

No. 775,325.

PATENTED NOV. 22, 1904.

W. ASHERT.
MINER'S PICK.

APPLICATION FILED DEC. 7, 1903

NO MODEL.

Fig. 1.

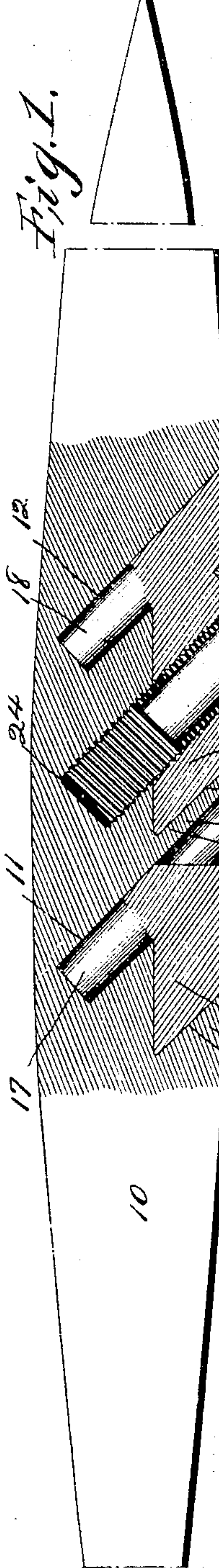


Fig. 2.

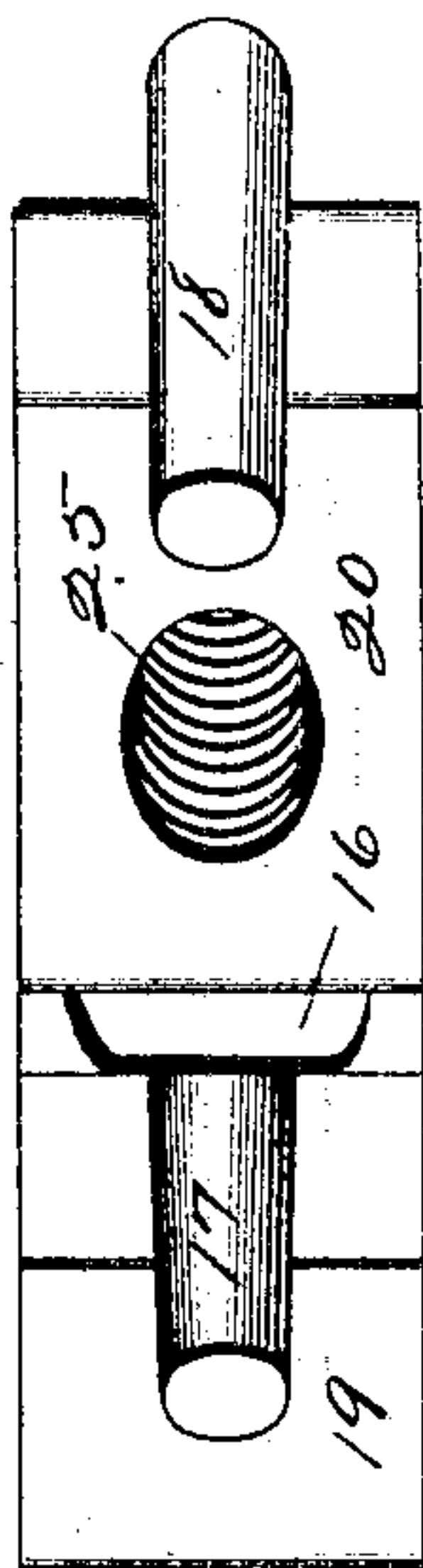


Fig. 3.

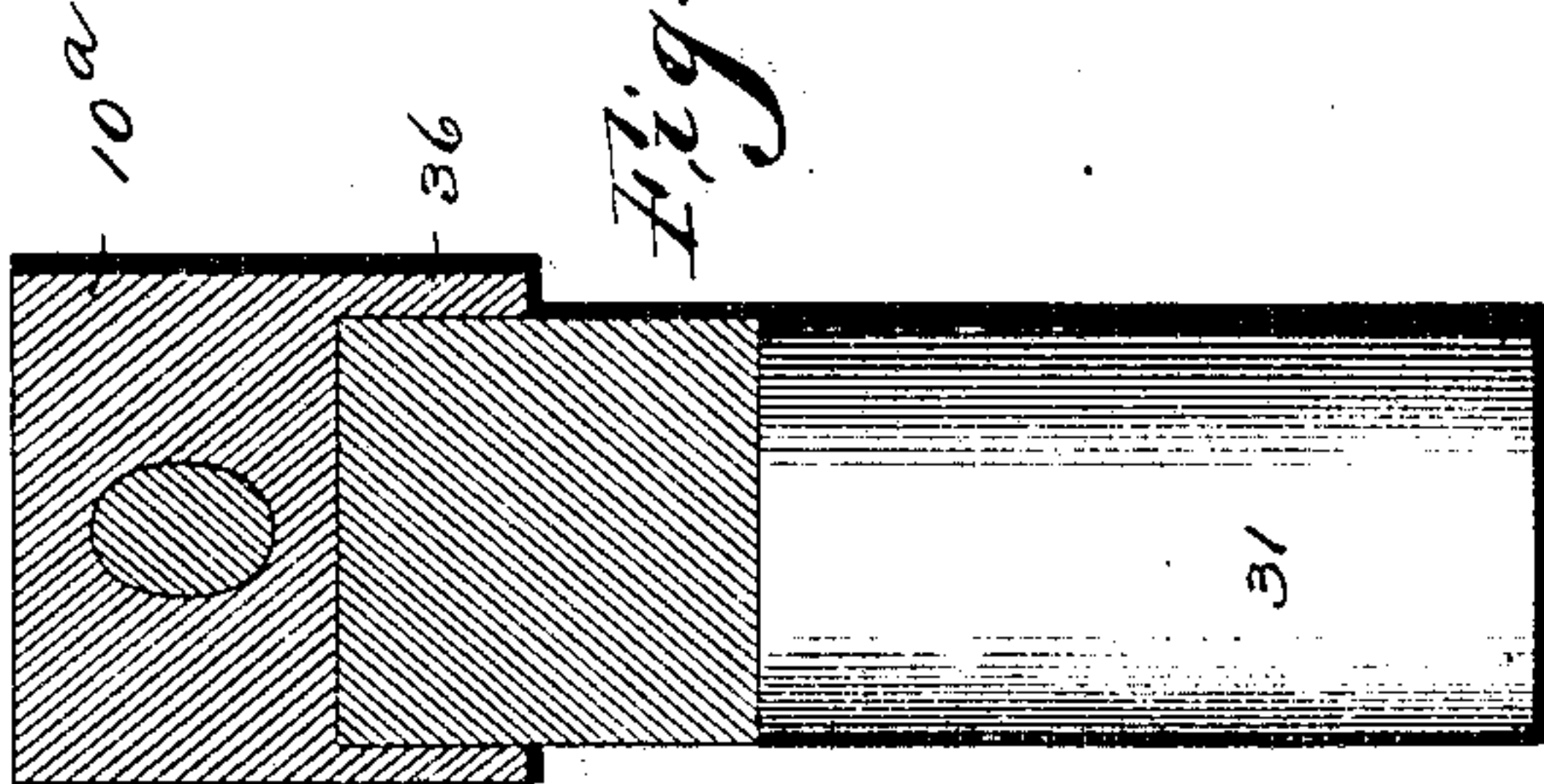


Fig. 4.

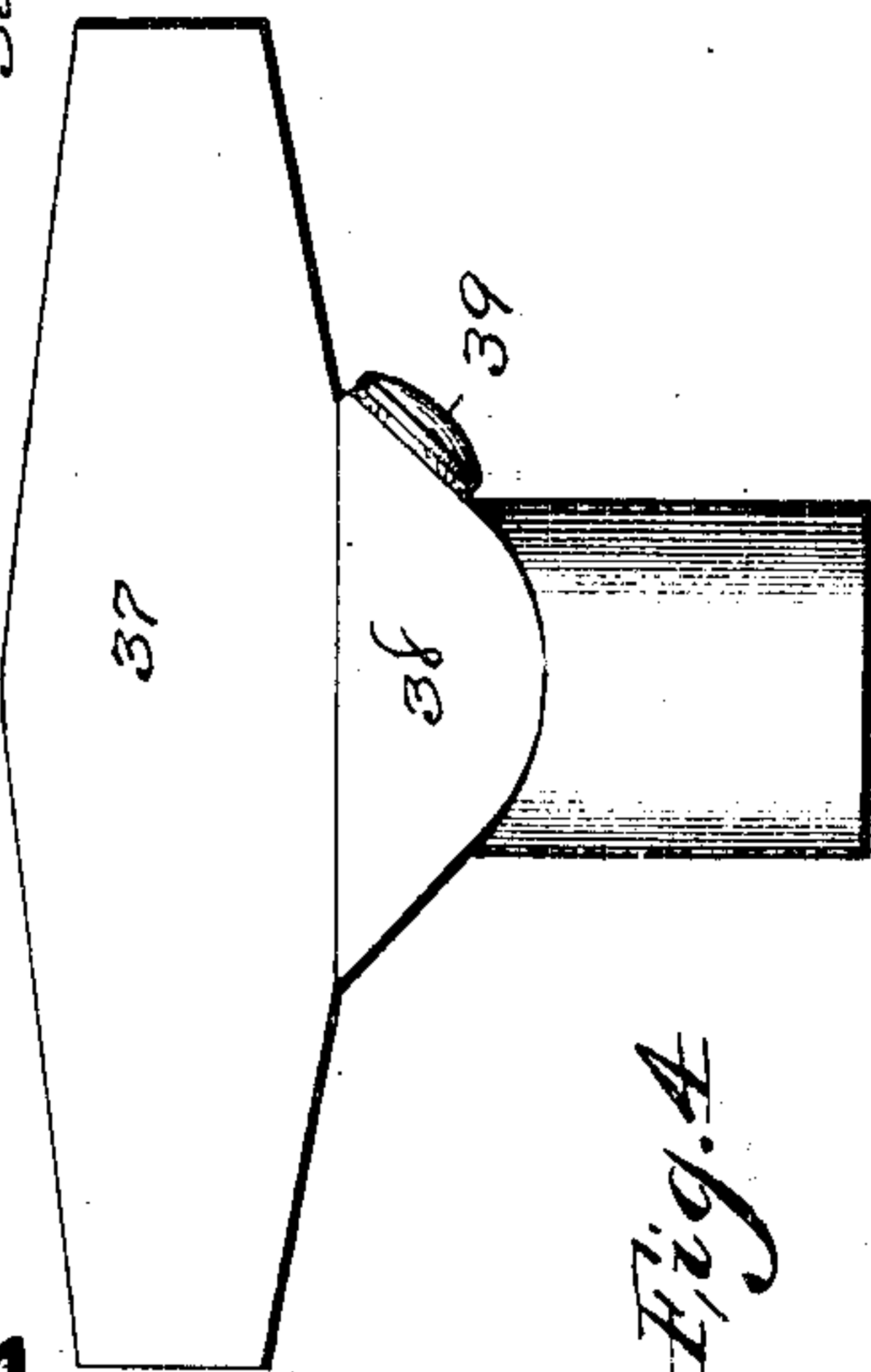
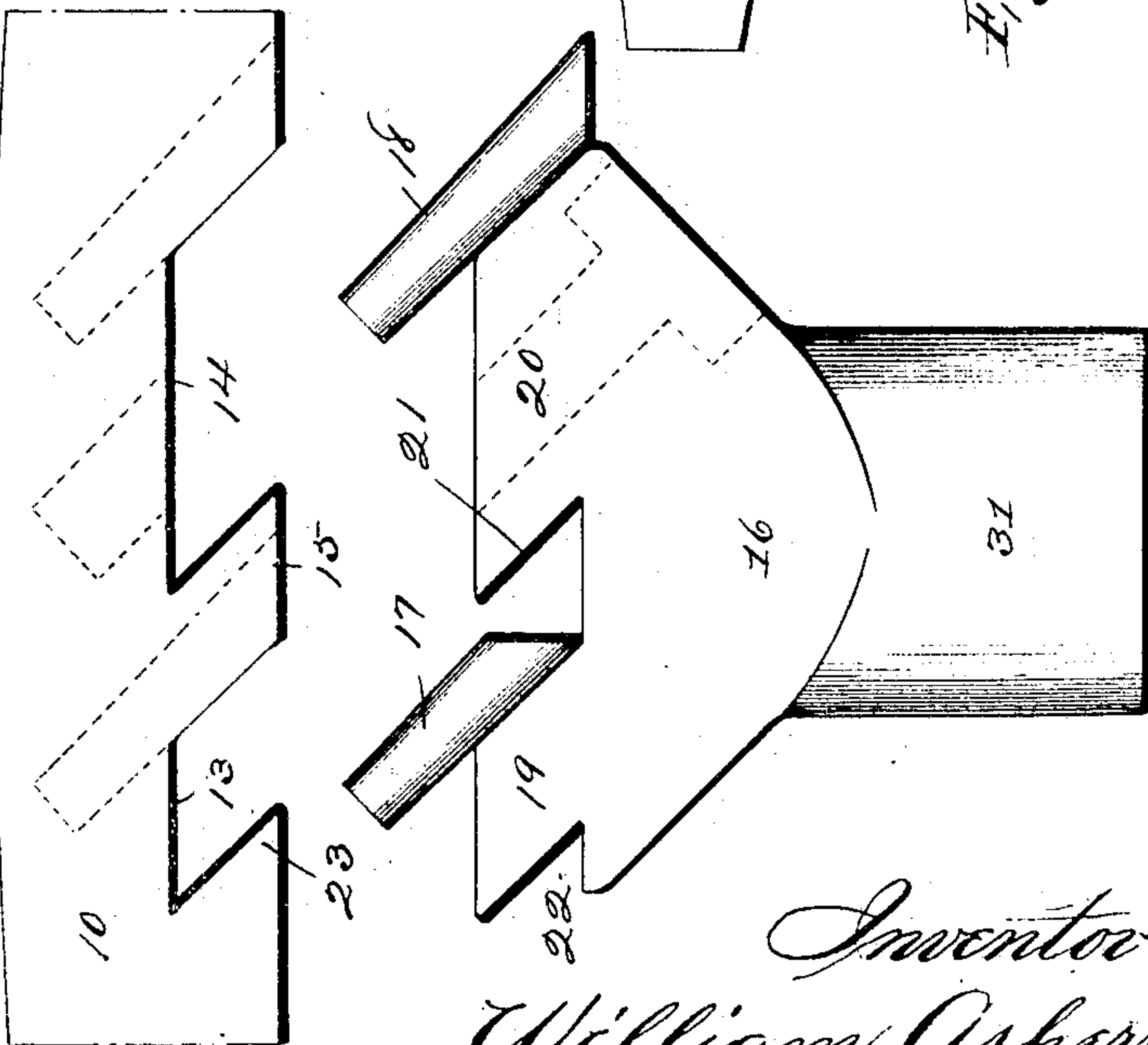


Fig. 5.



Attest:
R. B. Cring.
W. Ellis.

Inventor
William Ashert
By J. S. Webb atty

UNITED STATES PATENT OFFICE.

WILLIAM ASHERT, OF DES MOINES, IOWA.

MINER'S PICK.

SPECIFICATION forming part of Letters Patent No. 775,325, dated November 22, 1904.

Application filed December 7, 1903. Serial No. 184,238. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ASHERT, a citizen of the United States of America, and a resident of Des Moines, Polk county, Iowa, have invented a new and useful Miner's Pick, of which the following is a specification.

The object of this invention is to provide an improved construction for tools and tool-handles.

A further object of this invention is to provide an improved construction for tools and tool-handles whereby the tool may be removably and replaceably attached to the handle and when attached rigidly secured thereto.

A further object of this invention relates to the specific construction of a miner's pick and stem or handle socket and the means of connecting said stem or handle socket to the pick removably and replaceably.

My invention consists in the construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, illustrating the application of my invention to a miner's pick and handle therefor. Fig. 2 is an end view of the handle or stem employed to carry a miner's pick or other tool. Fig. 3 is a view illustrating the pick head and stem separate from each other, the dotted lines indicating interior construction. Fig. 4 is an elevation illustrating the application of my invention to a sledge and handle therefor. Fig. 5 is a cross-section illustrating the application of my invention to a modified form of pick-head.

In the construction of the device as shown the numeral 10 designates a pick-head formed with tapering sockets 11 12 parallel with each other and at oblique angles to the trend or the longitudinal center of the pick-head. The sockets 11 12 open to the inner face of the pick-head 10 and communicate with notches 13 14 in said inner face of the pick-head, which notches also are parallel with each other, separated by a partition 15 and at oblique angles to the trend or longitudinal plane of the pick-head. A stem or handle socket 16 is provided and formed with dowel-pins 17 18 of tapering

formation and of a size and shape to enter and fit snugly in the tapering sockets 11 12 in the pick-head. The tapering dowel-pins 17 18 are formed integral with or rigidly fixed to the stem 16 parallel to each other and project material distances beyond the forward end of said stem. Shoulder members or studs 19 20 are formed on the forward end portions of the stem 16 and are shaped and arranged to enter and fit snugly in the notches 13 14 of the pick-head 10. The formation of the shoulder members or studs 19 20 is such that a recess 21 between them receives the partition 15 of the pick-head and a recess 22 therein receives a shoulder or projection 23 of the pick-head. The alternating relations of the shoulder 23, stud 19, partition 15, and stud 20, together with the engagement of the dowel-pins 17 18 in the tapering sockets 11 12 of the pick-head, effect and insure the distribution of strain or shock occurring in the use of the tool throughout a considerable portion of the length of the tool-head and the stem as contradistinguished to the application of said strain or shock to a single eye or socket of a tool or stem, and the arrangement of said members obliquely of the trend or longitudinal center of the tool-head insures the application of the shock obliquely of the grain thereof as contradistinguished to the application of the shock transversely of the grain of the resisting members, as would occur in the use of a single straight eye, stem, or socket.

A threaded seat 24 is formed in the central portion of the pick-head 10 intermediate of and in a plane parallel with the tapering sockets 11 12, and a corresponding threaded bore 25 is formed in the stem 16. (Dotted lines, Fig. 3.) The outer end portion of the bore 25 is enlarged diametrically and formed with smooth walls, thus producing a shoulder 26, on which is laid a washer 27, of leather or similar flexible material. A screw 28 is provided and formed with a screw-threaded end portion arranged for travel in the bore 25 and seating in the seat 24, a smooth central stem portion arranged for normal location in the bore 25 out of contact with the thread thereof, a barrel portion arranged for normal seating in the enlarged portion of the bore 25, and a head

portion at the outer end of the barrel portion. The head portion is of larger diameter than the barrel portion, and a washer 29, of leather or similar flexible material, is interposed between the inner face of the head portion and the face of the stem surrounding the bore. The head portion of the screw or bolt 28 is formed with a centrally-located tapering kerf or cavity 30, angular in cross-section and arranged to receive a wrench, such as the point of a pick-head, for rotation of said screw. It will be observed that when the screw 28 is seated to the fullest extent the threads thereof connect the pick-head 10 and stem 16 and that the trend of the screw is parallel with the trends of the dowel-pins 17 18 and that the barrel portion and head portion of the screw contact with and bind against portions of the stem and form a double-head bearing supplementary to the screw connection for holding the stem in the head. The washers 27 29 are interposed as cushions to provide a yielding resistance to the shock or strain of the use of the tool and counteract to some extent the strain and shock on the thread, barrel, and head portion of the screw. The washers 27 29 have the further function of establishing frictional engagement of the barrel and bolt-head and resisting rotation and loosening of the bolt in the stem.

The stem 16 is formed with a handle-socket 31 at right angles to the trend or longitudinal center of the pick-head 10, and a handle 32 may be mounted therein and secured by a key 33 in alining transverse apertures of the handle and stem. The key 33 is formed with a screw on one end, engaging a thread in one of the apertures of the stem 21, and the opposite end of said screw is formed with a tapering socket 34, angular in cross-section, to receive a wrench, such as the point of a pick-head, for rotation of said key.

I do not wish to be understood as limiting myself to the specific means and shape of the parts herein described nor the employment of the specific form of key for connecting the wooden handle to the stem, since divers and many devices for such purpose may be produced that fall within the scope of my invention.

In the construction of the device as shown in Figs. 1 and 3 the notches 13 14 extend entirely across the inner face of the pick-head 10; but in Fig. 5 I show a pick-head 10^a in which the notches do not extend entirely across the head, but are inclosed on either side by flanges 35 36. The construction illustrated in Fig. 5 is especially applicable where pick-heads of greater transverse dimensions are desired, in that it provides for the use of much larger pick-heads interchangeably with the smaller ones (shown in Figs. 1 and 3) on a single stem and handle.

In Fig. 4 I illustrate the application of my invention to a sledge wherein the head 37 is

mounted on a stem 38, constructed identically as is the stem 16 and secured thereto removably and replaceably by a screw 39.

I claim as my invention—

1. The combination of a tool formed with sockets obliquely to its trend, a stem formed with projections obliquely to its trend and a screw arranged parallel with said sockets and projections and connecting said tool and stem.

2. The combination of the tool-head formed with oblique, tapering sockets and oblique notches, and a stem formed with oblique tapering projections fitting said sockets and oblique studs fitting said oblique notches, and means for connecting said head and stem.

3. A combination of the tool-head formed with tapering oblique sockets and oblique notches, a stem formed with tapering pins fitting said oblique notches and a screw arranged in said stem intermediate of and parallel with said pins and screw-seated in said head.

4. The combination of a tool-head, formed with sockets, notches and a screw-seat arranged obliquely and parallel with each other, a stem formed with pins, projections and a bore arranged obliquely and parallel with each other, said pins seated in the sockets of the head, said projections seated in the notches of the head, a screw traversing the bore of the stem and seated in the seat of the head, said screw formed with a barrel and head, and washers interposed between said barrel and head and corresponding faces of said stem.

5. The combination of a tool-head, formed with sockets, notches and a screw-seat arranged obliquely and parallel with each other, a stem formed with pins, projections and a bore arranged obliquely and parallel with each other, said pins seated in the sockets of the head, said projections seated in the notches of the head, a screw traversing the bore of the stem and seated in the seat of the head, said screw formed with a barrel and head, and washers interposed between said barrel and head and corresponding faces of said stem, together with a handle and means for attaching said handle to the stem.

6. The combination of a tool-head, and a handle-socket, said tool-head provided on its under surface with shoulders extended from side to side of the tool-head and inclined obliquely relative to the handle-socket, said handle-socket provided with oblique shoulders fitting those of the tool-head, and a screw passed through part of the handle-socket and seated in the tool-head, said screw also inclined at the same angle as the shoulders.

7. The combination of a tool-head formed with two transverse notches on its under surface, the shoulders at the ends of said notches inclined obliquely relative to the longitudinal axis of the tool-head, said tool-head also having a screw-seat arranged parallel with the said shoulders, a handle-socket formed with

projections to enter the notches of the tool-head, the ends of said projections inclined to fit the shoulders of the tool-head, said handle-socket formed with an opening in line with
5 the screw-opening of the tool-head, and a screw passed through the opening in the handle-socket and seated in the tool-head.

8. The combination of a tool-head, formed with two transverse notches on its under surface, the shoulders at the ends of said notches
10 all inclined in the same direction obliquely to the longitudinal axis of the tool-head, a han-

dle-socket formed with two transverse projections shaped to fit into the notches of the tool-head, and a screw passed through a part
15 of the handle-socket and seated in the tool-head.

Signed by me at Des Moines, Iowa, this
14th day of May, 1903.

WILLIAM ASHERT.

Witnesses:

S. C. SWEET,
R. G. ORWIG.