May 29, 1956 E. M. BAILEY 2,747,505

SIGN PRINTING OR PAINTING MACHINE

Filed Sept. 1, 1953 2 Sheets-Sheet 1

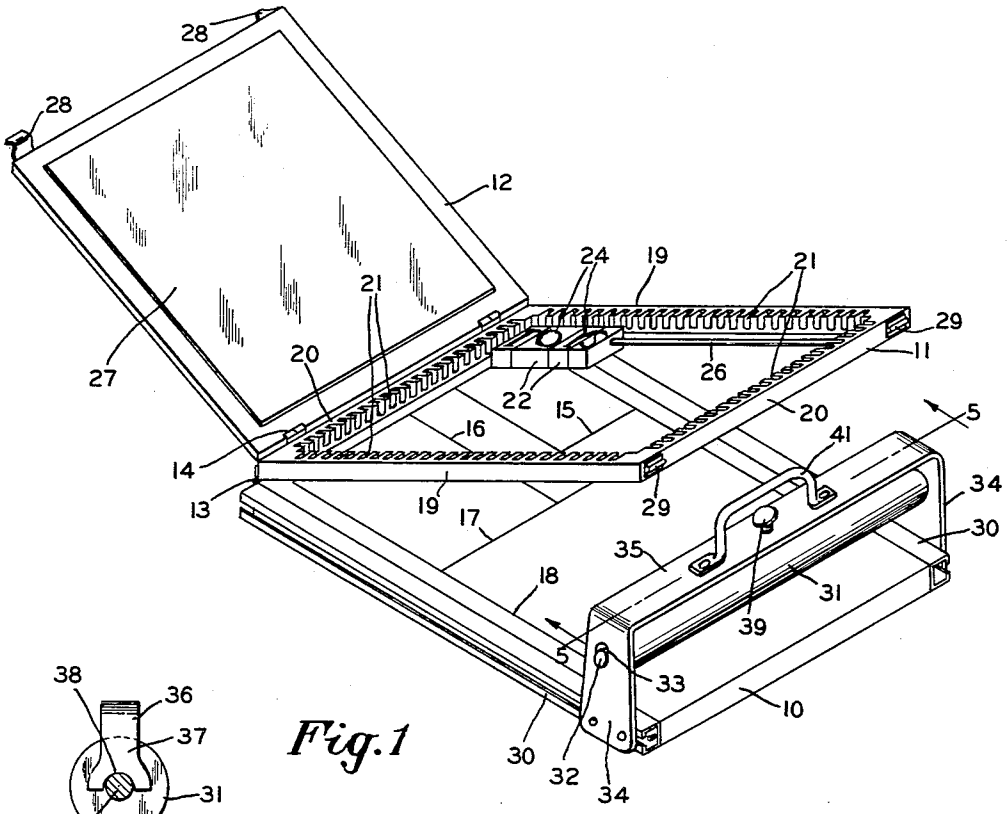


Fig. 1

Fig. 6

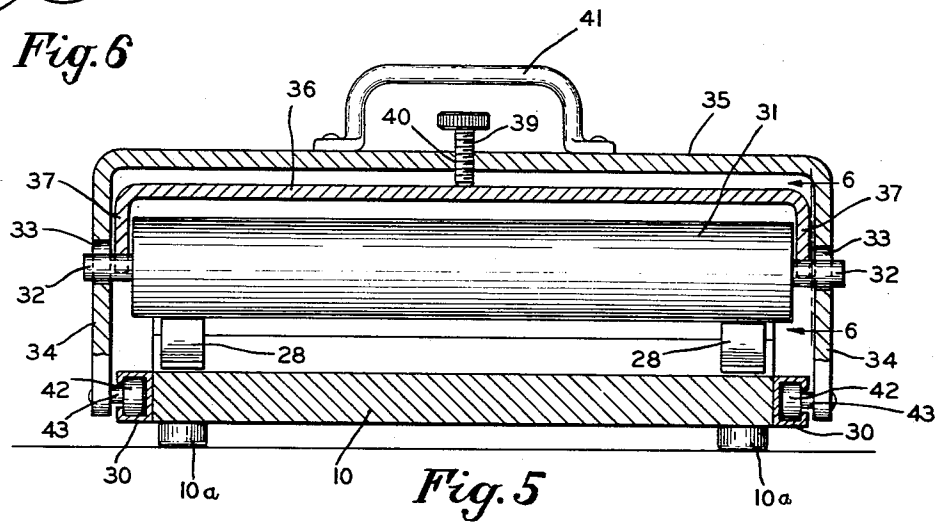


Fig. 5

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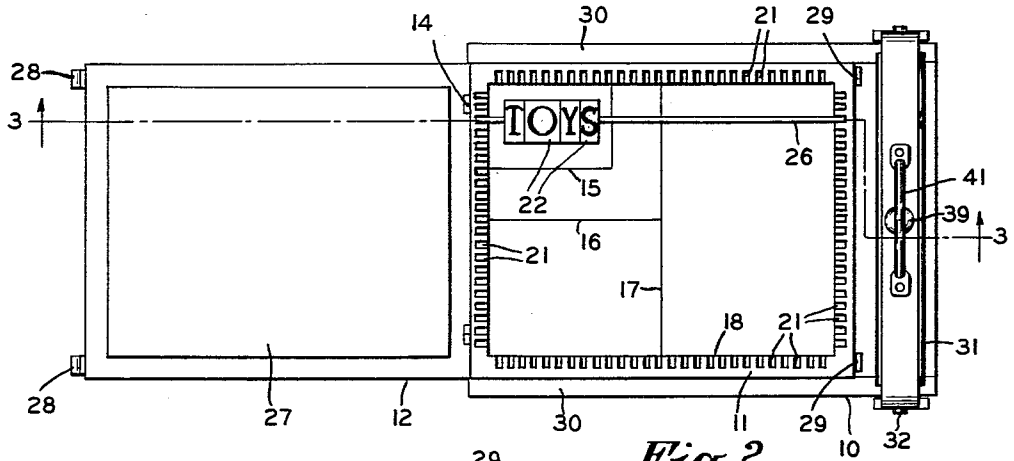


Fig. 2

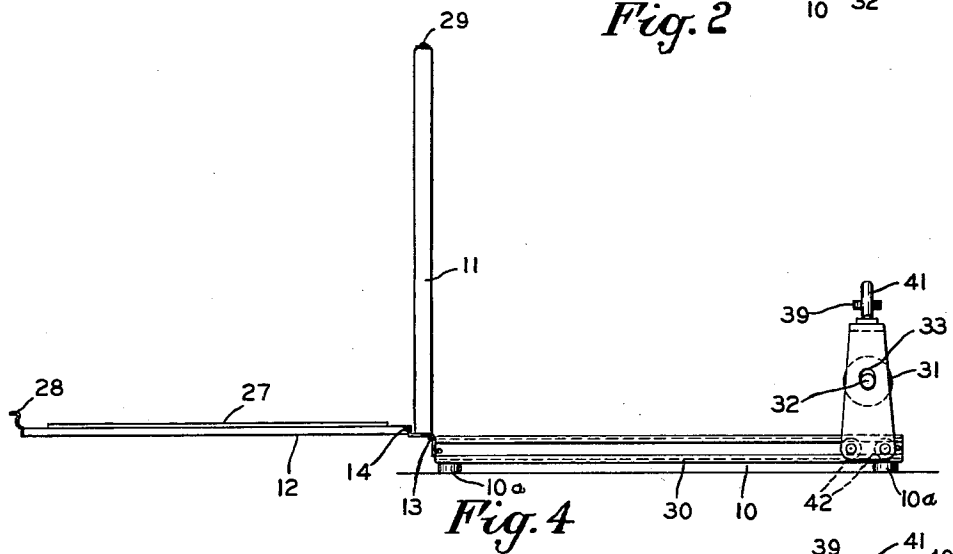


Fig. 4

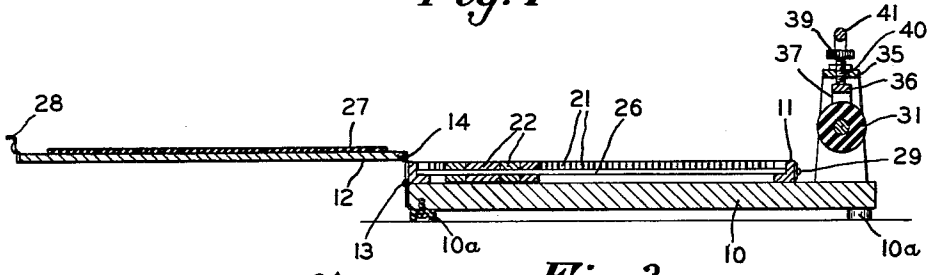


Fig. 3

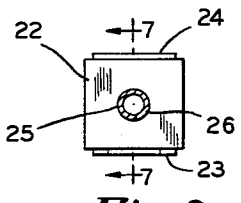


Fig. 8

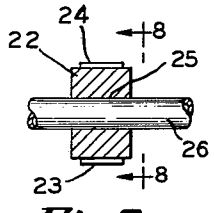


Fig. 7

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SIGN PRINTING OR PAINTING MACHINE

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5 Claims. (Cl. 101—287)

The invention relates to a device for printing or painting signs, cards and the like, and more particularly to a simple and easily operated device of this character.

An object of the invention is to provide such a device comprising a baseboard or platen, a type chase hingedly connected thereto, and a cover or pressure plate hingedly connected to the type chase.

Another object is to provide such a device in which a pressure roller is journalled in a carriage mounted to travel in guides on the baseboard or platen for rolling upon the cover or pressure plate.

A further object is to provide a printing or painting device of the character referred to in which changeable type blocks are adapted to be assembled on rods or tubes which are detachably connected to the type chase.

A still further object is to provide a printing or painting device of this character in which the type blocks may be threaded upon the tubes or rods.

It is also an object of the invention to provide a printing device in which type are located on the undersides of the type blocks and indicia is provided on the upper sides of the type blocks denoting the particular type on the undersides thereof so that a sign may be easily and quickly set up for printing.

Another object is to provide ruled spaces upon the baseboard or platen corresponding in size and shape to various sizes of signs to be printed.

A further object is to provide means for latching the swinging edges of the type chase and cover or pressure plate together for holding the type blocks in proper position within the type chase.

A still further object is to provide spaced vertical notches in all sides of the type chase for insertion of the ends of the tubes or rods upon which the type blocks are mounted.

The above objects together with others which will be apparent from the drawings and following description, or which may be later referred to, may be attained by constructing the improved sign printing or painting device in the manner hereinafter described in detail and illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a sign painting or printing device embodying the invention, showing the type chase and cover or pressure plate swung upwardly from their hinges, away from the baseboard and from each other;

Fig. 2 a top plan view of the device with the type chase positioned upon the baseboard and the cover or pressure plate swung backward to permit type blocks to be inserted in the chase;

Fig. 3 is a sectional view taken on the line 3—3, Fig. 2;

Fig. 4 a side elevation of the printing device wth the type chase and cover or pressure plate swung backward;

Fig. 5 an enlarged sectional view taken on the line 5—5, Fig. 1;

Fig. 6 a detail sectional view taken on the line 6—6, Fig. 5;

Fig. 7 an enlarged, detail sectional view of a type block and a portion of a tube upon which it is mounted, taken as on the line 7—7, Fig. 8; and

Fig. 8 a section taken as on the line 8—8, Fig. 7.

Referring now more particularly to the embodiment of the invention illustrated in the drawings, in which similar reference characters refer to similar parts throughout, the improved sign printing or painting device comprises generally a baseboard or platen 10, a type chase 11 and a cover or pressure plate 12.

These three principal elements of the device are hingedly connected together in the manner shown in the drawings, the type chase 11 being hinged at one edge to the adjacent edge of the baseboard 10 by a hinge indicated at 13, which may be of a construction to compensate for cardboards of different thickness being placed upon the baseboard or platen for printing or painting signs thereon.

The adjacent edge of the cover or pressure plate 12 is hinged to this hinged edge of the type chase 11 by a hinge indicated at 14. Both hinges 13 and 14 may be of the piano hinge type and are so constructed and arranged that the three members 10, 11 and 12 may be folded together with their opposed faces in contact with each other throughout their areas, as will be later described in detail.

The baseboard or platen 10 is of rectangular shape and of suitable size to accommodate the largest size of sign desired to be printed or painted in the device. The top surface of this baseboard is perfectly flat and has thereon a plurality of ruled spaces, as indicated at 15, 16, 17 and 18, corresponding in size to various size cards upon which signs may be printed.

The type chase 11 is in the form of a rectangular frame of a size corresponding to the baseboard and comprises the side rails 19 and end rails 20 rigidly connected together at adjoining ends. Each of these side and end rails has a plurality of spaced vertical notches 21 formed in its inner surface, these notches being open through the top and extending to points spaced from the under surface of the chase.

The type blocks 22 may be formed of metal, wood or other suitable material and are of a depth or thickness substantially equal to the vertical depth of the type chase. The type 23 are formed upon the undersides of the type blocks 22 and corresponding indicia 24 is provided upon the upper surfaces of each type block.

A horizontally disposed, central opening 25 is provided in each type block for mounting the type upon tubes or rods 26. These tubes or rods may be of slightly less diameter than the openings 25 in the type blocks so that the type blocks may be easily mounted in any desired arrangement and position upon the tubes. After using, the type may be easily cleaned while held upon the tube.

The cover or pressure plate 12 is of a size corresponding to the type chase and is provided with a rubberized under surface 27, preferably of less size than the inner perimeter of the chase, for contact with the upper surfaces of the type blocks, as will be later described.

Suitable latch members 28 are provided at the swinging edge of the cover or pressure plate for engagement with the corresponding members 29 upon the swinging edge of the type chase to interlock these two members together during the printing operation.

Referring again to the base board 10 suitable feet 10a may be provided upon the under surfaces thereof for resting upon a table or other horizontal support. Channel guides 30 are provided on opposite sides of the base board for operatively mounting a pressure roller to be moved longitudinally of the device.

This roller is indicated at 31 and may be formed of rubber or the like, and the journal portions 32 thereof

are journalled in elongated bearing openings **33** formed in the depending legs **34** of the inverted, U-shape roller housing **35**.

A pressure bar **36** is located within the housing **35** and the depending legs **37** thereof are provided with rounded notches **38** in their lower ends engaging the upper surfaces of the journal portions **32** of the roller.

An adjusting screw **39** is threaded through a tapped opening **40** in the top of the housing **35** and contacts the top of the pressure bar **36** for adjusting the roller. A hand grip **41** may be fixed to the top of the roller housing **35** for manipulating the same.

Small wheels **42** are journalled upon studs **43** carried by the lower ends of the depending legs **34** of the housing and are located within the channel guides **30** so that the roller housing may be moved longitudinally of the base board.

In the operation of the device, the type blocks **22** are set up in proper arrangement on one or more of the tubes or rods **26** supported at their ends in desired notches **21** in the type chase, directly above the ruled off space **15**, **16**, **17** or **18** corresponding to the size of the sign to be printed, as shown in Fig. 2, in which the type blocks are set up to print a sign corresponding to the ruled space **15** on the top surface of the base board or platen.

The type blocks may be set up from the top of the chase, the operator being able to construct the sign by means of the indicia upon the upper sides of the type blocks, as shown in Fig. 2.

After the type blocks are properly set up on the tube or tubes **26** and properly positioned in the type chase, the cover or pressure plate **12** is folded against the top surface of the chase and the latch members **28** thereon are engaged with the corresponding members **29** on the chase, locking these two members together.

The rubberized or friction surface **27** on the underside of the cover or pressure plate will contact the upper sides of the type blocks **22** holding them in proper position. A card board or the like of suitable size will be placed on the top surface of the base board corresponding in position to the proper ruled space **15**, **16**, **17** or **18** thereon.

The type **23** on the under surfaces of the type blocks will then be inked, or paint may be applied thereto as desired, and the type chase **11** and cover or pressure plate **12** as a composite unit are lowered to bring the inked type into contact with the sign board or card upon the base board. Any suitable means may be provided, if desired, for clamping the card or sign upon the base board.

With the parts in this position the pressure roller **31** is then moved longitudinally over the top of the pressure plate or cover **12**, applying uniform pressure over the entire surface thereof to press the type downwardly onto the card or sign board. The roller is then moved back to the position shown in the drawings when the type chase may be raised and the printed card removed.

From the above it will be apparent that the type may be easily and quickly set up for any desired size or shape card or sign without requiring any particular skill of the operator. The device may be quickly and easily operated to produce uniformly accurate impressions upon a card or sign board.

By means of the pressure roller the desired amount of pressure may be uniformly applied to the type so as to produce clear and sharp impressions upon the card or sign board.

In the foregoing description, certain terms have been used for brevity, clearness and understanding, but no unnecesary limitations are to be implied therefrom beyond the requirements of the prior art, because such words are used for descriptive purposes herein and are intended to be broadly construed.

Moreover, the embodiments of the improved construction illustrated and described herein are by way of example, and the scope of the present invention is not limited to the exact details of construction.

Having now described the invention or discovery, the construction, the operation, and use of preferred embodiments thereof, and the advantageous new and useful results obtained thereby; the new and useful constructions, and reasonable mechanical equivalents thereof obvious to those skilled in the art, are set forth in the appended claims.

I claim:

1. A device of the character described comprising a work supporting platen, a type chase, means hinging one edge of the type chase to a corresponding edge of the platen, a rod-like member detachably supported in the type chase, type blocks detachably mounted upon the rod-like member, type upon the under sides of the type blocks and corresponding indicia on the upper sides thereof, a pressure plate, means hingedly connecting the pressure plate to the hinged edge of the type chase, means for locking the swinging edge of the pressure plate to the swinging edge of the type chase, a pressure roller, and means for moving the pressure roller over the top surface of the pressure plate for pressing the type blocks toward the platen.

2. A device of the character described comprising a work supporting platen, a type chase, means hinging one edge of the type chase to a corresponding edge of the platen, a rod-like member detachably supported in the type chase, type blocks detachably mounted upon the rod-like member, type upon the under sides of the type blocks and corresponding indicia on the upper sides thereof, a pressure plate, means hingedly connecting the pressure plate to the hinged edge of the type chase, means for locking the swinging edge of the pressure plate to the swinging edge of the type chase, a housing mounted for longitudinal movement upon the platen, and a pressure roller in the housing for movement over the top surface of the pressure plate for pressing the type blocks toward the platen.

3. A device of the character described comprising a work supporting platen, a type chace, means hinging one edge of the type chase to a corresponding edge of the platen, a rod-like member detachably supported in the type chase, type blocks detachably mounted upon the rod-like member, type upon the under sides of the type blocks and corresponding indicia on the upper sides thereof a pressure plate, means hingedly connecting the pressure plate to the hinged edge of the type chase, means for locking the swinging edge of the pressure plate to the swinging edge of the type chase, a friction surface on the under side of the pressure plate for contact with the tops of the type blocks, a pressure roller, and means for moving the pressure roller over the top surface of the pressure plate for pressing the type blocks toward the platen.

4. A device of the character described comprising a work supporting platen, a type chase, means hinging one edge of the type chase to a corresponding edge of the platen, a rod-like member detachably supported in the type chase, type blocks detachably mounted upon the rod-like member, type upon the under sides of the type blocks and corresponding indicia on the upper sides thereof, a pressure plate, means hingedly connecting the pressure plate to the hinged edge of the type chase, means for locking the swinging edge of the pressure plate to the swinging edge of the type chase, a friction surface on the under side of the pressure plate for contact with the tops of the type blocks, a housing mounted for longitudinal movement upon the platen, and a pressure roller in the housing for movement over the top surface of the pressure plate for pressing the type blocks toward the platen.

5. A device of the character described comprising a work supporting platen, a type chase, means hinging one edge of the type chase to a corresponding edge of the platen, a rod-like member detachably supported in the

type chase, type blocks detachably mounted upon the rod-like member, type upon the under sides of the type blocks and corresponding indicia on the upper sides thereof, a pressure plate, means hingedly connecting the pressure plate to the hinged edge of the type chase, and means for locking the swinging edge of the pressure plate to the swinging edge of the type chase, a housing mounted for longitudinal movement upon the platen, a pressure roller in the housing for movement over the top surface of the pressure plate for pressing the type blocks toward the platen, and means in the housing for adjusting the roller.

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