

No. 837,465.

PATENTED DEC. 4, 1906.

H. P. GORMAN.

SHELL FISH OPENER.

APPLICATION FILED MAR. 15, 1906.

Fig. 1.

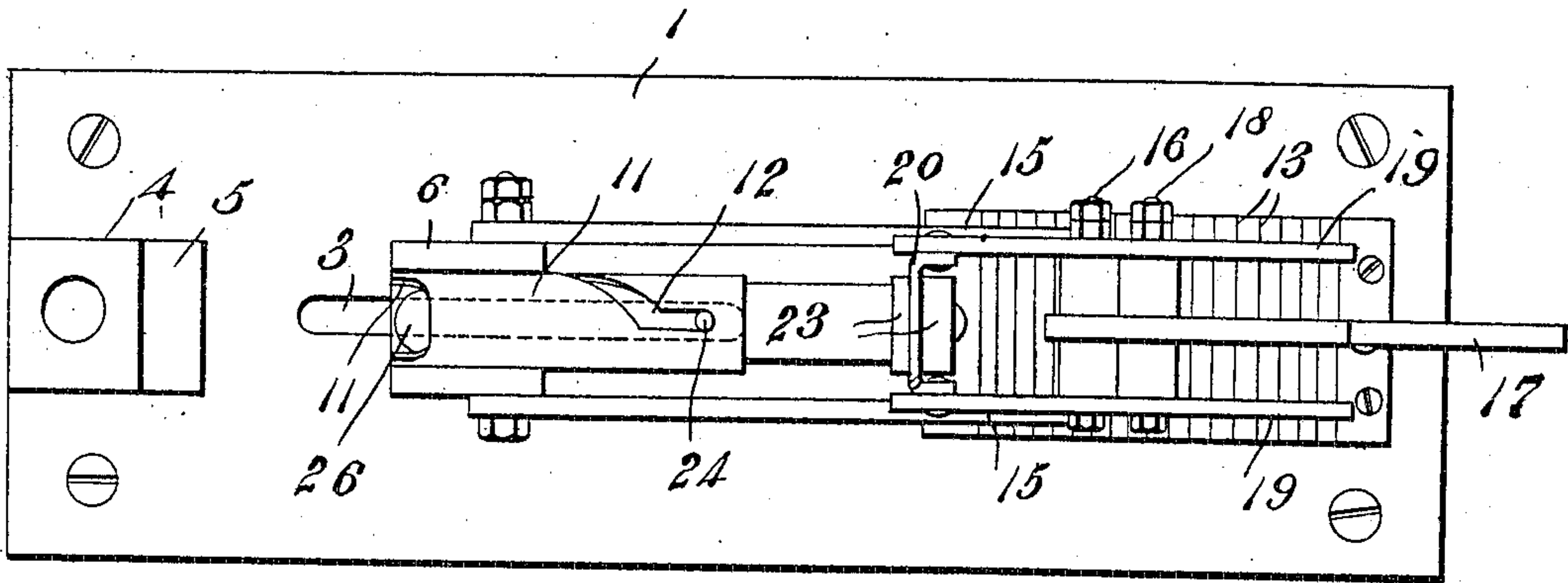
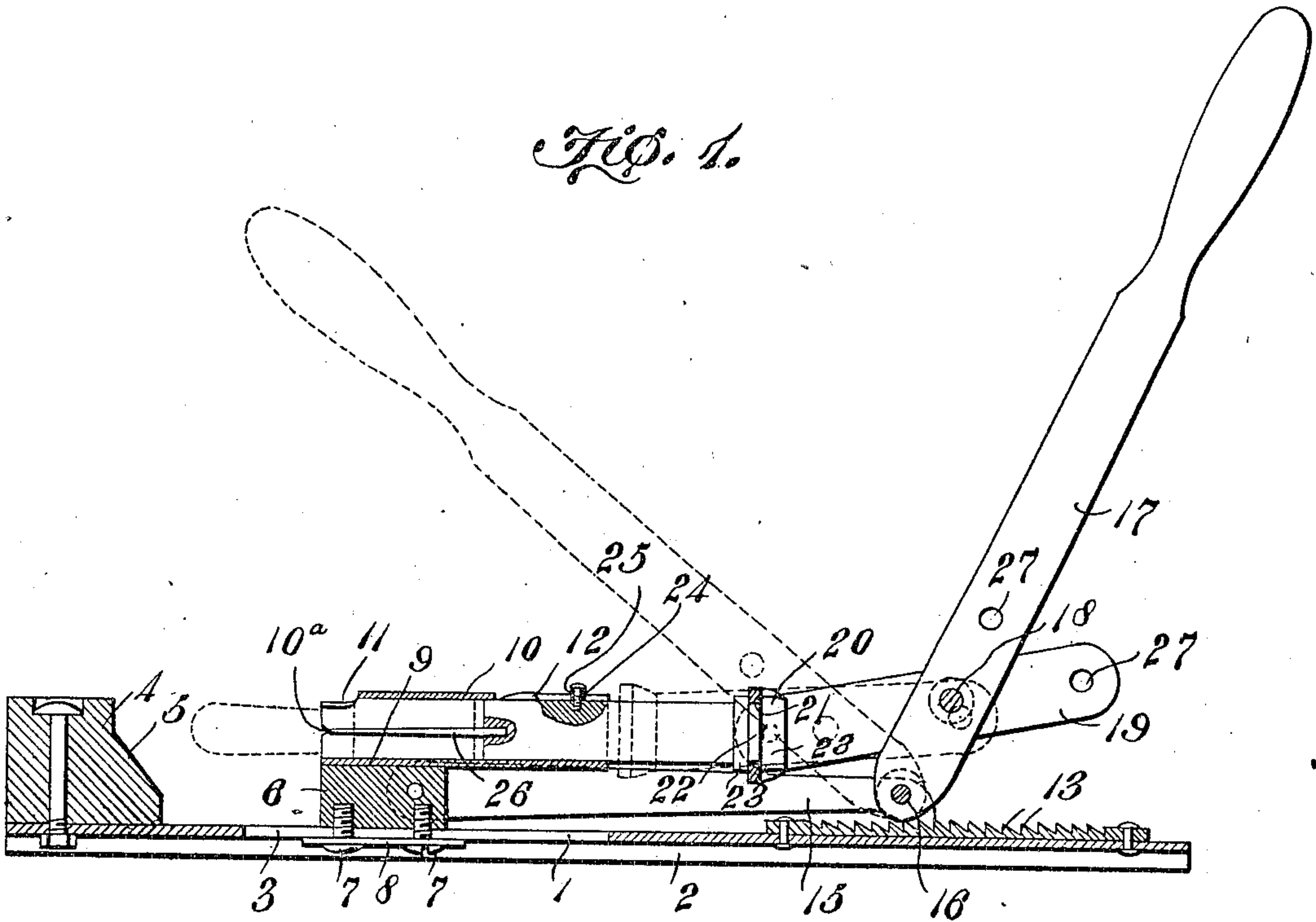


Fig. 2.

WITNESSES:

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HORACE PFOUTS GORMAN, OF HAZLETON, PENNSYLVANIA.

SHELL-FISH OPENER.

No. 837,465.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed March 15, 1906. Serial No. 306,281.

To all whom it may concern:

Be it known that I, HORACE PFOUTS GORMAN, a citizen of the United States, residing at Hazleton, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Shell-Fish Opener, of which the following is a specification.

This invention relates to devices for opening bivalved mollusca—such as oysters, clams, and the like; and its object is to provide a device which is quickly adjustable to bivalves of different sizes and which will hold them in position during the operation of opening mollusca.

Another object is to provide novel means for spreading apart the shells of the mollusca without chipping them.

With the above and other objects in view the invention consists of a base having a stationary jaw thereon and a sliding jaw. This sliding jaw is adjustably mounted and supports a guide on which is rotatably and slidably mounted a plunger of peculiar form having means for actuating it. The guide is adapted to impart a rotating movement to the plunger during a portion of its longitudinal movement, so that the end of the plunger can be first forced between the shells of the bivalves and then rotated so as to produce a twisting motion, and thereby result in spreading the shells apart.

The invention also consists of certain other features of construction and combinations of parts which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings, Figure 1 is a longitudinal section, and Fig. 2 is a plan view.

Referring to the figures by numerals of reference, 1 is a base having downwardly-extending ribs 2 at its edges, and a longitudinally-extending slot 3 is formed along the center of the base for a portion of its length. A fixed jaw 4 is secured to or formed upon the base at one end, and the inner or working face of this jaw has an inclined shoulder 5 at a point midway its upper and lower ends, said shoulder constituting a support for a bivalve. A jaw 6 is slidably mounted on the base and is attached thereto by means of guide-pins 7, which extend through the slot 3 and engage a retaining-plate 8, mounted on the lower face of the base. This sliding jaw has a substantially semicylindrical recess 9 in its upper face, and a groove 10^a extends

across the working face of the sliding jaw and intersects the recess 9. A tubular guide 10 is suitably secured at one end within the recess 9 and projects beyond the rear face of jaw 6. This guide has its forward portion cut away at the top, as shown at 11, and a slot 12 is formed within the guide for a portion of its length. The rear portion of this slot is disposed longitudinally within the guide, while the front portion thereof extends forward and partly around the guide. Ratchet-teeth 13 are disposed upon the base 1 and extend transversely thereof. These teeth are adapted to be engaged by toes formed at one end of arms 15, pivoted to opposite sides of the jaw 6. These toes normally engage the teeth by gravity and are connected by a cross-rod 16, on which is fulcrumed an operating-lever 17. This lever has a bolt 18 extending through it and engaging at its end links 19, pivoted to opposite sides of a cross-head 20. This cross-head has a central circular opening 21, in which is rotatably mounted a plunger 22, having collars 23 thereon for preventing independent longitudinal movement of the plunger and cross-head. Said plunger extends into the guide 10 and is adapted to slide and rotate therein. A stud 24 extends from the plunger and into the slot 12, and this stud has a friction-roller 25 to facilitate the actuation of the plunger. A knife-blade 26 is detachably inserted in the free end of the plunger, and when the stud 24 is in the longitudinally-extending portion of the slot 12 this blade is in a substantially horizontal position and in alinement with the groove 10^a in jaw 6. A plurality of apertures 27 are formed within the lever 17 and links 19, so as to permit desired adjustment of said lever in relation to the links.

When it is desired to open a bivalve by means of this device, the same is placed upon the shoulder 5 of jaw 4 and the lever 17 is pulled forward, so as to slide the toes 14 over the teeth 13. The sliding jaw 6 is thus moved against the bivalve, so that the edge thereof will rest within the groove 10^a. The lever 17 is now swung forward, the bolt 16 serving as a fulcrum, and as a result the plunger 22 is slid longitudinally within its guide, thereby projecting the end of the knife-plate 26 between the meeting edges of the shell. As the forward movement of the plunger continues the stud 24 will travel into the front portion of slot 12 and will cause the plunger to

partly rotate. As a result of this action the blade will partly revolve or twist between the edges of the shell and force them apart.

This operation can be continued, and jaw 6 can be readily adjusted in relation to the jaw 4, so as to properly hold bivalves of different sizes. Should it be desired to slide the jaw 6 away from jaw 4, it is first necessary to pull forward on the lever 17, so as to raise the toes from engagement with the teeth 13.

This device will be found of great utility and convenience for opening oysters and the like, and results can be obtained much more readily therewith than by the old hand-opening method, wherein considerable danger of cutting is incurred by the operator.

What is claimed is—

1. The combination with a fixed jaw and a sliding jaw; of a blade supported by the sliding jaw and means for successively projecting the blade toward the fixed jaw and rotating it.

2. The combination with a fixed jaw and a sliding jaw; of a guide supported by the sliding jaw, a blade mounted within the guide, and means for successively sliding and rotating the blade.

3. The combination with a stationary and a sliding jaw, of a guide carried by the sliding jaw, a plunger slidably mounted thereon, a blade mounted on the plunger and means connected to the sliding jaw for actuating the plunger.

4. The combination with a stationary and a sliding jaw, of a guide carried by the sliding jaw, a plunger slidably mounted thereon, a blade mounted on the plunger and means connected to the sliding jaw for actuating the plunger to successively slide and rotate the blade.

5. The combination with a fixed jaw and an adjustable jaw, of a tubular guide carried by the adjustable jaw and having a cam-slot, a plunger slidably mounted within the guide,

a blade carried thereby, means upon the plunger adapted to travel within the slot, and means for actuating the plunger.

6. The combination with a base having a fixed jaw thereon; of a jaw slidably mounted on the base, means for holding the jaw in adjusted position, a blade carried by the adjustable jaw and means for successively sliding and rotating the blade.

7. The combination with a base having a fixed jaw; of a jaw adjustably mounted upon the base, a tubular guide carried thereby and having a cam-slot therein, a plunger mounted within the guide, means projecting therefrom and into the slot, a blade carried by the plunger, and means for sliding the plunger, said cam-slot adapted to produce the rotation of the plunger during its reciprocation.

8. The combination with a base having a stationary jaw; of a jaw adjustably mounted on the base and having a transverse groove in its working face, a guide carried by the adjustable jaw, a blade supported by the guide, and means for reciprocating said blade, said guide adapted to cause the rotation of the blade during its reciprocation.

9. The combination with a base having a stationary jaw and teeth upon the base; of a jaw slidably mounted on the base, arms extending therefrom and normally engaging the teeth, an actuating-lever carried by the arms, a guide carried by the slidable jaw, a plunger mounted within the guide adapted to be reciprocated by the lever, said guide adapted to rotate the plunger during its reciprocation, and a blade carried by the plunger.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HORACE PFOUTS GORMAN.

Witnesses:

HENRY PLATT,
ARTHUR WALLAUER.