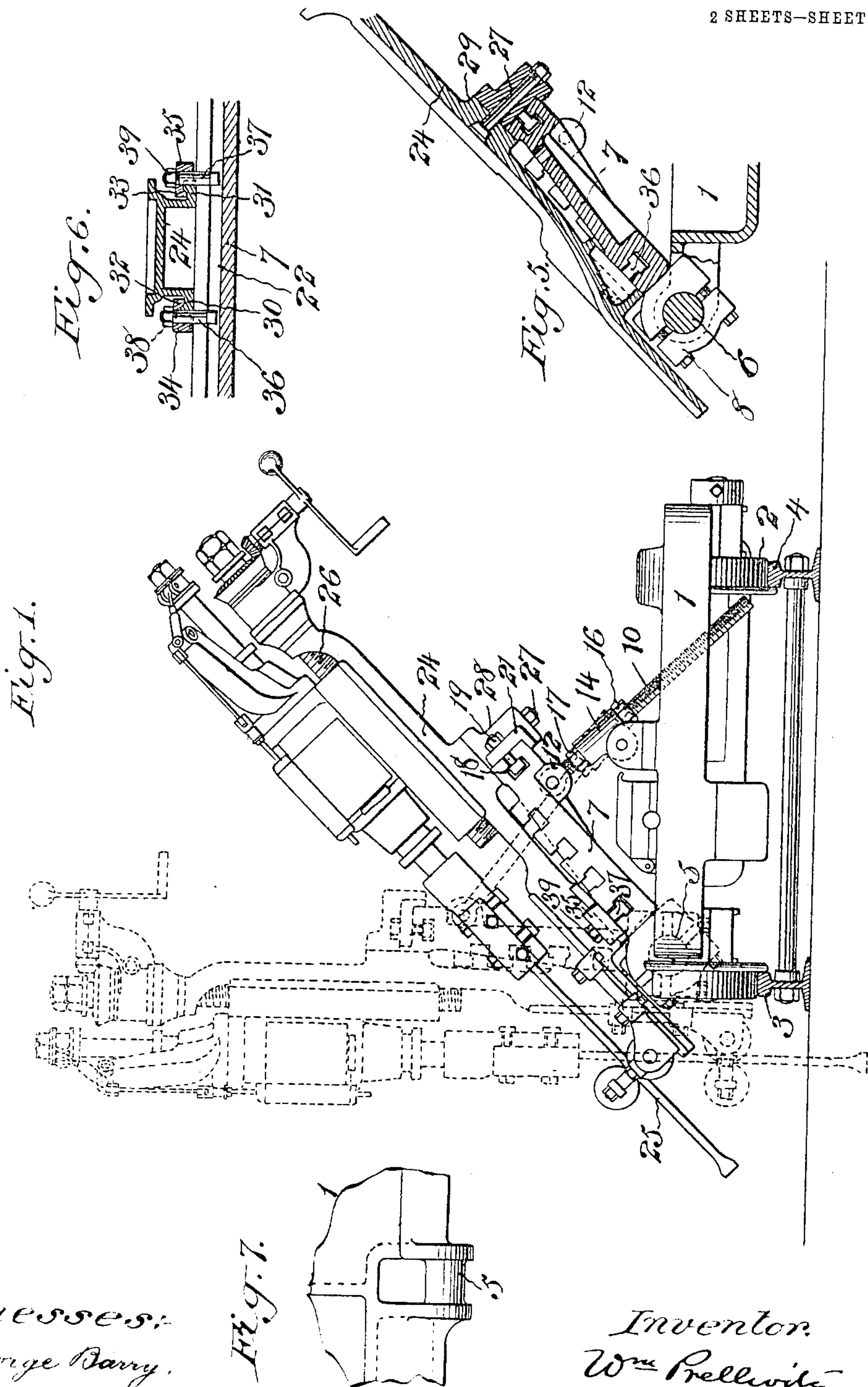


No. 818,558.

PATENTED APR. 24, 1906.

W. PRELLWITZ.  
CHANNELING MACHINE.  
APPLICATION FILED SEPT. 2, 1904.

2 SHEETS—SHEET 1



Witnesses:  
J. George Barry,  
Henry Thieme.

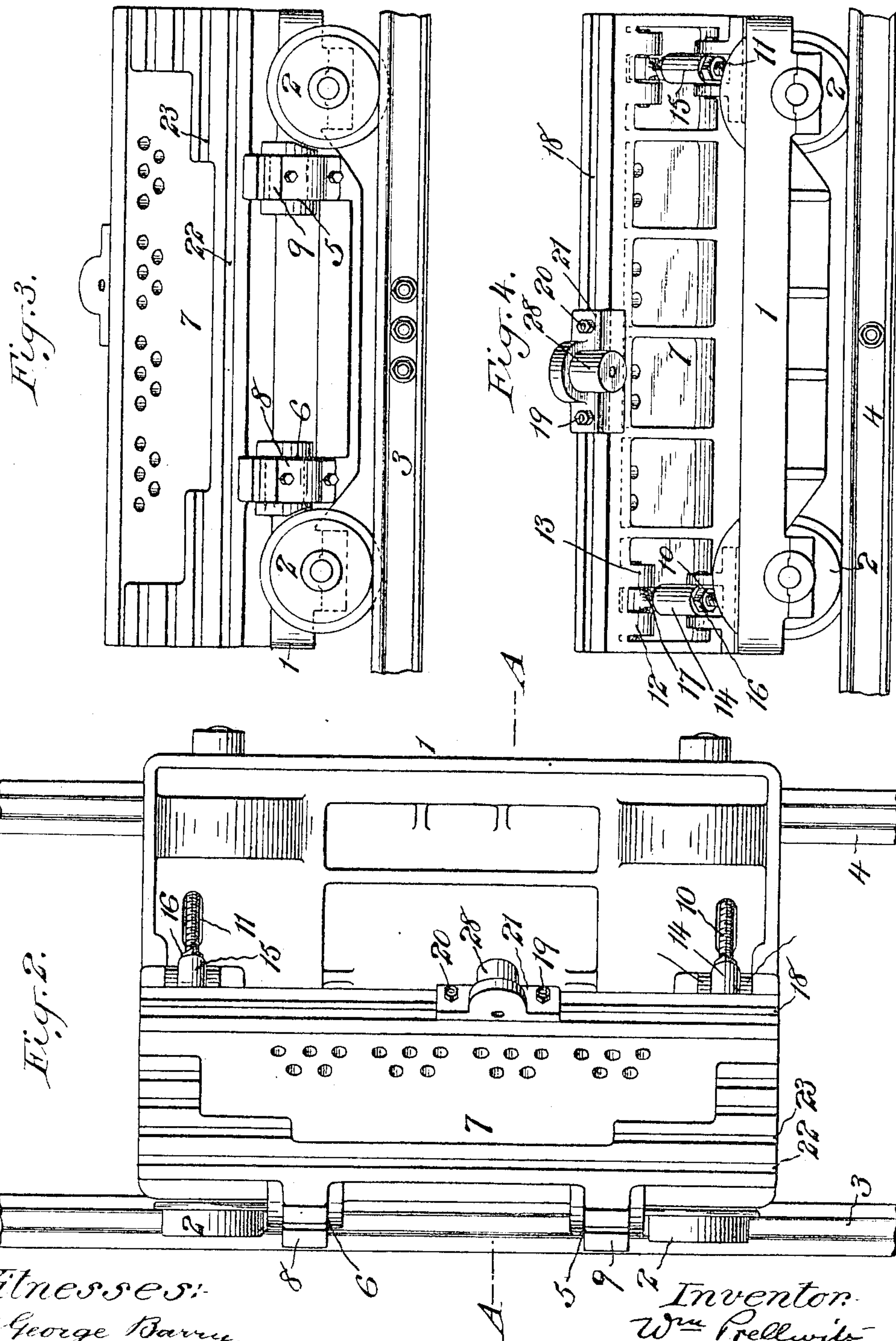
Inventor:  
Wm. Prellwitz  
By Brown & Howard  
his Attorneys

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2 SHEETS—SHEET 2



Witnesses:  
J. George Barry.  
Henry Thome.

Inventor:  
Wm. Prellwitz  
By Brown & Stewart  
his Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM PRELLWITZ, OF EASTON, PENNSYLVANIA, ASSIGNOR TO THE  
INGERSOLL-SERGEANT DRILL COMPANY, OF NEW YORK, N. Y., A  
CORPORATION OF WEST VIRGINIA.

## CHANNELING-MACHINE.

No. 818,558.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed September 2, 1904. Serial No. 223,100.

*To all whom it may concern:*

Be it known that I, WILLIAM PRELLWITZ, a citizen of the United States, and a resident of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Channeling-Machine, of which the following is a specification.

My invention relates to a channeling-machine, with the object in view of increasing its efficiency by providing means for permitting a channeling-cut much nearer the track along which the truck travels than heretofore, for bringing the supporting-pivot of the back frame into more stable relation to the truck and the shell into more stable relation to the back plate, and at the same time simplifying the adjustment of the channeler and structure of the shell, permitting the tool to work in a vertical position very close to the end wall.

My invention further contemplates certain novel features of construction and combination of parts, as will be more particularly described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the channeler in elevation as it appears attached to its truck in use looking at the truck in end elevation, the channeler being shown in full lines in an oblique position and in dotted lines in a vertical position. Fig. 2 is a top plan view of the back plate and truck, the other parts being removed. Fig. 3 is a front view of the same. Fig. 4 is a rear view of the same. Fig. 5 is a vertical transverse section in the plane of the line A A of Fig. 2. Fig. 6 is a transverse section through the shell and through a portion of the back plate, showing the manner of clamping the shell to the back plate; and Fig. 7 is a top plan view in detail of a portion of the truck-frame, showing the trunnions for supporting the back plate cast integral with the truck-frame.

The truck-frame is denoted by 1 and its supporting-wheels by 2, the latter spaced to travel along a temporary track formed by the rails 3 and 4, as is usual, to bring the channeler in working position with relation to the work. The particular structure of the truck-frame is not important and may be of any well-known or approved form, save only that it be provided on that side where the channeler is located with low-down trunnions

5 and 6, preferably cast integral with the frame, as clearly shown in Fig. 7. It will be noted that these trunnions are located near the plane of the axles of the truck and as low as may be and leave a practical clearance between the drill and the surface on which the track is laid.

The back plate is denoted by 7. It is provided at its lower edge with two-part bearings, which serve to pivot it on the trunnions 5 and 6 to permit it to be swung into different tilted adjustments in a vertical plane transverse to the truck. The said back plate is adjusted in such tilted positions by means of adjusting-screws 10 11, hinged at their upper ends to lugs 12 13 on the back of the back plate and passing through rocking sleeves 14 15, hinged to the truck-frame, the said screws being each provided with adjusting-nuts 16 17 in position to engage the opposite ends of the rocking sleeve. The back plate 7 is provided along its upper edge with a dovetailed groove 18, in which bolts 19 20 travel, for holding the shell-supporting carriage 21 in the desired adjustment longitudinally of the back plate. The carriage 21 does not project beyond the face of the back plate and so permits the shell to be brought into close proximity to the face of the back plate. The face of the back plate 7 is provided with several dovetailed grooves 22 23, &c., extending longitudinally therein and spaced apart with a view of providing seats for the bolts of the shell-clamps, whatever may be the position of the shell, as will hereinafter appear.

The shell is denoted by 24 and, as usual, supports the drill 25 and its actuating mechanism, as well as the feed-screw 26 and its actuating mechanism, the said drill, its actuating mechanism, the feed-screw, and its actuating mechanism forming specifically no part of my present invention. The shell 24 is pivoted to the carriage 21 by a pivot-bolt 27, which passes through a boss 28 on the carriage and through a thickened portion 29 of the shell, the said portion 29 of the shell having its face toward the carriage planed to a fit and extended over the upper portion of the face of the back plate in proximity to the carriage. That portion of the shell which is located opposite the lower part of the face of the back plate is provided with narrow lat-



erally-projecting flanges 30 31, (see Fig. 6,) said flanges having their outer faces dished to receive the hooked edges 32 33 of the shell-clamps 34 35. The clamps 34 35 are locked in the desired holding adjustment by means of bolts 36 37, having their T-heads seated in the groove or grooves 22 23 of the back plate and extending through the clamps 34 35 and provided on their outer ends with nuts 38 39. When the shell 24 is swung on its pivot 27 into position at right angles to the longitudinal grooves in the face of the back plate, as shown in Fig. 1, the bolts 36 37 will naturally be located in the same groove 22; but when the said shell is swung on its pivot 27 into a position oblique to the said grooves to cause the drill to reach forward or backward from its position in a plane transverse to the truck then the bolts 36 37 may occupy different grooves 22 23, &c., the clamps 34 35 assuming the slanting positions along the edges of the shell corresponding to the angle to which the shell is swung. In this manner the shell is brought close to the face of the back plate and near the axial plane of the trunnions which the back plate occupies, thereby materially increasing the stability over the old structure where the carriage was intermediate of the back plate and shell and at the same time the shell and drill carried thereby may be adjusted bodily by means of the carriage 21 along the back plate to the extreme end of the plate, and hence close to the end wall of rock. Furthermore, the low-down position of the trunnions on which the back plate rocks while materially adding to the stability of the machine admits of making an oblique cut nearer the track than where the trunnion is higher.

What I claim is—

1. A channeling-machine comprising a suitable support, a back plate mounted on the support, a shell located in immediate proximity to the face of the back plate, means for adjusting the shell bodily along the back plate and a drill carried by the shell.

2. A channeling-machine comprising a suitable support, a back plate mounted on the support, a carriage mounted on the back

plate, a shell pivoted to the carriage and located in immediate proximity to the face of the back plate and a drill carried by the shell.

3. A channeling-machine comprising a suitable support, a back plate mounted on the support, means for tilting the back plate, a carriage mounted on the upper edge of the back plate, a drill-carrying shell pivoted to the carriage and means for clamping the shell to the face of the back plate.

4. A channeling-machine comprising a suitable support, a back plate mounted on the support and provided with a plurality of grooves in its face, a drill-carrying shell adjustable bodily along the back plate, means for pivotally securing the drill-carrying shell to the back plate and clamping-bolts engaged in said grooves for locking the shell to the back plate in different adjustments.

5. A channeling-machine comprising a suitable support, a back plate mounted on the support and provided with dovetailed grooves on its face, a drill-carrying shell pivotally secured to the back plate and provided with lateral flanges, clamps constructed to engage the flanges and clamping-bolts having their heads engaged in the dovetailed grooves for locking the clamps and hence the shell to the back plate.

6. A channeling-machine comprising a suitable support, a back plate mounted on the support and provided with dovetailed grooves in its face and a dovetailed groove in its upper edge, said grooves extending to the opposite ends of the plate, a carriage mounted on the upper edge of the plate, a shell pivoted to the carriage, clamps for locking the shell to the plate and clamping-bolts having their heads engaged in said dovetailed grooves for locking the carriage and the clamps in the desired adjustments.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of August, 1904.

WILLIAM PRELLWITZ.

Witnesses:

WARD RAYMOND,  
RUSSELL WILHELM.