Sept. 4, 1923. 1,467,073

R. R. SOLMSON

PIPE STAMPING MACHINE

Filed Aug. 5, 1922 2 Sheets-Sheet 1

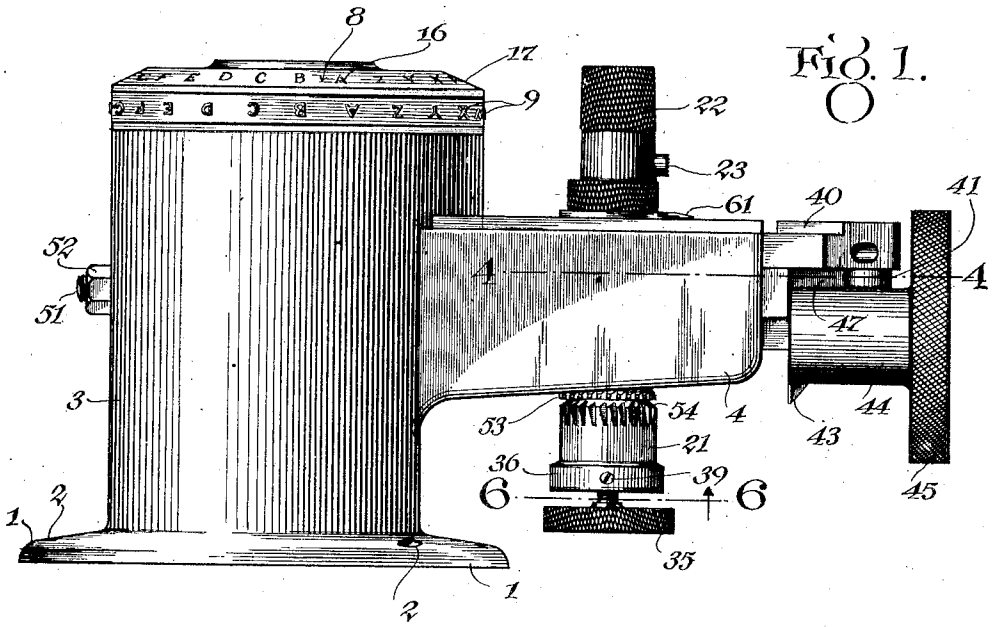


FIG. 1.

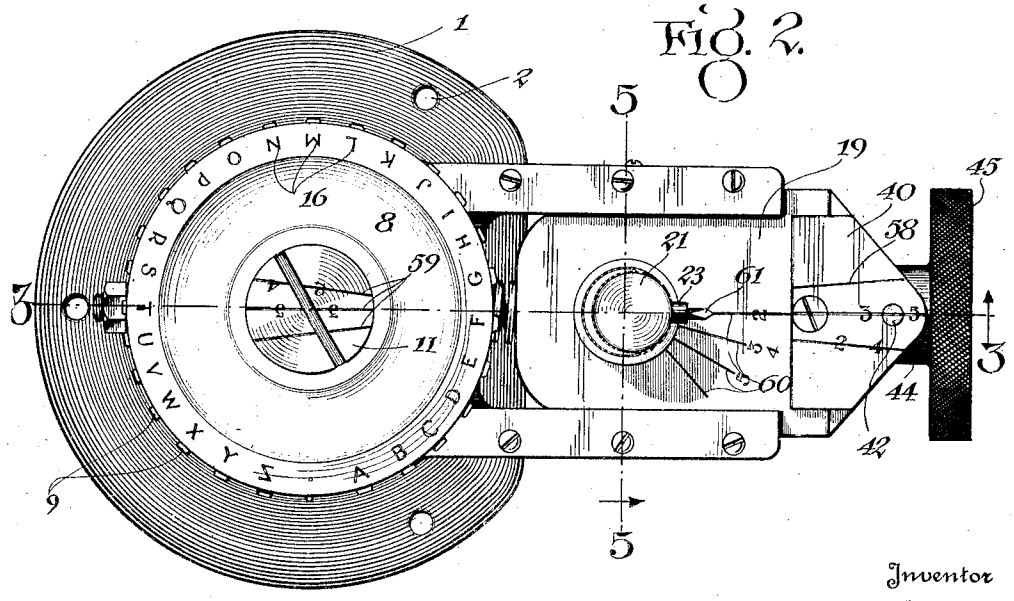


FIG. 2.

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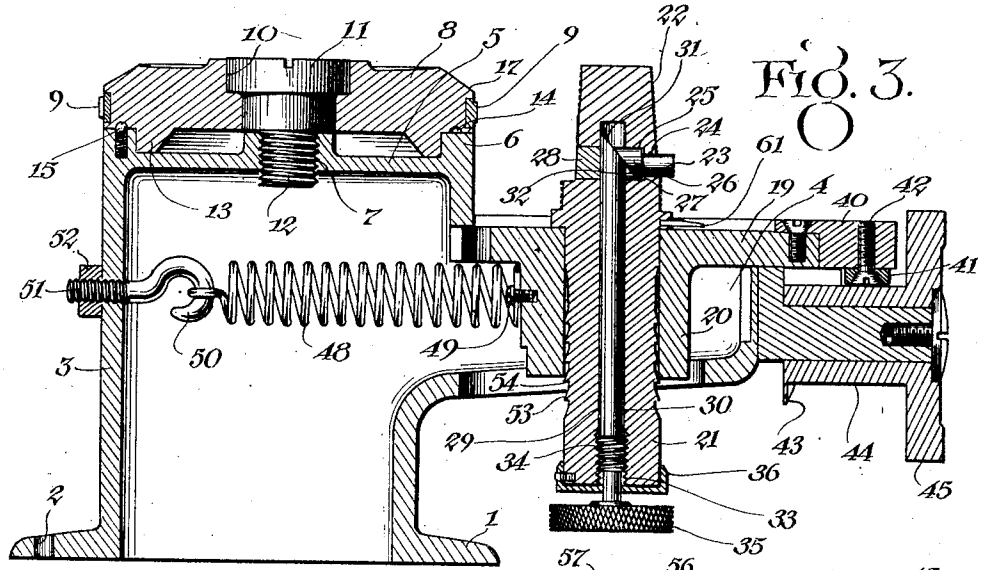


FIG. 3.

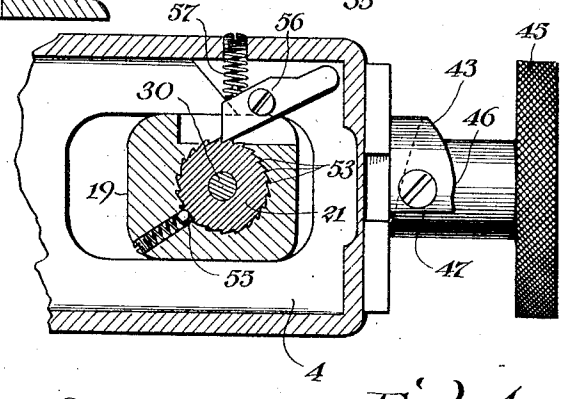


FIG. 4.

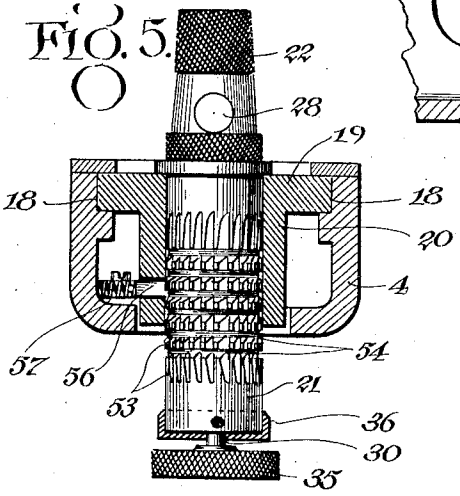


FIG. 5.

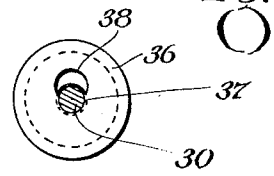


FIG. 6.

Inventor

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By George A. Brownell

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Patented Sept. 4, 1923. 1,467,073

UNITED STATES PATENT OFFICE.

ROBERT R. SOLMSON, OF NEW BRUNSWICK, NEW JERSEY.

PIPE-STAMPING MACHINE.

Application filed August 5, 1922. Serial No. 579,889.

To all whom it may concern:

Be it known that I, ROBERT R. SOLMSON, a citizen of the United States, residing at New Brunswick, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Pipe-Stamping 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.

This invention relates to improvements in marking devices and more particularly to an improved device for marking or lettering pipe bowls and the like.

The primary object of the invention is to furnish an inexpensive pipe marking apparatus designed to be placed in tobacco stores or the like to enable either the seller or purchaser of a pipe to mark the purchaser's initials or name on the pipe bowl.

A further object of the invention is to furnish an apparatus of the above character of simple construction which may be readily assembled and operated by an unskilled person.

A further object of the invention is to provide a pipe marking apparatus having improved means for forcing a pipe bowl into engagement with the raised type on a type wheel or the like.

A still further object is to furnish the pipe marking apparats with automatic means for shifting the pipe bowl step by step, in order that said bowl will be in proper position to strike successive letters on the type wheel.

Another object of the invention is to provide a pipe support in a machine of this character, which may be readily raised and lowered to place the letters on the pipe bowl one above the other, this means including a device for automatically locking the pipe holder in its adjusted positions.

With the foregoing objects outlined and with other objects in view, which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a side view of the improved apparatus.

Fig. 2 is a top plan view of the same.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a horizontal sectional view of a detail taken on line 4—4 of Fig. 1.

Fig. 5 is a vertical transverse sectional view of a detail taken on line 5—5 of Fig. 2.

Fig. 6 is a detail view partly in section taken on line 6—6 of Fig. 1.

In the drawing 1 designates a base preferably provided with apertures 2 to receive screws or the like for securing the base to a suitable support. Extending upwardly from this base is a standard or column 3 preferably of cylindrical form and provided on one side with an outwardly extending arm or platform 4. A top plate 5 closes the upper end of the standard and this top plate is provided with an annular flange 6 and a threaded aperture 7.

Rotatably mounted on the top plate 5 is a type wheel 8 having raised type 9 arranged around its circumference in spaced relation. This type wheel is provided with a countersunk aperture 10 adapted to receive a screw 11 having a threaded shank 12 engaging the threads of the aperture 7. This screw holds the type wheel on the plate 5 but permits the same to readily rotate. The type wheel is provided with a depending annular flange 13 having a sliding engagement with the inner surface of the flange 6 in order to steady the movement of the type wheel.

Means are provided for automatically locking the type wheel in adjusted positions for the purpose of holding a letter in the proper position to be struck by the pipe bowl, and this means preferably consists of a series of depressions 14 arranged in the under side of the type wheel and adapted to receive a spring-pressed ball 15 carried by the flange 6. There is preferably one of the apertures 14 in alignment with each letter of the type, so that each time a letter is moved into position to be struck by the type bowl, the ball 15 will engage the proper depression in order to hold the type wheel locked.

The type wheel is preferably turned by the hand of the operator, and to facilitate positioning the letters 9 opposite the pipe bowl, a letter dial 16 is arranged on an inclined face 17. This dial 16 may be readily

observed from above, and the letters of this dial are arranged opposite the similar letters of the type 9.

The platform 4 is provided with guideways 18 to guide a laterally moving slide or carriage 19, which has a vertically arranged sleeve 20 carrying the pipe supporting spindle 21. This spindle is preferably provided with a milled head 22 on which the pipe bowl may be placed, and in order to hold the pipe bowl on the support, I have provided said spindle with a radially movable pin or lug 23 slidable in an aperture 24 arranged in the spindle. This aperture merges into a larger aperture 25 and a head 26 integral with the pin 23, is slidably mounted in the larger aperture. A shoulder 27 is arranged between the two apertures and is designed to prevent the pin 23 from moving outwardly beyond a certain point. A plug 28 is arranged in the spindle diametrically opposite the pin 23, in order to permit the insertion and removal of said pin. The spindle 21 is also provided with an axially arranged chamber 29 in which is located the pin actuating rod 30 provided at its upper end with an inclined face 31 designed to cooperate with an inclined face 32 on the head 26. It may be readily seen from Fig. 3 that the raising of the rod 30 will cause the inclined surfaces to cooperate and force the pin 23 outwardly while the lowering of the rod 30 will permit the pin 23 to be moved inwardly. The spindle 21 is provided near its lower end with internal threads 33 in threaded engagement with the threads of a screw 34 which supports the rod 30. The screw is provided with a milled head 35 to enable the operator to readily actuate the same. In order to prevent the screw 34 from being accidentally detached from the spindle 21, I have provided the lower end of the spindle with a cap 36 having an aperture 37 merging into an enlarged aperture 38. The aperture 37 is of less diameter than the threaded portion of the screw 34, so that when the cap 36 is placed in position the threads cannot move downwardly below said cap. The enlarged aperture 38 is provided in order to permit the screw 34 to be placed in the aperture 37, and in this operation the screw 34 is inserted through the aperture 38, which is of sufficient size to receive the same. After the screw has been inserted through the cap until the cap is in a position close to the head 35 the screw 34 may then be moved into the aperture 37 and at this time the screw 34 and cap are in position to be attached to the spindle 21. The cap may be secured in position on the spindle by means of a screw 39.

The carriage 19 is provided at its outer end with a dial plate 40 having a roller 41 secured on its underside by means of a screw 42. This roller is adapted to be engaged by the mutilated or interrupted thread 43 arranged on the exterior of an operating sleeve 44 having a milled head 45. This interrupted thread is provided with a depressed portion 46 designed to receive the roller 41 for holding the carriage 19 in a fixed position when desired. The mutilated thread 43 is designed to be turned with the sleeve 44, and it causes the roller 41 to move the carriage 19 in one direction, that is, in the present instance toward the right, and when the roller reaches the mutilated portion 47 at the end of the thread, said roller will be released and a spring 48 will move the carriage with a quick jerk towards the left. As the pipe holding spindle 21 moves with the carriage 19, it will be understood that a pipe supported by the spindle will be moved with great force against a letter of the type wheel 8. The spring 48 is arranged within the column 3 and it is connected at one end by a screw 49 to the carriage 19, and the opposite end of the spring is connected to a hook 50 having a threaded shank 51 engaged by a nut 52 which may be turned to adjust the tension of the spring.

The means for manually moving and automatically turning the pipe bowl to properly position the same to be struck by successive letters of the type wheel, includes vertically arranged series of ratchet teeth 53, each series of the ratchet teeth being separated by circular grooves 54. These grooves cooperate with a spring-pressed ball 55, shown in Fig. 4. The spring-pressed ball is mounted in the carriage 19, and when the operator pushes the spindle 21 up or down, the ball 55 rides over the ratchet teeth and clicks into the grooves 54. When the ball occupies either one of the grooves 54 it will hold the spindle 21 from accidental downward movement.

The ratchet teeth of each series are designed to cooperate with a pivoted pawl 56 which is mounted on a stationary portion of the platform 4 and is yieldably pressed towards the spindle 21 by means of a spring 57. When the carriage 19 moves towards the left, the pawl 56 will ride over the teeth 53, but when the carriage is moved in the opposite direction, the pawl will engage these teeth and turn the spindle one step, so that the pipe bowl carried by the spindle will be moved into a position to receive a succeeding letter.

The present machine may be used to print on either the front or rear of a pipe bowl, and in order to align the pipe bowl up for printing on the front of the same, the dial plate 40 is provided with spaced lines 58. When the handle of the pipe is in alignment with the central one of these lines the bowl will be in a position to receive either a single letter, three letters or five letters, and

when the pipe stem is in alignment with the line marked "2" and "4" on the dial plate 40, the bowl will be in a position to receive either two or four letters. On the other hand when the stem is in alignment with the upper line 58, the bowl may receive six or more letters.

If it is desired to print on the back of the bowl the pipe stem is aligned up with the lines 59 arranged on the head of the screw 11. The upper face of the carriage 19 is also provided with a dial having lines 60 adapted to cooperate with a pointer 61 fixed to the pipe supporting spindle 21. When the pointer 61 is in alignment with the line "2" of the dial 60, the pipe bowl may be impressed with a single letter or with two letters, while the alignment of the pointer 61 with the line having the numerals "3" or "4" will enable the pipe bowl to be impressed with three or four letters of succeeding order.

In operation, if it is desired to place a single letter on the central portion of the front of the pipe bowl, the operator places the inverted pipe bowl over the head 22 and aligns the stem of the pipe up with the central one of the lines 58. He then turns the head 35 in order to cause the pin 23 to clamp the pipe bowl in position. At this time the head 45 has been turned to a position to bring the roller 41 into the notch or recess 46 of the multilated thread. Then the handle 45 is turned in a clockwise direction until the roller 41 leaves the notch and is drawn along the surface 47 by the spring 48. This causes the pipe bowl to be drawn with a quick jerk against the desired letter on the type wheel.

If it is desired to place two letters on the front of the pipe bowl, then the handle 45 may be turned further in a clockwise direction until the leading end of the mutilated thread 43 engages the roller 41, and as the handle 45 continues to turn, the carriage 19 will be moved toward the right, and in this movement the pawl 46 will engage one of the teeth 53 and will cause the spindle 21 to be turned one step, so that the pipe bowl will be brought into a position for a second stamping. Then if a different letter is desired for a different stamping, the type wheel is turned in order to bring the proper letter into a position to be struck by the pipe bowl. It will be understood that when the roller 41 engages the notch 46, the carriage 19 will be locked in position to permit the manipulation of either the type wheel or the pipe bowl.

If it is desired to impress say five letters on the pipe bowl in succeeding order, then the spindle 21 is turned by hand until the pointer 61 is opposite the line "5" of the dial 60, and then the handle 45 is actuated five times. During these actuations the spindle 21 will be turned step by step by the pawl 56 in a manner which will be readily understood. It will also be understood that the type wheel is turned between the actuations of member 45 when necessary to bring the proper letter into proper position.

From the foregoing I believe that the construction, operation and advantages of the invention may be readily understood by those skilled in the art, and it is apparent that various changes may be made without departing from the spirit of the invention as expressed in the claims.

What I claim and desire to secure by Letters-Patent is:

1. An apparatus of the character described including a type supporting member, and a pipe supporting member, one of said members being movable toward and away from the other member, automatic means for moving the movable member rapidly toward the other member, manually operated means for moving the movable member in the opposite direction and a pipe supporting spindle arranged on the pipe supporting member.

2. An apparatus of the character described including a type supporting member, a pipe supporting member movable towards and away from the type supporting member, a spring for moving the pipe supporting member toward the type supporting member, and means for moving the pipe supporting member away from the type supporting member, said pipe supporting member being axially adjustable to permit letters to be stamped on the pipe bowl in vertical arrangement.

3. The apparatus of the character described including a type supporting member, a pipe supporting member movable towards and away from the type supporting member, a spring for moving the pipe supporting member toward the type supporting member, and means for moving the pipe supporting member away from the type supporting member, said means for moving the pipe supporting member away from the type supporting member including a mutilated thread, and a projection extending from the pipe supporting member and engaging said thread.

4. A machine of the character described including a type supporting member, a pipe supporting element movable towards and away from said member, automatically operating means for moving said element rapidly toward said member, manually operated means for moving the element in the opposite direction, and means for automatically turning a portion of said element when the same reciprocates.

5. A machine of the character described including a type supporting element having a series of type thereon, a carriage movable

toward and away from said element, automatic means for moving said carriage rapidly toward said element, manually operated means for moving the carriage in the opposite direction, and a pipe supporting spindle arranged on said carriage.

6. A mechanism as claimed in claim 5 in which the means for moving the carriage toward said element includes a spring.

7. A mechanism as claimed in claim 5 in which the means for moving the carriage away from the element includes a rotatable sleeve provided with a mutilated thread, and a member projecting from said carriage and engaging said thread.

8. A mechanism as claimed in claim 5 in which said spindle is rotatable in said carriage, and means for rotating the spindle step by step when the carriage reciprocates.

9. A mechanism as claimed in claim 5 in which the spindle is provided with a clamp for securing a pipe bowl in position on the same.

10. A machine for marking pipe bowls including a supporting column, a type wheel rotatably mounted on said supporting column and provided with type, a platform extending from said column and having guideways, a carriage slidably mounted in said guideways, a spring for moving said carriage toward said column, a spindle rotatably mounted in said carriage and adapted to support a pipe bowl and move the same into engagement with said type, a member projecting from said carriage, and a rotatable sleeve provided with a mutilated thread engageable with said member for moving said carriage away from said column.

11. An apparatus of the character described including a type supporting member, a pipe supporting member movable towards and away from the type supporting member, a spring for moving the pipe supporting member toward the type supporting member, means for moving the pipe supporting member away from the type supporting member, and dials for aligning a pipe bowl with said type.

12. An article marking apparatus including a reciprocating carriage, a rotatable spindle mounted on said carriage and adapted to support an article to be marked, a pointer arranged on said spindle, a dial arranged on the carriage and cooperating with said pointer, and means for rotating said spindle step by step as the carriage reciprocates.

In testimony whereof I affix my signature.

ROBERT R. SOLMSON.

Witnesses:
ALFRED S. MARCH,
CHAS. W. ORAM.