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FINGERPRINT MACHINE

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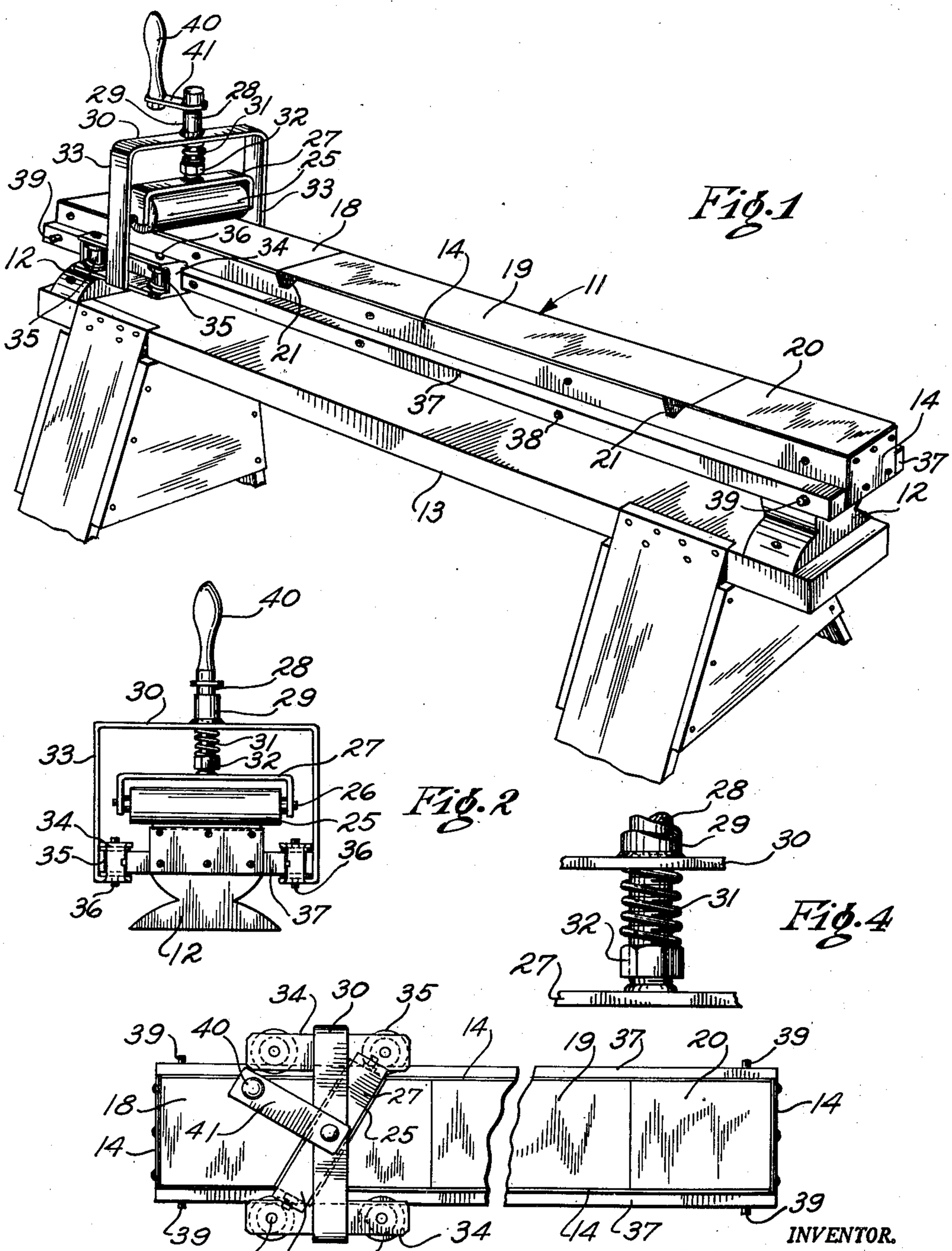

Fig. 1

Fig. 2

Fig. 4

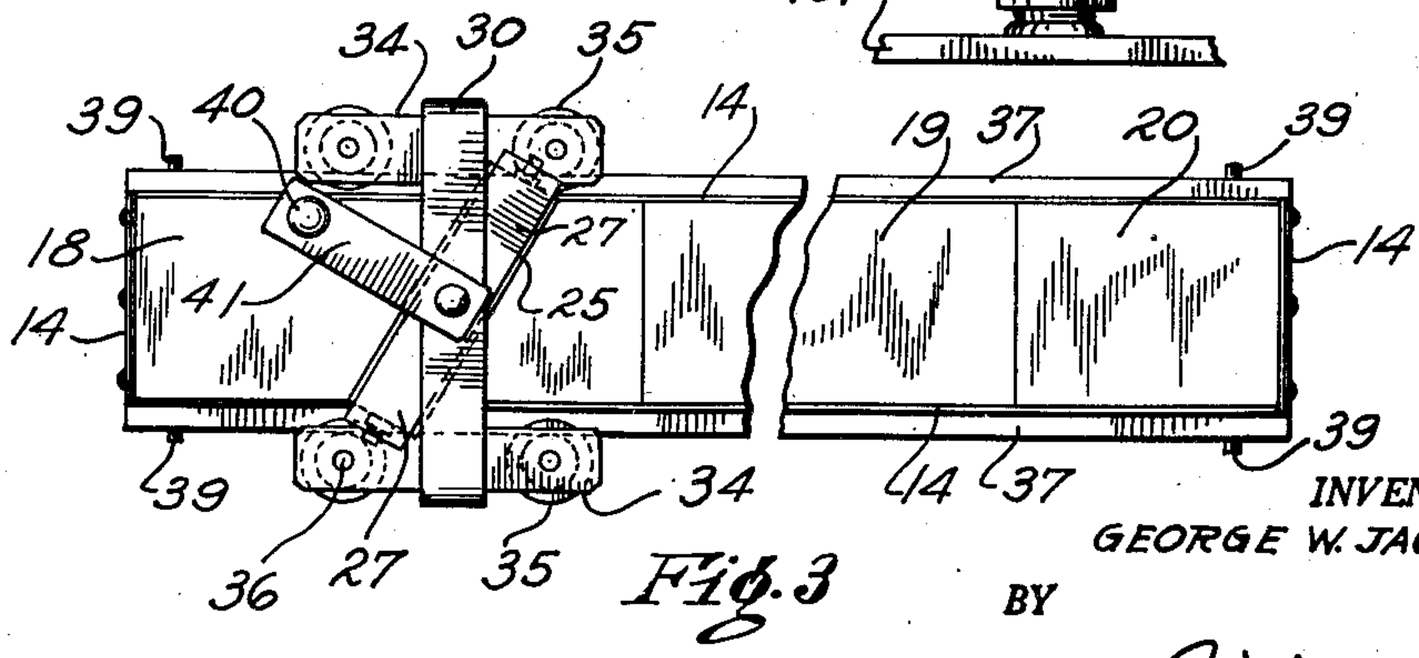

Fig. 3

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FINGERPRINT MACHINE

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11 Claims. (Cl. 91—48)

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This invention relates broadly to machines for inking plates, and, in its preferred embodiment, is directed more particularly to machines for inking glass plates or slabs used in taking finger print impressions. As is well known, when finger print impressions are taken, means must be provided for obtaining a thin uniform layer of an appropriate ink on the digits of the subject. Ordinarily, the ink is spread on a plate of glass or metal or a platen of a similar character by means of a hand roller. While it is possible to spread the ink satisfactorily on a plate by the use of a hand roller, the operation is tedious and time-consuming and can be performed satisfactorily only by a skilled operator.

This invention is directed to a machine for performing the ink spreading operation rapidly and accurately and is designed to accommodate operation thereof by an unskilled person.

An object of the invention is to provide a machine for inking plates of the type used in making finger prints.

Another object of the invention is to provide a plate inking machine which is susceptible of operation with ease and dispatch.

Another object of the invention is to provide a plate inking machine in which the inking roller is guided for translation over the plate in a plane parallel thereto.

A further object of the invention is to provide a plate inking machine in which the proper degree of pressure is automatically maintained.

A still further object of the invention is to provide a plate inking machine in which the axis of the roller may be readily inclined to its direction of movement over the plate to secure a more uniform distribution of ink.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which, considered in connection with the accompanying drawings, sets forth the preferred embodiment of the invention.

Referring to the drawings:

Fig. 1 is a perspective view of a plate inker in accordance with the invention;

Fig. 2 is an end elevation of the plate inker;

Fig. 3 is a plan view thereof; and

Fig. 4 is an elevational view of a detail of the machine.

In its preferred embodiment, the invention comprises an elongated wooden base 11 which is preferably made of several plies of wood glued together to prevent warping. The length of the

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base will of course depend on the size and number of the plates to be inked, the width, however, being of the size customarily used in platens of this character. The base is supported on wooden uprights 12 screwed or otherwise affixed thereto, which may be mounted on any convenient supporting structure such as the trestle 13. Sheet metal strips 14 having the upper edges thereof disposed slightly above the upper face of the base are mounted on the side and end walls thereof to retain the plates in their operative position. Three plates 18, 19 and 20 are placed in end to end relation upon the block within the side and end strips 14. The dimensions of the ledge formed about the sides of the base by the strips 14 is designed in relation to the dimensions of the plate to facilitate the ready entry and removal thereof yet arrest undue sliding movement. The plate 19 constitutes the working platen for use in taking impressions while the plates 18 and 20 provide a land for the reception of excess ink that accumulates at the ends of the reciprocative movement of the roller. The upper faces of the plates 18, 19 and 20 are disposed in a common plane and each of the plates is preferably formed of glass although they may be of metal or plastic if desired. The upper surface of the block 11 is enameled white to facilitate inspection of distribution of the ink when a transparent plate is used. Slots 21 are formed in the upper margin of the strips 14 adjacent the ends of the plate 19 to facilitate the removal thereof after inking.

The inking is performed by a soft rubber roller 25 on a shaft 26 which is received in clevises in the ends of a U-shaped bracket 27. The bracket is rigidly mounted at its center on a vertical shaft 28 which is rotatably and slidably received in a boss 29 integral with a cross member 30 of a reciprocable carriage. Control of the pressure between the roller and the plates is effected by a compression spring 31 retained on the shaft 28 between the cross piece 30 and an adjusting nut 32 received on a threaded portion of the shaft. Pressure of the roller against the plates may be regulated by actuation of the nut 32 in the customary manner. The carriage comprises, an addition to the cross piece 30, a pair of stanchions 33 formed integral with the cross piece attached to a pair of trucks 34 by welding or through any other suitable means. Each truck 34 embodies a rectangular frame in which two flanged rollers 35 are journaled on pins 36 extending through the truck frame. The

rollers are flanged for guided translation upon rails **37** which are mounted on each side of the base. The rails are secured to the base intermediate their ends by countersunk screws **38** and filister head cap screws **39**, adjacent the ends thereof, the heads of the cap screws protruding beyond the faces of the rails to serve as stops to limit the movement of the trucks. The carriage is reciprocated by a handle **40** mounted on a crank arm **41** fixed to the upper end of the roller mounting shaft **28**.

In the use of the apparatus, ink is applied to the plate **18** and is distributed over the roller by reciprocation thereof through the ink. By pulling the handle **40** to either side as the carriage is reciprocated, the roller can be skewed relative to its direction of travel to facilitate the uniform distribution of ink thereon. The roller is then traversed back and forth between the plates **18** and **20**, the roller running over plate **19** and distributing a thin layer of ink thereon. During this operation, the roller is first moved back and forth with the roller normal to the major axis of the plate **19**, then the roller is adjusted in angular relation thereto as indicated by dotted lines in Fig. 3 so that the film of ink will be drawn over the plate with greater uniformity and less lineation. It will be noted that the length of the roller **25** is greater than the width of the plates so that it will extend entirely across the plates even though set at an acute angle.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

1. A plate inker comprising means for supporting a plate to be inked, a reciprocable carriage, means guiding the carriage for reciprocation parallel to the plane of the plate, an inking roller mounted on the carriage, means for resiliently urging the roller into engagement with the plate, and means for varying the angle between the axis of the roller and the carriage as the carriage is reciprocated.

2. A plate inker comprising an elongate base, a plate on each end of the base, the plates defining a space therebetween for the reception of a plate to be inked, a traversable carriage having a part overlying the base, a shaft perpendicular to the base rotatably mounted in the part, an inking roller mounted on the shaft with its axis perpendicular to the shaft and adapted to engage the end plates and the plate being inked, and a crank on the shaft by which the shaft may be rotated and the carriage traversed.

3. A plate inker comprising an elongate base, a shallow rim extending above the base for the retention of plates laid on the base, a plate laid on each end of the base, the plates defining a space therebetween for the reception of a plate to be inked, a guided carriage traversable over the base, a shaft perpendicular to the base rotatably mounted in the carriage, an inking roller mounted on the shaft with its axis perpendicular to the shaft and adapted to engage the end plates and the plate being inked, and a crank on the shaft by which the shaft may be rotated and the carriage traversed.

4. A plate inker comprising an elongate base, a shallow rim extending above the base for the retention of plates laid on the base, a plate laid on each end of the base, the plates defining a space therebetween for the reception of a plate to be inked, a pair of tracks parallel to the edges of the base, a carriage traversable on the tracks and having a part overlying the base, a shaft perpendicular to the base rotatably mounted in the part, an inking roller mounted on the shaft with its axis perpendicular to the shaft and adapted to engage the end plates and the plate being inked, and a crank on the shaft by which the shaft may be rotated and the carriage traversed.

5. A plate inker comprising an elongate base, a plate on each end of the base, the plates defining a space therebetween for the reception of a plate to be inked, a traversable carriage having a part overlying the base, a shaft perpendicular to the base rotatably mounted in the part, an inking roller mounted on the shaft with its axis perpendicular to the shaft and adapted to engage the end plates and the plate beink inked, and means by which the shaft may be rotated and the carriage traversed.

6. A plate inker comprising means for supporting a plate to be inked, a reciprocable carriage, means guiding the carriage for reciprocation parallel to the plane of the plate, an inking roller mounted on the carriage and movable over the plate, and means for varying the angle between the axis of the roller and the carriage and thereby the angle between the roller and its direction of movement as the carriage is reciprocated.

7. A plate inker comprising an elongate base, means defining a space thereon for the reception of a plate to be inked, a traversable carriage having a part overlying the base, a shaft perpendicular to the base rotatably mounted in the part, an inking roller mounted on the shaft with its axis perpendicular to the shaft and adapted to engage the plate being inked, means for rotating the shaft, and means for traversing the carriage.

8. A plate inker comprising an elongate base, means for retaining a plate to be inked thereon intermediate the ends of the base, a traversable carriage having a part overlying the base, a shaft perpendicular to the base rotatably mounted in the part, an inking roller adapted to engage the plate being inked mounted on the shaft with its axis perpendicular to the shaft, means for rotating the shaft, and means for traversing the carriage.

9. A plate inker comprising two plates lying in the same plane, means for supporting a plate to be inked in the plane of and between the first-named plates, a traversable carriage, means guiding the carriage for reciprocation parallel to the plane of the plates, an inking roller mounted on the carriage and adapted to roll over the plates, and means for varying the angle between the axis of the roller and the direction of traverse during traverse of the carriage.

10. A plate inker comprising two plates lying in the same plane, means for supporting a plate to be inked in the plane of and between the first-named plates, a carriage traversable over the plates, means guiding the carriage for reciprocation parallel to the plane of the plates, and an inking roller mounted on the carriage and adapted to roll over the plates.

11. A plate inker comprising two plates lying in

the same plane, means for supporting a plate to be inked in the plane of and between the first-named plates, a traversable carriage, means guiding the carriage for reciprocation parallel to the plane of the plates, an inking roller mounted on the carriage and adapted to roll over the plates, and means for varying the angle between the axis of the roller and the direction of traverse during traverse of the carriage, the last-named means including a rotatable mounting shaft for the roller mounted in the carriage perpendicular to the plane of the plates and the axis of the roller, and means for rotating the shaft.

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