No. 698,430. Patented Apr. 29, 1902.

W. J. BAKER.

SCREW PLATE.

(Application filed Jan. 11, 1901.)

(No Model.)

Fig. 1.

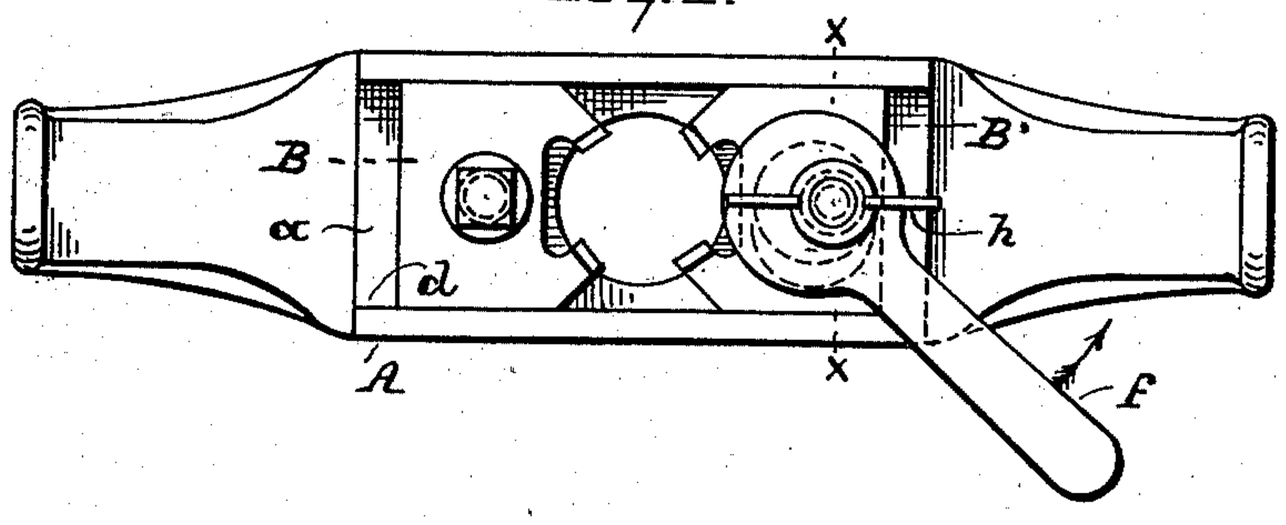


Fig. 2.

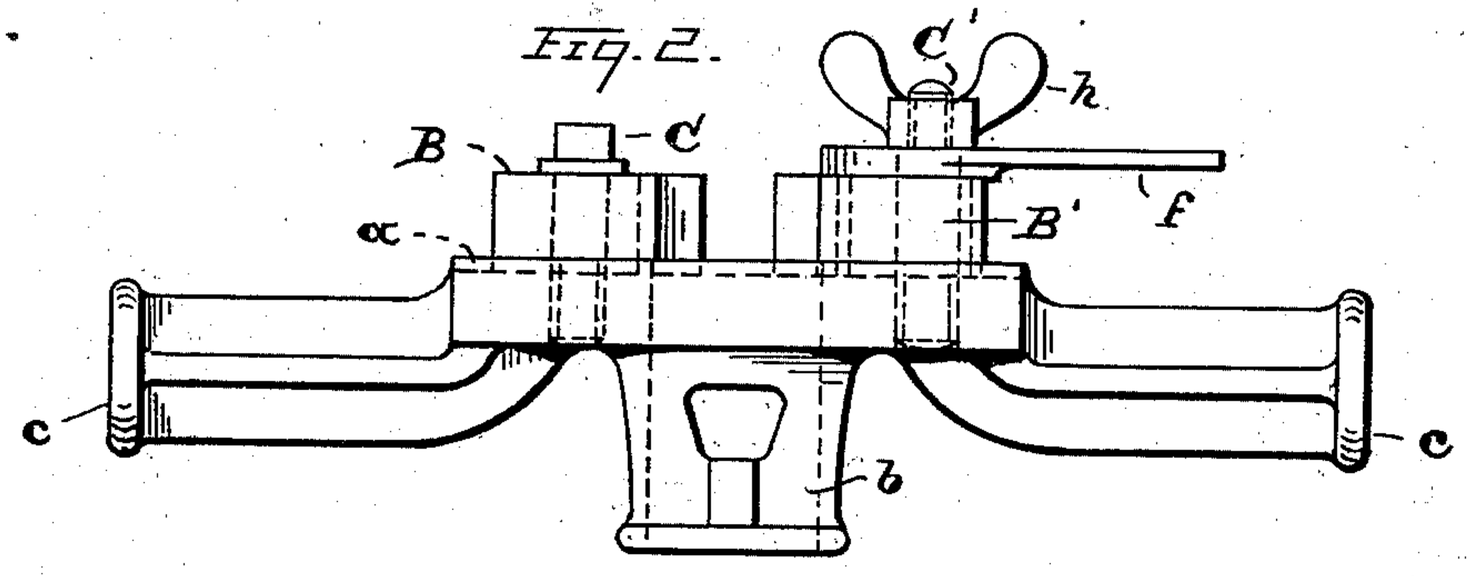


Fig. 3.

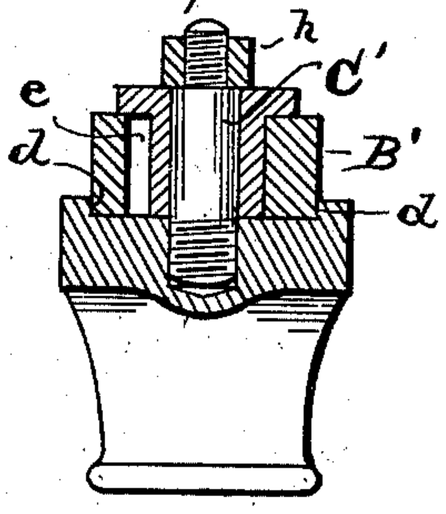
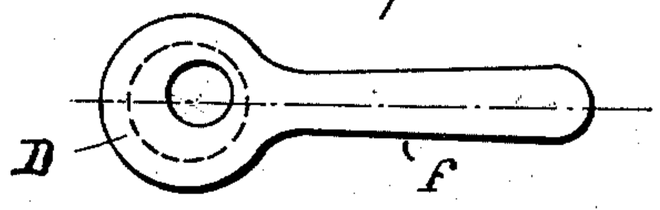


Fig. 4.



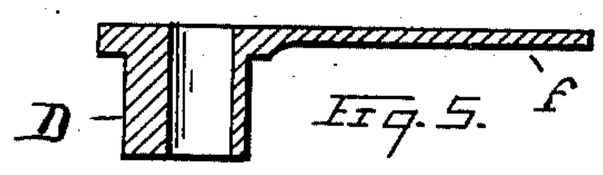
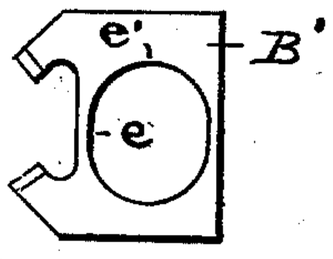


Fig. 5.

Fig. 6.



WITNESSES.

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SCREW-PLATE.

SPECIFICATION forming part of Letters Patent No. 698,430, dated April 29, 1902.

Application filed January 11, 1901. Serial No. 42,830. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BAKER, a citizen of the United States of America, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Screw-Plates, of which the following is a specification.

My invention relates to improvements in so-called "screw-plates" wherewith screw-threads are cut upon pipes, rods, &c.; and the object of my improvement is to facilitate the thread-forming operation upon pipes, &c., in such manner as to enable a ready removal of the dies (respectively screw-plate) after the pipes or rods are cut, thus dispensing with the tedious "returning" of the screw-plate after same has been run onto pipes, &c., for the purpose of cutting a screw-thread thereon. I attain these objects in a device constructed substantially as shown in the accompanying drawings, in which—

Figure 1 illustrates a face view of said improved screw-plate. Fig. 2 is a side view of same. Fig. 3 is a transverse sectional view of same on line *x x*. (See Fig. 1.) Fig. 4 is a face view of an eccentric applied in said device. Fig. 5 illustrates a sectional view of said eccentric, and Fig. 6 represents one of the dies of said screw-plate detached.

Like letters of reference denote like parts in the drawings and specification.

Substantially this screw-plate consists of the stock A, the dies B B′, the set-screws C C′, and the eccentric D. The stock A is of well-known "type," the face side *a*, the sleeve *b*, and terminals *c c* of which being adapted, respectively, for reception of the dies, for the pipes or rods to be cut and for handles or extensions whereby said stock or plate is turned in cutting threads. The dies B B′ fit between the shoulders *d d* in Figs. 1 and 3 and are held secure with the plate by means of cap-screws or screw-threaded studs C C′. (See Figs. 2 and 3.)

As shown, one of the dies, B′, is slotted, as at *e*, (see Figs. 3 and 5,) and into such slot is inserted the eccentric D, which also fits over the stud C′. By means of said eccentric, which is provided with a handle *f*, one is enabled to withdraw the die B′ sufficiently so that both the dies may be slipped over the pipe or rod after the thread is cut thereon. The spreading of one or both the dies simplifies the work of cutting threads in so far as it dispenses with the tedious operation of running the screw-plate back and upwardly after the thread is cut during the down and forward operation of the dies.

When the dies are closed—that is, when the die B′ assumes the position as shown in Fig. 1—then the eccentric assumes a position in relation to the slot *e* and pin C′ as to render said die absolutely fixed in said position, for the reason that the center of the eccentric has been shifted beyond the line of thrust and the periphery of the eccentric is binding against the side *e′* of the slot *e*.

Only by moving the handle part of the eccentric in direction of the arrow it is possible to move the die B′ outwardly or to spread the dies. Simply to prevent accidental moving of the handle I provide a thumb-nut *h* upon the stud C′. Said nut enables clamping of the eccentric onto the plate or stock and also admits of a ready release of the eccentric (die, respectively) whenever it becomes desirable to spread the dies for the purpose as above stated. Obviously both the dies may be equipped with a releasing device, as above described. For general demands, however, it has been found sufficient when only one of the dies is rendered movable to facilitate the work of cutting threads upon pipes, rods, &c.

As will be seen, the eccentric D extends into the transverse slot *e* of the die B′. Furthermore, the die B′, being arranged between the guides *d*, is incapable of moving laterally of the stock. Hence any movement of the eccentric D, whether in the direction of the arrow, as in Fig. 1, or in a direction to return the die, will impart a positive movement to the die, but only in a direction longitudinally of the stock. By this construction there is no requirement of hand manipulation of the die independent of the movement of the eccentric, such as is required where the operating means moves the die in but one direction.

What I claim, and desire to secure by Letters Patent, is—

1. In a screw-plate the combination with the stock; of a die relatively fixed; a complemental die having a reciprocating movement longitudinally of the stock; and a cam

mechanism for positively moving said complemental die in both directions, said die in its inner position being automatically held locked against outward movement under pressure, due to the major axis of the cam crossing the point against which the pressure is applied, the movement being limited.

2. In a screw-plate the combination with the stock thereof, of a fixed and a transversely-slotted die, the latter having a reciprocating movement longitudinally of the stock; and a handle-operated eccentric located within a slot of the last-named die, in pivotal connection with a clamping-stud, said eccentric moving said die in both directions and preventing an outward movement of the movable die under pressure when said die is moved to its inner position.

3. In a screw-plate, the combination with the stock; of a die relatively fixed; a complemental die having a reciprocating movement longitudinally of the stock, said die having a transverse slot; and an eccentric extending into said slot and adapted to impart movement to the die in both directions, said slot and eccentric having a relative cooperation to automatically hold said die locked against outward pressure when said die is in its inner position.

Signed at Cleveland, Ohio, this 24th day of December, 1900.

WILLIAM J. BAKER.

Witnesses:
BERNHARD EIBLER,
JAMES MATHERS.