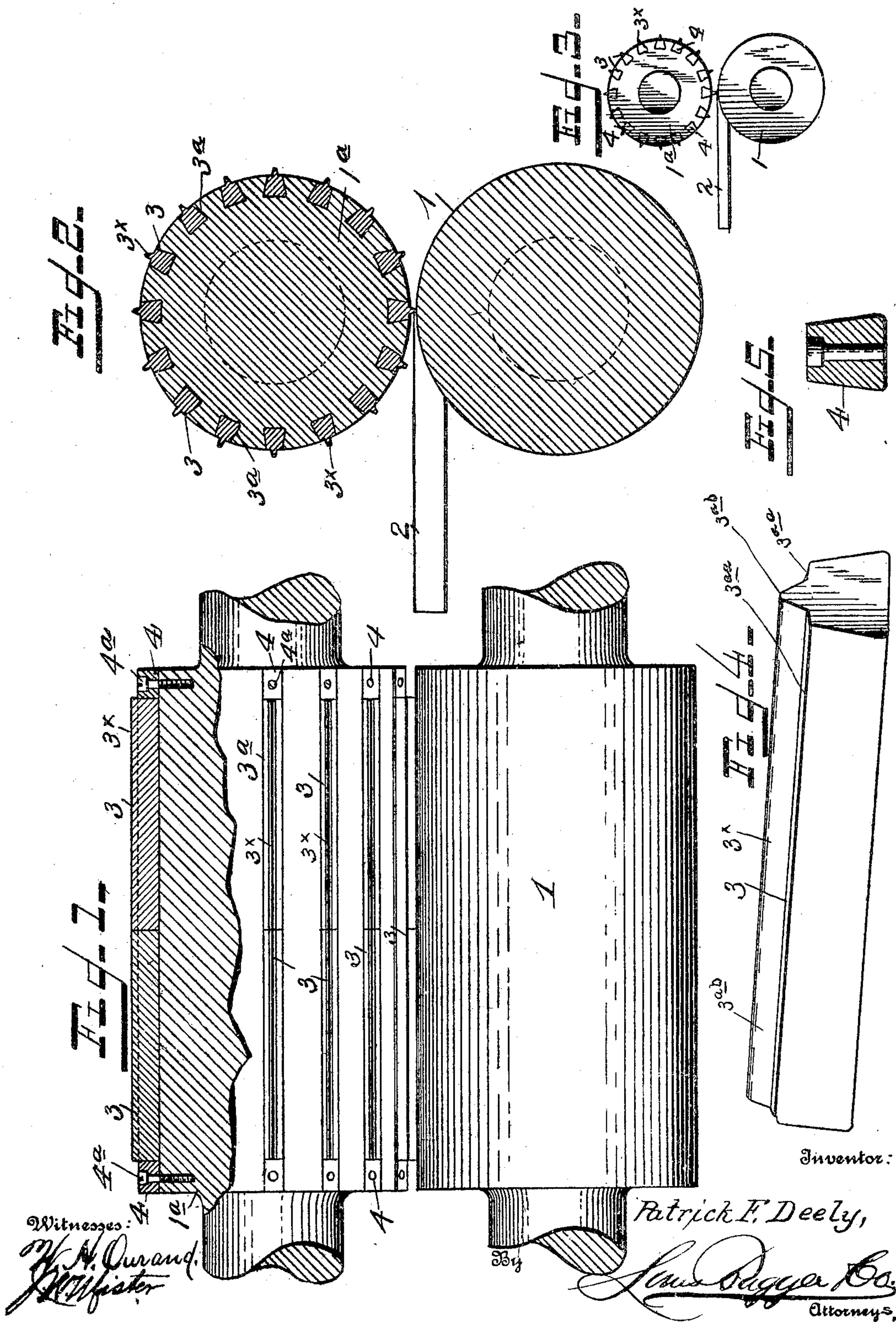


No. 797,886.

PATENTED AUG. 22, 1905.

P. F. DEELY.
MACHINE FOR CUTTING SCRAP METAL.
APPLICATION FILED AUG. 12, 1904.



UNITED STATES PATENT OFFICE.

PATRICK F. DEELY, OF WATERBURY, CONNECTICUT.

MACHINE FOR CUTTING SCRAP METAL.

No. 797,886.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed August 12, 1904. Serial No. 220,564.

To all whom it may concern:

Be it known that I, PATRICK F. DEELY, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Machines for Cutting Scrap Metal, of which the following is a specification.

My invention relates to improvements in what may be termed machines for cutting "scrap" metal, whether it be alloy, iron, brass, spelter, wire, tubing, &c., also regardless of its thickness. It will be noted that the operation of cutting as herein employed indicates simply the severing into parts, not by producing a clean incision, but more by the breaking of the metal.

Said invention has for its object to secure this end in an expeditious and effective manner; and it therefore consists of certain structural details substantially as hereinafter more fully disclosed, and particularly pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a front elevation thereof. Fig. 2 is a sectional elevation, and Fig. 3 is a side elevation, of the same. Fig. 4 is a detached perspective view of a cutter member enlarged. Fig. 5 is an enlarged sectional view of an end-securing block for a cutter member.

In the carrying out of my invention I provide two rolls 1^a, one superposed to the other and suitably supported and journaled in position, and requisitely arranged with relation to these rolls is a suitable feed-table 2, upon which the scrap metal is fed by hand or otherwise thereto.

The roll 1, or the lower one, has a plane face or periphery and upon it is borne the metal as it is revolved, as in similar roll mills. The upper roll 1^a has produced in its face, at suitable or short intervals apart, longitudinal sockets or pockets 3^a, each extending the entire length of said roll and each of which sockets receives or contains two cutter members 3 for delivering a severing action upon the scrap metal fed thereto, said cutter members being arranged in endwise alinement. Said sockets and cutter members are of corresponding shape and are produced in general rectangular outline, with their lateral surfaces or walls converging somewhat toward the roll periphery, as shown, to prevent the radial displacement of said cutter members. Said sockets open out laterally through the ends of said roll to permit the insertion of said

cutter members thereto. In order to retain the latter against lateral displacement, blocks 4, of corresponding shape in cross-section as said sockets, are inserted therein laterally of the cutter members, the latter being of less length than said sockets, said blocks being held in place preferably by screws 4^a, countersunk into said cutter members and screwed into the roll. Said cutter members 3 are stepped from each side, providing inward-extended shoulders thereon, as at 3^{aa}, with the outer central portions of the steps more decidedly tapered than their main or body portions 3^a, as at 3^{ab}, which latter portions, however, do not terminate into knife-edges, but are narrowed, as at 3^{ab}, just sufficiently to render their thus-formed blunt outer-end rounded, conical, or salient portions 3^x effective not to make a clean incision through the scrap metal, but more to break it in two upon the lower feeding-roll carrying said metal thereunder, and suitably delivering the thus-broken-up pieces of the latter to the opposite side of said feeding-roll.

The machine thus described is of great and effective cutting capacity, as well as doing its work with great expedition and celerity.

Latitude, it will be noted, is allowed as to details herein, as they may be changed as circumstances suggest without departing from the spirit of my invention.

I claim—

1. A machine of the character described, employing a roll equipped with longitudinal peripheral breaker members, narrowed outward and formed with outer-end rounded effective terminals for breaking the metal and seated therein as against radial displacement.

2. A machine of the character described, employing a roll equipped with longitudinal peripheral breaker members, seated therein as against radial displacement and stepped from each side, forming inward-extended shoulders, with the central portions of the steps narrowed outward and formed with outer-end rounded effective terminals for breaking the metal.

3. A machine of the character described, employing a roll having longitudinal peripheral sockets and equipped with longitudinal peripheral breaker members seated in said sockets as against radial displacement, and stepped from each side forming inward-extended shoulders thereon, with the central portions of the steps narrowed outward and formed with outer-end rounded effective terminals for breaking the metal.

4. A machine of the character described, employing a roll equipped with longitudinal peripheral breaker members seated therein as against radial displacement and stepped from each side forming inward-extended shoulders thereon, with the central portions of the steps narrowed outward and formed with outer-end rounded effective terminals for breaking the metal, and a feeding-roll opposed to the afore-said roll and adapted to deliver said metal to, and aid, said breaker members in breaking said metal.

5. A machine of the character described, employing a roll having longitudinal peripheral sockets, with outward-tapered walls, and equipped with longitudinal peripheral breaker

members seated in said sockets and having their base portions of corresponding cross-sectional outline as said sockets, said breaker members also being stepped from both sides, forming inward-extended shoulders thereon, with the central portions of the steps narrowed outward and formed with outer-end rounded effective terminals for breaking the metal.

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

PATRICK F. DEELY.

Witnesses:

JAMES R. LAWLOR,
FINTON J. PHELAN.