

H. TERHUNE.
 DROP HAMMER FRAME ADJUSTING MEANS.
 APPLICATION FILED JUNE 5, 1911.

1,044,292.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.

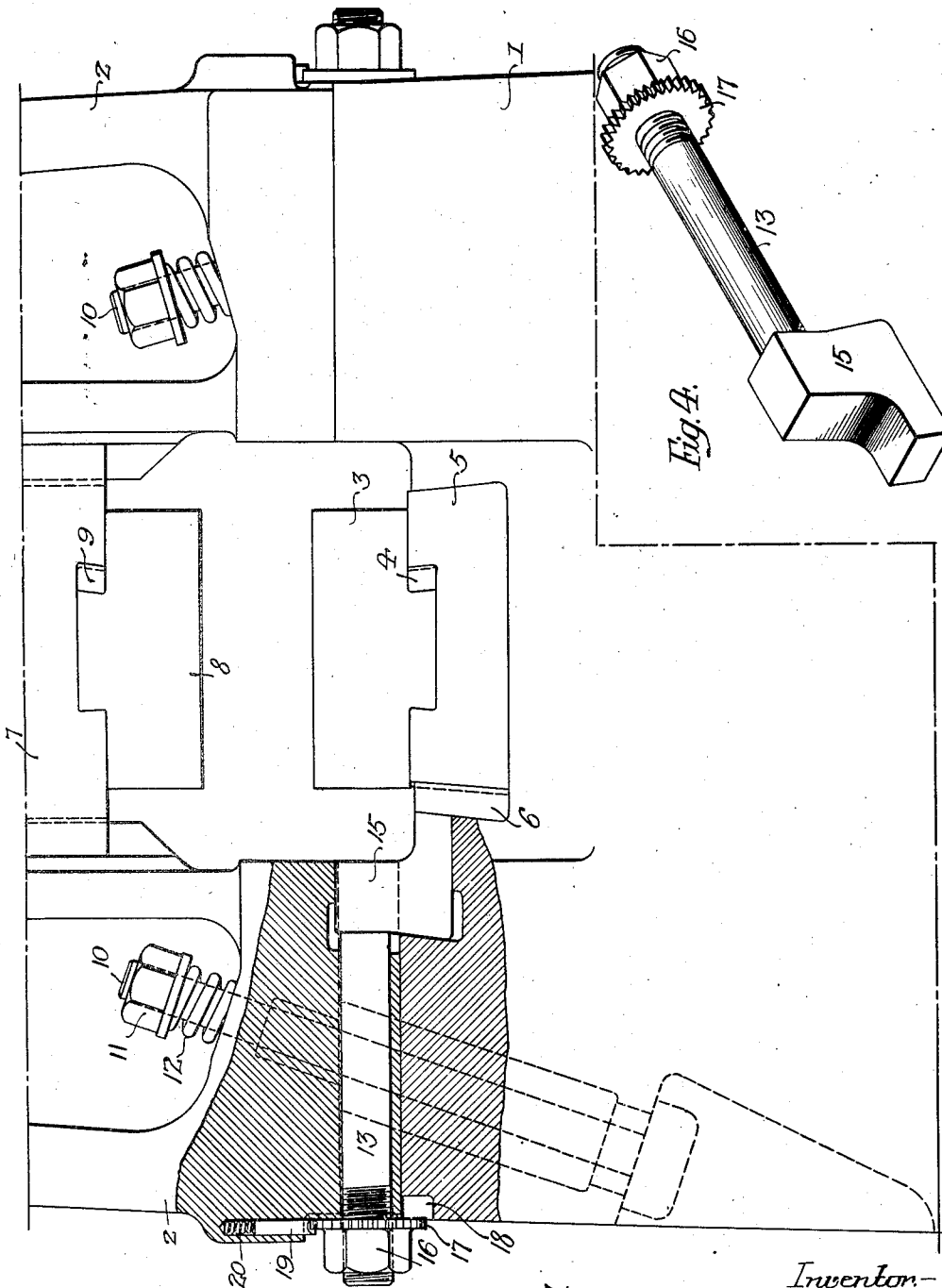


Fig. 4.

Fig. 1

Witnesses—
 Hiram Pitter
 Allen A. Burrows

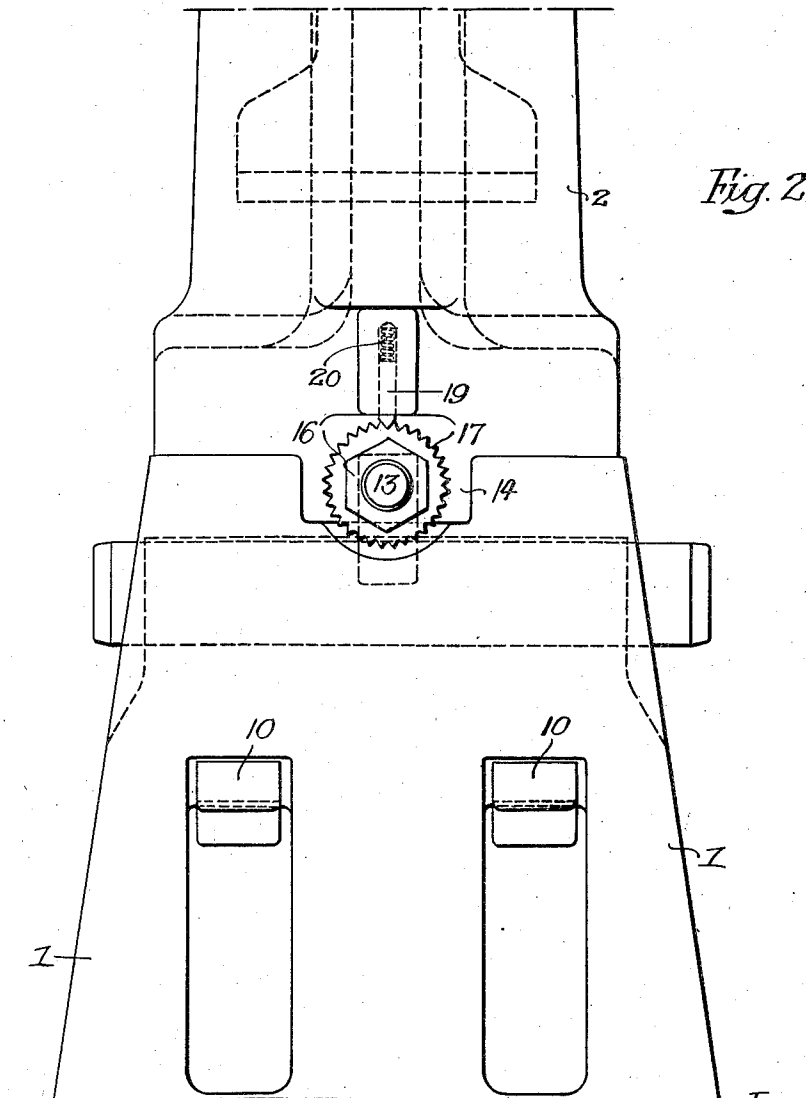
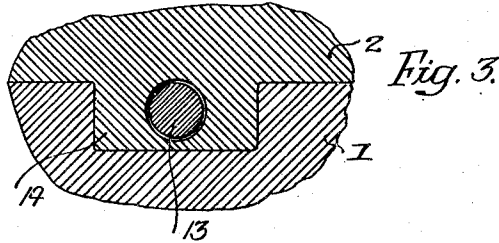
Inventor—
 Howard Terhune.
 by his Attorneys—
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UNITED STATES PATENT OFFICE.

HOWARD TERHUNE, OF CHAMBERSBURG, PENNSYLVANIA, ASSIGNOR TO CHAMBERSBURG ENGINEERING COMPANY, OF CHAMBERSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DROP-HAMMER-FRAME-ADJUSTING MEANS.

1,044,292.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed June 5, 1911. Serial No. 631,230.

To all whom it may concern:

Be it known that I, HOWARD TERHUNE, a citizen of the United States, and a resident of Chambersburg, Franklin county, Pennsylvania, have invented certain Improvements in Drop-Hammer-Frame-Adjusting Means, of which the following is a specification.

One object of my invention is to provide novel means for adjusting the positions of the two parts of a drop hammer relatively to each other, in order that the two dies respectively keyed to the anvil and to the ram of the hammer may be properly mated with each other; it being especially desired that the device shall be substantial as to its construction, shall be conveniently operable and have its parts so disposed as to require little if any attention or repairs even after prolonged periods of use. These objects and other advantageous ends I secure as herein-after set forth, reference being had to the accompanying drawings, in which;—

Figure 1, is a front elevation partly in section illustrating my invention as applied to a drop hammer; Fig. 2, is a side elevation of the structure shown in Fig. 1; Fig. 3, is a fragmentary section illustrating the connection between the top and bottom portions of the frame, and anvil, and Fig. 4, is a perspective view of one of the bolts constituting part of the invention.

In the above drawings 1 represents the anvil of a drop hammer on which is mounted the frame 2; there being between these parts a tongue and groove connection as shown in Fig. 3 whereby it is possible to move said frame transversely of the anvil.

On the anvil is a cap 5 held in place by a key 6 and in turn supporting a die 3 held to it by a key 4. The ram of the hammer is indicated at 7 and this has an upper die 8 held to it by a key 9. The anvil and frame are held together by inclined bolts 10 whose heads are disposed within suitable pockets of said anvil and which have springs 12 mounted between the nuts 11 on their upper ends and the adjacent surface of the frame.

For adjusting the position of the frame on the anvil in order that the dies 3 and 8 may be properly mated, I provide two adjusting bolts 13 each extending through one of the tongues 14 of the frame 2 and each provided with a hooked head 15 of the construction

shown in Fig. 4. The anvil adjacent said head is provided with an undercut recess for the reception of the correspondingly formed part of the bolt head which tightly fits said recess and also at its upper portion tightly fits a recess or pocket in the frame.

The outer end of each of the bolts is threaded for the reception of a nut 16 having integral with it a toothed collar 17 bearing on the frame; the anvil 1 being recessed as indicated at 18 so that the nut rests exclusively on the frame. For holding said nut in any given position against the vibration due to the operation of the hammer I provide a small tooth or plunger 19 mounted in a suitable cavity of the frame and normally pressed toward the toothed collar 17 by a spring 20.

The frame adjacent the heads 15 of the bolts 13 is cut away so that the under face of each of said heads bears only on the anvil. With this arrangement of parts if it be desired to shift the frame 2 toward the right side of the anvil in order to properly aline the dies 3 and 8, the nut 16 of the bolt 13 on the right hand side of the machine is to be slackened off while the nut on the other bolt will be tightened. As a result the frame 2 would be moved transversely of the anvil to the desired position and thereafter the nut of the right hand bolt would be tightened up so as to place said bolt in tension.

Owing to the provision of the hooked heads 15 and the cooperating undercut portions of the anvil 1, the tightening of the nuts 16 of the two bolts 13 tends to draw said heads down on their seats in the anvil, and inasmuch as they tightly fit the cavities of the anvil and frame in which they are mounted, the admission of scale to said cavities is effectually prevented. There is thus no tendency for the head of the bolt to be forced or held out of its proper position and in case one of the bolts should break it may very quickly be removed merely by removing the die and the anvil cap. Thereafter a new bolt may be quickly inserted without the necessity for removing the frame from the anvil or otherwise dismantling the machine.

Owing to the peculiar formation and arrangement of the bolt head and also to the fact that the bolts 13 are at all times main-

tained under tension, a relatively durable construction is provided. It is noted that the bolts 10 cooperate with the bolts 13 to cause the frame to tightly jam against the 5 nuts on said latter bolts, thus preventing a possible inward shifting of the frame 2 due to the shocks received from the hammer blows under operating conditions.

Another advantage of the use of the tension bolts 13 arises from the fact that there 10 is no tendency for any of their parts to be battered or upset as would be the case were they in compression.

I claim:—

15 1. The combination in a drop hammer of a frame and an anvil movable relatively to each other; and means for adjusting said parts consisting of a bolt having a hooked head; said head fitting an undercut cavity 20 in one of the parts and having a nut operative on the other part.

25 2. The combination in a drop hammer of an anvil and a frame movable relatively to each other; with oppositely placed bolts for adjusting said frame on the anvil, said bolts each having a hooked head and the anvil having undercut recesses for the reception

of the bolt heads; with a nut for each of the bolts, bearing on the frame.

3. The combination in a drop hammer of 30 an anvil and a frame movable relatively to each other; bolts for preventing the vertical separation of said parts; and other bolts normally in tension for adjusting the frame transversely of the anvil; the first bolts be- 35 ing inclined to the second bolts in positions to cause the frame to exert tension on said latter bolts.

4. The combination in a drop hammer of 40 an anvil and a frame movable relatively to each other; bolts for preventing the vertical separation of said parts; and bolts normally in tension for adjusting the frame transversely of the anvil; said latter bolts hav- 45 ing hooked heads fitting in undercut recesses of the anvil.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HOWARD TERHUNE.

Witnesses:

SARAH T. FROMMEYER,
A. A. LONGAKER.