

No. 875,092.

PATENTED DEC. 31, 1907.

I. S. MERRELL.
CAN MARKING MACHINE.
APPLICATION FILED JULY 31, 1906.

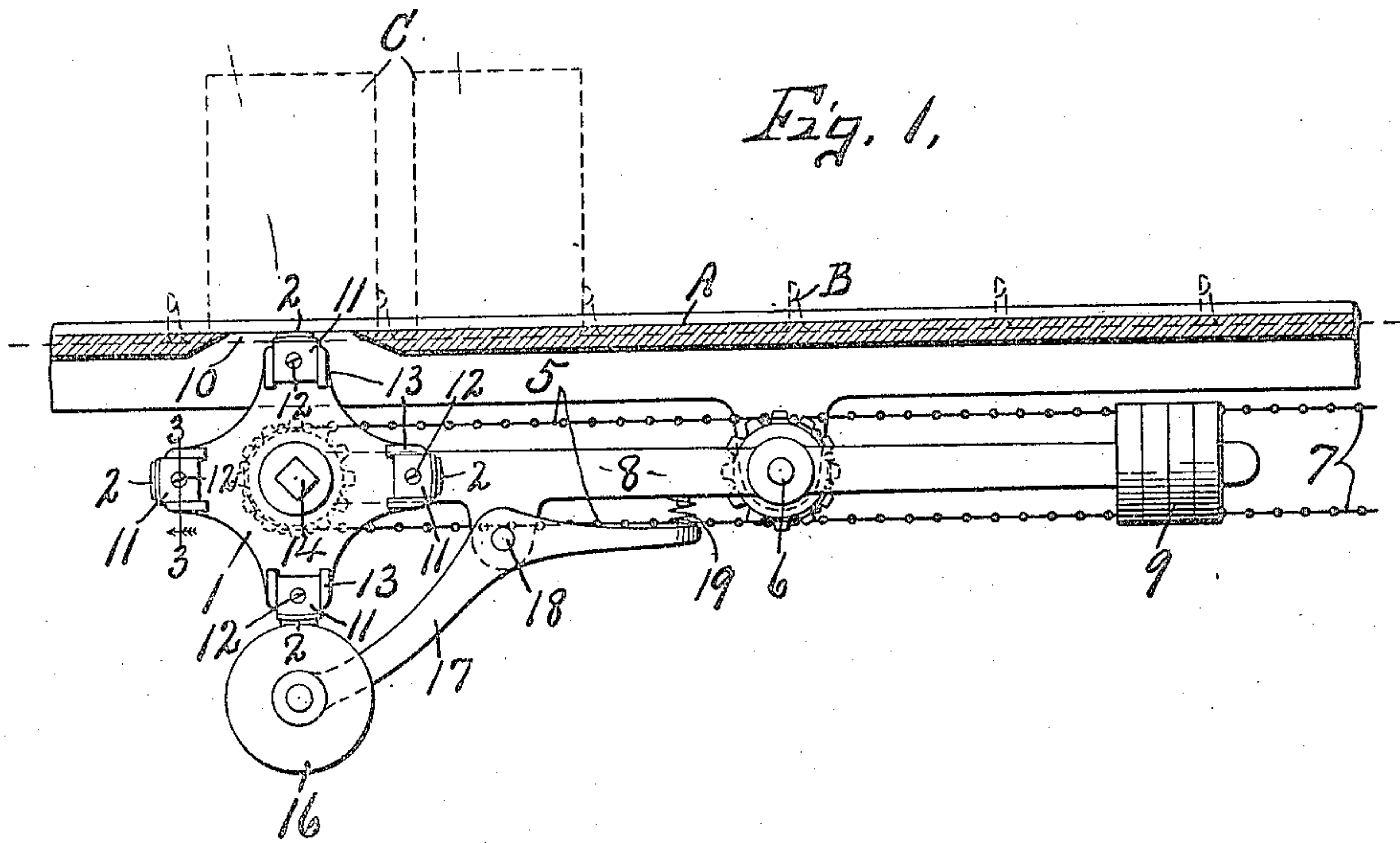


Fig. 2.

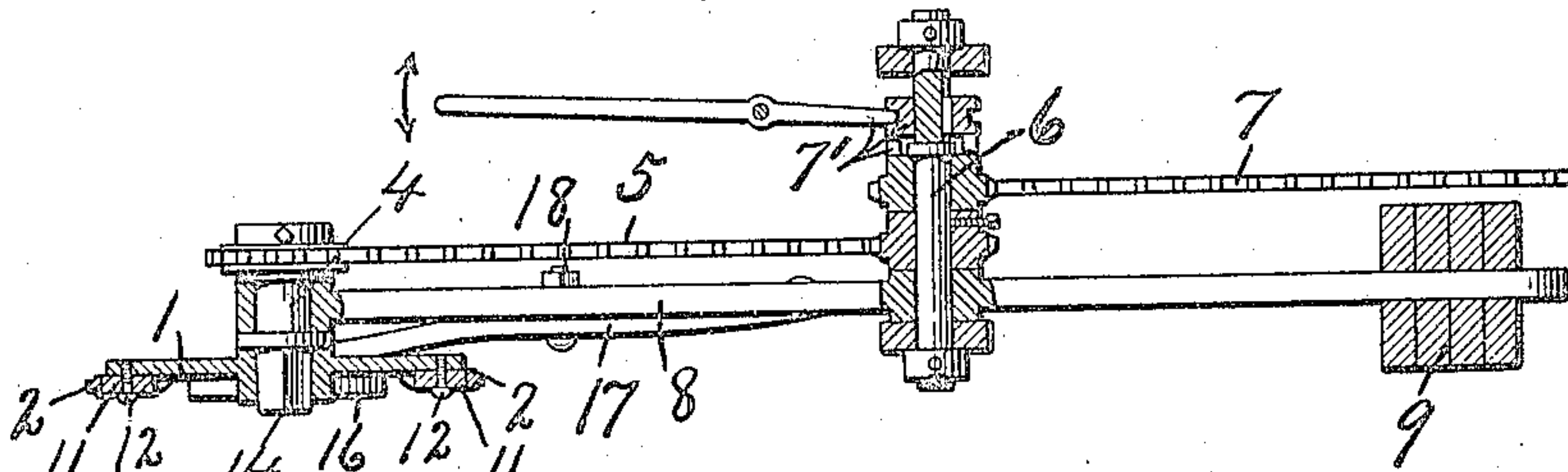


Fig. 4.

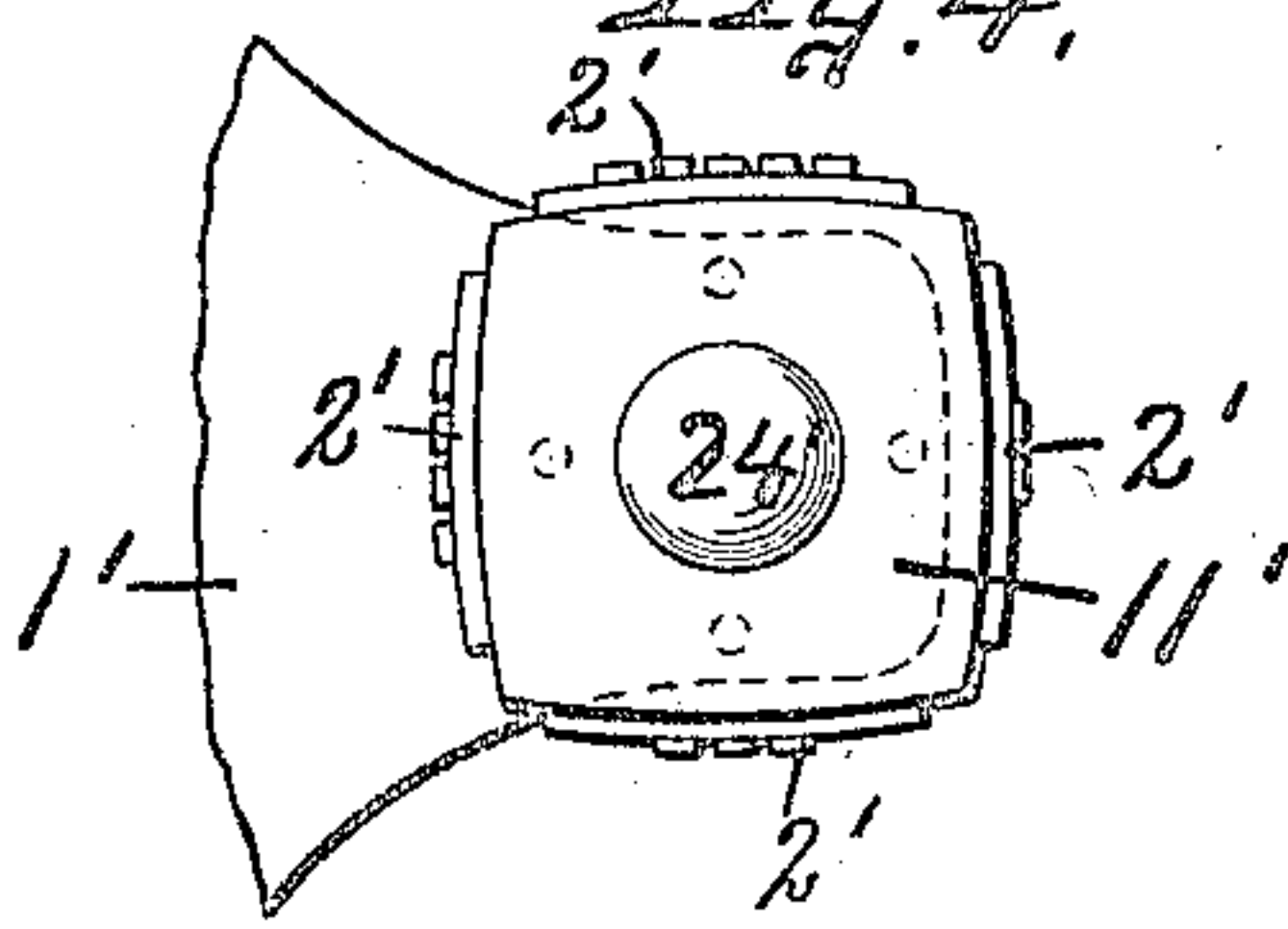


Fig. 3.

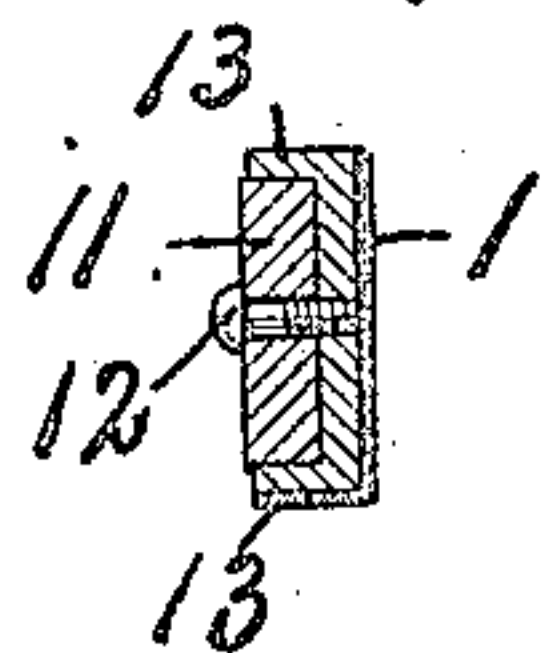
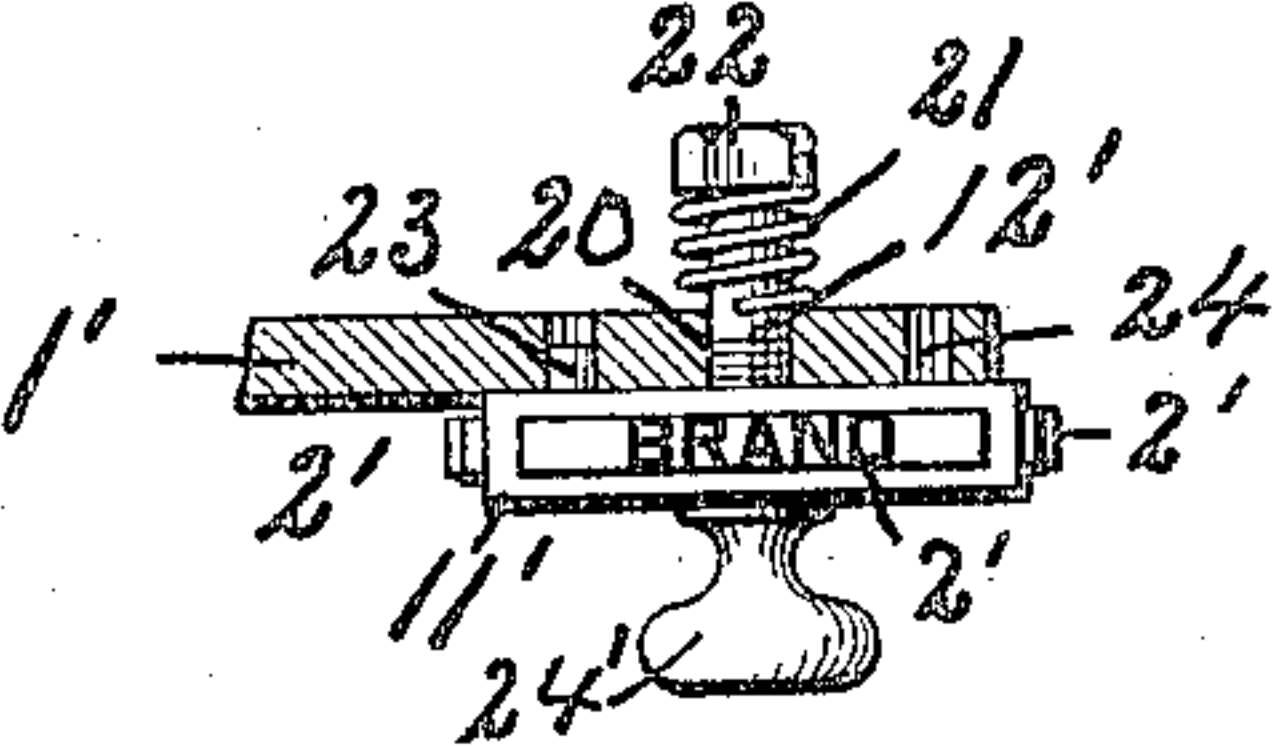


Fig. 5.



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IRVING S. MERRELL, OF SYRACUSE, NEW YORK, ASSIGNOR TO MERRELL-SOULE COMPANY,
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CAN-MARKING MACHINE.

No. 875,092.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed July 31, 1905. Serial No. 271,976.

To all whom it may concern:

Be it known that I, IRVING S. MERRELL, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Can-Marking Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in can-marking machines, and is particularly useful in canning factories for the purpose of branding or stamping certain marks or characters upon the cans, as they are successively fed, one-by-one, along a suitable guide or table after being filled with the material to be preserved.

It is common practice to label or brand the cans for different materials, or those containing different grades of the same material, by some distinguishing mark or character, but so far as I am aware, this has been done only by means of a hand-stamp.

My object is to automatically impress or print the distinguishing brand or mark upon the bottom of the filled can as it is automatically fed from one place to another during the process of canning, and to enable the operator to easily and quickly change the stamp when desired, without stopping or retarding the operation of the machine.

A more specific object is to move the marker at the same rate of speed and in the same direction as that of the can, preferably under a rolling contact with the bottom of the cans, so as to leave a uniformly perfect impression or print in substantially the same relative position on the bottom of each can, where the mark is protected from obliteration by the annular flange with which said can is provided, and to provide means for transferring the printing ink to the marker at regular intervals, or at each printing operation.

A further object is to enable the marker to be stopped or started at will irrespective of the can feeding mechanism.

Other objects and uses will appear in the following description.

In the drawings—Figure 1 is a longitudinal side elevation of a can-marking device embodying the features of my invention, the can supporting table being shown in section, and the cans and their feeding means being shown in dotted lines. Fig. 2 is a top plan of the marking device seen in Fig. 1, the marking-

wheel, clutch and other parts being shown in section. Fig. 3 is an enlarged detail sectional view taken on line 3—3, Fig. 1, showing the manner of securing type stamps to the wheel. Fig. 4 is a detail view of a portion of a marking-wheel showing a circumferentially adjustable type-block, as provided with a series of marking faces, each representing a different brand. Fig. 5 is a sectional view, partly in elevation, of the modified marking device seen in Fig. 4.

During the process of canning, the filled cans are fed right side up along a supporting bed or guide by a suitable conveyer so as to follow one another in more or less close proximity, and are preferably stamped on the bottoms while in transit from the filler to the capping machine.

The specific means for supporting these cans and feeding them successively to the marking device is immaterial, and I have, therefore, shown, somewhat diagrammatically, a supporting-bed or guide —A— and a portion of a conveyer —B—, the latter being shown by dotted lines in Fig. 1, as provided with a series of arms, or abutments, spaced equal distance apart for engaging and successively feeding the cans, one-by-one, to my improved marking device. This marking device comprises, in this instance, a rotary disk or wheel —1— having a series of type —2— spaced equidistant apart circumferentially, said wheel being mounted upon a rotary shaft —4— which is positively driven by a belt or chain —5— from a driving shaft —6—, the latter being in turn driven from any available source of power through the medium of a second endless belt —7—, and clutch —7'—.

The rotary shaft —4— is shown as mounted in a horizontal position upon one end of an oscillatory lever —8—, which is fulcrumed on the shaft —6— and has its other end provided with a counter-weight —9—, whereby the type-wheel —1— is yieldingly pressed against the can.

The marking-wheel seen in Figs. 1 to 3, is provided with a series of four stamps or type —2— which travel in a suitable opening —10— in the guide or bed —A—, and are preferably made of rubber and secured to woodblocks —11—, which, in turn, are rigidly held in place on the wheel —1— by suitable fastening means, as screws —12— and opposed shoulders —13—, said blocks

fitting snugly between the shoulders —13— which hold them firmly against circumferential displacement. This wheel is mounted upon an angular tapering end —14— of the shaft —4—, which latter fits into a tapering angular socket centrally in the hub of the wheel —1— so that the wheel is held solely by friction upon the tapering end of the shaft —4— and may be removed endwise, by hand, when it is desired to change from one brand to another. It is evident, however, that any other suitable form of removable marker moving in unison with the can feed, either intermittently or continuously, may be employed and still be within the scope of my invention. In this instance, the stamps —2— on each disk are identical, and I usually have a number of the disks or wheels —1— at hand, each having different stamps for different brands of canned goods, although it is clearly evident that I may have a series of blocks —11— having different types or brands, and simply change blocks when it is desired to mark the cans with a different brand, but I prefer to use a separate removable type-wheel or type-arm for each brand so that it may be easily and quickly taken off and replaced by another when necessary.

The speed of rotation of the wheel —1— is synchronized with the speed of movement of the conveyer —B— in any well known manner, not necessary to herein describe, the only requirement being that the marker and can move in unison under a rolling contact, thereby giving a perfect impression or print of the particular brand of goods upon each can.

The type —2— may be inked in any desired manner as by an inking roller —16—, which in this instance, contacts with the type opposite the printing point and is preferably mounted upon one end of a lever —17—, which is pivoted at —18—, to the lever —8— between the fulcrum —6— and shaft —4— and its other end extends rearwardly and is pressed downwardly by a compression-spring —19—, thereby yieldingly holding the periphery of the inking roller —16— in the path of the moving type —2—.

It will be observed that the type-wheels are recessed or cut away between the type-blocks to afford finger space and allow the type-wheel to be placed upon or withdrawn by hand from the shaft —4—, the movement of the conveyer —B— and printing-wheel —1— being sufficiently slow to permit the operator to withdraw one wheel and replace it with another while changing from the canning of one quality or brand of material to another. This recessing of the periphery of the wheel, forms in this instance, four arms, each carrying a fixed type-block —11—, but in some instances I prefer to use an ad-

justable type-block, as —11'—, Fig. 4, which is rotatably mounted on one of the arms —1'—, similar to the wheel —1— and is provided with a plurality of type-faces —2'—, either of which may be brought to the printing-position by merely rotating the block —11'— upon its supporting spindle —12'—.

Each of the type —2'— represents a different brand so that by providing the wheel 1'— with four of these blocks 11'—, each rotatable upon its spindle 12'—, it is evident that four different brands may be printed from the same type-wheel without removing it from its driving shaft.

It will be seen upon reference to Fig. 5 that the rotary spindle 12' upon which the type-block 11'— is secured is passed through an aperture —20— in the wheel 1'— and is encircled by a friction compression-spring —21— having one end bearing against the opposite side of the wheel and its other end tensioned by a suitable nut —22—, the block being held against rotation by one or more pins or studs —23— which are movable into and out of apertures —24— in the disk or wheel 1'— at one side of the pin 12'—.

Each of the type-blocks —11'— is provided with a knob or hand-piece —24'—, whereby when it is desired to change the type or brand the block —11— is drawn out against the action of the spring —21— and thereby withdraws the pin —23— from the aperture —24—, whereupon the block 11'— may be readily rotated to bring the desired type to the printing point, in which position, the pin —23— will enter another one of the apertures —24— and will be held against rotation by said pin and the spring —21—.

The operation, briefly stated, is as follows: The cans, as —C—, are fed successively along the guide —A— by means of a conveyer —B—, and as each can is brought into registration with the opening —10—, one of the type —2— is simultaneously brought into rolling contact with the can, thereby imprinting its particular brand thereon. When it is desired to change the brand or stamp, the operator simply grasps the wheel —1— in the hand, and draws it endwise from the tapering angular end —14— and then replaces it with another wheel having the desired type thereon, which may be done while the wheel is in motion, or while it is temporarily stopped by throwing the clutch 7' out of action.

I believe that I am the first to produce a device for automatically branding or marking the cans during the process of canning, and therefore, I do not limit myself to the construction of device shown and described

What I claim:

A can marking machine comprising a can supporting bed having an opening therein, means to feed the cans right side up along

the bed and across said opening, a rotary type carrying disk having its type traveling in said opening and making rolling contact with the bottoms of the cans as the latter are successively presented to said opening, a yielding support for the type carrying disk and means to rotate said disk.

In witness whereof I have hereunto set my hand this 28 day of July 1905.

IRVING S. MERRELL.

Witnesses:

H. E. CHASE,
HOWARD P. DENISON.