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## INVENTIONS PATENTED.

NOTE-Patents are granted for 15 years. The term of years for which the fees have been paid, is given after the date of the patent.

## No. 17,555. Fmery or Corundum Wheel.

(Tambour à émeri.)
James T. Barnard, Hamilton, Ont., (Assignee of Gilbert Hart, Detroit, Mich., U. S.,) 1st September, 1883; 5 years.
ing Claim.-1st. An emery, corundum or other composition wheel having embedded therein and extending from the center toward the cir cumference thereof a brace or braces formed of a substance as easily or more easily worn away by friction than the body of the wheel Whereby the composition of which such wheel is formed is braced against the centrifugal strain resulting from a rapid rotation and an even wear of the periphery of said wheel secured, substantially as set forth. 2nd. An emery, corundum or other composition grinding or polishing wheel having embedded therein a concentric recticulated or foraminous metal disk or disks equally subject to wear by friction as the body of the wheel whereby said wheel is re-enforced in all directions, substantially as set forth.

## No. $\mathbf{1 7 , 5 5 6}$. Couplings for Shafting.

(Embrayage des arbres de couche.)
John Killip, Allegheny, Penn., U. S., 1st September, 1883; 5 years.
Claim.-1st. A shaft-coupling composed of longitudinal separable sections having a central bore, one of said sections having rectangular tat-faced keys, which project into the cavity of the coupling, said keys surrounded by relief-channels, substantially as and for the purposes bpecified. 2nd. A shaft-coupling composed of longitudinally separagrooctions having a central bore, each section having longitudinal grooves on its edges parallel to the axis of the bore, substantially as and for the purposes specified. 3rd. The combination with the shafts having flat recesses $h$, of a coupling composed of longitudinally 8eparable sections, one of said sections having rectangular flat-faced projections $f f$ which project into the recesses $h h$ of the shafts, sub${ }^{8}$ tantially as and for the purposes specified.

## No. 17,557. Telephone. (Téléphone.)

Allen W. Rose, London, Eng., 1st September, 1883; 5 years.
Claim.-1st. Connectiag the receiver and transmitter of a telephone, can be one rod or carrier so as to form a portable telephone which can be grasped and carried in the hand and simultaneously placed in position opposite or against the ear and the mouth respectively of the user, substantially as described with reference to figure 1 of the drawigs. 2nd. Constructing telephonic transmitters of two diaphragms, discs or plates separated from each other by insulating divided or so as to form a recess or cavity between them to contain between or powdered carbon or its equivalent, a space being left Which they outward surfaces of the diaphragms and the holder in described they are secured to admit of free vibration, substantially as phonic redith reference to figure 2 of the drawings. 3rd. The teledramie receiver, as described, with reference to figures 3 and 4 of the magnets, the said receiver being provided with a circular or coiled the bet, one pole of which is carried inwards to the center to receive ated in or about the body part of the magnet and the coil are situ-

## No. 17,558. Pipe Grapple. (Tenaille à tuyau.)

Elisha K. Green, Los Angelos, Cal., U. S., 1st September, 1883; 5 years.
Claim.-1st. A pipe-grapple, consisting of the two jaws A B hinged together and provided with the connecting-link C, substantially as described. 2nd. In a pipe-grapple, the hinged jaws A B formed with concaves $h$, substantially as and for the purpose specified.

## No. 17,559. Wire Woven Mattress and other Spring Beds. (Matelas de fil de fer tissé et autres lits a resorts.)

William C. Norman, Montreal, Que., 1st September, 1883; 5"years.
Claim. In combination, with the head and foot, of an iron bedstead, ${ }_{C}^{a}$ woven wire mattress frame composed of head bars B and side rails C secured together by castings A holding the ends of both, and provided with pins $D$ setting into shoulders $E$ on the posts, all as set forth and for the purposes described.

## No. 17,560. Elevator. (Elévateur.)

Levi Daso, Pioncer, Ohio, U. S., 1st September, 1883 ; 5 years.
Claim.-1st. In an elevator, the combination of the platforms D DI provided with suitable guide rollers with the grooved standards A , substantially as shown and described. 2nd. In an elevator, the combination of the platforms $D$ Dı provided with suitable guide rollers with the grooved standards A, cables secured to said platforms and extending over suitable pulleys at the top and bottom of the standards. substantially as described. Brd. In an elevator, the combination of the platforms D Di with the standards A, cables $G$ secured to each of said platforms, said cables passing around a drum II, in opposite directions, the construction being such that both elevators may be operated sinultaneously by turning the drum alternately in opposite directions, one platform being raised while the other is lowered, substantially as and in the manner described. 4th. In an elevator, two platforms in combinatinn with suitable standards, cables for operaplating said platforms, said cables passing around a drum in opposito directions, and in connection therewith mechanism whereby said drum may be turned alternately in opposite directions, the construcdrum may be turned alternately in opposite directions, the construc-
tion being such that one of the platforms may be hoisted as the other is lowered, substantially as described. 5th. In an elevator, the sombiis lowered, substantially as described. Sth. In an elevator, the sombidards A1 and in connection there with a cable secured to said platform and over a hoisting drum with suitably intervening pulleys, the construction being such that by rotating the drum in opposite directions the platform may be hoisted and lowered, substantially as described. 6th. In an elevator, the combination with suitably grooved standards, of the platforms D D1, cables secured to said platforms and to the hoisting drum, the shaft of said drum provided with a suitable pinion, the bevelled gear wheels Ni located upon a suitable shaft and adapted to mesh with said pinion, and means for bringing said wheels alternately into mesh with said pinion, the construction being that the drum may be operated alternately in opposite directions theroby causing one platform to ascend as the other descends, substantially as described. 7th. In an elevator, the combination with a winding drum provided with a ratchet-wheel, of a forked pawl, substantially as and for the purpose described. 8th. In an elevator, the combinaas and for the purpose described. 8th. connected to said platforms by suitable cables, the shaft of said drum connected to said platiorms by suitable cables, the shaft of salu drum provided with a suitable pinion, bevelled wheels Ni mounter upon a driving shaft fitted for endwise movement, and in connection there-
with means for bringing either of said bevelled gear wheels into mesh with theans for bringing either of said bevelled gear wheelsator the
with said pinion, substantially as described. 9 th . In an elevator With said pinion, substantially as described. 9 th . In an elevator the
combinution with the platforms, of the safety stop, consisting of the combinution with the platforms, of the safety stop, consisting of the
spring pawls F, connecting rods $f$, draw-bar Eprovided with a spring spring pawls F, connecting rods, draw-bar E provided with a spring
$e$, substantially as described. 10th. In an elevator, the combination, with the platform, of the draw-bar E provided with a spring e, said draw-bar constructed with an interior groove el in which the cable may be located, the ciamp secured to said draw-bar, and in connection therewith a ratchet and pawl drum adapted to tighten the oable, substantially as described. 11th. In an elevator, the guide roller $\mathbf{M}^{\prime}$ mounted upon a suitable frame, and frame $m$ provided with a suitable pulley $m$ r adapted to hold the cable upon said roller, the construction being such that the roller may shift from side to side upon its shaft, substantially as and for the purpose described. $12 t \mathrm{~h}$. In an elevator,

