(No Model.)

A. A. BOGEN & R. NIX.

SIDE STICK AND QUOIN.

No. 466,650. Patented Jan. 5, 1892.

Fig 1

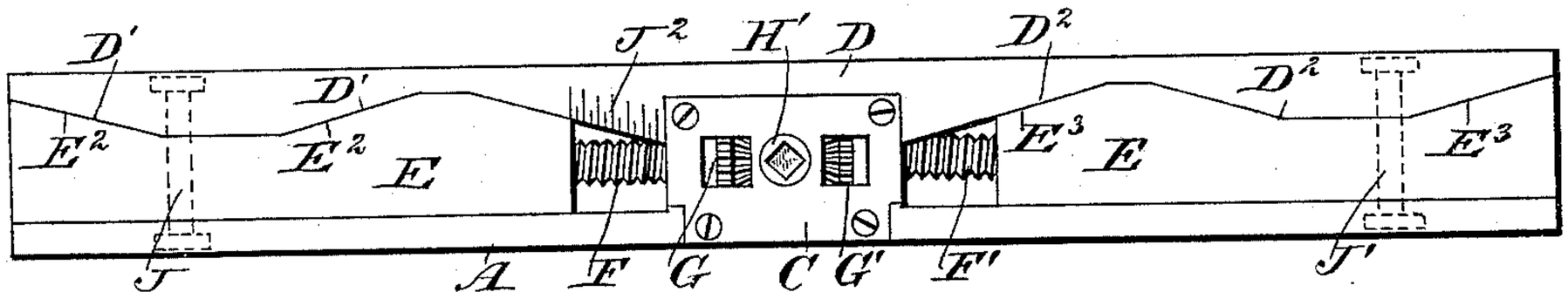


Fig 2

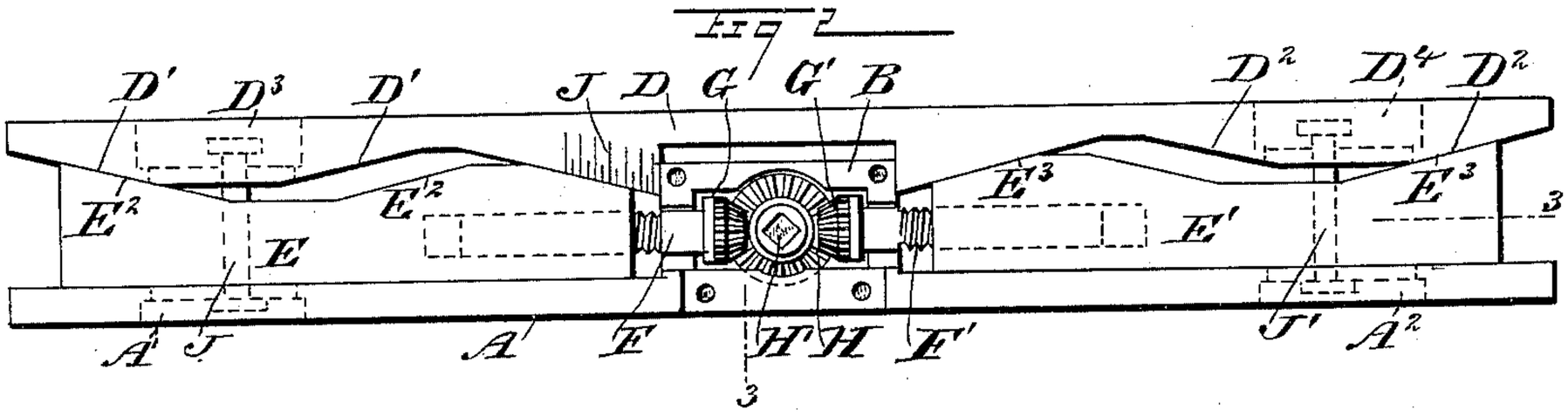


Fig 3

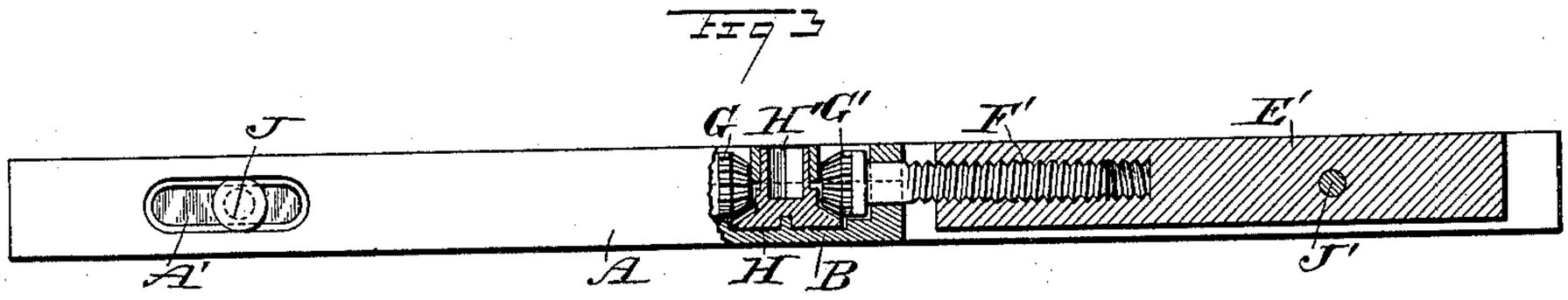


Fig 4

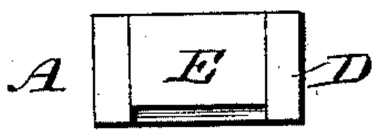
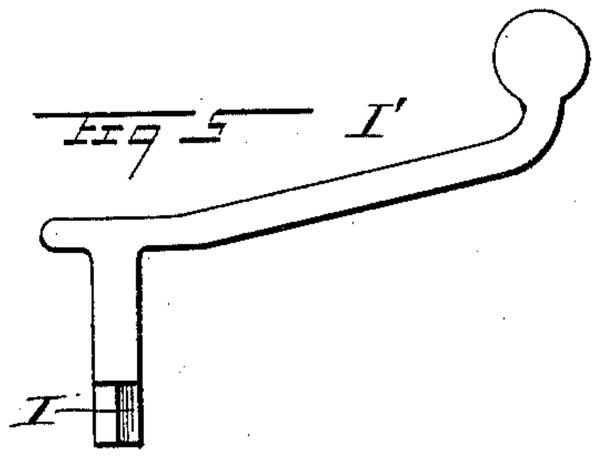


Fig 5



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UNITED STATES PATENT OFFICE.

ALBERT A. BOGEN AND ROBERT NIX, OF NEW ULM, MINNESOTA.

SIDE-STICK AND QUOIN.

SPECIFICATION forming part of Letters Patent No. 466,650, dated January 5, 1892.

Application filed May 19, 1891. Serial No. 393,277. (No model.)

To all whom it may concern:

Be it known that we, ALBERT A. BOGEN and ROBERT NIX, both of New Ulm, in the county of Brown and State of Minnesota, have invented a new and useful Improvement in Side-Sticks and Quoins, of which the following is a full, clear, and exact description.

The invention relates to printers' furniture; and its object is to provide new and improved side-sticks and quoins which are simple in construction and durable and arranged to conveniently and securely lock the form in the chase.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a like view of the same in a different position and with the casing-plate removed. Fig. 3 is a side elevation of the improvement with parts in section on the line 3 3 in Fig. 2. Fig. 4 is an end view of the same, and Fig. 5 is a side elevation of the key for revolving the gear-wheel.

The improvement is provided with a bar A, formed on the inside at or near the middle with a casing B, preferably rectangular in shape and covered by a plate C. On this casing B is fitted to slide transversely a second bar D, having its outer side parallel with the outer side of the bar A. The inner side of the latter is straight and parallel to its outer side, while the inner side of the bar D is formed on opposite sides of the casing B with inclines or bevels D′ and D^2, adapted to be engaged by correspondingly-shaped inclines or bevels E^2 and E^3, respectively, of blocks or wedges E and E′, respectively, mounted to slide longitudinally between the bars A and D on opposite sides of the casing B. The side of the blocks E and E′ adjacent to the inner side of the bar A is straight and fits snugly against the said inner side, as plainly shown in Figs. 1 and 2. The blocks or wedges E and E′ are engaged by screw-rods F and F′, respectively, being either right or left handed and extending in line with each other, as plainly shown in the drawings. The screw-rods F and F′ are mounted to revolve in suitable bearings in the ends of the casing B, the cover-plate C forming a cap for the bearings. On the inner ends of the screw-rods F and F′ are secured or formed the bevel gear-wheels G and G′, respectively, in mesh at opposite sides with a bevel gear-wheel H, mounted to revolve in the casing B, and having a hub H′ extending upwardly into a bearing in the plate C, the said hub being formed with a square opening or recess for the insertion of a correspondingly-shaped key I, formed with a handle I′, as plainly shown in Fig. 5.

In order to properly guide the several parts and hold the same together, headed pins J and J′ are provided, held in the blocks or wedges E and E′, respectively, and extending through the longitudinal slots A′ D^3 and A^2 D^4, respectively, of which the slots A′ A^2 are formed in the bar A and the slots D^3 and D^4 are formed in the bar D. The heads of the pins are adapted to engage shoulders in the bars, so as to prevent displacement of the said pins. The pins are of a sufficient length to permit an outward sliding motion of the bar D on the casing B.

The operation is as follows: When the device is in the position shown in Fig. 1, the blocks or wedges E and E′ are in their outermost position, and when it is desired to lock the form in place in the chase the operator engages the key I in the hub H′ of the gear-wheel H, and then turns the said key so that the bevel gear-wheel H revolves in the casing, and, by being in mesh with the gear-wheels G and G′, turns the gear-rods F and F′ so that the two blocks or wedges E and E′ are moved toward each other, and by their bevels E^2 and E^3, traveling on the corresponding bevels D′ and D^2 of the bar D, cause a lateral sliding of the said bar D away from the bar A. The outer side of the said bar D is then moved in contact with the form, the side of the bar A resting against the inside of the chase, or vice versa. It will be seen that by this arrangement the blocks or wedges E and E′ move simultaneously, and consequently an even outward movement of the bar D takes place, and also the pressure on the said bar D is equally distributed throughout its length, so that the form is securely and

evenly locked in place. In order to gage the lateral movement of the bar D, the latter is provided with a graduation J^2 near one end of the casing B and the inner end of the block E. By turning the gear-wheel H in an opposite direction the blocks E and E′ move outward, thus unlocking the form.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination, with a bar provided with a casing at about its middle and a second bar fitted to slide transversely on the casing, of wedges fitted to slide between the said bars, screw-rods mounted in the casing and engaging the said wedges, a pinion on the inner end of each rod, and a gear-wheel mounted in the casing and meshing with the pinions on the screw-rods, said gear-wheel having a socket in its hub to receive a key, substantially as described.

2. In a device of the class described, the combination, with a bar provided with a casing, of a second bar fitted to slide transversely on the said casing and formed on its inner side with bevels, blocks having bevels and fitted to slide longitudinally between the said bars, the bevels of the blocks engaging the bevels of the second bar, screw-rods screwing in the said blocks and mounted to turn in the said casing, pinions held on the said screw-rods, and a gear-wheel mounted to turn in the said casing and in mesh with the said pinions, substantially as shown and described.

3. In a device of the class described, the combination, with a bar provided with a casing, of a second bar fitted to slide transversely on the said casing and formed on its inner side with bevels, blocks having bevels and fitted to slide longitudinally between the said bars, the bevels of the blocks engaging the bevels of the second bar, screw-rods screwing in the said blocks and mounted to turn in the said casing, pinions held on the said screw-rods, a gear-wheel mounted to turn in the said casing and in mesh with the said pinions, and a removable key for revolving the said gear-wheel, substantially as shown and described.

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Witnesses:
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