

**No. 645,655.**

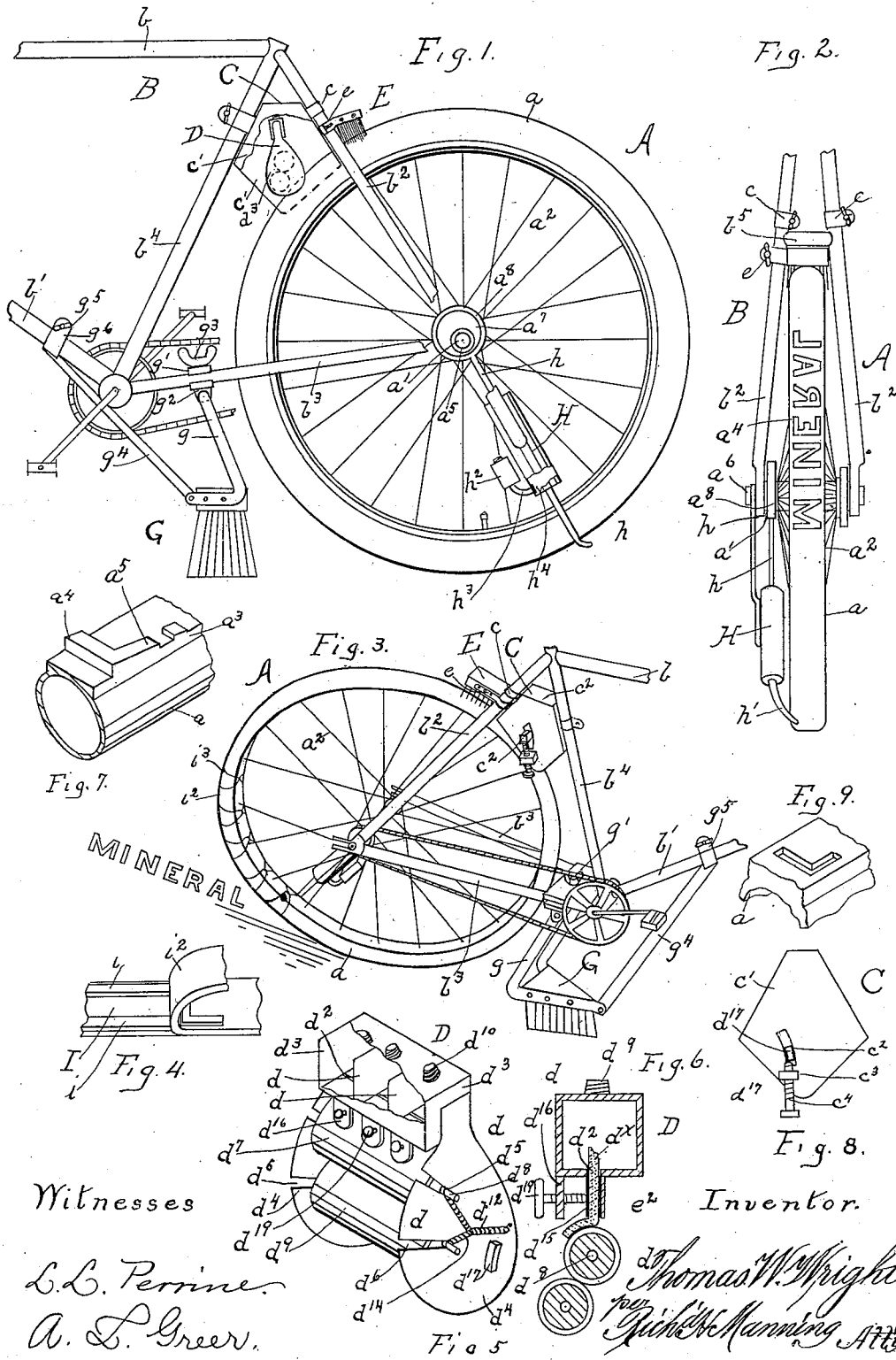
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**T. W. WRIGHT.**

## STAMPING DEVICE FOR STREET ADVERTISEMENTS.

(Application filed Aug. 8, 1899.)

(No Model.)



# UNITED STATES PATENT OFFICE.

THOMAS W. WRIGHT, OF ROSEDALE, KANSAS.

## STAMPING DEVICE FOR STREET-ADVERTISEMENTS.

SPECIFICATION forming part of Letters Patent No. 645,655, dated March 20, 1900.

Application filed August 8, 1899. Serial No. 726,608. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS W. WRIGHT, a citizen of the United States of America, residing at Rosedale, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Stamping Devices for Street-Advertisements; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The object of my invention, primarily, is to stamp any desired character, letter, or a series of words or ornamental designs upon the street-pavement at successive intervals in suitable colors for the purpose of advertising; second, to secure the characters or designs detachably to an inflatable tire and prevent the jar in the contact of the raised characters with the pavement in the rotation of the wheel; third, to enable the full impression of the character to be made upon the surface receiving the imprint; fourth, to afford a perpetual feed of the coloring substance to the raised characters upon the tire during the rotation of the wheel; fifth, to regulate the flow of the liquid containing the color to the coloring-pads; sixth, to present a clean surface for the imprint of the character or design in advance of the wheel and also clean the surface of the character or design in the circle of rotation of the wheel; seventh, to impart a lustrous surface to and fix indelibly the imprint.

My invention consists in the novel construction and combination of parts, such as will be fully described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a side view representing the rear wheel of a bicycle, showing broken portions of the frame of a bicycle connected with said wheel and the invention applied to the wheel and frame, a portion of the side of the case inclosing the fountain for the liquid color being broken away. Fig. 2 is a rear elevation of the wheel and frame as seen in Fig. 1. Fig. 3 is a view in perspective of a reverse side of the wheel and frame to that seen in Fig. 1, showing the imprint device detachably connected with the wheel. Fig. 4

represents a broken detached portion of the imprint device, showing the elevated outer edges of the inner strip. Fig. 5 is a detail view in perspective of the color-supply fountain, with portions of the receptacle for the color broken away, also showing the spring-contracted journal for the rollers and the adjusting devices for the liquid-distributing wick. Fig. 6 is a vertical sectional view of one of the receptacles of the fountain for the liquid, showing the feed-rollers and wick and the wick-compressing plate and screw. Fig. 7 is a broken view of the inflated tire, showing the raised characters and the inclined surface of one of the characters. Fig. 8 is a detail side view of the case inclosing the fountain, showing the slot for the bearing upon the fountain and the fastening device. Fig. 9 is a detail view of one of the matrices.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

Referring to the drawings, A represents the rear-end wheel of a bicycle, of which  $a$  represents the inflated rubber tire,  $a'$  the hub, and  $a^2$  the spokes, all of which parts are of the ordinary construction.

B represents the bicycle-frame, a sufficient portion of the frame connected with the rear wheel being shown to illustrate the invention, of which frame  $b$  represents the upper reach and  $b'$  the lower reach.  $b^2$   $b^3$  are the upper rear stays, and  $b^3$   $b^3$  the lower rear stays.

$b^4$  is the seat-post tube.  $b^5$  is the cross-stay for the tubes  $b^2$   $b^2$ . Upon the outer surface of the rubber tire are the projected characters  $a^4$ . These characters are formed integral with the tire during the usual process of molding the rubber, in which tube formation the outer ends of the characters or designs upon the under side are extended downwardly to fit the curved outer edges of the tire, as at  $a^3$  in Fig. 7, thus presenting a flat surface of each letter or character. In the present instance the word "Mineral" is shown upon the surface of the rubber tire, these letters occupying a portion of the circumference of the wheel. The first design or letter upon the outer surface of the tire is made with a curved surface, as at  $a^5$ , in the direction of the circumference of the wheel. The last raised letter or character in a series of characters is

also curved, so as to prevent shock or jar to the rider in the rotation of the wheel.

C represents the case, secured by the clamps  $c\ c$  to the upper ends of the upper rear stays  $b^2\ b^2$ , above the line of the periphery of the wheel A. Said case consists of the side plates  $c'\ c'$ , which are nearly lozenge or diamond shaped to fit the space formed between the upper ends of the rear stays  $b^2\ b^2$  and the seat-post tube  $b^4$ . The upper portion of the case is inclosed by a plate  $c^2$ , which is connected with the sides  $c'\ c'$  and extends upwardly from a position near the seat-post tube  $b^4$  parallel with said post and also upon the portion of the sides  $c'\ c'$  parallel with the stays  $b^2\ b^2$ , the upper horizontal portion of the said ends of the case being also inclosed by a bent portion of the ends of the case.

Within the case C is the liquid-fountain D. The upper portion of said fountain consists of a box or receptacle which is divided by the partitions  $d\ d$  into three compartments. In the bottom  $d'$  of each compartment is a slot  $d^2$ , extending in the longitudinal direction of the box. With each end  $d^3$  of the box is connected the upper end of a plate  $d^4$ , which plate, below the level of the bottom of said box, is elliptical in form. In the plate  $d^4$  are transverse slots  $d^5\ d^6$ . The slot  $d^5$  extends from a point near the front side of the box D downwardly a short distance and at an angle to the chord extending lengthwise through the elliptical plate. The other slot  $d^6$  extends in the direction of the center of the elliptical plate  $d^4$ .

$d^7$  is the upper feed-roller, the surface of which is covered with felt, the journals  $d^8$  of which roller extend through the slots  $d^5\ d^6$  of plates  $d^4$ .

$d^9$  is the lower feed-roller, which is also covered with felt, the journals  $d^{10}$  of which roller extend through the slots  $d^6$ . With one journal  $d^{10}$  of the roller  $d^9$  is connected one end of a spiral spring  $d^{12}$ , the other end of which spring is extended in the direction of the rear edge of the plates  $d^4$  and secured to a fixed point on said plate. With the journals  $d^8$  of the roller  $d^7$  is connected one end of a spiral spring  $d^{14}$ , the other end of which spring is connected with the spiral spring  $d^{12}$  at a point between its connection with the journals  $d^8$  and the point at which it is secured on plates  $d^4$ . With the under side of the bottom  $d'$  of the receptacle D and in line with the rear edge of the slot  $d^2$  of the separate receptacles is a downwardly-extended plate  $e^2$ , the lower end of which plate extends nearly to the feed-roller  $d^7$ . Upon the other side of the slot  $d^4$  and connected with the under side of the receptacles is a wrist-clamping plate  $d^{15}$ , between which plates is a wick  $d^x$ , extending to the roller  $d^7$ .

$d^{16}$  represents plates extending from the under side of the box D opposite each plate  $d^{15}$ , in which plates are the adjusting-screws  $d^{18}$ , the inner end of which screws bear against the plate  $d^{15}$ . In the top of the plate D and to

each compartment is an upwardly-extended screw-threaded neck  $d^9$ , to which the cap  $d^{10}$  is fitted.

Upon the ends of the receptacle D are the curved bearing-plates  $d^{17}$ , which enter the inwardly-curved slots  $c^2$  in the sides of case C and extend beyond the outside of said case, so as to be operated by the hand. Upon the outer side of case C is a screw-threaded lug  $c^3$ , in which is a screw  $c^4$ , the upper end bearing upon the periphery of the wheel A.

E represents a brush in rear of case C, which is removably secured to the upper rear stay-tube  $b^2$  by the clamps  $e\ e$ , said brush bearing upon the periphery of the wheel A.

G represents a brush which is drawn over the pavement in advance of the wheel A. With the rear end of the brush G is connected the lower end of a bar  $g$ , the upper end of which bar is connected with a cross-plate  $g'$  on the lower stay-tubes  $b^2\ b^2$  and with a screw-bolt  $g^2$ , extending through said plate, said bolt  $g'$  having a thumb-screw  $g^3$ . With the forward end of the head of brush G is pivotally connected the lower end of a bar  $g^4$ , on the upper end of which bar are the clamping-plates  $g^5$ , secured by the screw  $g^6$  to the lower reach  $b'$  of the frame B of the bicycle.

H represents a spraying device or pump upon the side of wheel A. The cylinder  $h$  of said pump is secured by a plate  $h'$ , the upper end of which plate is perforated to receive the end of shaft  $a^5$ , the ordinary nut  $a^6$  on said shaft securing the plate from movement. Upon the hub  $a'$  of wheel A is an eccentric  $a^7$ , around which passes a band  $a^8$ , which band is connected with the piston-rod  $h$  of the pump. Upon the lower end of the pump is a curved nozzle  $h'$ , which extends to a position in rear of the wheel A and near the line of the pavement.

$h^2$  represents a supply vessel on the side of pump H, from the bottom of which vessel extends a tube  $h^3$ , connected at its lower end with the side of pump H near the lower end of said pump, said tube having a valve  $h^4$  on the inner side of the pump, which is operated by the piston of the pump.

In the application of the invention for the purpose designed the compartments in the receptacle D are supplied with liquid, the color of the liquid in one compartment being preferably different from that in the other. The liquid employed is any readily-flowing paint and of which the chromes may form the base. The lower feed-roller  $d^9$  bears upon the periphery of the wheel A and yields as the projecting characters upon the tire of the wheel A come in contact with the roller. The vessel  $h^2$  is supplied with a solution of gum-shellac varnish. The adjusting-screws  $d^{17}$  are adjusted so as to compress the wicks sufficiently to regulate the flow of the liquid from each compartment of the receptacle or fountain D, and the liquid flows to the feed-roller  $d^7$  and is transferred to the roller  $d^9$ —as, for instance,

let the compartment of the receptacle D be filled with the varied colors red, white, and blue. These colors will be conveyed to the roller  $d^7$  and thence to the roller  $d^8$ , the width of the space described upon the roller  $d^8$  by each color being in proportion to the width of the wick supplying the color. The bicycle is then propelled in the usual manner over the pavement and such surfaces as are better presented by asphalt or brick, and the characters upon the tire  $a$  of wheel A are brought in contact with the feed-roller  $d^9$  and the three separate colors imparted in the direction of the circumference of the wheel to the characters or letters and upon such letters composing the word "Mineral," as illustrated in the drawings, and as the wheel continues to rotate the repeated imprint of the letters are made upon the surface of the pavement at such distances apart as the distance described upon the circumference of the wheel A between the first and last letters of the word "Mineral." The letters thus placed upon the pavement are in bright colors, readily seen at a distance, and attract attention, thus serving an invaluable advertisement and in the most conspicuous place for riveting the attention of persons passing upon the streets.

During the movement of the wheel A the piston  $h^4$  of pump H draws the varnish from the vessel  $h^2$ , and as soon as an imprint of the word is made upon the pavement a spray of varnish is forced automatically upon the freshly-imparted imprint or paint upon the pavement, which glazes over the paint and prevents erasure of the letters. The usual paint-driers may be employed instead of varnish, and other solutions for fixing indelibly the imprint may be used. Instead of varnish I may use ground mica, and forced upon the freshly-painted surface, thus giving, especially at night, a bright reflecting-surface to the imprint.

In the passage of the wheel A upon the pavement the brush G cleans the pavement in advance of the wheel, and as soon as the raised characters reach the bristles of brush E the dust which may gather upon them is removed preparatory to receiving a supply of coloring liquid from the fountain D. The brush G is raised from the pavement by releasing and adjusting the clamping-screw  $g^5$ . All of the devices being attached to the wheel and frame by clamps are detachable in a short space of time.

Instead of making the raised letters or characters integral with the tire of the wheel A, I take a narrow strip of leather I of the proper length, upon the upper surface of which and in line with the outer edges are placed narrow strips  $i^1$  of the same material. The characters or letters are molded or cut in a strip of rubber  $l^2$  of the same width as the strip I (see Fig. 4) and the strips are glued together. The strip I is then fastened to the

tire of the wheel by lacing-strings  $i^3$ , passed over the strips  $i^2$  and between the letters or characters and held by the usual tying of the loops around the tire. In this construction the raised outer edges of the strip  $i^3$  presents a flat surface of the character to the pavement, and consequently the imprint is clear and bold.

Instead of a bicycle the frame, as shown, may be connected direct with a vehicle or operated by hand, the advantage being that large areas of pavement may be given advertising impressions and made ornamental as the skill of the rider of the bicycle is adequate to the reproduction of scenery or unique scrollwork or other designs. The invention affords rapid means for advertising of all kinds, and within a short space of time the imparting of important telegrams or such news of public welfare, as the approach of storms or plagues, may be rapidly communicated with little expense and with the most beneficial results. The chrome colors or anilin dyes, which disappear with the first fall of rain, may be employed and other well-known materials used to effect brilliant surfaces to the imprints and the characters affixed to any rotary device. Upon dirt roads instead of employing the tires with the raised letters I form the characters by making a matrix of the character or design in the tire. The coloring is fed to the tire in the manner heretofore described, the result being that the matrix will leave the characters formed in the dust, and at the same time the surrounding portion to a certain extent will be fixed by the paint around the outer edges of the characters.

Instead of employing felt on the rollers I may use any well-known ink or coloring transferring roller.

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

1. A rotary stamping-wheel and a detachable strip connected with said wheel and stamping devices upon said strip adapted to imprint upon suitable surface, and means for imparting color to the said devices.

2. A rotary stamping-wheel and a detachable strip connected with the periphery of said wheel, and a strip of suitable material having stamping devices extending therefrom, and the outer edges of said strip reinforced substantially as described.

3. A rotary stamping-wheel, and separate strips connected with and extending in the direction of the circumference of said wheel, and connecting the stamping devices with the periphery of the wheel, and reinforcing-strips between the separate strips and near the outer edges of said strips.

4. A rotary stamping-wheel, stamping devices upon and extending beyond the surface of the periphery of said wheel, having the surface of the devices inclined and adapted

to lessen the resistance in contacting with the surface of a pathway.

5. The combination with the frame of the bicycle and with one of the wheels of a pump, a receptacle having a valve connected with the pump, a plate connecting said pump with the axis of said wheel, and an eccentric upon

the hub of said wheel, and a band extending around said eccentric and connected with the piston-rod of said pump.

THOMAS W. WRIGHT.

Witnesses:

JOHN T. MARSHALL,  
JOSEPH P. FONTRON.