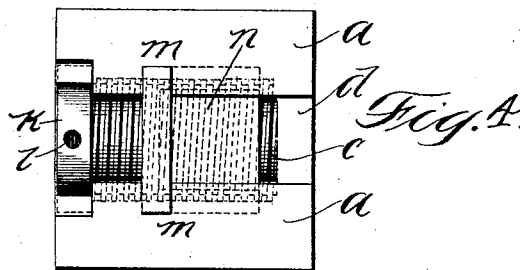
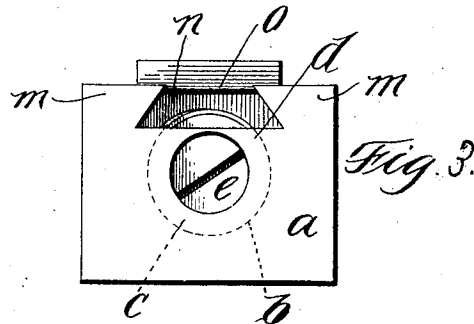
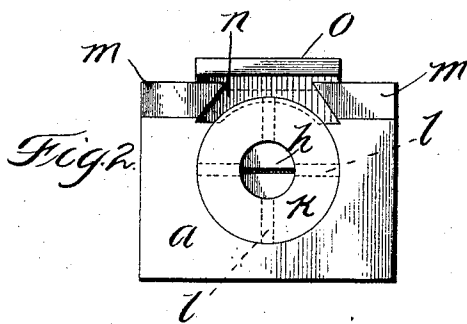
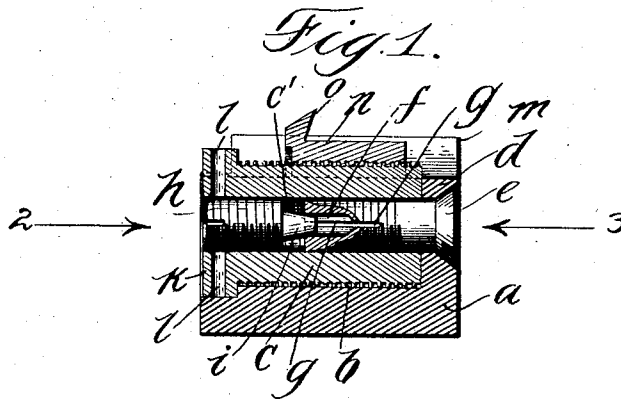


H. B. ROUSE.
REGISTER HOOK.

APPLICATION FILED DEC. 27, 1902.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY B. ROUSE, OF CHICAGO, ILLINOIS.

REGISTER-HOOK.

SPECIFICATION forming part of Letters Patent No. 771,834, dated October 11, 1904.

Application filed December 27, 1902. Serial No. 136,802. (No model.)

To all whom it may concern:

Be it known that I, HARRY B. ROUSE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Register-Hooks, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to what are known in the printing trade as "register-hooks," that are particularly useful in connection with "color-type" work wherein accurate registration is required, the hooks serving to accurately adjust the position of the plates independently of each other upon the beds of the presses.

The object of my invention is to provide improved construction of the devices described whereby many of the defects hitherto existing are eliminated.

In devices of the prior art dirt frequently accumulated within the blocks supporting the hook; and it is one object of my invention to so construct the device that the dirt will in the use thereof be ejected from its lodging-place. To this end I employ a block that is provided with a bore that partially surrounds a cylindrical feeder that has threaded engagement with the hook. This bore is smooth and is preferably engaged throughout its length by the threaded feeder, so as to be substantially filled thereby. As this feeder is rotated to cause the hook to advance or recede it carries with it the foreign matter that may have previously become lodged within the bore, this foreign matter being brought to the upper surfaces of the block, from whence it may readily be removed.

By means of my construction, that has been generally outlined, I am enabled to accomplish another object of the invention—namely, a simplification in the construction of the hook; which instead of having a screw passing through the same, as was the case with devices in the prior art, only has engagement with a portion of the periphery of the feeding-screw.

I am further enabled by means of this construction to provide a fixed bearing or sup-

porting surface for the plate, in that the hook may have a body portion in the form of a dovetail block which may be confined within a dovetail groove whose sides may be very closely approached.

In order that the support of the plate may be totally independent of the hook, the upper surface of the dovetail body portion of the hook is placed below that of the block, the walls of the dovetail groove desirably preventing this dovetail body portion of the hook from rising to the upper level of the block. The bore within which the feeding-screw is contained preferably entirely performs the function of a bearing for the screw, the block being supplemented by an adjusting-screw for the purpose of retaining the feeding-screw in place. The feeding-screw is desirably provided with a head, also having a bearing which is preferably in the form of an enlargement of the bore in the block. This end of the feeding-screw is preferably threaded to receive a threaded set-plug that enters a bore provided in the aforesaid adjusting-screw, which adjusting-screw is longitudinally split, so that when the set-plug is forced into the said adjusting-screw the feeding-screw and the adjusting-screw are firmly clamped together.

Other features and advantages of my construction will be set forth hereinafter.

I will explain my invention more fully by reference to the accompanying drawings, in which—

Figure 1 is a sectional view of the device of my invention, certain parts being shown in elevation. Fig. 2 is a view in the direction of arrow 2 in Fig. 1. Fig. 3 is a view in the direction of arrow 3 in Fig. 1. Fig. 4 is a plan view of the structure.

Like parts are indicated by similar characters of reference throughout the figures.

The block *a* is formed of any suitable material, as brass, desirably in one integral structure, this block being cut away at its central portion to provide a main bore *b*, that is partially tubular, this bore having a periphery of more than one hundred and eighty degrees and being continued on both sides above a horizontal diameter, so that the feeding-screw

c cannot be vertically displaced. The bore is desirably closed at one end by means of a bridge-wall *d*, integrally formed with the remainder of the block. This bridge-wall has an aperture coaxially arranged with the bore in the block and the axis of the feeding-screw. An adjusting-screw *e* is passed through this bridge-wall. The feeding-screw is provided with a threaded bore *c'*, that is coaxial with respect thereto. The adjusting-screw passes through the bridge-wall into engagement with this bore to adjust the longitudinal position of the feeding-screw with respect to the block. The adjusting-screw is also desirably provided with a bore *f*, extending partially through the same from its tail end, this portion of the adjusting-screw being desirably slotted on both sides, as indicated at *g*. The plug *h* is screwed within the bore *c'* and is provided with a conical continuation *i*, which projects within the bore in the screw *e* to spread or expand the same into clamping engagement with the feeding-screw, and thereby securing the adjusting-screw in locked engagement with the feeding-screw. Thus the position of the feeding-screw with reference to the bridge-wall may be most accurately determined by the adjusting-screw, totally eliminating or permitting that slight degree of end thrust that may be desired of the feeding-screw with respect to the block. The feeding-screw is preferably enlarged at its outer end to provide a head *k*, which head has radial recesses or apertures *l*, into which a turning-rod may be inserted to rotate the feeding-screw. The bore of the block is desirably enlarged where the head of the feeding-screw is located to act as a bearing for the head, the head and the shank of the feeding-screw thus cooperating with the entire bore in the block to maintain the feeding-screw in its proper alinement. The block is continued above the bridge-wall to constitute the sides *m m* of a dovetailed guide, between which the dovetail body portion *n*, supporting the hook *o*, is adapted to slide longitudinally. This body portion of the guide is preferably in some manner adapted for threaded engagement with the feeding-screw, being for the purpose desirably threaded itself upon its lower surface. The upper surface of the body of the hook is preferably placed below the horizontal faces of the sides *m*, so that it will not disturb the adjustment of the plate, the said body portion being prevented from rising by reason of the dovetail joint connection of the same with the block. It will be observed that foreign material within the bore of the block is raised to the surface by the feeding-screw when it is rotated. The feeding-screw preferably has its exterior thread left-handed, while its interior thread is right-handed.

While I have illustrated a dovetail connection of the hook with the block, it is obvious that joints of other construction may be em-

ployed without modifying the general characteristics of the device. It will be apparent that I have provided a most compact device for the purpose described, especially in view of the fact that the hook, with its body, is most firmly held in place by means of the feeding-screw and the block. By making the feeding-screw of large diameter and having the bottom of the body portion of the hook engaged thereby much more stability and an increased leverage are secured. This will be apparent to those skilled in the art, as the peripheral length of the thread of the feeding-screw is much greater than that of the threads of the feeding-screws in such devices in the prior art. It will be obvious that improved results are secured, inasmuch as the point of application of the screw-pressure upon the register-hook lies very close to the plane of the plate. In the devices of prior art the point of power application was considerably removed from the plane of the plate.

It is highly desirable to have the bore in the block incomplete, so that the feeding-screw may project into the guideway containing the register-hook, or rather the body thereof, so as to secure, as stated, the application of power to the register-hook at a point very near the plane of the plate that is to be adjusted.

Many changes may be made from the construction shown without departing from the spirit of my invention, and I do not therefore wish to be limited to the precise type of device illustrated; but,

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a block provided with a bore, of a feeding-screw filling the bore and projecting above the same, and a register-hook in sliding engagement with the block and in threaded engagement with the feeding-screw, the axis of rotation of said feeding-screw being substantially parallel to the plane of movement of said hook, substantially as described.

2. In a device of the class described, the combination with a block provided with a bore and a bridge-wall, of the feeding-screw within the bore, a register-hook in sliding engagement with the block and threaded engagement with the feeding-screw, an adjusting-screw passing through the bridge-wall into threaded engagement with a bore provided in the feeding-screw, the said adjusting-screw being expandible at its inner end and a locking-plug adapted for threaded engagement with the feeding-screw and to be forced against the adjusting-screw to expand the same into locking engagement with the feeding-screw, substantially as described.

3. In a device of the class described, the combination with a block, of a feeding-screw carried thereby and a register-hook in sliding engagement with the block and in threaded engagement with a limited peripheral portion of

the screw, the said screw extending beneath the hook and the body portion thereof, the axis of rotation of said screw being in the direction or plane of movement of said hook, substantially as described.

4. In a device of the class described, the combination with a block provided with a guideway, of a hook slidable in said guideway, said block being provided with a bore, and a feeding-screw within the said bore projecting into the said guideway, a portion of its peripheral surface having threaded engagement with said hook, the axis of rotation of said screw being substantially parallel to the plane of movement of said hook, substantially as described.

5. In a device of the class described, the combination with a block provided with a guideway, of a hook slidable in said guideway, the said block being provided with a bore, a feeding-screw within the said bore projecting into the said guideway and having a portion of its

peripheral surface in threaded engagement with said hook, the axis of rotation of said screw being substantially parallel to the plane of movement of said hook, and means providing against end thrust of the feeding-screw, substantially as described.

6. In a device of the class described, the combination with a block provided with a bore, of a feeding-screw filling the bore and projecting above the same, and a register-hook in sliding engagement with the block and in threaded engagement with the feeding-screw, the said register-hook being slidable upon the block in a direction parallel with the axis of the feeding-screw, substantially as described.

In testimony whereof I hereunto subscribe my name this 23d day of December, A.D. 1902.

HARRY B. ROUSE.

Witnesses:

GEORGE L. CRAGG,
JESSIE L. DAVIS.