MBooks: Google Books Online at the University of Michigan Library

Phil Farber, Chris Powell, Cory Snavely

University of Michigan Library Information Technology
Please login to use Course Reserves, Get This and My Account and to permanently save items to My Shelf.

HINT: You can put "phrases in quotes"

Word(s) anywhere: model T Ford car, its construction, operation

Examples: "occult fiction" and woman
<table>
<thead>
<tr>
<th>#</th>
<th>Format</th>
<th>Author</th>
<th>Title</th>
<th>Year</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Pagé, Victor Wilfred</td>
<td>The model T Ford car: its construction, operation and repair; a complete practical treatise explaining the operating principles of all parts of the Ford automobile, with complete instructions for</td>
<td>1918</td>
<td>• Bentley Historical FB 2 F699 P133</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Pagé, Victor Wilfred</td>
<td>The model T Ford car: its construction, operation and repair; a complete practical treatise explaining the operating principles of all parts of the Ford automobile, with complete instructions for</td>
<td>1918</td>
<td>• Buhr Shelving Facility – Ask at any library</td>
</tr>
</tbody>
</table>
The model T Ford car: its construction, operation and repair; a complete practical treatise explaining the operating principles of all parts of the Ford automobile, with complete instructions for driving and maintenance. Includes the most thorough and easily understood illustrated instructions for Ford repairing ever published...

Electronic Location
- U-M Online: http://hdl.handle.net/2027/mdp.39015002064486
- Google Online: http://books.google.com/books?id=UOM39015002064486

Holdings
What Libraries Have

Author

Published
New York, N.W. Henley, 1918.

Format
Electronic Resource
Your search for "winter care" matched 4 pages in this item.

Viewing results for: 1 to 4 of 4 pages

Return to the last page you viewed

Sequence #151 - 2 matching terms
...Winter Care of Automobiles 153 Filling and screwing down each cup three times, to insure ample su...
...to discover loose parts while oiling and take immediate steps to remedy the defective condition. Winter Care of Automobiles. While motoring through out the entire year is not unusual, many owners o...

Sequence #153 - 1 matching term
...Winter Care of Automobiles 155 using calcium chloride when compounding an anti-freezing solution ...

Sequence #155 - 1 matching term
...Winter Care of Automobiles 157 The freezing temperatures of such solutions of varying proportio...

Sequence #286 - 1 matching term
...using U V W Why Clutch is Necessary . Why Cooling Systems Are Necessary Why Oil is Used Winter Care of Automobiles . Wiring Diagrams for Dry Cells Wiring Diagram, Ignition . Wiring Di...

Viewing results for: 1 to 4 of 4 pages
Winter Care of Automobiles

using calcium chloride when compounding an anti-freezing solution care must be taken that commercially pure salt is employed, as the cruder grades will liberate a larger percentage of free acid. The mistake should not be made of using chloride of lime, which has much the same appearance, but the corrosive action of which is very great.

It is well to test a solution of calcium chloride for acid before placing it in the radiator. A piece of blue litmus paper may be obtained at any drug store and immersed in the solution. If the paper turns red it is a sign that there is acid present. Acid may be neutralized by the addition of a small quantity of slacked lime.

The solutions may be made in these proportions:

Two pounds of salt to the gallon of water will freeze at eighteen degrees Fahrenheit.

Three pounds of salt to the gallon of water will freeze at one and five-tenths degrees Fahrenheit.

Four pounds of salt to the gallon will freeze at seven-
Architecture overview

Four basic pieces:

- Mirlyn, the library catalog
- Page image and metadata repository
- Rights and GeoIP databases
- Pageturner
• During scanning, tracking information is stored in Mirlyn:
  – Manual scanning of barcode or batch process for a call number range
  – Triggers unavailability message online
  – Metadata extracted and made available
  – Daily list of barcodes for returned items used to remove unavailable status
• When images are added to repository:
  – *Barcodes used to add to the item record call-number-2 field*
  – *Supplies info to rights database*
  – *Record updated in 006, 007, and 533 fields*
  – *Virtual 856 fields or link to detailed holdings are generated in the display*
  – *Supplies metadata to the pageturner*
METS Object

• Why METS?
  – Can serve as an Archival Information Package and a Dissemination Information Package
  – Designed to record the relationship between pieces of complex digital objects
  – Can be created automatically as texts are loaded or reloaded
• What’s there?
  – metsHdr with an ID and CREATEDATE
  – dmdSec with a URL
  – Two techMD referencing notes files
  – Two fileGrps (images and OCR)
  – Physical structMap tying together the files with any metadata (page numbers or features)
Objectives:

- A guiding principle: store archival images, create deliverables on demand
- Incorporate TDR-like practices

Simple filesystem layout adapted from DLXS

- One directory per volume, all files inside
- Example: /l1/obj/bc/39015/1/2/3/39015123456789/
- Use of a namespace allows for conflicting identifiers
- Currently, one namespace: UM barcode (‘bc’) at scan time
Download and ingest

- **Google Return Interface (GRIN) at Google** provides volumes over HTTPS
  - TIFF, JPG, UTF-8 OCR, metadata in a package

- **Google Return (Object Oriented) Validation Environment (GROOVE) at UM**
  - manages all download and validation
  - Written in Perl; MySQL backend for state tracking
  - available to Google Partners via CVS (see me!)
• Automatic validation in GROOVE
  – Check barcode check digit using Luhn algorithm
  – Fixity check on JPG, TIFF, UTF8 using MD5
  – Well-formedness and embedded metadata check on JPG, TIFF, UTF8 using JHove
  – Various completeness cross-checks
  – Failures retried, will eventually refer to Google

• Periodic fixity checks using MD5
• Qualitative validation (manual)
  – 20-page samples to QA staff (primarily students)
  – *ACDSee used to examine visual characteristics and severity (readable/not readable); recorded in database*
    – *Trends identified and reported to Google*
  
• METS file created (functions as a manifest)
• Persistent identifier (Handle) created
• Feed of identifiers sent to/from Mirlyn via ssh
• What information to store?
  – Considered complexity and maintenance
  – Considered using MARC directly
  – Needed to accommodate both bib record-derived rights and manual overrides

• Approach: examine bib record, determine authoritative copyright status, store rights attribute, source, reason, and timestamp

• Stored in MySQL
• Rights attributes currently in use
  – pd: public domain
  – pdus: public domain for US viewers* 
  – inc: in copyright 
  – und: undetermined (a body of work for cataloging!)
  – nobody (override): no access
Rights database

• Rights attributes not yet in use:
  – orph: orphaned work
  – umall (override): open access for authenticated UM affiliates
  – world (override): open access to world

• Source can currently be ‘google’ or ‘lit-dlps-dc’ (local digitization)
• Each rights attribute must have a reason.

• Reasons in use:
  – bib: bibliographically-derived
  – man: manual access control override

• Reasons not yet in use:
  – con: contractual agreement on file
  – ddd: due diligence documented
Right attribute ‘pdus’ requires country of origin.

Several options; all use DNS registry information with tweaks for additional accuracy.

We chose MaxMind GeoIP database:
  - 99% accurate
  - Update utility and several query APIs included
  - $12/month
Pageturner middleware

• Ties all the rest together
  – *User interface*
  – *Access rights determination*
  – *OCR, page image access*
  – *Item search*

• Gives users the opportunity to provide feedback
Pageturner: feedback form

Feedback Options

- Help make MBooks better - take our survey
- Do you have a comment about this page? Please tell us.

Page Feedback

- Overall page readability and quality
  - Few problems, entire page is readable
  - Some problems, but still readable
  - Significant problems, difficult or impossible to read

Specific page image problems?
- Missing parts of the page
- Blurry text
- Curved or distorted text
- Other problem

Problem with access rights?
- This item is in the public domain, but I don't have access to it.
- I have access to this item, but should not.
To request a reply on this rights-related issue, enter your email address below. (We will make every effort to address copyright issues by the next business day after notification.)
[Your email address]

Other problems or comments?

Submit
- Access GeoIP and Rights dB
- Access repository for METS object and archival image
- Access Mirlyn library catalog for item metadata
- Transform images and cache them
- Wrap in XML, apply XSL to create HTML
Pageturner: page image retrieval
Pageturner: *Item searching*

- Wrap, concatenate and cache OCR files
- Create and cache indexes
- Perform search
- Display results
• **Wrap, concatenate and cache OCR files**

```xml
<doc>
  <page SEQ="1"></page>
  <page SEQ="2">THE MODEL T FORD CAR ITS CONSTRUCTION, OPERATION AND REPAIR A COMPLETE PRACTICAL TREATISE [...]</page>
  <page SEQ="292"></page>
  <page SEQ="293"></page>
</doc>
```
Pageturner: *Item searching*

- **Create and cache indexes**
  - XPAT full text index
  - XML page region index
  - Processed in real-time
  - Cache indexes
• **Perform search**
  
  – Individual words and/or phrases co-occurring within a page

  – Right stemming with “*”, e.g., "fond*" gives "fond," "fondest," "fondly," etc.
• **Display results**
  – Hit counts and KWICs, per page
  – No KWICs if access restricted
  – OCR Word/Phrase highlighting
Pageturner: **Item searching**

- **Title**: The model T Ford cars: construction, operation and repair, a complete ...  
- **Note**: detailed search results are not shown for restricted items.

- Sequence #33 - 3 matching terms
- Sequence #108 - 2 matching terms
- Sequence #255 - 4 matching terms
- Sequence #257 - 4 matching terms

Viewing results for: 1 to 4 of 4 pages
Your search for "transmission case" flywheel matched 4 pages in this item.

Viewing results for 1 to 4 of 4 pages

Sequence #33 - 3 matching terms
... is driven in that direction. The bell rests in a socket member attached to the lower part of the... shown at Fig. 3. It will be apparent that this method of...
... ing plate while the third point of support is at a ball joint member attached to the rear of the transmission case. This ball joint serves...
... forms the same function for the rear end of the car that the ball joint on the front end of the flywheel case performs for the front...

Sequence #108 - 2 matching terms
...h bush, no gears are turning. I know the weight of the gear case serves merely as an additional flywheel member. With light cars like...
... the top, this fitting in a suitable carrying member or ball seat, machined in the back end of the transmission case. The front end of the...

Sequence #205 - 4 matching terms
... carried by the stationary plate by no less than 0.2 in. in the case. To take the old magnets from the... of the three screws which serve to fix the collecting terminal in...
... taking the power plant out of the car. After the crank case and transmission cases are off, the flywheel may be taken off of the...
... be taken off of the flange on the end of the crank shaft by removing four cap screws that hold the... to that member. Whenever repairs are necessary to the magnets such as replacing magnets...

Sequence #257 - 4 matching terms
... the inlet manifold, while the small packing at F is used at the lower portion of the crank case or flywheel compartment as a seating for the oil drain plug. The felt packings are clearly shown at F...
... crank case member and the cylinder block. The piece marked M, is employed between the top of the transmission case and the pressed steel lower portion. The large packing, C, is placed between the...
... of the crank case and the pressed steel lower crank case member. Packing F is utilized under the transmission case cover plate on late model Ford cars, while that shown at E is used on some of the...
... are used to complete the packing between the timing gear case portions and between the upper transmission case and round portion...
Ford Radius Rod, Construction

In a ball at its apex and attached to the front spring supporting member at its ends. This triangular radius member serves to take the push of the chassis and raise the axle forward as the car is driven in this direction.

The ball rests in a socket member attached to the lower part of the internal casing of the engine as clearly shown at Fig. 1. It will be apparent that this method of support permits the front axle to move up or down for an end to be higher than the other without tending to twist the frame in such as would be the case if the usual system of semi-elliptic front springs was used. A certain amount of twisting is unavoidable so the front axle three-point suspension in connection with that of the motor makes that its strains will come on the crank case because of this varying frame direction.

The rear axle assembly which also includes the driving shaft and its supporting housing is also fastened to the frame by three points. Two of these are at the axle, where the single rear spring member is shackled to drop forged steel hangers secured to brake one retaining plates while the third point of support is at a ball joint member attached to the rear of the transmission case. This ball joint serves to enclose the universal joint and performs the same function for the rear end of the car that the ball joint on the front end of the Bonneville case performs for the front end of the car. The rear radius rod system is also triangular in shape, the end members extending from the brake carrying castings on the ends of the axles to the flange fitting just back of the casting forming the ball part of the point at the front end of the pinion drive shaft housing. This construction is clearly outlined in sectional view of the complete car shown on folding plates Fig. 2, and also in the plan view, Fig. 3. It will be apparent that
What’s Next?

• Display additional structural metadata
• Building collections
• Scalability of repository storage