(No Model.)

A. COLLET.

TOOL FOR TRIMMING OFF TREENAILS.

No. 590,089. Patented Sept. 14, 1897.

FIG. 1.

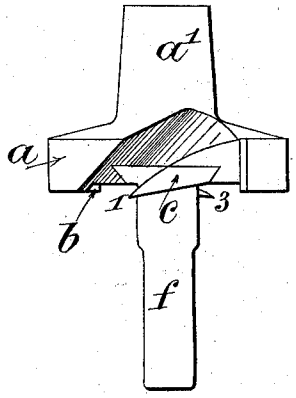


FIG. 5.

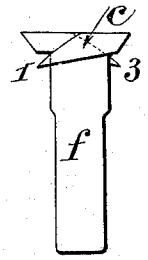


FIG. 3.

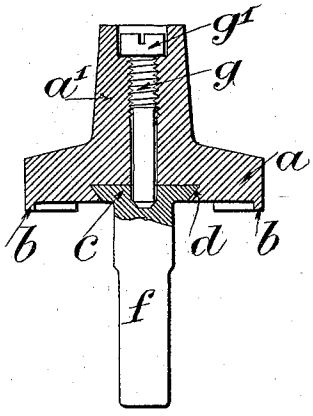
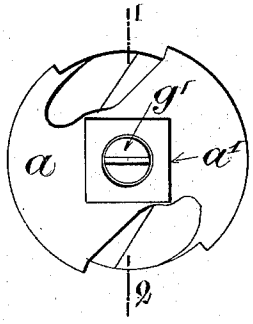


FIG. 2.



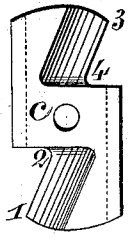


FIG. 4.

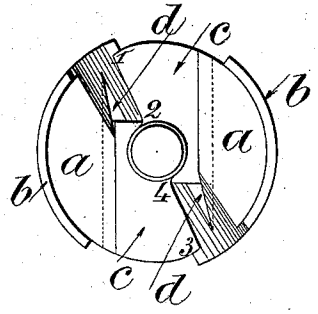


FIG. 6.

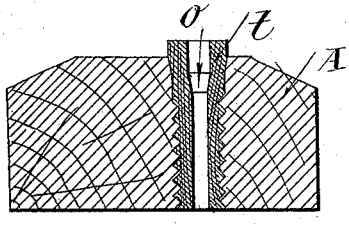
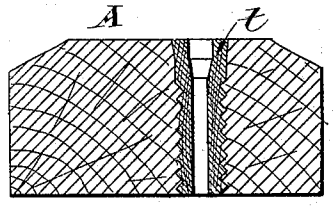


FIG. 7.



WITNESSES.

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TOOL FOR TRIMMING OFF TREENAILS.

SPECIFICATION forming part of Letters Patent No. 590,089, dated September 14, 1897.

Application filed April 1, 1897. Serial No. 630,216. (No model.) Patented in France August 5, 1895, No. 249,406.

To all whom it may concern:

Be it known that I, ALBERT COLLET, civil engineer, of No. 2 Rue de Berne, Paris, in the Republic of France, have invented new Improvements in Tools to be Employed in Screwing Treenails in Railway-Sleepers or in other Similar Operations, (for which I have obtained Letters Patent of France for fifteen years, No. 249,406, dated August 5, 1895;) and I do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawings.

In order to consolidate the screws, cramps, or spikes in railway-sleepers, externally-screw-threaded hard-wood treenails are advantageously used, and which are screwed into the holes already made and screw-cut for the purpose of receiving them, and into which treenails are afterward screwed the screws, cramps, or spikes for fixing the rail or chair to the sleeper. In order to facilitate the screwing of the said treenails, the latter are provided with a head which projects above the sleeper after the treenail has been fixed in place.

My invention has for its object to provide a tool for at once cutting off this head of the treenail level with the sleeper.

In the accompanying drawings, Figure 1 is a perspective view of the cutting-off tool. Fig. 2 is a plan view. Fig. 3 is a longitudinal section on the line 1 2 of Fig. 1. Fig. 4 is an under side view of Fig. 3. Fig. 5 represents in elevation and in plan the removable piece forming the cutting edges. Fig. 6 is a cross-section of a sleeper provided with a screwed treenail before the head of the latter is cut off level, and Fig. 7 shows a corresponding section of the sleeper after the treenail has been cut off level.

The cutting-off tool is a kind of circular plane formed by a piece of cast metal *a*, provided at its lower face with a circular flange *b* two or three millimeters deep, in order to take support on the sleeper A when the cutting edges are at work and to prevent the said cutting edges from penetrating into the treenail below the level of the upper surface of the sleeper.

The core *a* is provided on its upper face with a square head *a'*, on which fits the operating-key, and on its under face with a dovetailed slot *d*, into which comes and engages frictionally a piece *c* in fine special steel and forming a blade or knife toward its two ends. The horizontal cutting edges 1 2 and 3 4 of these knives stand a little below the flat face of the under side of the core and at about the same level as the rim or flange *b*.

The piece of fine steel *c*, which forms a double knife, is integral with a tapering guide-rod *f*, which engages, during the cutting-off operation, the central hole or bore *o* of the treenail *t*. The said piece *c* is always connected for working purposes to the core *a* by means of a screw *g*, which comes and houses its point in a corresponding recess in the piece *c*. When the said screw *g* is in position, its head *g'* is countersunk in the core *a*, Fig. 3.

The piece *c* is essentially removable and is separated from the core *a* by taking out the screw *g* and then sliding the said piece in its dovetailed housing. In this manner the sharpening of the knives or the renewal of the whole piece may be proceeded with as often as necessary.

Opposite the knives 1 2 and 3 4 the piece *c* and the core *a* are cut away obliquely through their entire thickness for allowing the escape of the chips.

The core *a* is in cast iron or steel, and the piece *c* only, which forms the knives or blades, is in fine steel specially used for tools.

I claim—

1. A tool designed for cutting the heads of treenails off on a level with the upper surface of the sleepers, into which the said treenails are screwed, and which is formed by a core or body *a*, having a square head *a'*, provided, on its under side with a rim *b*, on a level somewhat below the face of the said under side, and with a dovetail slot, in which engages frictionally a piece *c*, in fine steel specially used for tools, forming a blade or knife at its ends, and which is fixed to the body by means of a plain pointed screw *g*, the horizontal cutting edges 1 2 and 3 4 of the knives coming opposite the openings provided in the cast-iron or cast-steel body for the escape of the chips.

2. In a cutting-off tool, a cast-iron or cast-steel body *a*, with square head *a'*, provided, at its under side, with a rim *b*, on a level somewhat below the face of the said under

side, a dovetail slot, and two openings through its entire thickness for the escape of the chips, substantially as described and for the purpose specified.

3. In a cutting-off tool, the combination, with a cast-iron or cast-steel body *a*, provided, on its under side, with a rim *b*, and a dovetail slot, of a piece *c*, in fine steel specially used for tools, forming a blade or knife at its ends, having openings for the escape of chips through it, and which engages frictionally in the dovetail slot in the body, and is fixed in place by means of a screw *g*, placed in line with the axis of the tool, substantially as described and for the purpose specified.

4. A cutting-tool having a body provided with two peripheral rims projecting downward from the lower face of the body, the said lower face of the body having a dovetailed groove run across the same between the rims, and a member held within said dovetailed groove, the member having a cutting edge, and a guide-rod projecting intermediately from the said member, the guide-rod being centrally located with reference to the body.

5. A cutting-tool having a body portion with a rim projecting from the lower face thereof, the rim being located at the periphery of the body, the body portion having a cutting edge located within the rim, and a guide-rod attached centrally to the lower face of the body.

6. A cutting-tool having a body portion with a head rising therefrom, and with a flange or rim run around the lower face of the body, the body having a groove run across said lower face, a member located within the groove and having a cutting edge, and a downwardly-extending guide-rod located centrally with reference to the body portion, and a screw held in the head of the body portion and engaging the said member to hold the same in place.

7. A tool having a body provided with a rim projecting downward from the lower face of the body, and a member removably held on said lower face, the member having a cutting edge and also having a guide-rod, the cutting edge being located inward from the rim, and the guide-rod being located centrally with reference to the body portion.

8. A tool having a body portion with a cutting edge on its lower face, the body portion having a rim projecting down from said lower face and outside of the cutting edge and the body portion also having means capable of engaging the work on which the tool is operated, such means holding the tool centrally with reference to said work so that the tool may turn around said center.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALBERT COLLET.

Witnesses:

GEORGES BORDEAU,

EDWARD P. MACLEAN.