W. J. GREEN.

BRANDING MACHINE.

APPLICATION FILED OCT. 23, 1908.

913,884. Patented Mar. 2, 1909.

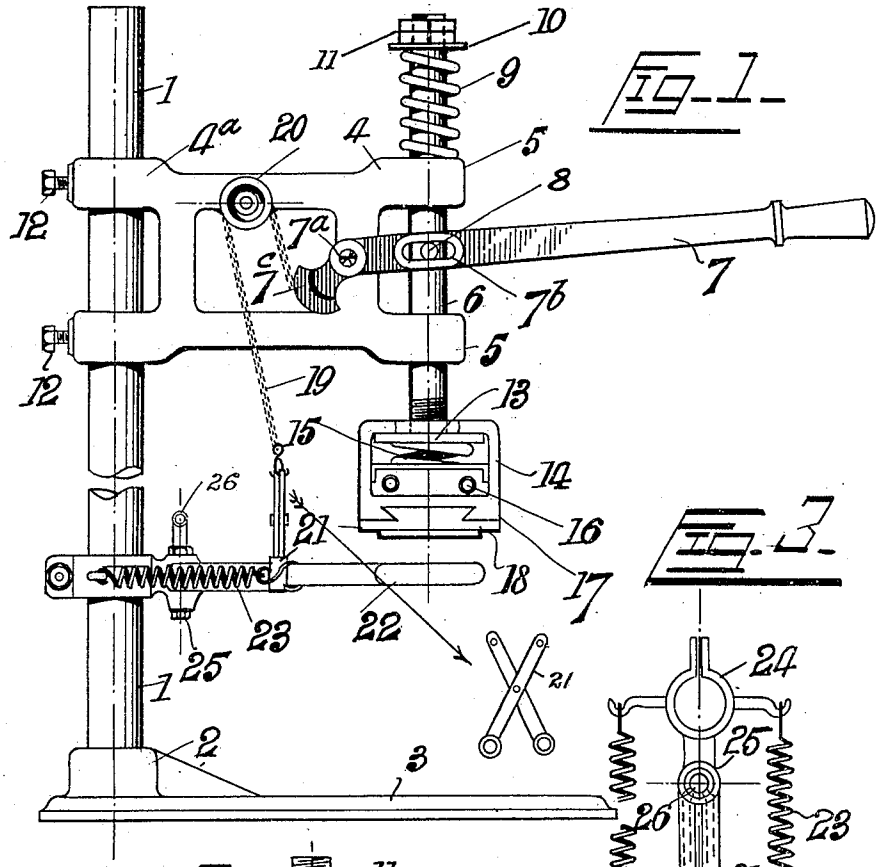


Fig. 1.

Fig. 3.

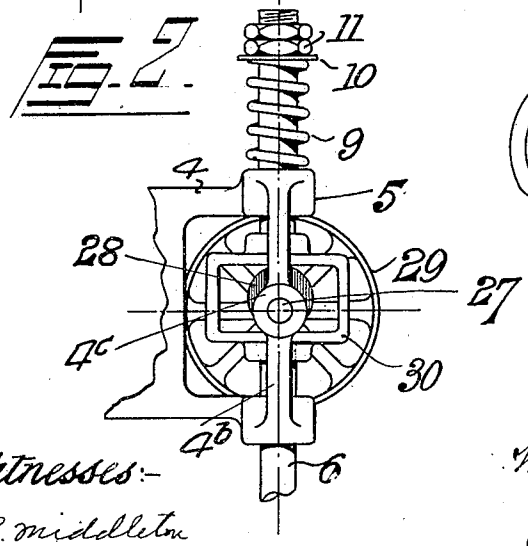


Fig. 2.

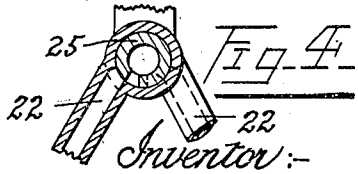


Fig. 4.

Witnesses:-

L. B. Middleton

J. A. McMaster

Inventor:-

William J. Green.

per

Hubert W. J. Jenner.

Attorney.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM JAMES GREEN, OF LONDON, ENGLAND.

BRANDING-MACHINE.

No. 913,884. Specification of Letters Patent. Patented March 2, 1909.

Application filed October 23, 1908. Serial No. 459,220.

To all whom it may concern:

Be it known that I, WILLIAM JAMES GREEN, residing at 36 Lower Marsh, Lambeth, London, S. E., England, chemist, have invented certain new and useful Improvements in Branding-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.

My invention relates to improvements in branding machines and has special reference to that class in which the brands are heated by gas, and which are operated by hand, my improvements comprising a light machine that is quick in operation and in which the brand plates may be removed with ease. It further has means for controlling the source of heat whereby its working costs are reduced to a minimum.

It is carried out as follows, reference being made to the accompanying drawings, in which:—

Figure 1 is an elevation of a complete machine. Fig. 2 shows a method of driving by power. Fig. 3 shows the automatic gas-heating. Fig. 4 is a detail sectional plan view through the plug 25 and arms 22 to show the gas cut off from the arms, and is drawn to a larger scale.

In Fig. 1 I have shown a hand operated branding machine, according to one form of my invention, in which, 1 is the pillar, preferably tubular in section, and which, if occasion necessitates, may be telescopic. This pillar is screwed or socketed into the base 2. The base is provided with a foot or platform 3. Mounted on the pillar 1 is an adjustable arm casting 4, having lugs 5 drilled to receive the spindle 6. A lever 7 is preferably pivoted at 7^a to the arm 4, and has a slot 7^b cut in its length in which a pin 8 in the spindle 6 rakes a bearing. A spring 9 surrounds the upper part of the spindle 6 reacting between the lug 5 and a washer 10, nuts 11 securing the washer from rising. The cast arm is secured to the pillar by set screws 12 passing through the arm bosses 4^a to the pillar, the spindle 6 terminates at its lower extremity with a head 13 screwed, forged with, or pinned thereto. The branding head consists of a divided box, 14 and accommodates in its upper part a spring 15, and in the lower part the atmospheric burners 16, or other source of heat. The base 17 is grooved to receive the brand-plate 18. The brand-plate 18 has a dovetailed projection which is slidable horizontally in a dovetailed groove in the bottom of the branding-head. Although I have described the branding head as containing the burners, I may place these below the brand-plate, see Figs. 1 and 3, and make provision for automatically moving these burners out of the way of the branding head when the lever is depressed. This is accomplished as follows:—The lever 7 has a segmental extension 7^c to which a cord, chain, or flexible-wire 19 is attached. This cord, passes over a pulley 20, stud pivoted to the cast arm 4, and is attached to the two levers 21 hinged to the gas bracket arms 22. These arms are bent as shown in Fig. 3, and have springs 23 normally tending to keep the gas arms swung apart and away from the branding head. The gas brackets are hinged to a collar 24, secured to the pillar 1, the hinge pin 25 being a perforated plug whose apertures are so arranged that gas is cut off from the brackets when they are moved aside as shown in Fig. 4. The plug 25 has a gas pipe connection 26. The operation of this form of my invention is as follows:—Presuming the burners are within the branding head, the brand-plate 18 is inserted and heated by the gas-jets, which I find give their best heat when impinging obliquely toward the center. The object to be branded is now placed beneath and the handled lever 7 depressed. After the brand has been in contact with the object branded for a short while the operator allows the lever to go, which, by the action of the spring 9, is raised to its proper position for the next operation.

The spring 15 is arranged between the head 13, which is rigidly secured to the plunger 6, and the lower part of the branding-head 14. The upper part of the branding-head is slidable on the said plunger above the head 13.

In the event of the object branded presenting other than a level surface the spring 15 admits a certain amount of rock so that the impression be true.

When a movable burner beneath the branding head is employed the operation of the branding machine is identical, but the burner brackets 22 are removed apart by the

springs 23, directly the lever is depressed, the cord allowing the cross-levers to open out by the action of the springs.

In Fig. 2 I have shown my invention when power driven, in this case the arm casting 4 has brackets 4^b whose bosses 4^c carry the power shaft 27. This arm casting 4 also acts as a guide to the eccentric race 30. Keyed on the shaft is an eccentric 28, and fast and loose pulleys 29. The spindle 6 is divided and an eccentric race 30 interposed between its upper and lower portions. This form of branding machine is adapted for use with automatic box machinery or in cases where speed is desirable.

Although I have shown a spring 9 for bringing the branding head into a normally inoperative position it is obvious that I may substitute a mechanical equivalent in the shape of a counter balance disposed upon an extension of the lever, or by a cord and weight.

To raise or lower the branding device upon its supporting pillar, the set screws 12 are loosened when the whole may be moved up or down. By placing a block of wood between the lever and the top lug, the lever may be used to assist in this operation.

From the foregoing it will be observed that with a minimum of detail I am enabled to construct an efficient and inexpensive branding machine, that will brand quickly and yet give the results both as to clearness and depths, of the heavier types and of more elaborate design.

I claim.

1. In a branding machine, the combination, with a supporting frame, of a plunger slidable in the frame and provided with a head, a hollow branding-head slidable on the end portion of the said plunger and inclosing the said head, a spring interposed between the said head and branding-head, and a removable brand-plate provided with a dovetailed projection which is slidable in a dovetailed groove in the bottom of the said branding-head.

2. In a branding machine, the combination, with slidable branding devices, and means for moving the said devices vertically; of a gas supply valve, pivoted burner arms connected with the said valve, springs operating to move the said arms apart, pivoted links for drawing the said arms toward each other, and means for connecting the said links with the said branding devices whereby the said arms are moved back and forth in a horizontal plane as the said branding devices are raised and lowered.

In testimony whereof I have affixed my signature, in presence of two witnesses.

WILLIAM JAMES GREEN.

Witnesses:
H. H. ELLIOTT,
H. D. JAMESON.