wheel, and mechanism for holding same detent in idle position.

14. In a type distributing implement, the combination of a split tube, a star wheel carried at the base of the tube and adapted to engage the foot of type in the tube, a bail surrounding the star wheel, a finger piece for pulling on said bail, a spring detent for preventing inopportune rotation of the star wheel, and mechanism for holding said detent in idle position.

15. In a type distributing implement, the combination of a holder for a line of type, a handle at one end of said holder, a finger piece on the front end of the handle on the under side of the holder, a spring pressing said finger piece toward the open end of the holder, a discharge mechanism adjacent to such open end, and a connection between the same and said finger piece.

16. In a type distributing implement, the combination of a holder for a line of type having a downwardly turned free end, a handle at the other end of said holder, a finger piece on the front end of the handle on the under side of the holder, a discharge mechanism adjacent to such free end, and a connection between the same and said finger piece.

17. The combination of a portable type holder formed to engage type grooved on its opposite sides and having a free open end, a spring tending to feed the type toward such open end, a handle and finger operated means adjacent to the handle for controlling the discharge from such open end.

18. The combination of a type holder having a free open end, a spring tending to feed the type toward such open end, means for controlling the discharge from such open end, a handle at the other end of the holder, and finger means adjacent to the handle for operating the discharge mechanism.

19. The combination of a type holder having a free open end and adapted to carry type having beveled feet, a spring tending to feed the type toward such open end, a star wheel adapted to engage such feet and thereby control the discharge from such open end, a handle at the other end of the holder, and finger means adjacent to the handle for operating the star wheel.

20. The combination, in an implement adapted to operate with type grooved on its opposite sides, of a handle, a split tube ex-

tending therefrom having its adjacent edges adapted to occupy the grooves of the type, a spring adapted to be compressed within the handle and adapted to extend within the tube to force the type along the same, and means for controlling the discharge from the tube.

21. In a type distributing implement, the combination of a type holder adapted to hold a row of type, a spring for forcing the same along the holder, means for controlling the discharge of a type located adjacent to the exit end of the holder, and finger operated means for actuating such discharge controller.

22. In a type distributing implement, the combination of a type holder in the form of a split tube, a handle at one end thereof, a movable finger piece adjacent to the handle, mechanism near the other end of the type holder for controlling the discharge, a connecting rod between said mechanism and said movable finger piece, and a helical spring within the tube adapted to act against the type.

23. In a portable type-distributing implement, the combination of a split tube for holding a line of type, a star wheel carried by the holder and adapted to engage successive type to feed them out one at a time, a spring within the tube pressing the type toward the star wheel, and finger controlled means for giving said star wheel successive portions of a rotation.

24. The combination, in a portable type-holder adapted to carry type grooved on their opposite sides and having beveled feet, said type-holder having means entering such grooves to loosely hold the type, of a star wheel adapted to have its teeth enter between the bevels of successive type to discharge them one at a time, and a spring guided by the type holder for pressing the type toward the star wheel.

25. In a type holding implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves in opposite sides of type and loosely hold a line thereof, a handle on one end of such tube whereby it may be moved from place to place, a spring adapted to occupy the tube or be compressed into the handle, and means operable from a point adjacent to the handle for controlling the discharge from such tube.

26. The combination of a handle, a type-holder extending therefrom, a spring adapted to be compressed within the handle and adapted to extend to force the type along the holder, and means for locking the spring in idle position compressed substantially within the handle.

27. The combination of a handle, a type holder in the form of a split tube extending therefrom, a spring adapted to be com-

pressed within the handle and adapted to extend within the tube to force the type along the holder, and a plunger at the head of the spring provided with a lug for locking the spring in idle position compressed substantially within the handle.

28. In a type distributing implement, the combination of a split tube, a handle into which one end of said tube extends, a spring occupying a recess in the handle in line with the tube, said spring being adapted to extend into the tube or be compressed substantially into the handle, a plunger on the end of the spring having a lug adapted to occupy the split of the tube or be turned into a lateral notch to lock the spring in idle position, the spring when released operating to press the line of type in the tube toward the free end, and means for controlling the discharge from such free end.

29. In a type distributing implement, the combination of a split tube, a handle into which one end of said tube extends, a spring occupying a recess in the handle in line with the tube, said spring being adapted to extend into the tube or be compressed substantially into the handle, a plunger on the end of the spring having a lug adapted to occupy the split of the tube or be turned into a lateral notch to lock the spring in idle position, the spring when released operating to press the line of type in the tube toward the free end, a star wheel carried by the under side of the tube adjacent to the free end and adapted to control the discharge of type therefrom, a finger piece carried by the handle, and mechanism connecting the finger piece with the star wheel and extending along the tube, whereby the finger piece may operate the star wheel to discharge the type.

30. In a type distributing implement, the combination of a split tube, a handle at one end of said tube, a star wheel carried by the under side of the tube adjacent to the free end and adapted to control the discharge of type therefrom, a finger piece carried by the handle, a bail connecting the finger piece with the star wheel and extending along the tube, whereby the finger piece may operate the star wheel to discharge the type, and a spring detent carried on the under side of the tube and adapted to engage the star wheel.

31. A type distributing element adapted to carry and distribute type grooved on its opposite sides comprising a holder formed to occupy such grooves, a handle, mechanism acting successively on the foremost type in a line for discharging the same, and means adjacent to the handle for operating said mechanism.

32. A portable type distributing implement comprising a type holder having an open end, a handle at the other end of the holder, means for discharging the type one

at a time through the open end, and means for controlling such discharge from a point adjacent to the handle.

33. A type distributing implement adapted to operate with type grooved on its opposite sides and beveled on its feet, comprising a holder, a handle, and means engaging such feet between contiguous type to control the discharge.

34. A type distributing implement adapted to operate with type grooved on its opposite sides and beveled on its feet, comprising a holder, a handle, and a star wheel engaging such feet to control the discharge.

35. A type distributing implement adapted to distribute type grooved on its opposite sides and beveled on its feet comprising a holder having two parallel separated edges adapted to enter the grooves of the type, a spring pressing the type toward the exit of the holder, and means cooperating with the beveled feet of the type for controlling the discharge from the holder.

36. In a type distributing implement, the combination of a split tube adapted to carry type grooved on its sides and beveled on its feet, and means carried by such tube for cooperating with said feet to control the discharge.

37. In a type distributing implement, the combination of a split tube adapted to carry type grooved on its sides and beveled on its feet, and means carried by such tube for cooperating with said feet to control the discharge, said means being located near the discharge end of the tube, a handle at the other end of the tube, and finger means operable from a point adjacent to the handle for actuating the discharge controller.

38. A portable type distributing implement comprising a tube adapted to hold grooved type, and a star wheel mounted on the tube and adapted to engage the feet of such type.

39. A portable typeholder adapted to carry type grooved on their opposite sides and having beveled feet, said typeholder having means entering such grooves to loosely hold the type in line, and means mounted on the holder adapted to engage between the bevels of the feet of successive type to discharge them one at a time.

40. In a type distributing implement, the combination of a split tube, the edges of the tube adjacent to the split being adapted to enter grooves on opposite sides of type and loosely hold a line thereof, and a movable discharge controller for such type mounted on the tube and acting to discharge the type in the direction of the length of the row.

41. The combination, with a portable

typeholder adapted to carry type grooved on their opposite sides, of movable means near one end of the holder for controlling the discharge thereof, finger operated mechanism near the other end of the holder connected to operate said means, and a spring within the holder pressing the type toward said movable means.

42. A type distributing implement adapted to operate with type grooved on its opposite sides and beveled on its feet, comprising a holder having a slot between parallel edges which are adapted to occupy the grooves of a row of type in the slot, a star wheel engaging the feet of the type to control the discharge, and a restrainer for the star wheel.

43. The combination, with a holder for type, of a star wheel having its teeth adapted to engage such type and control the passage thereof, a spring wire bail having a roller mounted on it for engaging between the teeth of the star wheel to control its rotation, and means engaging such teeth to rotate the wheel step by step.

44. The combination, with a holder for type having beveled feet and grooved on its opposite sides, said holder having a pair of parallel separated guiding edges adapted to occupy such grooves, of a star wheel having its teeth adapted to engage between the bevels of successive type.

45. The combination, with a holder for type having beveled feet grooved on its opposite sides, said holder having a pair of parallel separated guiding edges adapted to occupy such grooves, of a star wheel having its teeth adapted to engage between the bevels of successive type, and spring means engaging the teeth of the star wheel to confine its rotation to an intermittent movement.

46. The combination of a typeholder in the form of a tube having a slot parallel with its axis, which slot is adapted to hold a row of type grooved on its opposite sides and having beveled feet, a star wheel rotatably carried by said typeholder on the side opposite the slot and projecting through an opening into the tube into position to engage such beveled feet, and means for controlling the rotation of the star wheel, thereby controlling the passage of the type.

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

HARRY C. GAMMETER.

Witnesses:

ALBERT H. BATES,
A. J. HUDSON.