

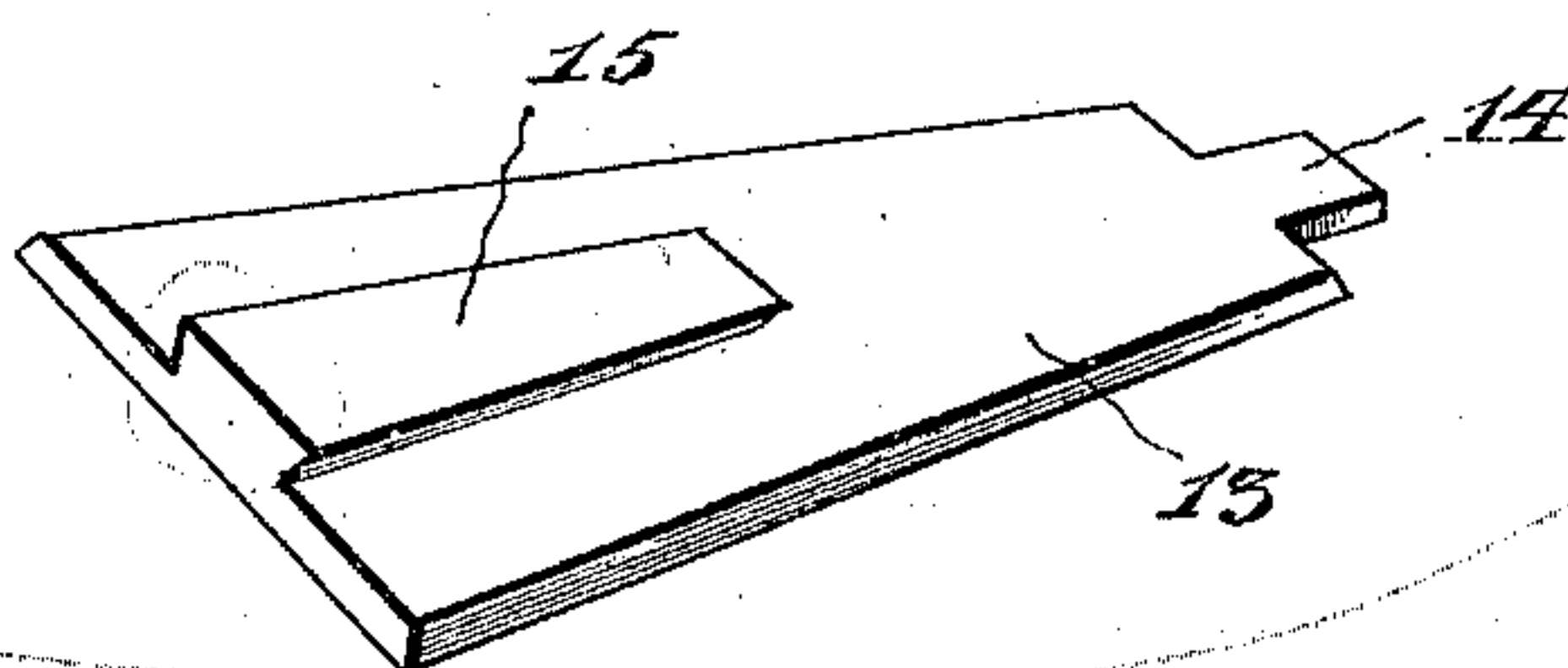
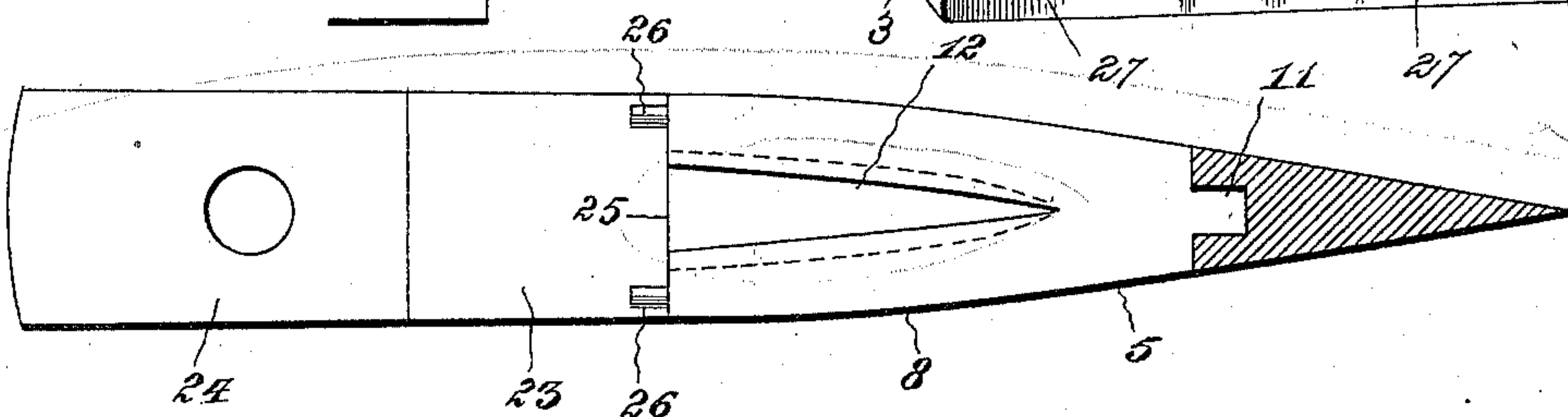
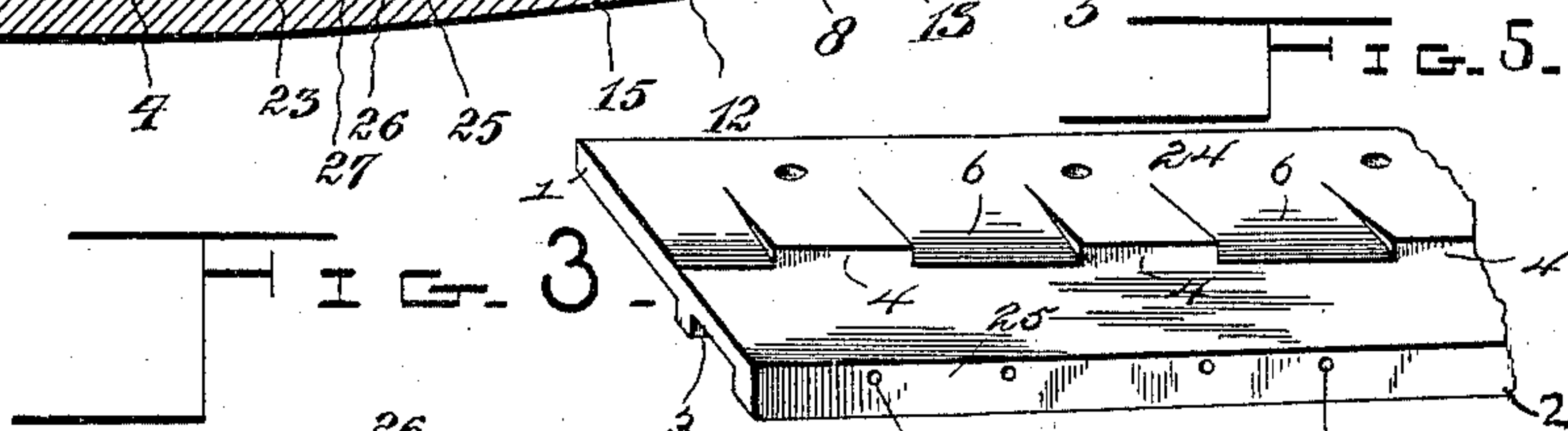
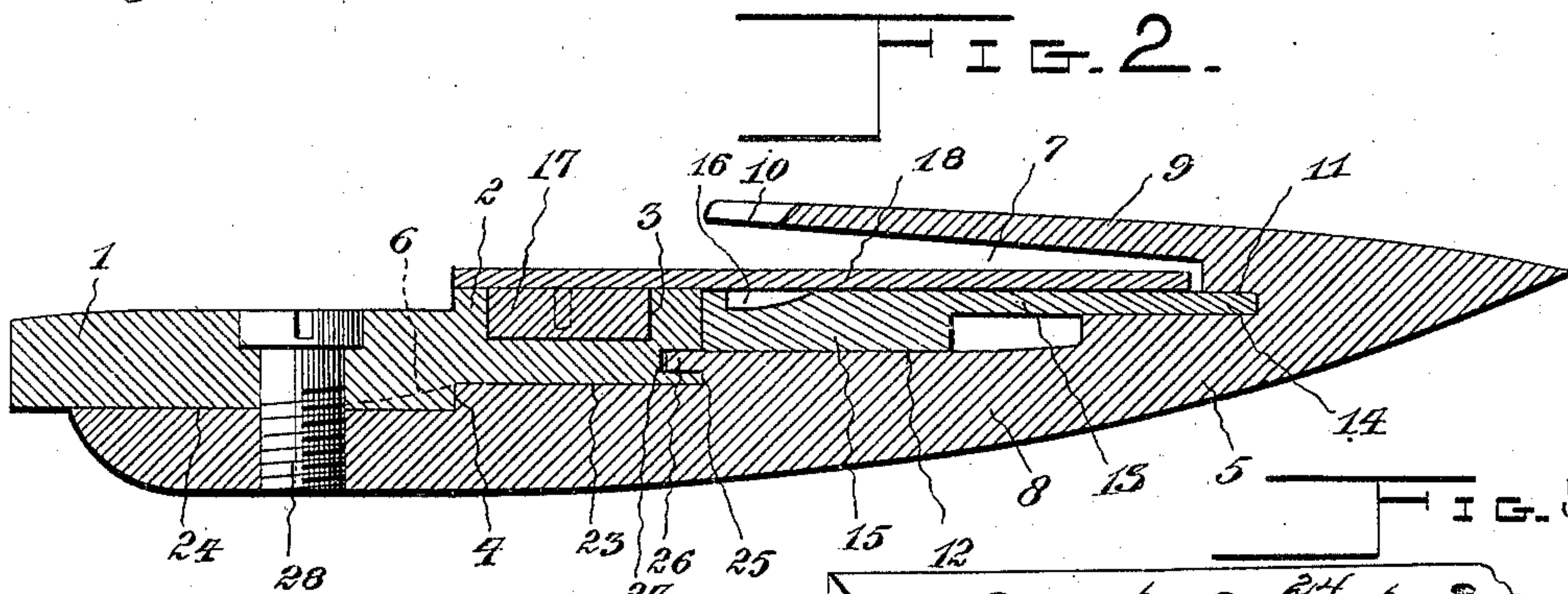
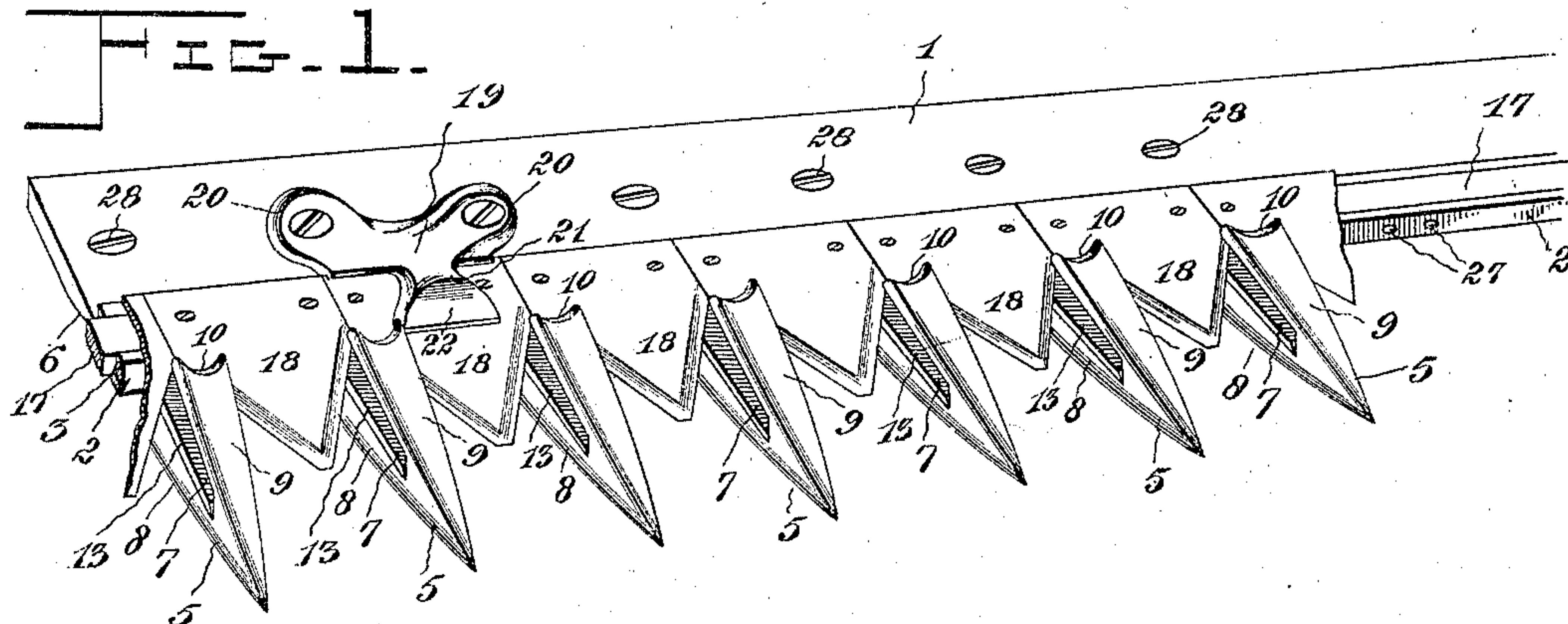
No. 641,123.

Patented Jan. 9, 1900.

J. F. KUKACKA.
CUTTER BAR.

(Application filed June 27, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN F. KUKACKA, OF MONTGOMERY, MINNESOTA.

CUTTER-BAR.

SPECIFICATION forming part of Letters Patent No. 641,123, dated January 9, 1900.

Application filed June 27, 1899. Serial No. 722,084. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. KUKACKA, a citizen of the United States, residing at Montgomery, in the county of Le Sueur and State of Minnesota, have invented a new and useful Cutter-Bar, of which the following is a specification.

This invention relates to cutting apparatus, and is designed to afford convenient means of assemblage of the fingers on the finger-bar, and also contemplates the precise arrangement of the ledger-plates and diminish the fastenings necessary to secure the said parts, and also at the same time preserve the strength required in such devices and facilitate the removal of the several parts for the purpose of sharpening or adjustment.

A further purpose of the improved construction is to provide a close fitting of the reciprocating cutters or knives on the ledger-plates and avoid the entrance of the sap or gum of the material being cut or of dirt or grit between the said parts, and thereby decrease friction and avoid interference with the effective operation of the knives or cutters.

The invention consists of the construction and arrangement of parts, which will be more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a cutting apparatus embodying the features of the invention. Fig. 2 is a transverse vertical section through one of the fingers and the parts of the bar. Fig. 3 is a horizontal section through a portion of one of the fingers. Fig. 4 is a detail perspective view of one of the ledger-plates shown inverted. Fig. 5 is an inverted perspective view of a portion of the finger-bar.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a finger-bar having at its front edge an upstanding continuous extension or offset 2, with a longitudinal angular groove 3 in the upper portion thereof. The upstanding extension 2 provides at regular intervals lower shoulders 4, which are equal in length to the width of the rear portion of the fingers 5, the material on opposite sides of the terminations of the said shoulders being cut away at a downwardly and rearwardly curved bevel, as shown at 6 in dotted

lines, Fig. 2. These cut-away portions of the finger-bar prevent the formation of obstructions to catch upon the material cut, and thereby form a drag. By removing the material between the shoulders 4 the movement of the cutter-bar as an entirety over the surface of the ground is made much easier, and the upstanding extension 2 also provides means for disposing the cutter-bar and ledger-plates at elevations required to secure the functions thereof.

Each finger 5 has an opening 7 therethrough between the upper surface of the body or under portion 8 thereof and the top or shield 9, which in the present instance has its inner end cut away or recessed, as at 10, for a purpose which will be presently set forth. A recess 11 is formed on a level with the top surface of the body or under portion 8, and the said body also has a horizontally-disposed dovetailed recess 12 in rear of the recess 11 and which is also substantially wedge-shaped and converges toward the front end of the finger. Each ledger-plate 13 has in the present instance also a particular and preferred construction and is provided at its outer end with a tongue 14 to removably enter a recess 11 and on the under side, as clearly shown by Fig. 4, has a dovetailed tapering rib 15 to removably enter the recess 12. When the ledger-plate has the tongue 16 and the rib 15 inserted, respectively, in the recesses 11 and 12, its top surface is in the same plane with the upper surface of the extension 2 and its inner edge abuts squarely against the outer edge of said extension. The inner central portion of the ledger-plate has a top recess 16 for the purpose of removing the same and which may be reached through the cut-away portion of the top or shield 9. A suitable implement may be employed for removing the ledger-plate and have an end thereof inserted in the recess 16 to bear against the rear wall of the same.

Within the groove 3 of the upstanding extension 2 a reciprocating bar 17 is mounted and of such thickness as to have its upper face stand flush with the upper surface of the said extension, and thereto are secured the cutters or knives 18, which lie closely against the upper surfaces of the ledger-plates and are free to reciprocate under the tops or shields 9 of the fingers 5. The reciprocating

bar 17 is intended to be operated by any suitable mechanism, and the cutters or knives 18 have their opposite edges sharpened, as is customary, as well as the ledger-plates 13. To hold the connected cutters or knives 18 firmly down against the ledger-plates, guards 19 are used and arranged at intervals, only one being shown in the present instance, each guard comprising a pair of diverging securing-ears 20, with a forwardly-projecting shank 21, having an under flat face, under which the cutters or knives have play or movement, and an outer downwardly-beveled front end 22 to avoid the formation of shoulders or projections that might encourage the collection of cut material or portions of the same on the series of cutters or knives. The fingers 5 in rear of the upper faces of the body or under portions, in which the recesses 12 are formed, have stepped horizontal depressions 23 and 24. At the beginning of the first depression 23 in each finger a shoulder 25 is formed, which has rearwardly-extending projections, in the present instance being in the form of pins or studs 26, that enter corresponding openings 27 in the lower front edges of the said extension 2. The said pins or studs 26 are preferably arranged in parallel relation, the width of the front edge of the extension 2 when the finger is applied being exactly and completely taken up by the combined width of the rear portion of the ledger-plate and the distance between the upper horizontal surface of the first stepped depression 23 and the upper face of the body or under portion 8 of the finger. By the use of two studs or pins 26 the finger is prevented from having a lateral movement, and additional strength is given by such fastening. The depression 23 provides a shoulder which abuts against the shoulder 4, hereinafter referred to, when the finger is applied to the finger-bar. This brings the second stepped depression 24 closely to bear against the under surface of the finger-bar 1, and after each finger is thus placed in position each is firmly fastened by the use of a single screw 28, extending downwardly through the finger-bar and into vertical openings, passing entirely through the rear of each finger or that portion containing the second stepped depression 24. The position of the recesses 11 and 12 and the pins or studs 26 is clearly shown in Fig. 3, and the said pins or studs extend rearward from an elevation in a plane parallel with the upper face of the body or under portion 8 of the finger, which also adds strength to the connection and assists the pins or studs in resisting a downward drag or pressure on the several fingers by providing as much metal as possible in the front edge of the extension 2 thereunder.

The several parts of the cutter-bar constructed as specified and arranged in the operative relation set forth can be quickly assembled or detached, as the fastenings are readily accessible, and, if desired, the fingers

may be individually disconnected without disturbing the connected series of knives or cutters, in view of the fact that the screws 28 are exposed at a rear portion of the finger-bar 1, and when the said screws or fastenings are released each one or all of the fingers may be pulled out for any purpose that may be desired.

Other advantages will also appear from time to time to those using the device, and changes in the proportions, size, and minor details of construction might be resorted to without in the least departing from the nature of the invention or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

1. In a cutting apparatus, the combination of a finger-bar having an elevated extension at its front edge and provided at regular intervals with lower shoulders which terminate in a plane parallel with the under surface of the finger-bar to thus form seats at regular intervals under the said extension, the front edge of said extension also having closely-arranged pairs of parallel openings at regular intervals in horizontal transverse directions, fingers having transversely-extending shoulders adapted to register with the lower portion of the front edge of the extension of the finger-bar, said shoulders having at their opposite extremities rearwardly-projected horizontally-disposed pins adapted to removably enter the said parallel openings, a portion of the fingers alone extending under the finger-bar and having seats at varying elevations to provide shoulders, and single fastenings removably extending through the rear of each finger and adjacent portion of the finger-bar and disposed in vertical planes.

2. In a cutting apparatus, the combination of a finger-bar, a finger removably fitted thereto and having an outer recess and an inner dovetailed recess, a ledger-plate provided with a tongue to engage the outer recess and an under dovetailed rib to removably fit in the dovetailed recess, and a knife or cutter adapted to travel over the ledger-plate.

3. In a cutting apparatus, the combination of a finger-bar, a finger removably attached thereto and having an overhanging top or shield with a recess in the inner termination thereof and other recesses below in the body of the finger, and a ledger-plate having projecting devices to engage the recesses in the body of the finger, and an upper recess adjacent the rear end for the reception of a removing tool or implement adapted to be placed in position through the recess at the inner end of the overhanging top or shield.

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

JOHN F. KUKACKA.

Witnesses:

JOHN SHEEHY,
ALBERT J. FACTOR.