

(No Model.)

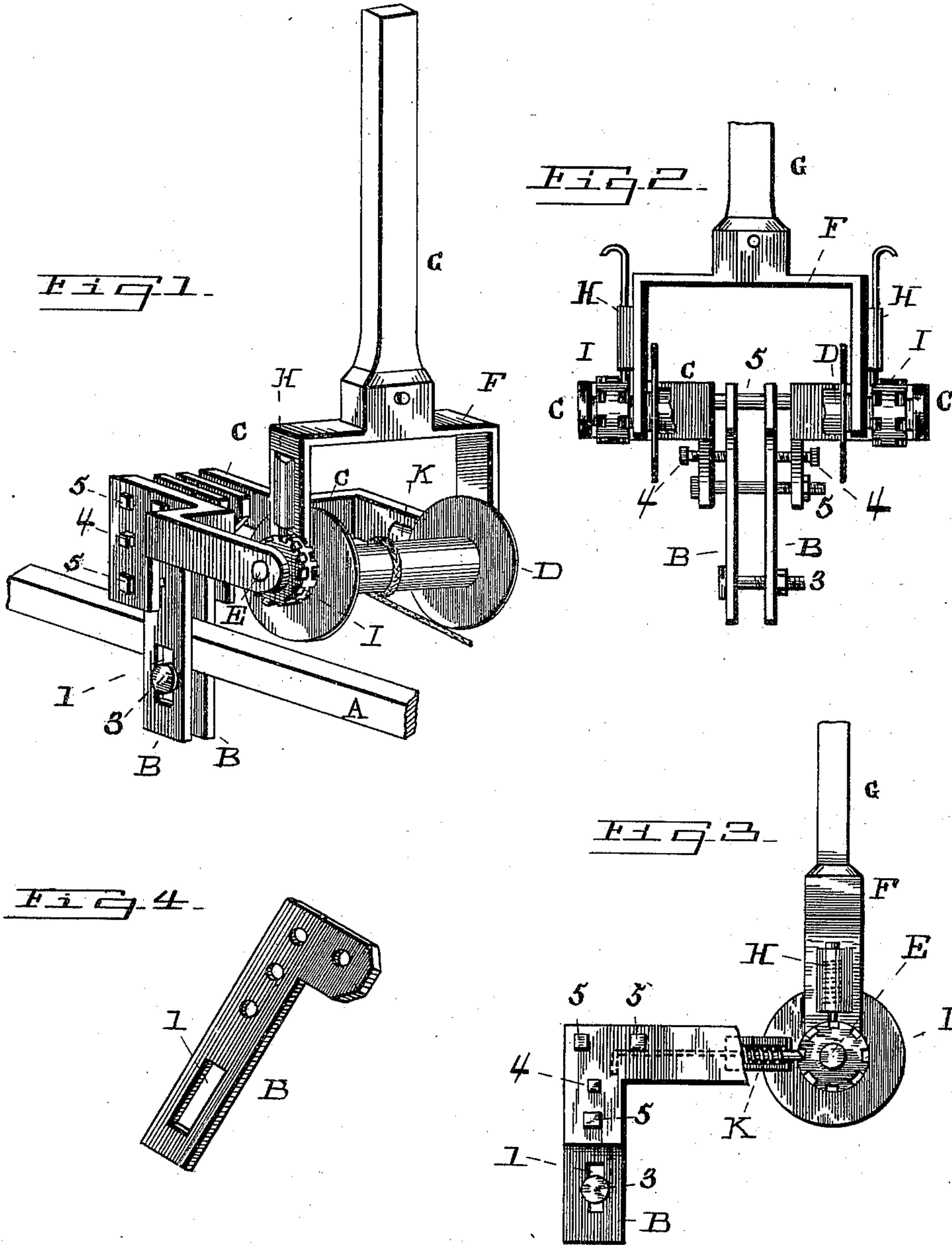
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H. J. TRACY.

MACHINE FOR DRAWING TOGETHER ENDS OF SURFACE RODS.

No. 598,165.

Patented Feb. 1, 1898.



WITNESSES

Chas. K. Davies.

E. A. Ryan

INVENTOR

H. J. Tracy

By W. A. Bartlett
Attorney

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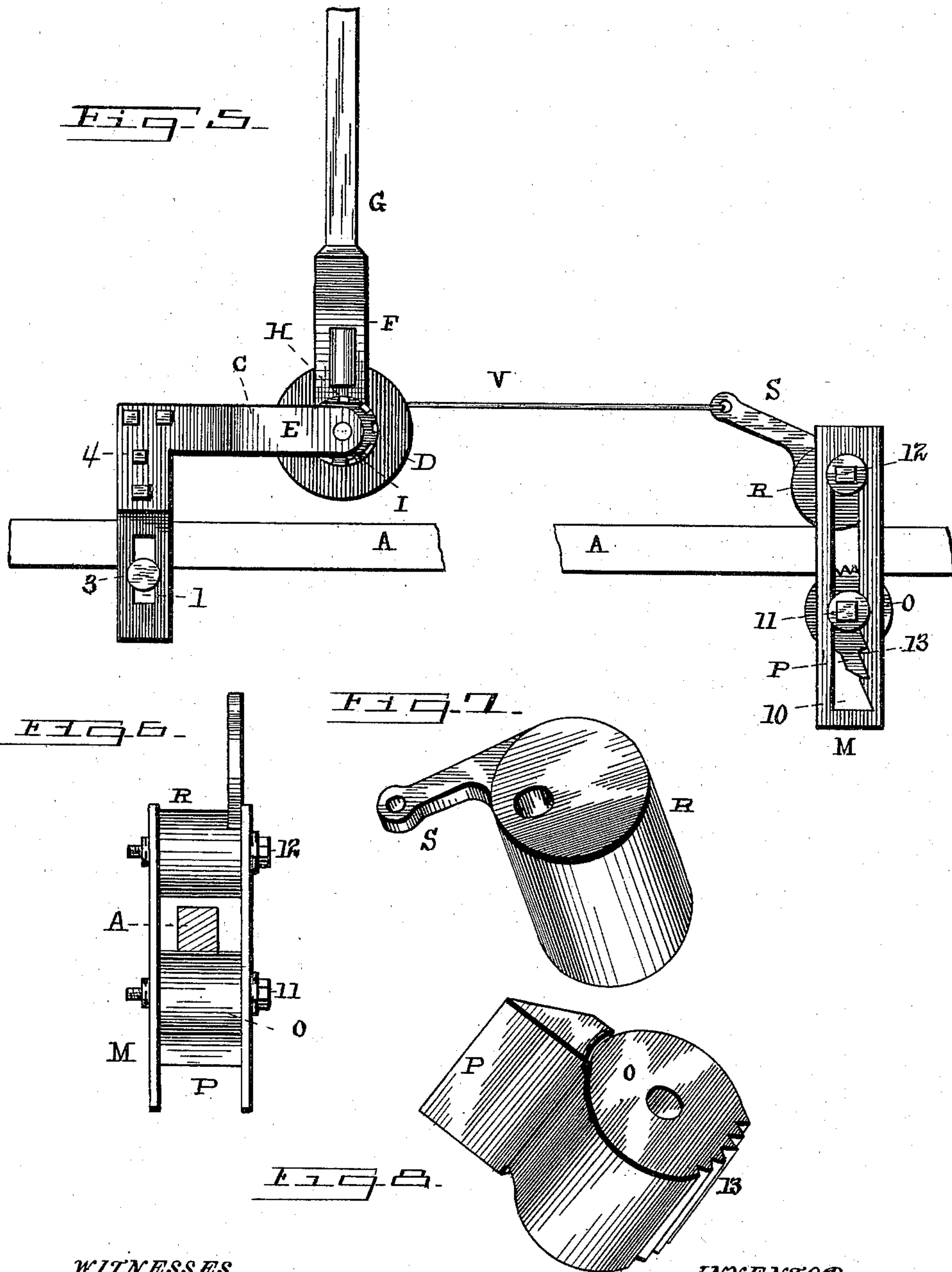
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UNITED STATES PATENT OFFICE.

HARLIN J. TRACY, OF SALAMANCA, NEW YORK.

MACHINE FOR DRAWING TOGETHER ENDS OF SURFACE RODS.

SPECIFICATION forming part of Letters Patent No. 598,165, dated February 1, 1898.

Application filed June 1, 1897. Serial No. 639,006. (No model.)

To all whom it may concern:

Be it known that I, HARLIN J. TRACY, residing at Salamanca, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Machines for Drawing Together the Ends of Surface Rods, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to machines for repairing or drawing together "surface rods," so called, such rods being used for pumping oil-wells, &c.

Surface rods are usually wooden bars, generally about two by three inches in cross-section and made in lengths of twenty feet or thereabout, coupled end to end. These rods are supported generally in pendulum form from light frames and are frequently several hundred feet in length. To splice such a rod when broken, a team has generally been required to draw the ends of the rods together.

My improvement enables a single workman to draw the contiguous ends of a separated or broken rod together, so that a splice can be made by straps bolted to the rod or bar or by other suitable connection.

Figure 1 is a perspective view of the winding-reel and its rod-clamp shown as attached to a broken section of a surface rod. Fig. 2 is a plan or elevation of Fig. 1, but with handle or lever broken. Fig. 3 is a broken end elevation and partial section of the machine of Fig. 1. Fig. 4 is a perspective detail of one of the clamp-plates. Fig. 5 is a broken side elevation showing winding-reel and connections as applied to a broken bar. Fig. 6 is an end elevation of the bar-clamp connected to the cable. Fig. 7 is a perspective of eccentric drum. Fig. 8 is a perspective of holding-drum.

A indicates a portion of a surface rod, the same being supposed to be a rectangular wooden strip held up by any usual and suitable support. The clamp-plates B B are simply flat metallic plates, each having a slot 1 and a number of holes 2 therein. The plates B are clamped to a piece of the surface rod by bolts 3, passing through the slots in the plates B, and by set-screws 4 4.

The frame of the windlass is composed of angle-bars C C, having bearings therein for the axle of the winding-drum D and having holes through which bolts 5 5 extend, one or more of the bolts passing through holes in the plates B. Set-screws 4 4 are in threaded holes in bars C and bear against the plates B B. Thus by means of the bolts and set-screws the plates B may be attached very firmly to the surface rod and the frame-pieces held to the plates B. The angle-bars of the windlass-frame have the bars which contain the winding-drum D about at a right angle to the bars to which the clamp-plates are connected. The effect of this is to clamp the whole device with reference to the surface rod when the windlass is drawn on, thus binding the clamp and windlass more tightly to the rigid rod and at the same time maintaining the cable in proximity to the surface rod and in convenient position for working.

The winding-drum D (partly broken away in Fig. 2) is a reel or drum having its axis E supported in bearings in the frame-pieces C and also having the forked ends F of a handle G supported on such axle or shaft. The forks of the handle have spring-pawls H attached, said spring-pawls engaging notches in ratchet-wheels I, which are rigid with the shaft of the windlass. The frame C has one or more spring-pawls K connected thereto and engaging the notches in the ratchet-wheels I. The ratchet-wheels are shown as disks with square-cut gear-teeth cut at opposite corners, and one of the pawls is shown as beveled on one side to engage (like the engagement of a common door-catch) in one direction, while yielding when pressed in the other direction, such being a common construction of ratchets and pawls; but other suitable form of ratchet and pawl may be used. The object of the pawls and ratchet-wheels is to hold the drum from movement in one direction, but to compel it to rotate in the other direction when the handle G is swung back and forth.

To the drum D a strong steel cable V, usually about one-half inch in diameter, is secured. The cable should be some twenty feet in length or long enough to extend as far as the length of a surface-rod joint, although

to pull the ends of a broken rod together only a short cable is needed, and the remainder of the cable may be wound on the drum.

The winding-reel is clamped to a joint or
5 section of the surface rod, so that the handle
G may extend above, below, or at one side of
the surface rod, according to the convenience
of using, and by setting up the bolts and set-
10 screws the machine may be very firmly at-
tached, so that it will not slide along the joint
of the rod.

The clamp-plates M form the framing of
the cable-clamp. These plates are of metal,
15 slotted at 10, and have bolts 11 12 passing
through the slots and held by nuts. A clamp-
piece O surrounds one of these bolts between
the two plates M. This piece O has a wing
or pawl P rigid therewith, which wing is a
20 little longer than the cylindrical body of the
piece O. The clamp piece or jaw O also has
teeth 13 on one side, which teeth come in
contact with the surface rod when the clamp
is attached thereto. Suitable washers may
25 surround the head and foot of bolts 11 and
12. The pawl P may be swung out of en-
gagement with one set of teeth and into en-
gagement with other teeth in slot 10, so that
the jaw may be adjusted nearer to or farther
from the end of such slot.

30 The eccentric jaw R is perforated longitu-
dinally near one side and is mounted on bolt
12 between plates M. The eccentric jaw has
a lever S connected rigidly thereto, and cable
V is attached to said lever.

35 The cable-holding clamp described is se-
cured to a joint of the surface bar by slip-
ping the clamp over the end of the joint, so
that jaw O lies close alongside the surface
rod and is held in notches of frame M. Then
40 by pulling on the cable the eccentric jaw R
is turned about the bolt forming its axis and
is firmly clamped to the surface rod. The
further pull on the cable V binds the clamp
more tightly, and at the same time draws the
45 cable-clamp toward the windlass to which the
other end of the cable is secured. The oper-
ation of the handle G in a manner common
in the operation of windlasses serves to draw
the parts of the surface rod toward each other
50 with great force, and when in proper posi-
tion a splice may be effected in any usual or
suitable way.

It will be observed that this implement or
machine is composed of very simple parts, be-
55 ing mainly such as can be made or repaired
at a blacksmith's shop. So far as may be flat
strap-iron and common bolts with nuts are
used, so that broken or misplaced parts can
be repaired without great skill and at small
60 expense.

I am aware that machines somewhat like
mine are used for stretching fence-wire. I
make no broad claims to such devices; but

what I desire to claim is the specific improve-
ments devised by me and understood by me 65
to be as stated in the following claims.

I claim—

1. The rod-clamp consisting essentially of
notched and slotted side plates, a movable
jaw having a pawl engaging teeth in said 70
plates, and an eccentric jaw having a lever-
arm, the cable connected to said lever-arm,
and means which may be connected to another
rod-section for drawing on said cable, sub-
stantially as described. 75

2. In a machine for repairing surface rods,
the perforated and slotted clamp-plates B, B,
the bolt 3 passing through the slots in the
clamp-plates and having a head bearing
80 against one of said side plates and a nut bear-
ing against the other of said side plates, the
bolt 5 passing through said clamp-plates, and
the windlass having its frame connected to
one of said bolts, and having set-screws pass-
ing through such frame and bearing on said 85
clamping-plates, substantially as described.

3. In a machine for repairing surface rods,
the slotted clamping-plates having bolts pass-
ing therethrough, one of said bolts adjustable
in the slot to position to bear against the 90
edge of the surface rod; the windlass and
frame connected to said clamping-plates, and
set-screws in the windlass-frame bearing on
the clamp-plates by which the clamp-plates
may be compressed on the flat faces of the 95
surface rods, all combined substantially as
described.

4. In a machine for repairing surface rods,
the windlass-frame composed of right-angled
bars, the winding-drum supported in said 100
frame and the operating-lever therefor having
usual engaging means, the adjustable clamp-
plates extending parallel to one bar of the
frame and at a right angle to that bar form-
ing the drum-support, and means connected 105
to said clamp-bars by which the same may be
made to embrace the rectangular surface rod,
substantially as described.

5. The combination with a windlass and ca-
ble and means for clamping the windlass to 110
one section of a surface rod, of a clamp com-
posed of side plates, bolts passing through
said plates, an eccentric jaw on one of the
bolts, and a lever-arm rigid with said jaw and
connected directly to the cable, whereby the 115
clamp is tightened and made to bind the rod
between the eccentric jaw and the opposite
abutment by the said cable, substantially as
described.

In testimony whereof I affix my signature 120
in presence of two witnesses.

HARLIN J. TRACY.

Witnesses:

EULALIE ALDRICH,
GEO. F. ALDRICH.