

Sept. 14, 1926.

1,599,461

E. DINKELMAN

BILLET STAMPING DEVICE

Filed June 13, 1925

2 Sheets-Sheet 1

Fig. 1

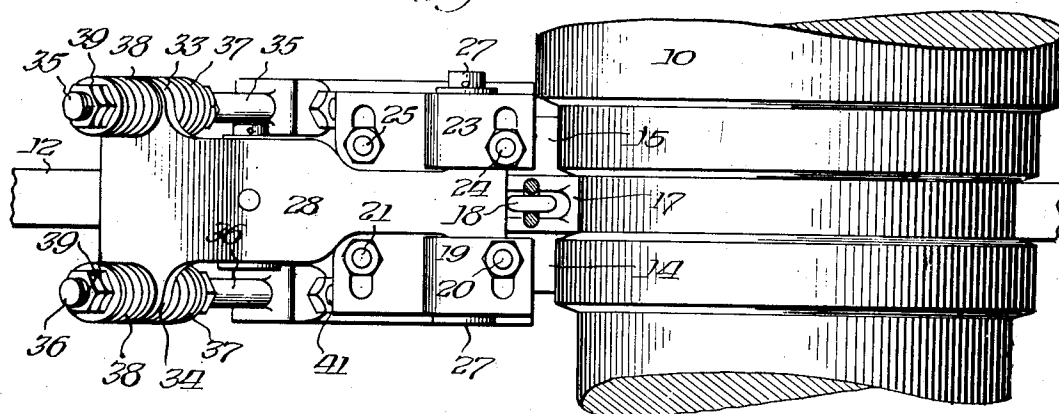
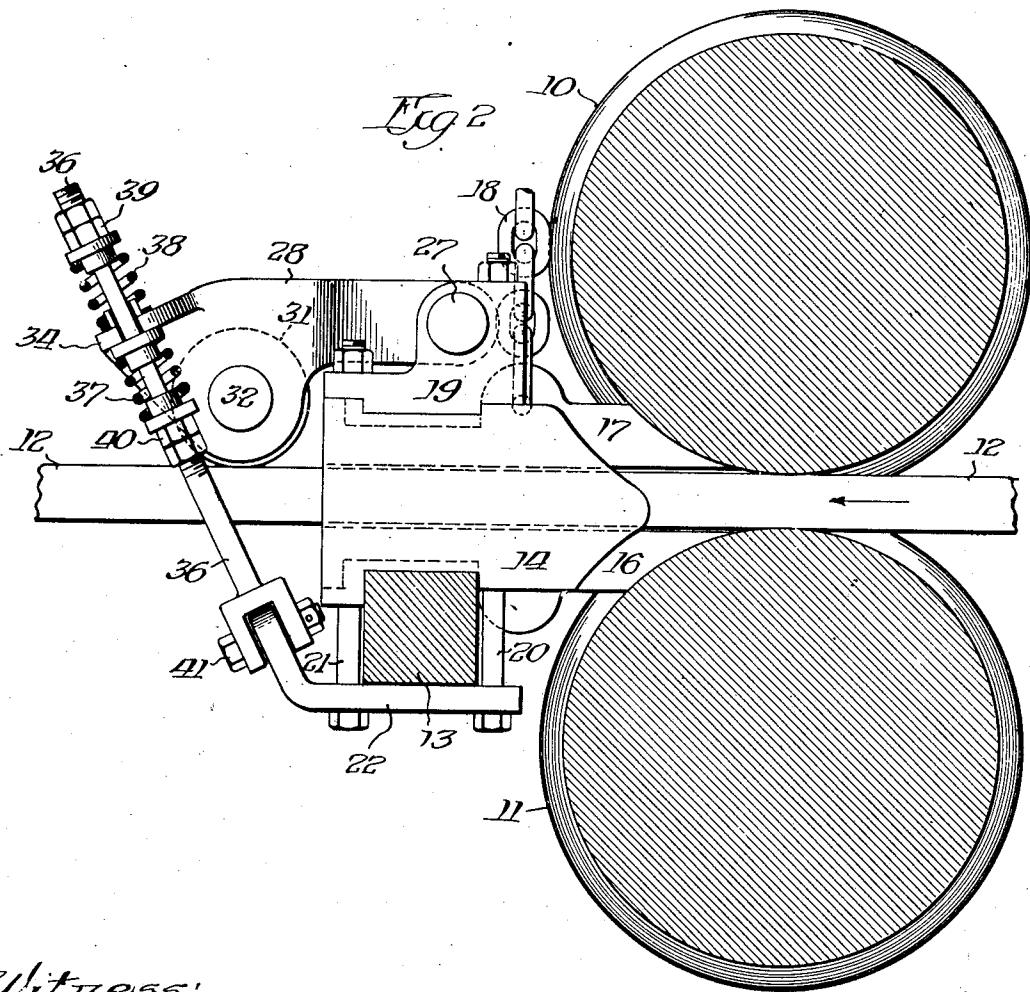


Fig. 2



Witness:
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2 Sheets-Sheet 2

Fig. 3

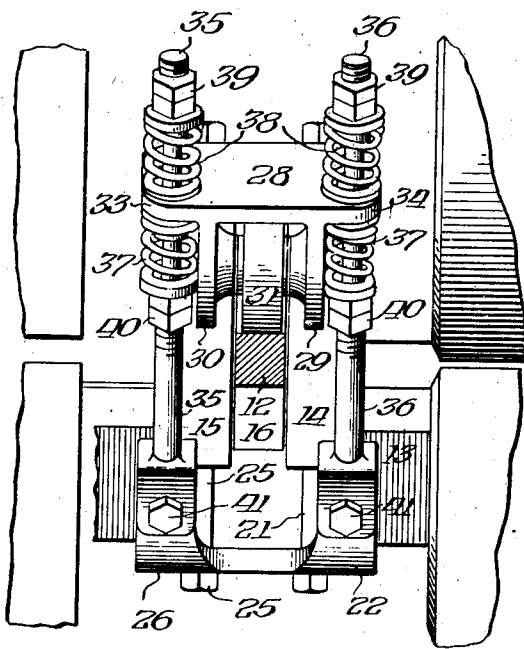


Fig. 4

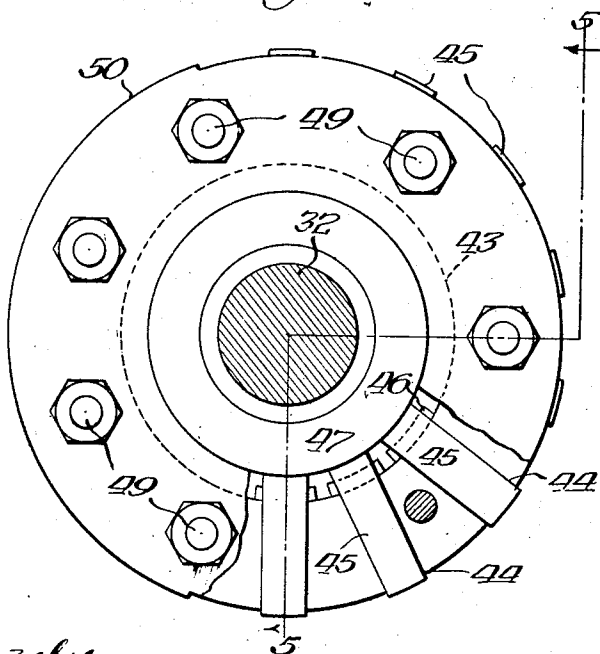
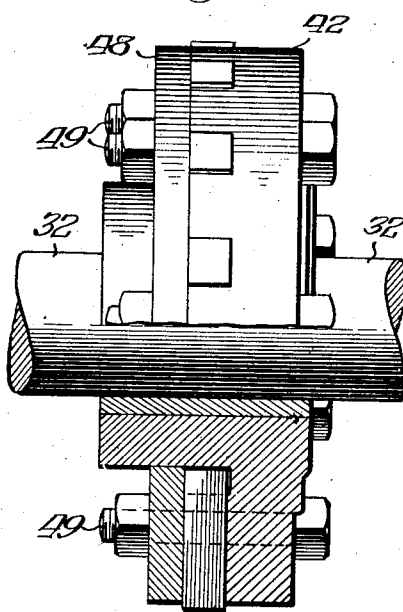


Fig. 5



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ERNEST DINKELMAN, OF CHICAGO, ILLINOIS.

BILLET-STAMPING DEVICE.

Application filed June 13, 1925. Serial No. 36,936.

My invention relates to billet stamping devices and has particular reference to a device which is attached to the roll housing of the output side of a roll stand, and has for its primary object the provision of a device upon which the heat numbers or other identifying indices are stamped upon a billet or other rolled product as it passes from the rolls so that the particular heat of the furnace from which the billet is being rolled can be thereafter identified.

Another and further object of my invention is the provision of a billet stamping device which is attached to the outgoing side of the roll housing immediately adjacent the rolls for stamping the billet as it comes from the rolls without any attention on the part of the operator or without the necessity of additional operations in order to stamp the billet with the proper identifying marks.

Another and further object of my invention is the provision of a billet stamping device which has a plurality of dies associated therewith which can be easily changed to form a combination of any numbers or figures desired, and which is flexible, adjustable and easy of operation.

Another and further object of my invention is the provision of a marking device in which a marking wheel is used, having a plurality of dies inserted therein, the said wheel revolving about a common center, one portion of the wheel having a larger radius than the other portion thereof in which the dies are set so that the proper spacing of the identifying marks may be made upon the billet by the number and position of the marking dies.

These and other objects of my invention will be more fully and better understood by reference to the accompanying sheet of drawings and in which—

Figure 1 is a top view of my improved invention;

Figure 2 is a side view, partially in section and partially in elevation, showing the device attached to the roll housing;

Figure 3 is an end view of the device looking towards the rolls to which the device is attached;

Figure 4 is an elevational view of the marking wheel used in connection with the device; and

Figure 5 is a view partially in section and partially in elevation on lines 5—5 of Figure 4.

Referring now specifically to the drawings, an upper roll 10 is shown, and a lower roll 11, having a billet 12 passing therebetween, and having the usual back rest bar 13 extending longitudinally of the rolls and spaced therefrom, and upon which a pair of side guides 14 and 15 of the usual type are mounted. A bottom resting guide 16 is provided which is mounted upon the rest bar 13 in any approved manner and a top hanging guide 17 is also mounted upon the rest bar and held in contact with the upper roll 10 by means of a chain 18 having a weight or spring attached thereto in the usual manner. Immediately above the side guide 14 and superimposed thereon is a bracket 19, having a pair of bolts 20 and 21 extending therethrough, the said bolts passing through a bracket 22 at the lower end thereof, the said bolts 20 and 21 clamping the side guide 14 and the bracket 19 securely to the rest bar 13. At the opposite side from the guide 14 and above the side guide 15 is a bracket 23 clamped into position by means of a pair of bolts 24 and 25, which extends downward below the rest bar 13, and having a bracket 26 at the lower ends thereof which serves as a means of attachment for certain of the parts hereinafter described, and also as a clamping member for the bolts 24 and 25, thereby holding the side guide 15 and bracket 23 securely to the rest bar 13. Mounted between the brackets 19 and 23 by means of a pin 27 extending through one end thereof, is a stamp holder 28 having a pair of downwardly extending trunnions 29 and 30 formed thereon between which a stamp wheel 31 is mounted by means of a pin 32, the said stamp wheel being illustrated in detail in Figures 4 and 5. The outer end of the stamp holder 28 has a pair of outwardly extending portions 33 and 34 formed thereon having holes therein through which rods 35 and 36 extend, which pass on each side of the billet, each of the said rods having a pair of upper and lower springs 37 and 38 mounted thereon engaging against the portions 33 and 34 of the stamp holder heretofore described, and having suitable upper locking nuts 39, 39 in threaded engagement with the rods 35 and 36 by means of which the requisite amount of tension can be put upon the upper springs 38, each of said rods having a pair of lower locking nuts 40, 40 thereon by means of which the proper amount of tension can be placed

upon the lower springs 37, 37 so that the marking wheel 31 is caused to contact with the billet 12 with sufficient pressure to imprint an identifying mark on the billet carried by the dies in the marking wheel 31 hereinafter described. The lower ends of the rods 35 and 36 are bifurcated and are secured to the brackets 22 and 26 by means of bolts 41, 41 so that the stamp holder is held in extended position with the stamp wheel 31 in such adjusted position that it contacts with the billet passing through the rolls sufficiently so as to imprint thereon the identifying marks from the dies carried by the said marking wheel.

The stamp wheel 31 is composed of a pair of members, a circular body member 42 being provided having an annular channel 43 formed therein, and having a plurality of radially extending holes 44 therein within which a plurality of marking dies 45, 45 are positioned, the said dies having pins 46 inserted through their inner ends which engage in the groove 43 with the rear end abutting against the hub 47 of the wheel 42, the said dies or marking members extending a slight distance beyond the outer periphery of the member 42, and having figures or other marking indicia cut in their ends so that an imprint is made in the billet as it is delivered from the rolls. A face plate 48 is provided which is secured to the member 42 by means of a plurality of bolts 49, 49 so that the dies or marking device 45, 45 are securely held positioned in the wheel 42. The openings 44 extend only a partial distance around the outer periphery of the wheel 42. The balance of the outer periphery of the member 42, as at 50, is smooth and has a slightly greater radius than the portion of the wheel carrying the dies and provides a spacing means for the wheel as it comes into contact with the billet as the billet passes through the rolls.

It will be understood also that the number of the dies 45, 45 can be varied so as to provide any number of combination of letters or figures necessary to properly mark each billet, and preferably with such a combination of figures as conform to the heat numbers from the furnace so that the particular heat number of each furnace and the billet and steel formed therefrom can be traced and followed through to the complete manufactured article.

In operation the device is exceedingly simple as it will be understood from the description heretofore given how the device is attached to the outgoing side of the roll housing so that a billet passing through the rolls as shown in Figure 2 comes in contact with the outer periphery of the marking wheel 31 carrying the dies and is held in engagement with the upper side of the billet by the springs 38, 38 so that as the billet

is forced through the rolls, the wheel 31 as it turns upon the billet leaves the imprint from the dies 45 in the hot metal forming the billet. The necessary tension for marking the billet and for properly adjusting the marking wheel is provided by means of the locking nuts on the rods through the springs which support the outer end of the marking holder, so that a spring tension is kept on the marking wheel 31 during the operation of the device.

It will also be understood that the mechanism described conforms to the standard roll housing and that the device can be applied to the roll housing at any number of the rolls desired so that a complete marking of the billet can be retained as the billet passes through the various sets of rolls as it is being fashioned into a manufactured article. It will also be understood that the placing of the marking device immediately adjacent the output side of the rolls eliminates the necessity of running the billets over a table for the purpose of marking them, or for using additional means involving an extra handling of the billets in order that they may be marked so as to be able to identify the billets and thus know the chemical analysis of the steel which enters into the manufactured article, a condition which has become highly important in the steel industry of today.

Though a preferred embodiment of the present invention has been described in detail, it will be clear that many modifications will occur to those skilled in the art. It is intended to cover all such modifications that fall within the scope of the appended claims.

I claim:

1. A marking device comprising in combination a holder, means at the inner end of said holder whereby the same is pivotally mounted to the rest bar of the roll housing, a pair of rods at the outer end of said rest bar, means for attaching the said rods to the rest bar at their lower ends, springs mounted upon said rods carrying said holder, and a rotary marking wheel carried by the said holder.

2. A marking device comprising in combination a holder having a pair of downwardly extending spaced trunnions thereon, means for pivotally mounting the said holder at the inner end thereof to the roll housing, a marking wheel mounted on said holder between the trunnions, a pair of rods extending through the said holder at its outer end thereof, upper and lower springs carried by said rods and placed above and below the said holder respectively, and means for attaching the said rods at their lower ends to the roll housing.

3. A marking device comprising in combination a pair of brackets secured to the

side guides of a roll housing, a holder means for pivotally mounting the holder at the inner end thereof to the said brackets, a marking wheel carried by said holder, a pair of rods extending through the said holder at each side thereof at its outer end, upper and lower springs carried by each of said rods between which the said holder is mounted, and means for securing the lower end of said rods to the roll housing. 10

Signed at Chicago, Illinois, this 27th day of May, 1925.

ERNEST DINKELMAN.