

Feb. 15, 1927.

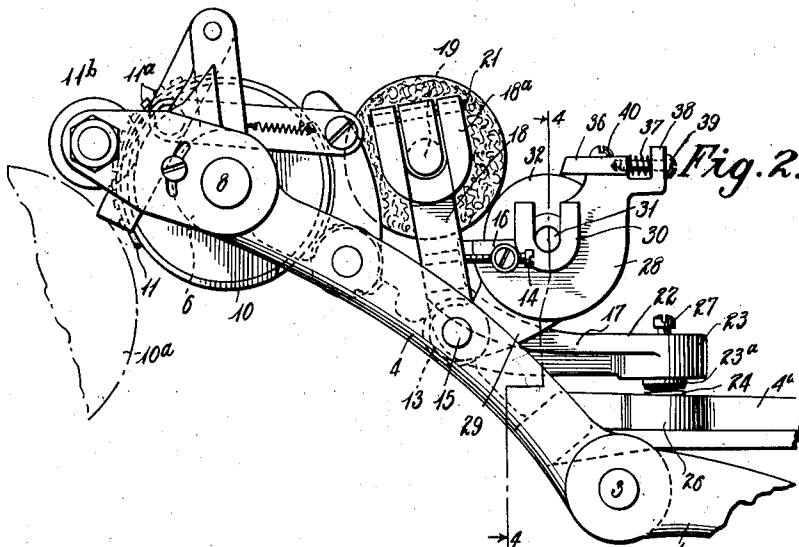
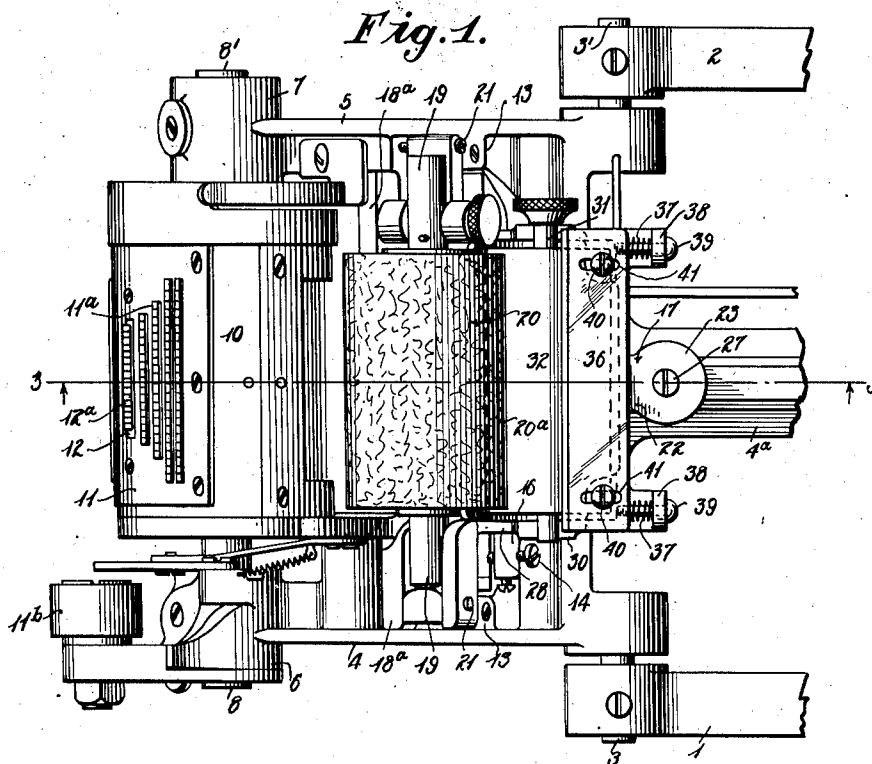
H. SWANSON

1,617,878

INKING MECHANISM

Filed Dec. 27, 1923

2 Sheets-Sheet 1



Inventor

Hjalmar Swanson

By Munday, Clarke & Carpenter
his Attorneys

Feb. 15, 1927.

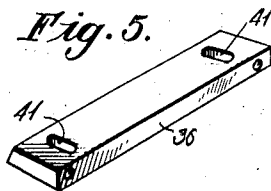
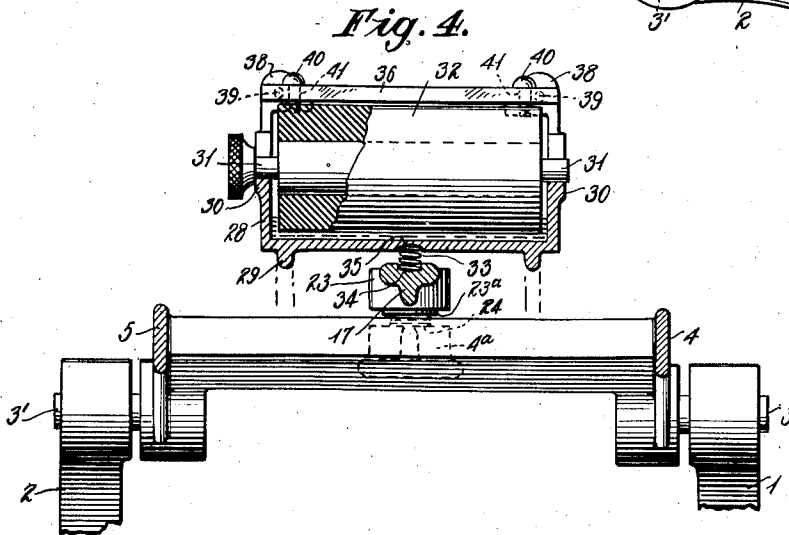
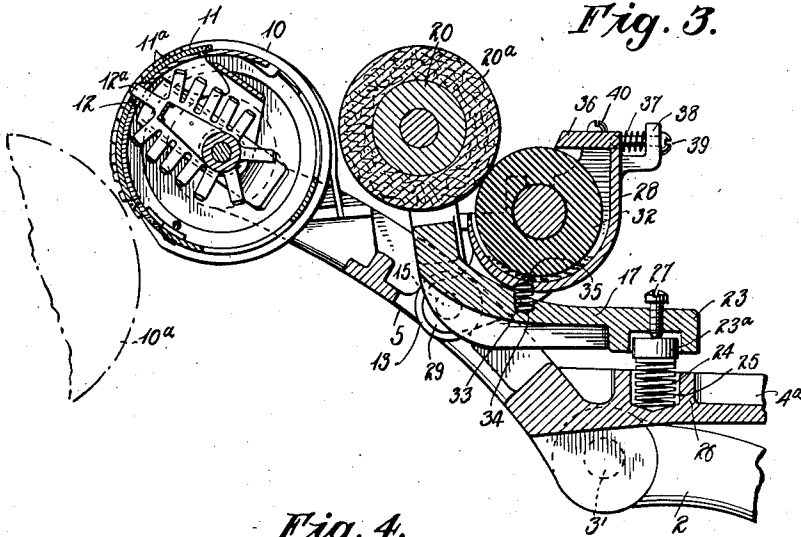
1,617,878

H. SWANSON

INKING MECHANISM

Filed Dec. 27, 1923

2 Sheets-Sheet 2



Inventor

Hjalmar Swanson,

By Munday, Clark & Carpenter
his Attorneys

Patented Feb. 15, 1927.

1,617,878

UNITED STATES PATENT OFFICE.

HJALMAR SWANSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO CUMMINS PERFORATOR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

INKING MECHANISM.

Application filed December 27, 1923. Serial No. 682,956.

The invention relates to an inking mechanism or device and among its many useful applications has particular utility in connection with a machine for endorsing or otherwise marking checks or the like.

My invention contemplates provision of an improved inking device or mechanism and has for its objects: to provide an inking mechanism composed of few parts simply and compactly arranged whereby convenience and accuracy in the operation thereof is insured; to provide an inking mechanism which may be readily and conveniently assembled within or removed from a check endorsing machine or the like; to provide an inking mechanism so designed as to prevent the accumulation of a superfluous quantity of ink on the inking roller and in which the continuous feed of the proper amount of ink to the inking roller is definitely effected; to provide an inking mechanism characterized by the provision of ink supply controlling elements which may be conveniently adjusted to increase or decrease in quantity the continuous supply of ink to the inking roll.

In addition to the general objects recited above, the invention includes among its advantages, such other improvements and advantages in construction and operation as are found to obtain in the structures and devices hereinafter described or claimed.

In the accompanying drawings, forming a part of this specification, and showing, for purposes of exemplification, a preferred form and manner in which the invention may be employed and practiced, but without limiting the claimed invention specifically to such illustrated instance or instances:

Fig. 1 is a plan view of a portion of a check endorsing machine or the like, having assembled therein an inking device or mechanism constituting a preferred embodiment of the invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a longitudinal vertical sectional view on line 3—3 of Fig. 1.

Fig. 4 is a transverse sectional view on line 4—4 of Fig. 2.

Fig. 5 is a perspective view of the ink scraping or distributing element.

Referring to the drawings, 1 and 2 designate a pair of co-extending arms which are rigidly secured at their lower ends to the

frame of a check endorsing machine (not shown) and having pivotally and adjustably mounted in the free ends thereof by means of stud shafts 3, 3', a second pair of arms or bracket members 4 and 5. Mounted in suitable bosses 6 and 7 in the free ends of the members 4 and 5 and extending inwardly therefrom are a pair of supporting trunnions 8, 8'. These trunnions through the intermediary of ball bearings (not shown) of which their ends are fashioned to constitute the cones, support the opposite ends of a printing or type roller 10, and provide a substantially frictionless bearing construction for the said type roller. The printing roller 10 is adapted to cooperate with an impression roller 10^a during the operation of the check endorsing machine. The printing roller 10 is further provided with a removable type plate 11 carrying the fixed type 11^a on its upper surface and having a substantially rectangular aperture 12 through which projects the changeable data 12^a, contained within the roller 10, to be printed on the check and which data is in alignment with said aperture when the plate 11 is positioned on the roller 10. The check endorsing machine of which the present improvements may constitute a part, is preferably automatic in operation and is actuated by the check or other piece of paper to be marked by the printing roller 10, the said roller 10 being actuated by the insertion of the check to be marked or endorsed by means of the feed roll 11^b. The particular mechanism cooperating with the inserted check and by which the intermittent rotation of the printing roller 10 is obtained, forms the subject matter of a co-pending application Serial Number 596,728, and as the same is set forth in detail therein, will not be further described.

Integrally formed with the arms or members 4 and 5 is a rearwardly extending tail portion 4^a having adjusting means at its rear portion (not shown) by means of which the arms 4 and 5 and printing roller 10 carried thereby may be properly adjusted or positioned with respect to the impression roller 10^a.

Formed integrally with the inner surfaces of the members or arms 4 and 5 and suitably positioned thereon, is a pair of oppositely disposed bosses 13 having journaled

thereon by means of stud shafts 15 a pivotally mounted supporting frame 17. The frame 17 is provided with a pair of upwardly extending arms 18 terminating in adjustable yoke members 18^a forming bearings for the ends of the shaft or shafts 19 of the inking roller 20, the latter being removably secured as by pins 21 for free rotation within said yoke members.

The inking roller 20 is provided with a removable circumferential layer of felt 20^a or any preferred ink absorbing material. A rearwardly projecting tail portion 22 of the frame 17 terminates in a socketed boss 23, which constitutes a seat for a spring-pressed plate or plunger 23^a. A coil spring 24 is seated in a recess 25 formed in a boss portion 26 of the rearwardly extending tail portion 4^a of the arms 4 and 5 and bears at its upper end against the lower side of the plate or plunger 23^a. A set screw 27 is threaded into the boss 23 of the frame 17 and bears at its lower end against the upper surface of the plate or plunger 23^a. It will be apparent that by means of the arrangement described that any desired adjustment of the frame 17 may be effected by means of the set screw 27 to bring the inking roller 20 into proper cooperating operation with the printing or type roller 10.

An ink receptacle or well 28 is provided, having depending curved arms 29 at either end terminating in hub portions which are journaled on the stud shafts 15 and 16. The ends of the ink receptacle 28 are provided with bearing portions 30 which may be of U-shape, and which bearings form journal supports for the shaft or shafts 31 of a removable ink supply roll 32. The supply roll 32 may be of any desired or preferred material and is provided with a smooth surface adapted when the roller is in position to be partially immersed in the ink contained within the receptacle 28. A compression spring 33 is or may be provided and is seated in a recess 34 formed in the frame 17 and is seated at its upper end in an oppositely disposed recess 35 formed in the receptacle 28 (Fig. 3). It will be seen by this latter described arrangement that the spring 33 bearing upward against the receptacle 28 maintains the ink supply roller 32 in a yielding and constant rolling engagement with the inking roller 20. This yielding engagement of the rollers 20 and 32 may be further varied to any desired extent by means of an adjusting set screw 14 having threaded engagement in a boss 16 provided at one end of the ink receptacle 28 and bearing at its free end against the frame 17.

An adjustable ink scraper or member 36 is provided and is seated at each end upon suitably flattened portions of the ink receptacle 28 and projects inwardly to adjustably

cooperate with the ink supply roller 32. The scraper 36 is normally forced inwardly toward the ink supply roll 32 by means of coil springs 37 each of which bears at one end against the scraper and bear at their other ends against upstanding lugs 38 preferably integrally formed on the ink receptacle 28. Adjusting screws 39 are provided having threaded engagement with the lugs 38, said screws being threaded at their inner ends into the ink scraper 36. The adjusting screws 39 provide means for properly adjusting the scraper 36 with respect to the ink supply roll 32 according to whether a thin or thick film of ink is desired on said roll. Forward movement of the scraper 36 is limited by means of one or more screws 40 passing through suitable slots or recesses 41 in the ink scraper, said screws having threaded engagement with the ink receptacle 28.

The operation of the improved inking mechanism above described is as follows:

The printing roller 10 is adjusted to the proper or desired printing relation with respect to the impression roller 10^a, such pressure being sufficient to cause the impression of the type contained within the printing roller to be visible on the paper or material passed between said rollers. The inking roller 20 is then adjusted by means of the set screw 27 to bear with desired pressure against the printing roller 10 so as to completely engage the surface of the type contained within and on the surface of the roller 10. The desired frictional engagement between the ink supply roller 32 and the inking roller 20 is effected by means of the set screw 14. This engagement is preferably such that the ink supply roller barely touches the inking roller with sufficient pressure to cause the rotation of the former when the inking roller is turned by hand. The ink scraper 36 is adjusted by means of the adjusting screws 39 into the desired cooperative relation with respect to the ink supply roller 32 so as to leave a thin film of ink upon the surface of the roller when the same is rotated within the ink receptacle by means of inking roller 20. It will be apparent that the adjusted relation of the ink scraper 36 with respect to the ink supply roller may be such as to result in a thin or thick film of ink being contained on the ink supply roller according to the will of the operator, such adjustment being effected by means of the screws 39.

The invention as hereinabove set forth may be variously embodied within the scope of the claims hereinafter made.

What is claimed is:

1. An inking device for check endorsing machines and the like, comprising in combination: a printing roller adapted to be intermittently rotated, an inking roller ad-

justably mounted with respect to said printing roller and adapted to cooperate with said printing roller, an ink receptacle adjustably and resiliently mounted to constantly bear toward said inking roller, an ink supply roller rotatably and removably mounted in said ink receptacle and adapted to cooperate with said inking roller, and an ink scraper adjustably mounted on said ink receptacle and adapted to cooperate with said inking roller, whereby the supply of ink conveyed by said ink supply roller to said inking roller may be regulated.

2. An inking device for the purpose described, comprising in combination: a printing roller, an inking roller adjustably mounted with respect to said printing roller; said inking roller being normally out of driving engagement with said printing roller but adapted to be rotated thereby, an ink receptacle adjustably mounted with respect to said inking roller, an ink supply roller adjustably mounted in said receptacle and adapted to be rotated by said inking roller to transfer the ink from said receptacle and to distribute it over the surface of said inking roller during the rotation of the latter, an ink scraper adjustably mounted on said receptacle and adapted to cooperate with said ink supply roller, means for adjustably mounting said ink scraper on said ink receptacle, and resilient means cooperating with said adjusting means and tending nor-

mally to engage said ink scraper with said ink supply roller.

3. An inking mechanism for check endorsing machines comprising, in combination: a support; a printing-roller frame pivotally mounted on said support; a printing-roller rotatably mounted in said frame; an inking-roller support pivotally mounted on and extending upwardly from said printing-roller frame; an absorbent inking-roller removably mounted in said support; an ink receptacle pivotally mounted on and extending upwardly from said printing-roller frame; a rotatable ink applying roll removably mounted in said ink receptacle; means carried by the inking-roller support and tending to move said ink applying roll and the receptacle as a unit with relation to said frame in a radial direction with respect to the inking-roller to maintain the ink applying roll in frictional contacting engagement with the periphery of said inking roller; and means carried by said printing-roller frame tending to move said inking roller support and its ink absorbing roller and said ink receptacle and its ink applying member as a unit with relation to said frame and in a radial direction with respect to said printing-roller.

In testimony whereof I have hereunto set my hand.

HJALMAR SWANSON.