

TIMELY HINTS FOR PATENT OFFICE EXAMINERS.

The Commissioner of Patents, in a recent decision on a case appealed to him, gives expression to the following timely and common sense views respecting the duties of Patent Office examiners:

Where two parts of a device co-act to produce a useful result, they should not be separated for the purpose of rejection. A legitimate combination must be met as such or the claim admitted.

To dissect a claim and reject it piecemeal is not admissible. The invention claimed in this case is for the double purpose of preventing the losing of the key that holds the standard and beam of a plow together, and of strengthening the beam at its point of greatest weakness.

The device consists of a notched key to pass through the standard and a wedge shaped plate having a slot to receive the standard, the slot being considerably longer than the width of the standard. The slotted plate is then dropped over the upper end of the standard and so adjusted as to bring the thinnest end of the wedge under the keyhole, when the notched key or gib is inserted and the wedge plate driven under it firmly and then fastened to the beam by a screw.

The application was rejected by a reference to Fowler's patent of March 26, 1867, which, it was thought, showed the wedge shaped slotted plate, and to various classes of machinery for the notched key. The key is not separately claimed, neither is the slotted plate, and if they co-act to produce a useful result they should not be separated for the purpose of rejection. A legitimate combination should be met as such or not at all. The practice of dissecting a machine and rejecting it by piecemeal is without the sanction of either reason or law. Under such practice, the Office might very soon close its doors, for the lever, the inclined plane, and the pulley are all very old and very well known, and might soon become sufficient references for every possible mechanical device; but in this case applicant's invention is not met even by the fragmentary mode in which it was examined. The wedge in Fowler's patent is a fork driven under a pin in the standard, for the purpose of regulating the pitch of the plow point and the draft of the plow. It has no other use, and is not designed or adapted to serve the end sought by the applicant. It has no influence whatever in retaining the key in its place more than the beam would have without the plate. It resembles the plate in this case in being wedge shaped, and in being fastened to the beam with a screw, but in no other respect. The key, when considered by itself, has no element of novelty, and the applicant sets up no claim to novelty in either the plate or key. His claim is for a novel combination of the two in such manner as to secure a single and desirable end. It is well known that the alternating strain and relaxation upon the beam of a plow while at work has a very troublesome tendency to loosen the pin that retains the standard and beam in their proper relative positions. If the pin drops from its place, the plow is in danger of being seriously damaged. To obviate this danger and trouble is the sole end of applicant's invention, and it was no part of the object of Fowler's invention; neither would nor could his invention accomplish such purpose.

The key and slotted plate in applicant's device clearly co-act in securing this end, and seem to be admirably adapted to the purpose. The notched key could not be successfully used except with a plate substantially in the form described, and the plate would be worthless for the desired purpose except with the notched key. When acting together, the end is attained. Hence the combination is legitimate, and is not answered by references that apply only to the parts when separated from each other.

The decision of the Board of Appeals is reversed."

DEATH OF AN INDIAN NOBLEMAN.

On the 11th of January last, died, at Poona, British India, Venaick Gungadhr Shastree, commonly called Aba Sahib. The deceased was a Marátha nobleman who, unlike his class generally, chose a life of unobtrusive usefulness.

From his early youth he devoted his attention to science, and was in 1848 elected a member of the Royal Asiatic Society, which at that time did not number a dozen native members. He accomplished, unassisted, the correction of the ordinary Hindu calendar, which had remained for centuries in dispute, and is reputed to have been the first introducer of photography among the native communities of Western India.

Aba Sahib was for many years a subscriber to the SCIENTIFIC AMERICAN, and we are indebted to his son for a Bombay paper containing his obituary.

Aeronautics.

An ingenious instrument, for measuring the forces exerted by a horizontal current of air on planes in various positions, was lately exhibited before the Aeronautical Society of Great Britain. The plane is carried at one end of a horizontal arm passing through an eye at the upper end of a spindle, and can be fixed at any inclination by a clamp at the back. The direct pressure of the current is read off on a spring balance operated by the spindle, and the rising force due to the various inclines is shown on a vertical balance connected with the arm. The experiments show that, as the angle of inclination becomes more acute, the lifting force exceeds the horizontal (or power required to propel planes through the air) in an enormous ratio. At 20°, it is about three times more; while at 15°, the lift is four times greater than the thrust. More acute angles were not then tried, but it was deemed that further experiment would dissolve all mystery relative to the support of weights in flight.

Beecher on the Darwinian Theory.

Henry Ward Beecher, in the course of a recent sermon, thus expressed himself in regard to the Darwinian theory:

It is of little consequence to me where I came from; it is of a great deal of consequence to me to know where I am going. There are a great many men at the present day investigating the road which has brought man up to the present state, and I confess to a curiosity in the matter, and I do not say that these researches may not be of benefit. I regard the labors of Mr. Darwin with profound interest, believing that the world will in time accord him a great deal of credit. Although I am not prepared to accept all his speculations, I thank him for all his deductions of fact. I do not participate a particle with those who dread the idea of man's having sprung from some lower form of existence; all that I ask is that you show me how I got clear from monkeys, and then I am quite satisfied to have had one for an ancestor fifty centuries ago. (Laughter.) Only make the difference great enough and I am content. I had just as leave spring from a monkey as from some men I know around here. (Renewed laughter.) I look upon the Patagonians or the miserable crawling Esquimaux, and I don't see much to choose between them and any latent animalhood. I don't care so much about that thing, for I have never been there. I had no early associations a great while ago. I have not the least recollection of what happened a million years ago. All my life is looking forward. I want to know where I am going; I don't care where I came from.

Halls and School Rooms.

While sulphurous acid, chloride of lime and carbolate of lime cannot be used without inconvenience, on account of their unpleasant odor, in frequented rooms, chemical science has recently brought out a disinfectant apparently more effective than either, which can be safely and conveniently used anywhere, since it is free from odor, and when properly diluted does no harm to the color or texture of carpets or furniture. This is bromo-chloralum. Would it not be worth while, as a sanitary measure, occasionally to sprinkle the floors of our school rooms, churches and other assembly rooms with it? If this were done at the close of a session, the air, instead of being kept in its foul condition until the next gathering, would be cleansed of its impurities. If the sprinkling were repeated just before the pupils assemble, there would be a tendency to lessen the accumulation of unhealthiness in the atmosphere of the room. No thoughtful person can doubt that the question: How may we secure the best sanitary condition of our school rooms and public halls? is worthy of more attention than it has generally received.—*Professor M. C. Stebbins.*

FIVE EIGHTH inch octagon steel is the best for making punches, cold chisels, or drills; one and a quarter inches square is the best size to use for making chisels. To make a good sized flattening hammer, you will require about six inches of one and a half inches square steel. This will also make you as heavy a hand hammer as any ordinary man ought to use. If you make but one hammer, let it be of the face and ball pattern.

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For 2, 4, 6 & 8 H.P. Engines, address Twiss Bro., New Haven, Ct.

Grindstones for File Cutters. Worthington & Sons, North Amherst, Ohio.

Wanted—A man that fully understands Engines and Machinery, to travel and sell same—also, to sell Stoves. Address, with reference, Great Western Manufacturing Co., Leavenworth, Kansas.

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To Ascertain where there will be a demand for new Machinery, mechanics, or manufacturers' supplies, see Manufacturing News of United States in Boston Commercial Bulletin. Terms \$4.00 a year.

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The Baxter Steam Engine is safe, and pays no extra Insurance.

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