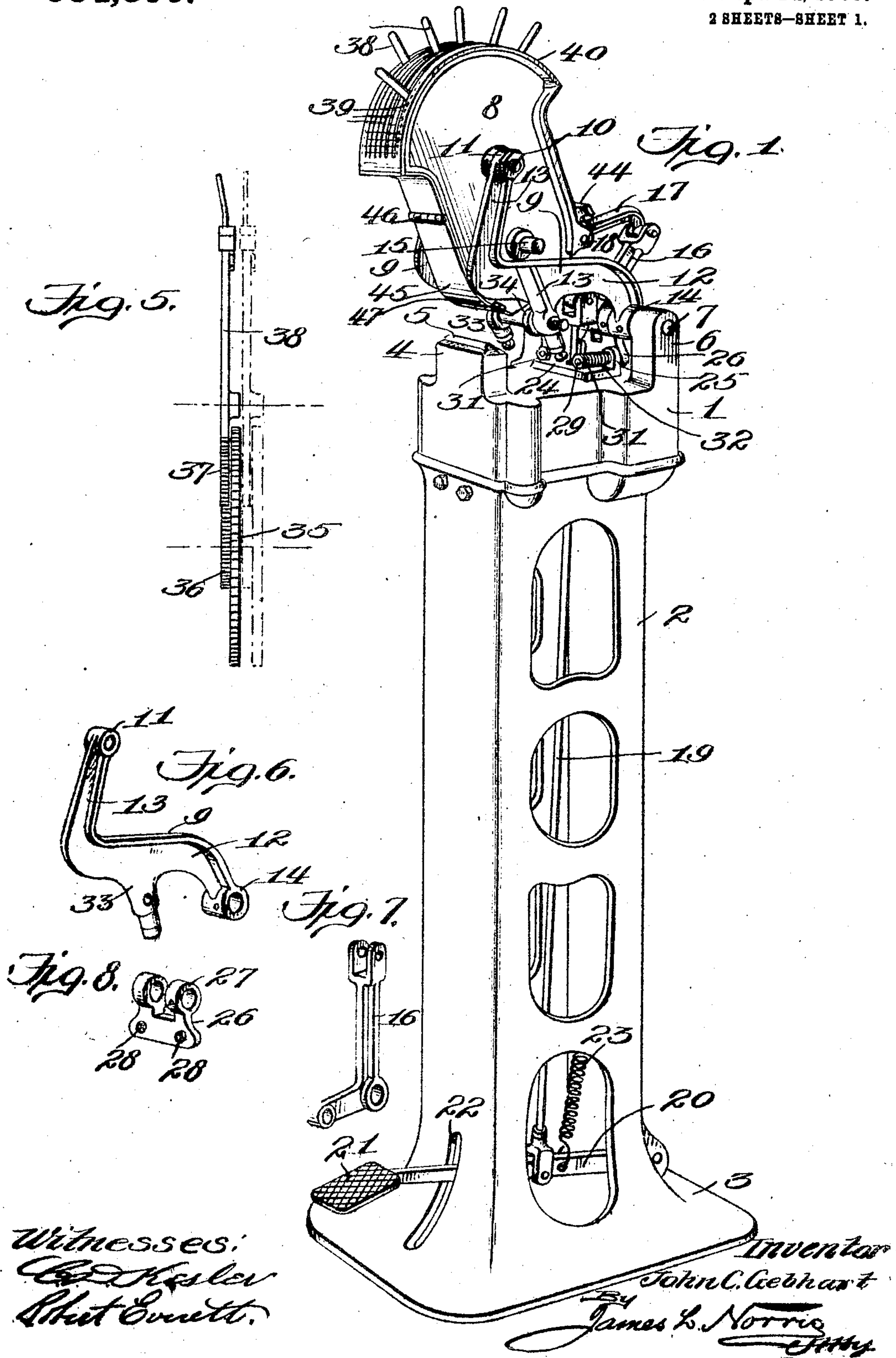


J. C. GEBHART.
LAUNDRY MARKING MACHINE.
APPLICATION FILED NOV. 21, 1908.

934,300.

Patented Sept. 14, 1909.

2 SHEETS—SHEET 1.

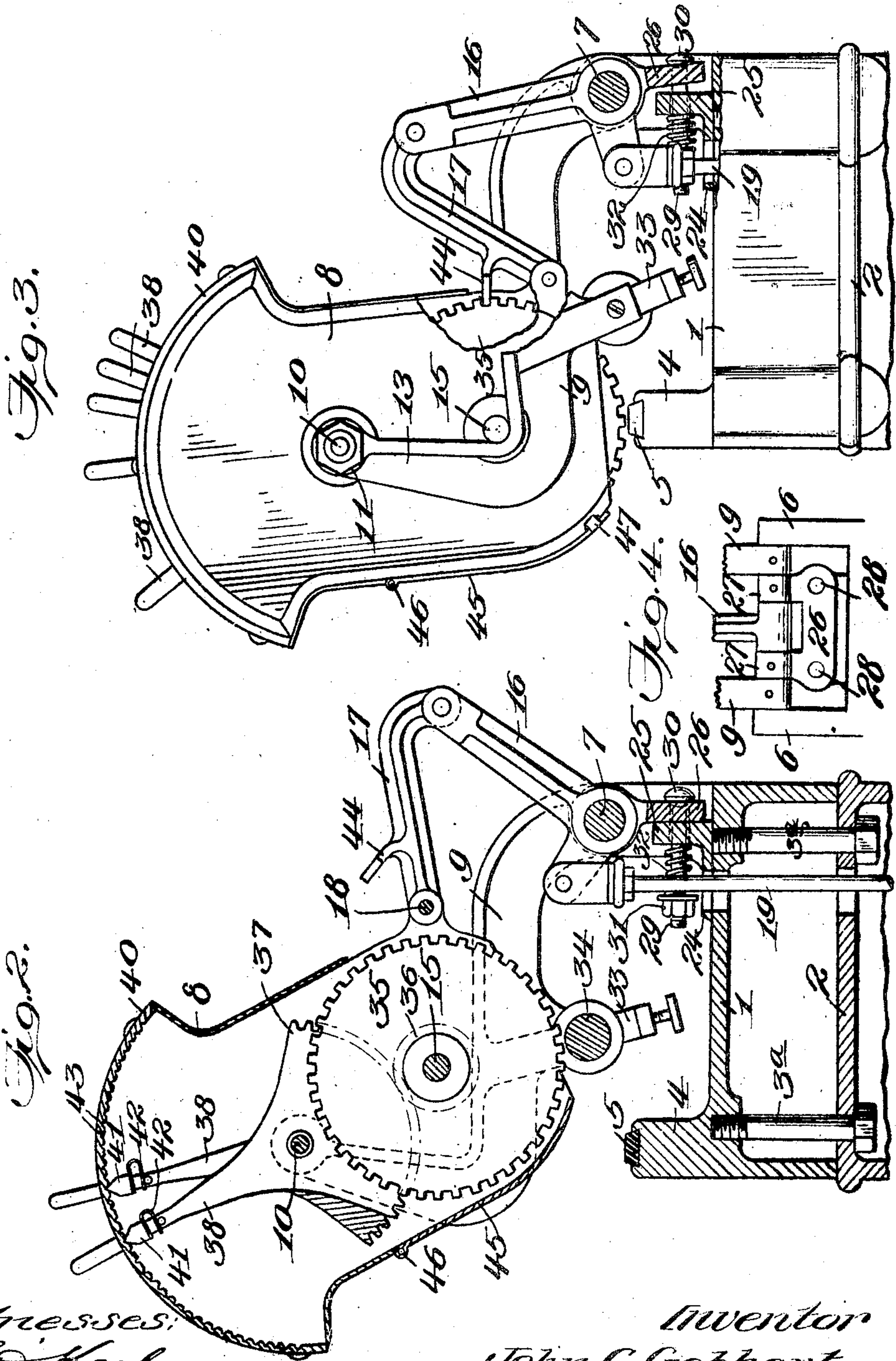


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JOHN C. GEBHART, OF MEMPHIS, TENNESSEE.

LAUNDRY-MARKING MACHINE.

934,300.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed November 21, 1908. Serial No. 463,844.

To all whom it may concern:

Be it known that I, JOHN C. GEBHART, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented new and useful Improvements in Laundry-Marking Machines, of which the following is a specification.

This invention relates to new and useful improvements in laundry marking machines and has reference more particularly to a machine of that type which includes a movable supporting means having type wheels associated therewith, which type wheels are capable of individual adjustment. The supporting means is movable with respect to a suitable platen or anvil in order to bring the type wheels into an operative position.

In the present invention the type wheels are mounted in a casing and the latter is carried by movable supporting means.

The invention aims primarily to provide supporting means of novel construction and employed in combination with novel actuating elements for operating the supporting means actively and for resetting the supporting means after each active operation thereof.

The invention includes as a further novel feature, the specific manner of mounting the type wheel casing with relation to the supporting means whereby said casing has an initial movement independent of said supporting means to bring the determinate line of type over the anvil, and whereby after such initial movement of the casing, a further movement thereof with the supporting means is had in order to effect the marking operation.

The invention possesses further novelty in the provision of automatic means for locking the type wheels against movement after they have been set and in the operative position of the casing. This locking means is supplemental to a means for locking each individual type wheel against movement after an adjustment thereof.

The invention comprehends the above novel structural features toward the ends of simplicity in construction, reliability and accuracy in operation and inexpensiveness in the reduction of the number of parts ordinarily employed in marking machines of the general type stated.

The invention will be best understood in view of the following description which is

to be read in connection with the accompanying drawings wherein is shown a preferred and advantageous form of construction in accordance with the present invention, while the novel features of the improvement are defined in language of proper determinative character in the claims appended at the end of this specification.

In the said drawings:—Figure 1 is a perspective view of a marking machine constructed in accordance with the present invention and showing the complete assemblage of parts, the elements being in their normal positions. Fig. 2 is a central longitudinal section illustrating the structural details of the movable type casing, the movable supporting means and the actuating parts, the elements being in the position shown in Fig. 1. Fig. 3 is a side elevation with parts broken away and parts in section, the machine being shown as in operation. Fig. 4 is a transverse sectional view showing the arrangement of the elements assembled upon the main supporting shaft. Fig. 5 is an elevation in detached relation of one of the type wheels and its adjusting means. Fig. 6 is a detail perspective view of one of the arms of the supporting means, the other arm being similar in construction. Fig. 7 is a detail perspective view of a bell crank lever forming an element of the operating train which will be described in detail, and Fig. 8 is a similar view of an abutment member which is mounted on the main supporting shaft and which is associated with the resetting means previously mentioned.

Similar characters of reference refer to corresponding parts throughout the several views.

For convenience the operating parts are carried on a base 1 which is mounted on a supporting pedestal 2, the latter being preferably hollow and having at its base a projecting flange 3 for attachment to the floor. The base 1 is preferably detachably assembled upon the pedestal 2 as by bolt and nut connections 3^a shown in Fig. 2. At the front end of said base an anvil 4 is provided, in which is set a raised section 5, preferably of rubber, which serves the purposes of a platen and shall hereafter be referred to by that name. The base 1 is formed at its rear end with a pair of spaced upwardly projecting bearing members 6 in which is journaled a transverse shaft 7, which forms the main supporting shaft.

The type wheel casing is indicated by the numeral 8 and is preferably supported pivotally with relation to arms 9, one of which is illustrated more particularly in Fig. 6. A shaft 10 extends transversely of the casing 8 and in addition to serving as the pivot for operating lever quadrants to be later described, serves as the connection between the casing 8 and the arms 9. Accordingly the ends of the shafts 10 are extended and journaled in bearings 11 formed in the upper ends of the arms 9. The latter are of angular formation and include horizontal portions 12 and vertical portions 13 which extend upwardly from the portions 12 at a substantial right angle thereto. The arms 9 have at their rear ends off-set collars 14 which surround the shaft 7 and are held fast thereon by any suitable means.

The type wheel shaft is indicated by the numeral 15 and is disposed transversely of the casing 8, beyond which its ends are extended for a purpose to be hereinafter set forth.

The casing 8 and the arms 9 are moved pivotally by a train of elements including essentially a bell crank lever 16 which is loosely mounted upon the shaft 7, and an angular link 17 connecting the upper end of the lever 16 with the casing 8 at the lower rear portion, as at 18. The link 17 is connected to the longer outwardly projecting arm of the lever 16, and an elongated link 19 is connected to the shorter inwardly projecting arm of said lever, the link 19 extending through the pedestal 2 and being pivoted to an operating lever 20 mounted at the base of the pedestal, and provided with a treadle 21. The lever 20 projects through a slot 22 formed in said pedestal and is preferably upheld so that the lever 16 and the casing 8 are sustained in a normal position by means of a spring 23 of retractile spiral form, one end of the spring 23 being connected to the lever 20 as shown and the other end of said spring being connected within the pedestal 2. The spring 23 affords a means for resetting the lever 16 and the casing 8 with relation to the arms 9 and means are further provided for resetting said arms 9, this last mentioned means comprising preferably a member 24 which is secured to the base 1 at the rear end thereof and which is formed with spaced lugs 25 coöperating with an abutment member 26 illustrated more particularly in Fig. 8. The member 26 depends from the shaft 7 and is formed with collars 27 which surround said shaft and are held fast thereon.

The member 26 is constructed with openings 28 through which are passed pins 29, the latter extending also through openings in the lugs 25 and having at their outer ends rounded heads 30 which engage in suitable seats formed in the member 26, whereby the

pins 29 have a certain degree of play, the openings 28 and the openings in the lugs 25 being of greater diameter than said pins to allow of the necessary play. The pins 29 have their inner ends threaded to receive nuts 31 which confine expansive coil springs 32, the latter surrounding the pins 29 and bearing against the nuts 31 and against the lugs 25.

The arms 9 are formed with projecting bearings 33 which support the shaft of an inking roller 34, the latter contacting with the peripheries of the type wheels within the casing 8; hence it will be seen that when the casing 8 is moved on its pivot 10, the roller 34 will automatically supply ink to the surfaces of the type wheels, the latter traversing said roller as will be readily understood.

The type wheels are indicated by the numeral 35 and are formed with the necessary and desired characters, alphabetical and numerical, the said type wheels being mounted for rotation on the shaft 15 previously referred to, as best represented in Fig. 2. A pinion 36 is made fast to the hub of each type wheel, being cast integral therewith or secured in any other suitable or desired manner. The type wheels are each set whereby the desired character is positioned with respect to the platen 5, the setting means comprising quadrants 37 which are in mesh with a corresponding pinion 36 and which are mounted pivotally on the shaft 10 previously referred to. The quadrants 37 are formed with lever arms 38 which project through slots 39 provided in a cover plate 40 for the casing 8, the projecting portions of the arms 38 serving as handles. The plate 40 is graduated and marked with suitable characters adjacent each slot, whereby the operator may be able to conveniently set the type wheels to the desired position, it being understood that by bringing a lever 38 to a position adjacent the character desired, the corresponding wheel 35 will be set through the means described to a position whereby such character will be presented to the piece to be marked.

Means are provided for locking the levers 38 and consequently the type wheels controlled thereby against accidental movement and such means preferably comprises pawls 41 which rest upon or are secured to springs 42, the latter being secured to the levers 38 and acting to hold the pawls 41 in engagement with teeth 43 formed on the inner or under face of the plate 40, the teeth 43 being arranged adjacent each slot 39 and corresponding in number to the type on the corresponding type wheel 35 and to the markings on the plate 40. It is also preferable to provide means for positively locking the wheels 35 against movement in the operative position of the casing 8, and accordingly the link 17 is formed with a pro-

jecting finger 44 which extends transversely of the type wheels 35 and engages between the peripheral type bearing projections thereof in the operative position of the casing 8, as shown more particularly in Fig. 3, the finger 44 locking the wheels against movement and also serving as an alining means.

In order that ready access may be had to the type wheels for the purposes of cleaning the same, the front wall of the casing 8 is provided with a movable section 45 which is hinged to the upper stationary section as at 46 and is held in closed position by a suitable latch means 47.

In order that the difference in purpose between the finger 44 and the locking pawls 41 may be made clear, it should be stated that the pawls 41 simply hold the levers 38 against accidental displacement, but do not engage with the teeth 43 with sufficient force to hold said levers against manual movement. They do, however, prevent too free a degree of manual movement and by clicking as they engage between the teeth give an audible indication of the movement of the type wheels the distance of a single tooth. The finger 44, however, alines the type and positively holds the wheels 35 against movement, at the same time preventing manual movement of the levers 38. Said finger engages with the type wheels at the completion of the initial relative movement of the casing and prior to its subsequent downward movement toward the platen, remaining in such engagement during the subsequent downward movement of the casing and all the while maintaining the type in proper alinement. Thus if the levers 38 were accidentally struck as by the arm of the operator during the marking operation, such striking would ordinarily effect movement of the wheels 35 from the positions into which they had been set, but owing to the provision of the finger 44, the levers 38 will have no movement if accidentally and violently struck, and consequently the wheels 35 will not be moved. In this manner the reliable operation of the machine is assured.

In use the operator sets the wheels 35 to make the desired impression upon the material, and then depresses the lever 20. Such action moves the bell crank lever 16 inwardly and effects an initial movement of the casing 8 with respect to the arms 9, such initial movement being continued until the projecting ends of the shaft 15 engage the arms 9, as shown in Fig. 3, as at a point at the junction of the portions 12 and 13. Thereafter the projecting ends of the shaft 15 serve as positive connectors whereby the movement of the casing 8 being continued by means of the lever 20, the arms 9 will be moved with respect to the shaft 7 as a pivotal axis by virtue of the engagement of

the ends of the shaft 15 with said arms, as above set forth. When the arms 9 are thus moved, the shaft 7 is turned therewith and the member 26 being fast on the shaft 27 is moved outwardly, thus storing power in the springs 32, as will be readily apparent. This movement of the arms 9 brings the face of the type wheels upon the material to be marked, the latter being of course positioned on the platen 5. When the lever 20 is released the spring 23 resets the casing 8 to its normal position with respect to the arms 9, through the medium of connections 19, 16 and 17. At the same time the springs 32 bearing against the nuts 31 reset the arms 9 to the normal position shown in Fig. 2 and the machine is ready for another operation. The wheels 35 are set when the casing 8 is in its normal inoperative position, as shown in Fig. 2, and in such position of said casing the type wheels do not contact with the inking roller 34. Such contact is only had during the movement of the casing and by the single row of type which is used for marking, such row touching the roller 34 as the casing 8 in its initial movement passes over said roller. The initial movement of the casing 8 also serves to center the previously inked row of type above the work, and the downward movement of said casing in continuation of its initial movement effectually carries out the marking operation.

The improvement has been referred to as a laundry marking machine for the reason that machines of this type are employed for the most part in laundry work, but it is of course apparent that the invention covers all the usages to which the machine may be put. I also desire it to be understood that while the form of the invention herein shown is advantageously employed, it serves merely as an example of illustration of the basic principles of structure and operation involved, and that other forms of the invention preserving such principles may be made which fall within the definitions of the appended claims.

Having fully described my invention, I claim:—

1. In a marking machine of the type set forth, in combination, type carrying means, a movable support therefor, a platen, means associated with the type carrying means for automatically effecting two movements of the latter, the first movement being with relation to the support and the second movement being in a path at an angle to the path of the first movement and with the support, and an operative connection whereby the support is automatically moved with the type carrying means during the second movement of the latter toward the platen and to effect the marking operation.

2. In a marking machine of the type set forth, in combination, movable supporting

means, type carrying means carried by the supporting means and movable with respect thereto, a platen, means associated with the type carrying means and active upon an initial movement of the type carrying means to engage the supporting means and thereby move the latter with the former to effect the marking operation, and means for imparting movement to the type carrying means.

3. In a marking machine of the type set forth, in combination, movable supporting means, type carrying means carried by the supporting means and movable with respect thereto, a platen, means associated with the type carrying means for effecting an initial movement thereof with relation to the supporting means to bring a row of type in line with the platen the supporting means remaining relatively stationary during such initial movement and means operable upon the completion of the initial movement of the type carrying means for automatically moving the supporting means and the type carrying means therewith to effect the marking operation.

4. In a marking machine of the type set forth, in combination, movable supporting means, type carrying means carried by the supporting means and movable with respect thereto, a platen, means for effecting an initial movement of the type carrying means to bring a row of type in line with the platen, means operable upon the completion of the initial movement of the type carrying means for moving the supporting means and the type carrying means therewith to effect the marking operation, means for resetting the type carrying means with respect to the supporting means and means for resetting the supporting means.

5. In a marking machine of the type set forth, in combination, a pivoted supporting arm, a type casing pivoted on the supporting arm and having means to engage the latter and effect movement thereof, a platen, and means for imparting initial independent pivotal movement to the type casing, the latter through said engaging means imparting pivotal movement to the supporting means.

6. In a marking machine of the type set forth, in combination, a pivoted supporting arm, a type casing pivoted on the supporting arm and having means to engage the latter and effect movement thereof, a platen, and means for imparting movement to the type casing and through the latter, by virtue of said engaging means, to said supporting means, comprising a pivoted lever, a link connecting the lever and the type casing and means for operating the lever.

7. In a marking machine, in combination, a type wheel and a platen having two relative movements in angular paths, and a type wheel aliner, the first movement producing an engagement of the type wheel and

the aliner which continues throughout the second movement and the latter movement producing the printing operation.

8. The combination with a type wheel and a platen having two relative movements in angular paths of means for causing the relative movements and a type wheel aliner associated with an element of the means, the first movement producing an engagement of the type wheel and the aliner which continues throughout the second movement and the latter movement producing the printing operation.

9. In a marking machine of the type set forth, in combination, a pivoted supporting arm comprising a substantially horizontal portion and a substantially vertical portion, a type casing pivoted on the supporting arm and having projections to engage the vertical portion thereof, means for moving the type casing, the latter by means of its projections moving the supporting arm, and a platen with respect to which the type casing is movable.

10. In a marking machine of the type set forth, in combination, a shaft mounted for rocking movement, a supporting arm fast on the shaft, an abutment member fast on the shaft, a lever loose on the shaft, a type casing carried by the supporting arm, movable with respect thereto and having means to effect movement of said arm, a connection between said lever and said type casing, means for operating the lever, means for resetting the lever and therewith the type casing after each operation thereof, a stationary member associated with the abutment member and spring means active to hold the abutment member normally against said stationary member, said abutment member in its movement with said shaft away from said stationary member storing power in said spring means, the latter resetting said shaft and said arm after each operative movement thereof.

11. In a marking machine of the type set forth, in combination, a pivoted supporting arm, an inking device provided thereon, a type casing pivoted on the arm, a platen, means for effecting an initial relative movement of the type casing on its pivot to traverse said inking device and to aline with the platen and means for automatically effecting a subsequent movement of the supporting arm on its pivot to move the casing toward the platen for the marking operation.

12. In a marking machine of the type set forth, in combination a movable supporting arm, a type casing movably mounted on said arm, a relatively stationary inking device, means for effecting a preliminary movement of the casing relative to the arm whereby the printing surfaces of the type traverse and contact with said inking device and means for automatically effecting a subse-

quent movement of the casing and the arm together and with relation to said platen.

13. In a marking machine of the type set forth, in combination, a platen, an adjustable type wheel, means for supporting the type wheel for movement toward and away from the platen, means for setting the type wheel, means for operatively moving the type wheel, and an automatic type wheel locking device rigidly carried by an element of the type wheel moving means and operative to engage said type wheel upon active movement of said element during the operation of said type wheel moving means and to disengage said type wheel upon the inactive movement of said type wheel moving means.

14. In a marking machine of the type set forth, in combination, a pivoted supporting arm, a type wheel casing pivoted on the arm, a platen, means for imparting continuous operative movement to the type wheel casing, means whereby the supporting arm is initially restrained from partaking of such movement for a period after the inception thereof, and means whereby the supporting arm is automatically and subsequently caused to partake of such movement for a period until the completion thereof.

15. In a marking machine of the type set forth, in combination, a movable supporting arm, a type carrier supported by and movable with respect to the arm, a platen, means for effecting continuous operative movement of the carrier, means whereby the supporting arm is restrained from partaking of such movement during a period after the inception thereof and means whereby the supporting arm is caused to subsequently partake of such movement for a period until the completion thereof.

16. In a marking machine of the type set forth, in combination, a prime mover, a shaft carrying a plurality of type wheels, an inking device, a platen, and means for automatically transmitting the movement of the prime mover to the shaft as an initial substantially horizontal movement thereof whereby the type wheels traverse the inking device and as a subsequent vertical movement thereof toward the platen.

17. In a marking machine of the type set forth, in combination, a movable supporting arm, a type carrier supported by and movable with respect to the arm, a platen, means for effecting continuous operative movement of the carrier, means whereby the supporting arm is restrained from partaking of such movement during a period after the inception thereof, means whereby the supporting arm is caused to subsequently partake of such movement for a period until the completion thereof and means operable to engage the type wheels to aline the printing surfaces thereof at a point of time after the

inception of the initial movement of the carrier relative to the supporting arm and during the subsequent movement of the carrier with the arm.

18. In a marking machine of the type set forth, in combination, a platen, an adjustable type wheel, supporting means for the type wheel and movable to cause the type wheel to move toward and away from the platen, means for setting the type wheel, means for causing operative movement of the type wheel supporting means and independent of the latter, and an automatic type wheel locking device associated with the means which causes movement of the type wheel supporting means and operative to engage said type wheel during and throughout its movement toward the platen and to disengage said type wheel at a point of time during its movement away from the platen.

19. In a marking machine of the type set forth, in combination, a platen, an adjustable type wheel, a pivoted supporting arm carrying the type wheel and operable to cause movement thereof toward and away from the platen, means for setting the type wheel, means for causing operative movement of the type wheel toward and away from the platen, and an automatic type wheel locking device associated with the means which causes movement of the type wheel toward and away from the platen and operative to engage said type wheel throughout its movement toward the platen.

20. In a marking machine of the type set forth, in combination, a platen, an inking device, a type carrier, means for causing an initial relative movement of the type carrier and the inking device, means for causing a subsequent relative movement of the type carrier and the platen, type alining means, and means for operating the type alining means at the completion of the initial movement after the inking operation and at the inception of and throughout the subsequent movement.

21. In a marking machine of the type set forth, in combination, a platen, an inking device, a type carrier, means for causing the type carrier to move initially and relatively to the inking device, means for causing the type carrier to move subsequently and relatively to the platen, the subsequent movement being in a path at an angle to the initial movement, type alining means, and means for operating the type alining means at the completion of the initial movement after the inking operation and at the inception of and throughout the subsequent movement.

22. In a marking machine of the type set forth, in combination, a type carrier, two movable elements connected thereto, an inking device, a platen, means for moving one of the elements to cause an initial relative

traversing movement of the type carrier and the inking device and means for moving the other element to cause a subsequent relative movement of the type carrier and the platen.

5 23. In a marking machine of the type set forth, in combination, a type carrier, an inking device, a platen, a movable element for causing an initial relative traversing movement of the type carrier and the inking device, a second movable element for causing a
10 subsequent relative movement of the type carrier and the platen, a prime mover and means automatically transmitting the movement of the prime mover first as an operative movement of the first element and
15 finally as an operative movement of the second element.

24. In a marking machine of the type set forth, in combination, a type carrier, an inking device, a platen, a movable element for
20 causing an initial relative traversing movement of the type carrier and the inking device, a second movable element for causing a subsequent relative movement of the type carrier and the platen, means whereby the
25 second element is operated by the first element, a prime mover, and operative connections between the prime mover and the first element.

25. In a marking machine of the type set forth, in combination, a shaft, a type carrier pivoted thereon, an inking device, a platen, means for causing movement of the type carrier pivotally on the shaft to traverse the inking device and means for causing
35 subsequent movement of the shaft and therewith the type carrier, toward the platen.

26. In a marking machine, in combination, a type wheel, an inking device, a platen, the type wheel and the inking device having a relative traversing movement and the type wheel and the platen having a second relative movement, and a type wheel aliner, the first movement producing an engagement of the type wheel and the aliner
45 which continues throughout the second movement and the latter producing the printing operation.

In testimony whereof I have hereunto set
50 my hand in presence of two subscribing witnesses.

JOHN C. GEBHART.

Witnesses:

E. M. APPERSON,
E. GEBHART.