train and attached to a bell upon the engine. How this patent happened to have been granted in 1847, when it had been in use in this country for many years, is a little singular. COM. PUB.

Translated for the Journal of the Franklin Institute.

*Driving Screw Piles with Wooden Stems.** By M. OUDRY, Civ. Eng.

Screw piles with wooden stems are with difficulty made to penetrate into resisting ground or to a great depth, since the twisting force to which the wood is subjected, breaks it by separating the fibres.

It is a matter of great importance, however, to render the screw arrangement applicable to wooden piles, since piles wholly of iron are very costly.

To remedy this inconvenience, M. Oudry seizes the pile which he wishes to drive at its base, by means of an envelope (or tube) of wrought iron, which can be withdrawn and used for an indefinite number of piles.

This method has been proposed for the new works to be executed at the port of Bayonne.

The idea is good, and if the experiment confirms the hopes of M. Oudry, it will permit a considerable reduction of cost in the work of driving screw piles for jetties, and similar works. F. R.

AMERICAN PATENTS.

List of American Patents which issued from October 6th, to October 27th, 1857, (inclusive,) with Exemplifications.

OCTOBER 6.

1. For an *Improvement in Machines for Forming and Hardening Hat Bodies*; Alonzo C. Arnold, Norwalk, Connecticut.

Claim.—"The cam shaft, worm-wheel, cam, levers, step cylinders, and collar, or their mechanical equivalents. Further, the shaft, lever, pulley and inverted cone or disk brackets, shaft pulley, sleeve, shaft, lever, and lifting rod, or their mechanical equivalents."

2. For an *Improvement in Grain Drills*; Henry Beitzell, Centreville, Indiana.

Claim.—"The combination of the adjustable cutter with the drill tooth and the draft bar."

3. For an *Improved Brick Press*; Ephraim H. Bellows, Worcester, Massachusetts.

Claim.—"The combination of the plungers, intermittently moving apron and frame, with the case or box, the whole being constructed and arranged so as to operate conjointly."

4. For an *Improvement in Steam Generators*; Julien F. Belleville, Nancy, France.

Claim.—"The general disposition and arrangement of the steam generator, and the parts connected therewith, consisting of tubes in which water or other liquids are converted into steam."

5. For an *Improvement in Power Looms for Weaving Wire Cloth*; Erastus B. Bigelow, Boston, Massachusetts.

Claim.—"1st, The mode of constructing and operating the shuttle, and combining it with the selvage forming apparatus, whereby the filling wire is straightened, the cer-

* From "Nouvelles Annales de la Construction, Sept., 1857."